Docket Nos. 50-440
50-441

MAY 3 1977

DISTRIBUTION:
Dockets
NRC PDR
Local PDR
LWR 4
OELD (JRutberg)
OELD (ESilberstein)
RDeYoung
DVassallo
JWilliams
HSmith
BSCott
IE (3)
NDube, MIPC
MJinks, OA (8)
WMiller, ADM
ACRS (16)
HDenton, DSE
VMoore, DSE
RVollmer, DSE
MErnst, DSE
cmiles, OPA
WGammill, DS
RHeineman, S
JKnight, SS
DRoss, SS
RTedescro, S
BScharf (15)
DSkovholt
EHughes
RGilbert, EP
MDuncan, EP
AToalston, A
IDinitz
SVarga
DLynch
MService

Cleveland Electric Illuminating Company
ATTN: Mr. Dalwyn R. Davidson
Vice President, Engineering
P. O. Box 5000
Cleveland, Ohio 44101

Gentlemen:

The Nuclear Regulatory Commission has issued Construction Permits Nos. CPPR-148 and CPPR-149 (enclosed) to the Cleveland Electric Illuminating Company, et al, authorizing construction of the Perry Nuclear Power Plant, Units 1 and 2, two boiling water reactors, in Lake County, Ohio. The construction permits have been issued in accordance with Initial Decisions dated January 6, 1977, and April 29, 1977.

A related notice which is being forwarded to the Office of the Federal Register for publication is also enclosed.

Sincerely,

Original signed by
Steven A. Varga

Steven A. Varga, Chief
Light Water Reactors Branch 4
Division of Project Management

Enclosures:
1. CPPR-148 and CPPR-149
2. Federal Register Notice

ccs: See next page

cont. 4

OFFICE ➤	LWR 4	LWR 4	LWR 4			
SURNAME ➤	MSERVICE	DLynch	SVarga			
DATE ➤	4/29/77	4/29/77	4/29/77			

THE TOLEDO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT 1

CONSTRUCTION PERMIT

Construction Permit No. CPPR-148

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

   A. The application for a construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission; there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission; and all required notifications to other agencies or bodies have been duly made;

   B. The Toledo Edison Company, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the Applicants) have described the proposed design of the Perry Nuclear Power Plant, Unit 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and have identified the major features or components incorporated therein for the protection of the health and safety of the public;

   C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

   D. Safety features or components, if any, which require research and development have been described, with one exception as described in E. below, by the Applicants and the Applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

SEE PREVIOUS YELLOW FOR CONCURRENCES

OFFICE➤				ADLWR	DDPM	DPM
SURNAME➤				DVassallo	RDeYoung	RBoyd
DATE➤				5/3/77	5/3/77	5/3/77

THE TOLEDO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT 1

CONSTRUCTION PERMIT

Construction Permit No. CPPR-148

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

   A. The application for a construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission; there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission; and all required notifications to other agencies or bodies have been duly made;

   B. The Toledo Edison Company, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the Applicants) have described the proposed design of the Perry Nuclear Power Plant, Unit 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and have identified the major features or components incorporated therein for the protection of the health and safety of the public;

   C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

   D. Safety features or components, if any, which require research and development have been described by the Applicants and the Applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

AIG
AToalston
5/2/77

	LWR MSERVICE	LWR-4 RDLowell	LWR 4 SVarga	AD:LWR DVassallo	ELD only as amended 5/3/77 E.S. Silberstein	ELD JRutberg
OFFICE	4/29/77	4/29/77	4/ /77	4/ /77	4/3/77	4/29/77
SURNAME	EPM RGilbert	~~AD:EPM~~ VMoore	SS&EM HDenton	AD:OA DSkovholt	DDPM RDeYoung	DPM RBoyd
DATE	5/2/77	5/2/77	5/2/77	4/ /77	4/ /77	4/ /77

E. The Applicants have not described the research and development program for the prompt relief trip system and, accordingly, this construction permit is conditioned upon Applicants submitting a method of demonstrating the operational adequacy of a prompt relief trip system in accordance with paragraph 3.E(5);

F. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

G. The Cleveland Electric Illuminating Company is technically qualified to design and construct the proposed facility;

H. The Applicants are financially qualified to design and construct the proposed facility;

I. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

J. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit, subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 50) of the Commission's regulations and all applicable requirements have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," the Nuclear Regulatory Commission (the Commission) hereby issues a construction permit to the Applicants for a utilization facility designed to operate at 3579 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicants and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Perry Nuclear Power Plant, Unit 1, will be located on the Applicants' site in Lake County, Ohio, on the southern shore of Lake Erie, about 35 miles northeast of Cleveland.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55, of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:

OFFICE➤						
SURNAME➤						
DATE➤						

A. The earliest date for the completion of the facility is April 1, 1981, and the latest date for completion is December 31, 1982.

B. The facility shall be constructed and located at the site as described in the application, in Lake County, Ohio.

C. This construction permit authorizes the Applicants to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.

D. The Applicants are subject to the following antitrust conditions:

The following "definitions" and "licensing conditions" were ordered by the Atomic Safety and Licensing Board presiding over the combined Davis-Besse 1, 2, 3 and Perry 1 and 2 antitrust hearings, and are in the words of the Licensing Board. The word "Applicants" refers to the five companies listed in paragraph 1.B. above.

Definitions

Entity shall mean any electric generation and/or distribution system or municipality or cooperative with a statutory right or privilege to engage in either of these functions.

Wheeling shall mean transportation of electricity by a utility over its lines for another utility, including the receipt from and delivery to another system of like amounts but not necessarily the same energy. Federal Power Commission, The 1970 National Power Survey, Part 1, p. I-24-8.

Licensing Conditions

(1) Applicants shall not condition the sale or exchange of electric energy or the grant or sale of bulk power services upon the condition that any other entity:

(a) enter into any agreement or understanding restricting the use of or alienation of such energy or services to any customers or territories;

(b) enter into any agreement or understanding requiring the receiving entity to give up any other bulk power service options or alternatives or to deny itself any market opportunities;

(c) withdraw any petition to intervene or forego participation in any proceeding before the Nuclear Regulatory Commission or refrain from instigating or prosecuting any antitrust action in any other forum.

OFFICE➤						
SURNAME➤						
DATE➤						

(2) Applicants, and each of them, shall offer interconnections upon reasonable terms and conditions at the request of any other electric entity(ies) in the CCCT (Combined CAPCO Company Territories), such interconnection to be available (with due regard for any necessary and applicable safety procedures) for operation in a closed-switch synchronous operating mode if requested by the interconnecting entity(ies). Ownership of transmission lines and switching stations associated with such interconnection shall remain in the hands of the party funding the interconnection subject however to any necessary safety procedures relating to disconnection facilities at the point of power delivery. Such limitations on ownership shall be the least necessary to achieve reasonable safety practices and shall not serve to deprive purchasing entities of a means to effect additional bulk service options.

(3) Applicants shall engage in wheeling for and at the request of other entities in the CCCT:

(a) of electric energy from delivery points of Applicants to the entity(ies); and,

(b) of power generated by or available to the other entity, as a result of its ownership or entitlements* in generating facilities, to delivery points of Applicants designated by the other entity.

Such wheeling services shall be available with respect to any unused capacity on the transmission lines of Applicants, the use of which will not jeopardize Applicants' system. In the event Applicants must reduce wheeling services to other entities due to lack of capacity, such reduction shall not be effected until reductions of a least 5 percent have been made in transmission capacity allocations to other Applicants in these proceedings and thereafter shall be made in proportion to reductions imposed upon other Applicants to this proceeding.**

* "entitlement" includes but is not limited to power made available to an entity pursuant to an exchange agreement.

** The objective of this requirement is to prevent the pre-emption of unused capacity on the lines of one Applicant by other Applicants or by entities the transmitting Applicant deems noncompetitive. Competitive entities are to be allowed opportunity to develop bulk power services options even if this results in re-allocation of CAPCO (Central Area Power Coordination Group) transmission channels. This relief is required in order to avoid prolongation of the effects of Applicants' illegally sustained dominance.

OFFICE➤						
SURNAME➤						
DATE➤						

Applicants shall make reasonable provisions for disclosed transmission requirements of other entities in the CCCT in planning future transmission either individually or within the CAPCO grouping. By "disclosed" is meant the giving of reasonable advance notification of future requirements by entities utilizing wheeling services to be made available by Applicants.

(4) (a) Applicants shall make available membership in CAPCO to any entity in the CCCT with a system capability of 10 MW or greater;

(b) A group of entities with an aggregate system capability of 10 MW or greater may obtain a single membership in CAPCO on a collective basis;*

(c) Entities applying for membership in CAPCO pursuant to License Condition 4 shall become members subject to the terms and conditions of the CAPCO Memorandum of Understanding of September 14, 1967, and its implementing agreements; except that new members may elect to participate on an equal percentage of reserve basis rather than a P/N allocation formula for a period of twelve years from date of entrance.** Following the twelfth year of entrance, new members shall be expected to adhere to such allocation methods as are then employed by CAPCO (subject to equal opportunity for waiver or special consideration granted to original CAPCO members which then are in effect).

* e.g., Wholesale Customer of Ohio Edison (WCOE).

** The selection of the 12-year period reflects our determination that an adjustment period is necessary since the P/N formula has a recognized effect of discriminating against small systems and forcing them to forego economies of scale in generation in order to avoid carrying excessive levels of reserves. We also found that P/N is not entirely irrational as a method of reserve allocation. We have observed that Applicants themselves provided adjustment periods and waivers to integrate certain Applicants into the CAPCO reserve requirement program. The 12-year period should permit new entrants to avoid initial discrimination but to accommodate and adjust to the CAPCO system over some reasonable period of time. Presumably new entrants will be acquiring ownership shares and entitlements during the 12-year period so that adverse consequences of applying the P/N formula will be mitigated.

OFFICE➤						
SURNAME➤						
DATE➤						

(d) New members joining CAPCO pursuant to this provision of relief shall not be entitled to exercise voting rights until such time as the system capability of the joining member equals or exceeds the system capability of the smallest member of CAPCO which enjoys voting rights.*

(5) Applicants shall sell maintenance power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(6) Applicants shall sell emergency power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(7) Applicants shall sell economy energy to requesting entities in the CCCT, when available, on terms and conditions no less favorable than those available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(8) Applicants shall share reserves with any interconnected generation entity in the CCCT upon request. The requesting entity shall have the option of sharing reserves on an equal percentage basis or by use of the CAPCO P/N allocation formula or on any other mutually agreeable basis.

(9) (a) Applicants shall make available to entities in the CCCT access to the Davis-Besse 1, 2, and 3 and the Perry 1 and 2 nuclear units and any other nuclear units for which Applicants or any of them, shall apply for a construction permit or operating license during the next 25 years.

* Our objective is to prevent impediments to the operation and development of an area-wide power pool through the inability of lesser entities to respond timely or to make necessary planning commitments. While we grant new member entities the opportunity to participate in CAPCO it is not our intent to relieve joining entities of responsibilities and obligations necessary to the successful operation of the pool. For those smaller entities which do not wish to assume the broad range of obligations associated with CAPCO membership we have provided for access to bulk power service options which will further their ability to survive and offer competition in the CCCT.

OFFICE➤						
SURNAME➤						
DATE➤						

Such access, at the option of the requesting entity, shall be on an ownership share, or unit participation or contractual pre-purchase of power basis.* Each requesting entity (or collective group of entities) may obtain up to 10 percent of the capacity of the Davis-Besse and Perry Units and 20 percent of future units (subject to the 25-year limitation) except that once any entity or entities have contracted for allocations totaling 10 percent or 20 percent, respectively, no further participation in any given unit need be offered.

(b) Commitments for the Davis-Besse and Perry Units must be made by requesting entities within two years after this decision becomes final and within two years after a license application is filed for future units (subject to the 25-year limitation).

(10) These conditions are intended as minimum conditions and do not preclude Applicants from offering additional bulk power services or coordination options to entities within or without the CCCT. However, Applicants shall not deny bulk power services required by these conditions to non-Applicant entities in the CCCT based upon prior commitments arrived in the CAPCO Memorandum of Understanding or implementing agreements. Preemption of options to heretofore deprived entities shall be regarded as inconsistent with the purpose and intent of these conditions.

The above conditions are to be implemented in a manner consistent with the provisions of the Federal Power Act and all rates, charges or practices in connection therewith are to be subject to the approval of regulatory agencies having jurisdiction over them.

E. The Applicants are subject to the following additional conditions:

(1) The Applicants will qualify the active pumping components to be placed within the manholes of the underdrain system, to operate in the presence of volatile air/fuel mixtures, including methane. In addition, the Applicants will develop and implement operating procedures which will require that all manholes and the gravity discharge pipes of the underdrain system: (a) be monitored for the presence of methane, prior to entry by operating personnel; and (b) be ventilated by portable equipment if the monitoring program cited above indicates this to be necessary.

* Requesting entities' election as to the type of access may be affected by provisions of State law relating to dual ownership of generation facilities by municipalities and investor-owned utilities. Such laws may change during the period of applicability of these conditions. Accordingly, we allow requesting entities to be guided by relevant legal and financial considerations in fashioning their requests.

OFFICE➤					
SURNAME➤					
DATE➤					

(2) The Applicants will establish a long term monitoring program to document, interpret and report the performance of the shale foundations. This program will include the provision of settlement monuments on all plant facilities whose settlement or differential settlement could present a hazard to either the safe operation or safe shutdown of the plant.

(3) The Applicants will complete the geologic mapping and photographing of the Chagrin shale under each safety-related building or structure to be founded on shale, prior to placement of any concrete (or other permanent cover) over the founding bedrock. These maps and photographs will be formally submitted to the NRC staff.

(4) The Applicants will install two valves in series, designed to seismic Category I criteria, in the piping system that provides makeup water to both of the cooling tower basins.

(5) The Applicants will submit to the Director of Project Management within 90 days after issuance of this construction permit, a proposed program for research and development of a prompt relief trip system in accordance with the definitions and provisions of Sections 50.2(n) and 50.34(a)(8) of 10 CFR Part 50.

F. The facility is subject to the following conditions for the protection of the environment:

(1) As additional protection, in order to detect effects of the operation of the underdrain system on groundwater levels in excess of those expected, the Applicants will install piezometer arrays to check the drawdown of the water table at distances up to 1000 feet (where possible) in four different directions from the perimeter of the plant.

(2) The Applicants will install a public address system to warn people on the lake within the exclusion area in the event that such a warning were necessary.

(3) An energy dissipater for the major stream sediment control dam (Site No. 1) will be installed below the spillway outlet. This energy dissipater will consist of a riprap lined stilling basin. The bottom of the stilling basin will extend the full width of the spillway. A riprapped apron will be constructed on three sides of the basin. For the minor stream diversion sediment control dam (Site No. 3) and the northwest storm drainage sediment control dam (Site No. 2), a riprapped spillway and metal baffle will be installed. Gravel filter blankets will be provided under all riprap slope protection at these three sediment control dams.

(4) Applicants must improve the analysis of milk samples to obtain a sensitivity of 0.5 pCi/per liter for iodine-131 and shall develop a program to establish the iodine-131 baseline data to take into account the air-goat-milk pathway.

OFFICE➤						
SURNAME➤						
DATE➤						

(5) Applicants shall take all necessary actions, including those summarized in Section 4.5 of the Final Environmental Statement, to avoid unnecessary adverse environmental impacts during construction of the station and associated transmission lines.

(6) Before engaging in a construction activity that may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than evaluated in the Final Environmental Statement, Applicants shall provide written notification to the Director, Division of Site Safety and Environmental Analyses.

(7) If unexpected harmful effects or evidence of irreversible damage are detected during facility construction, Applicants shall provide to the Commission an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.

(8) A control program shall be established by the Applicants to provide for a periodic review of all construction activities to assure that those activities conform to the environmental conditions set forth in this permit.

G. In accordance with the requirements imposed by the October 8, 1976 Order of the United States Court of Appeals for the District of Columbia Circuit in Natural Resources Defense v. Nuclear Regulatory Commission, No. 74-1385 and 74-1586, that the Nuclear Regulatory Commission "shall make any licenses granted between July 21, 1976 and such time when the mandate is issued subject to the outcome of such proceedings herein," the construction permit issued herein shall be subject to the outcome of such proceedings.

4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicants submit to the Commission the complete final safety analysis report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements were satisfied; and (d) the Applicants submit proof of financial protection and execute an indemnity agreement as required by Section 170 of the Act.

OFFICE➤						
SURNAME➤						
DATE➤						

5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by
Roger S. Boyd

Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance:

MAY 3 1977

OFFICE ➤						
SURNAME ➤						
DATE ➤						

THE TOLEDO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-441

PERRY NUCLEAR POWER PLANT, UNIT 2

CONSTRUCTION PERMIT

Construction Permit No. CPPR-149

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

   A. The application for a construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission; there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission; and all required notifications to other agencies or bodies have been duly made;

   B. The Toledo Edison Company, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the Applicants) have described the proposed design of the Perry Nuclear Power Plant, Unit 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and have identified the major features or components incorporated therein for the protection of the health and safety of the public;

   C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

   D. Safety features or components, if any, which require research and development have been described, with one exception as described in E. below, by the Applicants and the Applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

OFFICE➤						
SURNAME➤						
DATE➤						

THE TOLEDO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-441

PERRY NUCLEAR POWER PLANT, UNIT 2

CONSTRUCTION PERMIT

Construction Permit No. CPPR-149

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

   A. The application for a construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission; there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission; and all required notifications to other agencies or bodies have been duly made;

   B. The Toledo Edison Company, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the Applicants) have described the proposed design of the Perry Nuclear Power Plant, Unit 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and have identified the major features or components incorporated therein for the protection of the health and safety of the public;

   C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

   D. Safety features or components, if any, which require research and development have been described by the Applicants and the Applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

AID
AToalston
4/ /77

	LWR 4 MSERVICE	LWR-4 RPowell	LWR 4 SVarga	AD:LWR DVassallo	ELD	ELD JRutberg
OFFICE	4/29/77	4/ /77	4/ /77	4/ /77	4/ /77	4/ /77
	EPM	AD:BP	SS&EA	AD:QA	DDPM	DPM
SURNAME	RGilbert	VMoore	HDenton	DSkovholt	RDeYoung	RBoyd
DATE	4/ /77	4/ /77	4/ /77	4/ /77	4/ /77	4/ /77

E. The Applicants have not described the research and development program for the prompt relief trip system and, accordingly, this construction permit is conditioned upon Applicants submitting a method of demonstrating the operational adequacy of a prompt relief trip system in accordance with paragraph 3.E(5);

F. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

G. The Cleveland Electric Illuminating Company is technically qualified to design and construct the proposed facility;

H. The Applicants are financially qualified to design and construct the proposed facility;

I. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

J. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit, subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 50) of the Commission's regulations and all applicable requirements have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," the Nuclear Regulatory Commission (the Commission) hereby issues a construction permit to the Applicants for a utilization facility designed to operate at 3579 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicants and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Perry Nuclear Power Plant, Unit 2, will be located on the Applicants' site in Lake County, Ohio, on the southern shore of Lake Erie, about 35 miles northeast of Cleveland.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55, of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:

OFFICE➤						
SURNAME➤						
DATE➤						

A. The earliest date for the completion of the facility is October 1, 1982, and the latest date for completion is June 30, 1984.

B. The facility shall be constructed and located at the site as described in the application, in Lake County, Ohio.

C. This construction permit authorizes the Applicants to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.

D. The Applicants are subject to the following antitrust conditions:

The following "definitions" and "licensing conditions" were ordered by the Atomic Safety and Licensing Board presiding over the combined Davis-Besse 1, 2, 3 and Perry 1 and 2 antitrust hearings, and are in the words of the Licensing Board. The word "Applicants" refers to the five companies listed in paragraph 1.B. above.

Definitions

Entity shall mean any electric generation and/or distribution system or municipality or cooperative with a statutory right or privilege to engage in either of these functions.

Wheeling shall mean transportation of electricity by a utility over its lines for another utility, including the receipt from and delivery to another system of like amounts but not necessarily the same energy. Federal Power Commission, The 1970 National Power Survey, Part 1, p. I-24-8.

Licensing Conditions

(1) Applicants shall not condition the sale or exchange of electric energy or the grant or sale of bulk power services upon the condition that any other entity:

(a) enter into any agreement or understanding restricting the use of or alienation of such energy or services to any customers or territories;

(b) enter into any agreement or understanding requiring the receiving entity to give up any other bulk power service options or alternatives or to deny itself any market opportunities;

(c) withdraw any petition to intervene or forego participation in any proceeding before the Nuclear Regulatory Commission or refrain from instigating or prosecuting any antitrust action in any other forum.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

(2) Applicants, and each of them, shall offer interconnections upon reasonable terms and conditions at the request of any other electric entity(ies) in the CCCT (Combined CAPCO Company Territories), such interconnection to be available (with due regard for any necessary and applicable safety procedures) for operation in a closed-switch synchronous operating mode if requested by the interconnecting entity(ies). Ownership of transmission lines and switching stations associated with such interconnection shall remain in the hands of the party funding the interconnection subject however to any necessary safety procedures relating to disconnection facilities at the point of power delivery. Such limitations on ownership shall be the least necessary to achieve reasonable safety practices and shall not serve to deprive purchasing entities of a means to effect additional bulk service options.

(3) Applicants shall engage in wheeling for and at the request of other entities in the CCCT:

(a) of electric energy from delivery points of Applicants to the entity(ies); and,

(b) of power generated by or available to the other entity, as a result of its ownership or entitlements* in generating facilities, to delivery points of Applicants designated by the other entity.

Such wheeling services shall be available with respect to any unused capacity on the transmission lines of Applicants, the use of which will not jeopardize Applicants' system. In the event Applicants must reduce wheeling services to other entities due to lack of capacity, such reduction shall not be effected until reductions of a least 5 percent have been made in transmission capacity allocations to other Applicants in these proceedings and thereafter shall be made in proportion to reductions imposed upon other Applicants to this proceeding.**

* "entitlement" includes but is not limited to power made available to an entity pursuant to an exchange agreement.

** The objective of this requirement is to prevent the pre-emption of unused capacity on the lines of one Applicant by other Applicants or by entities the transmitting Applicant deems noncompetitive. Competitive entities are to be allowed opportunity to develop bulk power services options even if this results in re-allocation of CAPCO (Central Area Power Coordination Group) transmission channels. This relief is required in order to avoid prolongation of the effects of Applicants' illegally sustained dominance.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

Applicants shall make reasonable provisions for disclosed transmission requirements of other entities in the CCCT in planning future transmission either individually or within the CAPCO grouping. By "disclosed" is meant the giving of reasonable advance notification of future requirements by entities utilizing wheeling services to be made available by Applicants.

(4) (a) Applicants shall make available membership in CAPCO to any entity in the CCCT with a system capability of 10 MW or greater;

(b) A group of entities with an aggregate system capability of 10 MW or greater may obtain a single membership in CAPCO on a collective basis;*

(c) Entities applying for membership in CAPCO pursuant to License Condition 4 shall become members subject to the terms and conditions of the CAPCO Memorandum of Understanding of September 14, 1967, and its implementing agreements; except that new members may elect to participate on an equal percentage of reserve basis rather than a P/N allocation formula for a period of twelve years from date of entrance.** Following the twelfth year of entrance, new members shall be expected to adhere to such allocation methods as are then employed by CAPCO (subject to equal opportunity for waiver or special consideration granted to original CAPCO members which then are in effect).

* e.g., Wholesale Customer of Ohio Edison (WCOE).

** The selection of the 12-year period reflects our determination that an adjustment period is necessary since the P/N formula has a recognized effect of discriminating against small systems and forcing them to forego economies of scale in generation in order to avoid carrying excessive levels of reserves. We also found that P/N is not entirely irrational as a method of reserve allocation. We have observed that Applicants themselves provided adjustment periods and waivers to integrate certain Applicants into the CAPCO reserve requirement program. The 12-year period should permit new entrants to avoid initial discrimination but to accommodate and adjust to the CAPCO system over some reasonable period of time. Presumably new entrants will be acquiring ownership shares and entitlements during the 12-year period so that adverse consequences of applying the P/N formula will be mitigated.

OFFICE➤						
SURNAME➤						
DATE➤						

(d) New members joining CAPCO pursuant to this provision of relief shall not be entitled to exercise voting rights until such time as the system capability of the joining member equals or exceeds the system capability of the smallest member of CAPCO which enjoys voting rights.*

(5) Applicants shall sell maintenance power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(6) Applicants shall sell emergency power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(7) Applicants shall sell economy energy to requesting entities in the CCCT, when available, on terms and conditions no less favorable than those available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(8) Applicants shall share reserves with any interconnected generation entity in the CCCT upon request. The requesting entity shall have the option of sharing reserves on an equal percentage basis or by use of the CAPCO P/N allocation formula or on any other mutually agreeable basis.

(9) (a) Applicants shall make available to entities in the CCCT access to the Davis-Besse 1, 2, and 3 and the Perry 1 and 2 nuclear units and any other nuclear units for which Applicants or any of them, shall apply for a construction permit or operating license during the next 25 years.

* Our objective is to prevent impediments to the operation and development of an area-wide power pool through the inability of lesser entities to respond timely or to make necessary planning commitments. While we grant new member entities the opportunity to participate in CAPCO it is not our intent to relieve joining entities of responsibilities and obligations necessary to the successful operation of the pool. For those smaller entities which do not wish to assume the broad range of obligations associated with CAPCO membership we have provided for access to bulk power service options which will further their ability to survive and offer competition in the CCCT.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

Such access, at the option of the requesting entity, shall be on an ownership share, or unit participation or contractual pre-purchase of power basis.* Each requesting entity (or collective group of entities) may obtain up to 10 percent of the capacity of the Davis-Besse and Perry Units and 20 percent of future units (subject to the 25-year limitation) except that once any entity or entities have contracted for allocations totaling 10 percent or 20 percent, respectively, no further participation in any given unit need be offered.

(b) Commitments for the Davis-Besse and Perry Units must be made by requesting entities within two years after this decision becomes final and within two years after a license application is filed for future units (subject to the 25-year limitation).

(10) These conditions are intended as minimum conditions and do not preclude Applicants from offering additional bulk power services or coordination options to entities within or without the CCCT. However, Applicants shall not deny bulk power services required by these conditions to non-Applicant entities in the CCCT based upon prior commitments arrived in the CAPCO Memorandum of Understanding or implementing agreements. Preemption of options to heretofore deprived entities shall be regarded as inconsistent with the purpose and intent of these conditions.

The above conditions are to be implemented in a manner consistent with the provisions of the Federal Power Act and all rates, charges or practices in connection therewith are to be subject to the approval of regulatory agencies having jurisdiction over them.

E. The Applicants are subject to the following additional conditions:

(1) The Applicants will qualify the active pumping components to be placed within the manholes of the underdrain system, to operate in the presence of volatile air/fuel mixtures, including methane. In addition, the Applicants will develop and implement operating procedures which will require that all manholes and the gravity discharge pipes of the underdrain system: (a) be monitored for the presence of methane, prior to entry by operating personnel; and (b) be ventilated by portable equipment if the monitoring program cited above indicates this to be necessary.

---

* Requesting entities' election as to the type of access may be affected by provisions of State law relating to dual ownership of generation facilities by municipalities and investor-owned utilities. Such laws may change during the period of applicability of these conditions. Accordingly, we allow requesting entities to be guided by relevant legal and financial considerations in fashioning their requests.

OFFICE➤						
SURNAME➤						
DATE➤						

(2) The Applicants will establish a long term monitoring program to document, interpret and report the performance of the shale foundations. This program will include the provision of settlement monuments on all plant facilities whose settlement or differential settlement could present a hazard to either the safe operation or safe shutdown of the plant.

(3) The Applicants will complete the geologic mapping and photographing of the Chagrin shale under each safety-related building or structure to be founded on shale, prior to placement of any concrete (or other permanent cover) over the founding bedrock. These maps and photographs will be formally submitted to the NRC staff.

(4) The Applicants will install two valves in series, designed to seismic Category I criteria, in the piping system that provides makeup water to both of the cooling tower basins.

(5) The Applicants will submit to the Director of Project Management within 90 days after issuance of this construction permit, a proposed program for research and development of a prompt relief trip system in accordance with the definitions and provisions of Sections 50.2(n) and 50.34(a)(8) of 10 CFR Part 50.

F. The facility is subject to the following conditions for the protection of the environment:

(1) As additional protection, in order to detect effects of the operation of the underdrain system on groundwater levels in excess of those expected, the Applicants will install piezometer arrays to check the drawdown of the water table at distances up to 1000 feet (where possible) in four different directions from the perimeter of the plant.

(2) The Applicants will install a public address system to warn people on the lake within the exclusion area in the event that such a warning were necessary.

(3) An energy dissipater for the major stream sediment control dam (Site No. 1) will be installed below the spillway outlet. This energy dissipater will consist of a riprap lined stilling basin. The bottom of the stilling basin will extend the full width of the spillway. A riprapped apron will be constructed on three sides of the basin. For the minor stream diversion sediment control dam (Site No. 3) and the northwest storm drainage sediment control dam (Site No. 2), a riprapped spillway and metal baffle will be installed. Gravel filter blankets will be provided under all riprap slope protection at these three sediment control dams.

(4) Applicants must improve the analysis of milk samples to obtain a sensitivity of 0.5 pCi/per liter for iodine-131 and shall develop a program to establish the iodine-131 baseline data to take into account the air-goat-milk pathway.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

(5) Applicants shall take all necessary actions, including those summarized in Section 4.5 of the Final Environmental Statement, to avoid unnecessary adverse environmental impacts during construction of the station and associated transmission lines.

(6) Before engaging in a construction activity that may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than evaluated in the Final Environmental Statement, Applicants shall provide written notification to the Director, Division of Site Safety and Environmental Analyses.

(7) If unexpected harmful effects or evidence of irreversible damage are detected during facility construction, Applicants shall provide to the Commission an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.

(8) A control program shall be established by the Applicants to provide for a periodic review of all construction activities to assure that those activities conform to the environmental conditions set forth in this permit.

G. In accordance with the requirements imposed by the October 8, 1976 Order of the United States Court of Appeals for the District of Columbia Circuit in Natural Resources Defense v. Nuclear Regulatory Commission, No. 74-1385 and 74-1586, that the Nuclear Regulatory Commission "shall make any licenses granted between July 21, 1976 and such time when the mandate is issued subject to the outcome of such proceedings herein," the construction permit issued herein shall be subject to the outcome of such proceedings.

4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicants submit to the Commission the complete final safety analysis report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements were satisfied; and (d) the Applicants submit proof of financial protection and execute an indemnity agreement as required by Section 170 of the Act.

OFFICE➤						
SURNAME➤						
DATE➤						

5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by
Roger S. Boyd

Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance:

MAY 3 1977

OFFICE➤						
SURNAME➤						
DATE➤						

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-440 AND 50-441

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL

PERRY NUCLEAR POWER PLANT, UNITS 1 AND 2

NOTICE OF ISSUANCE OF CONSTRUCTION PERMITS

Notice is hereby given that, pursuant to the Initial Decisions dated January 6, 1977 (Antitrust), and April 29, 1977, the Nuclear Regulatory Commission (the Commission) has issued Construction Permits Nos. CPPR-148 and CPPR-149 to The Toledo Edison Company, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company for construction of two boiling water nuclear reactors at the applicants' site in Lake County, Ohio, on the southern shore of Lake Erie, about 35 miles northeast of Cleveland.

The proposed reactors, known as the Perry Nuclear Power Plant, Units 1 and 2 (the facilities), are each designed for a rated power of 3579 megawatts thermal with a net electrical output of 1205 megawatts.

The Initial Decisions are subject to review by an Atomic Safety and Licensing Appeal Board prior to becoming final. Any decision or action taken by an Atomic Safety and Licensing Appeal Board in connection with the Initial Decisions may be reviewed by the Commission.

	LWR 4	LWR 4	LWR 4	AD:LWR	ELD	ELD
	MSERVICE	DLynch	SVarga	DVassallo		JRutberg
	4/29/77	4/29/77	4/ /77	4/3/77	4/ /77	4/29/77
OFFICE➤	EPM	AD:OP	SS&EA	AD:QA	DDPM	DPM
SURNAME➤	RGilbert	VMoore	HDenton	DSkovholt	RDeYoung	RBoyd
DATE➤	5/2/77	5/2/77	5/2/77	4/ /77	5/3/77	4/ /77

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the construction permits. The construction permits include the condition that the construction permit is subject to the outcome of the proceedings in Natural Resources Defense Council v. Nuclear Regulatory Commission (D.C. Circuit, July 21, 1976) Nos. 74-1385 and 74-1586. The application for the construction permits complies with the standards and requirements of the Act and the Commission's rules and regulations.

The construction permits are effective as of their dates of issuance. The earliest date for completion of Unit 1 is April 1, 1981, and the latest date for completion is December 31, 1982. The earliest date for completion of Unit 2 is October 1, 1982, and the latest date for completion is June 30, 1984. The permits shall expire on the latest dates for completion of the facilities.

A copy of (1) the Initial Decisions dated January 6, 1977 (Antitrust), and April 29, 1977; (2) Construction Permits Nos. CPPR-148 and CPPR-149; (3) the report of the Advisory Committee on Reactor Safeguards, dated December 12, 1974, and May 12, 1975; (4) the Office of Nuclear Reactor Regulation's Safety Evaluation Report dated July 1974, and supplements thereto; (5) the Preliminary Safety Analysis Report and amendments thereto; (6) the Applicant's Environmental Report dated June 22, 1973, and supplements thereto; (7) the Draft Environmental Statement dated November 1973; and (8) the Final Environmental Statement dated

OFFICE➤						
SURNAME➤						
DATE➤						

April 1974, are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C., and the Perry Public Library, 3753 Main Street, Perry, Ohio 44081. A copy of the items 2, 4 and 8, may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Dated at Bethesda, Maryland, this 3rd day of May, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by
Steven A. Varga
Steven A. Varga, Chief
Light Water Reactors Branch 4
Division of Project Management

OFFICE➤						
SURNAME➤						
DATE➤						

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-440 AND 50-441

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL

PERRY NUCLEAR POWER PLANT, UNITS 1 AND 2

NOTICE OF ISSUANCE OF CONSTRUCTION PERMITS

Notice is hereby given that, pursuant to the Initial Decisions dated January 6, 1977 (Antitrust), and April 29, 1977, the Nuclear Regulatory Commission (the Commission) has issued Construction Permits Nos. CPPR-148 and CPPR-149 to The Toledo Edison Company, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company for construction of two boiling water nuclear reactors at the applicants' site in Lake County, Ohio, on the southern shore of Lake Erie, about 35 miles northeast of Cleveland.

The proposed reactors, known as the Perry Nuclear Power Plant, Units 1 and 2 (the facilities), are each designed for a rated power of 3579 megawatts thermal with a net electrical output of 1205 megawatts.

The Initial Decisions are subject to review by an Atomic Safety and Licensing Appeal Board prior to becoming final. Any decision or action taken by an Atomic Safety and Licensing Appeal Board in connection with the Initial Decisions may be reviewed by the Commission.

	LWR 4	LWR 4	LWR 4	AD:LWR	ELD	ELD
	MSERVICE	DLynch	SVarga	DVassallo		JRutberg
	4/29/77	4/ /77	4/ /77	4/ /77	4/ /77	4/ /77
OFFICE ➤	EPM	AD:DP	SG&EA	AD:QA	DDPM	DPM
SURNAME ➤	RGilbert RAG	VMoore	HDenton	DSkovholt	RDeyoung	RBoyd
DATE ➤	5/2/77	4/ /77	4/ /77	4/ /77	4/ /77	4/ /77

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the construction permits. The construction permits include the condition that the construction permit is subject to the outcome of the proceedings in Natural Resources Defense Council v. Nuclear Regulatory Commission (D.C. Circuit, July 21, 1976) Nos. 74-1385 and 74-1586. The application for the construction permits complies with the standards and requirements of the Act and the Commission's rules and regulations.

The construction permits are effective as of their dates of issuance. The earliest date for completion of Unit 1 is April 1, 1981, and the latest date for completion is December 31, 1982. The earliest date for completion of Unit 2 is October 1, 1982, and the latest date for completion is June 30, 1984. The permits shall expire on the latest dates for completion of the facilities.

A copy of (1) the Initial Decisions dated January 6, 1977 (Antitrust), and April 29, 1977; (2) Construction Permits Nos. CPPR-148 and CPPR-149; (3) the report of the Advisory Committee on Reactor Safeguards, dated December 12, 1974, and May 12, 1975; (4) the Office of Nuclear Reactor Regulation's Safety Evaluation Report dated July 1974, and supplements thereto; (5) the Preliminary Safety Analysis Report and amendments thereto; (6) the Applicant's Environmental Report dated June 22, 1973, and supplements thereto; (7) the Draft Environmental Statement dated November 1973; and (8) the Final Environmental Statement dated

OFFICE➤						
SURNAME➤						
DATE➤						

April 1974, are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C., and the Perry Public Library, 3753 Main Street, Perry, Ohio 44081. A copy of the items 2, 4 and 8, may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Dated at Bethesda, Maryland, this 31 day of ~~April~~ May, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by
Steven A. Varga

Steven A. Varga, Chief
Light Water Reactors Branch 4
Division of Project Management

OFFICE ➤						
SURNAME ➤						
DATE ➤						

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

THE TOLEDO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT 1

CONSTRUCTION PERMIT

Construction Permit No. CPPR-148

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

   A. The application for a construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission; there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission; and all required notifications to other agencies or bodies have been duly made;

   B. The Toledo Edison Company, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the Applicants) have described the proposed design of the Perry Nuclear Power Plant, Unit 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and have identified the major features or components incorporated therein for the protection of the health and safety of the public;

   C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

   D. Safety features or components, if any, which require research and development have been described, with one exception as described in E. below, by the Applicants and the Applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

E. The Applicants have not described the research and development program for the prompt relief trip system and, accordingly, this construction permit is conditioned upon Applicants submitting a method of demonstrating the operational adequacy of a prompt relief trip system in accordance with paragraph 3.E(5);

F. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

G. The Cleveland Electric Illuminating Company is technically qualified to design and construct the proposed facility;

H. The Applicants are financially qualified to design and construct the proposed facility;

I. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

J. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit, subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 50) of the Commission's regulations and all applicable requirements have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," the Nuclear Regulatory Commission (the Commission) hereby issues a construction permit to the Applicants for a utilization facility designed to operate at 3579 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicants and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Perry Nuclear Power Plant, Unit 1, will be located on the Applicants' site in Lake County, Ohio, on the southern shore of Lake Erie, about 35 miles northeast of Cleveland.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55, of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:

A. The earliest date for the completion of the facility is April 1, 1981, and the latest date for completion is December 31, 1982.

B. The facility shall be constructed and located at the site as described in the application, in Lake County, Ohio.

C. This construction permit authorizes the Applicants to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.

D. The Applicants are subject to the following antitrust conditions:

The following "definitions" and "licensing conditions" were ordered by the Atomic Safety and Licensing Board presiding over the combined Davis-Besse 1, 2, 3 and Perry 1 and 2 antitrust hearings, and are in the words of the Licensing Board. The word "Applicants" refers to the five companies listed in paragraph 1.B. above.

Definitions

Entity shall mean any electric generation and/or distribution system or municipality or cooperative with a statutory right or privilege to engage in either of these functions.

Wheeling shall mean transportation of electricity by a utility over its lines for another utility, including the receipt from and delivery to another system of like amounts but not necessarily the same energy. Federal Power Commission, The 1970 National Power Survey, Part 1, p. I-24-8.

Licensing Conditions

(1) Applicants shall not condition the sale or exchange of electric energy or the grant or sale of bulk power services upon the condition that any other entity:

(a) enter into any agreement or understanding restricting the use of or alienation of such energy or services to any customers or territories;

(b) enter into any agreement or understanding requiring the receiving entity to give up any other bulk power service options or alternatives or to deny itself any market opportunities;

(c) withdraw any petition to intervene or forego participation in any proceeding before the Nuclear Regulatory Commission or refrain from instigating or prosecuting any antitrust action in any other forum.

(2) Applicants, and each of them, shall offer interconnections upon reasonable terms and conditions at the request of any other electric entity(ies) in the CCCT (Combined CAPCO Company Territories), such interconnection to be available (with due regard for any necessary and applicable safety procedures) for operation in a closed-switch synchronous operating mode if requested by the interconnecting entity(ies). Ownership of transmission lines and switching stations associated with such interconnection shall remain in the hands of the party funding the interconnection subject however to any necessary safety procedures relating to disconnection facilities at the point of power delivery. Such limitations on ownership shall be the least necessary to achieve reasonable safety practices and shall not serve to deprive purchasing entities of a means to effect additional bulk service options.

(3) Applicants shall engage in wheeling for and at the request of other entities in the CCCT:

(a) of electric energy from delivery points of Applicants to the entity(ies); and,

(b) of power generated by or available to the other entity, as a result of its ownership or entitlements* in generating facilities, to delivery points of Applicants designated by the other entity.

Such wheeling services shall be available with respect to any unused capacity on the transmission lines of Applicants, the use of which will not jeopardize Applicants' system. In the event Applicants must reduce wheeling services to other entities due to lack of capacity, such reduction shall not be effected until reductions of a least 5 percent have been made in transmission capacity allocations to other Applicants in these proceedings and thereafter shall be made in proportion to reductions imposed upon other Applicants to this proceeding.**

---

* "entitlement" includes but is not limited to power made available to an entity pursuant to an exchange agreement.

** The objective of this requirement is to prevent the pre-emption of unused capacity on the lines of one Applicant by other Applicants or by entities the transmitting Applicant deems noncompetitive. Competitive entities are to be allowed opportunity to develop bulk power services options even if this results in re-allocation of CAPCO (Central Area Power Coordination Group) transmission channels. This relief is required in order to avoid prolongation of the effects of Applicants' illegally sustained dominance.

Applicants shall make reasonable provisions for disclosed transmission requirements of other entities in the CCCT in planning future transmission either individually or within the CAPCO grouping. By "disclosed" is meant the giving of reasonable advance notification of future requirements by entities utilizing wheeling services to be made available by Applicants.

(4) (a) Applicants shall make available membership in CAPCO to any entity in the CCCT with a system capability of 10 MW or greater;

(b) A group of entities with an aggregate system capability of 10 MW or greater may obtain a single membership in CAPCO on a collective basis;*

(c) Entities applying for membership in CAPCO pursuant to License Condition 4 shall become members subject to the terms and conditions of the CAPCO Memorandum of Understanding of September 14, 1967, and its implementing agreements; except that new members may elect to participate on an equal percentage of reserve basis rather than a P/N allocation formula for a period of twelve years from date of entrance.** Following the twelfth year of entrance, new members shall be expected to adhere to such allocation methods as are then employed by CAPCO (subject to equal opportunity for waiver or special consideration granted to original CAPCO members which then are in effect).

---

* e.g., Wholesale Customer of Ohio Edison (WCOE).

** The selection of the 12-year period reflects our determination that an adjustment period is necessary since the P/N formula has a recognized effect of discriminating against small systems and forcing them to forego economies of scale in generation in order to avoid carrying excessive levels of reserves. We also found that P/N is not entirely irrational as a method of reserve allocation. We have observed that Applicants themselves provided adjustment periods and waivers to integrate certain Applicants into the CAPCO reserve requirement program. The 12-year period should permit new entrants to avoid initial discrimination but to accommodate and adjust to the CAPCO system over some reasonable period of time. Presumably new entrants will be acquiring ownership shares and entitlements during the 12-year period so that adverse consequences of applying the P/N formula will be mitigated.

(d) New members joining CAPCO pursuant to this provision of relief shall not be entitled to exercise voting rights until such time as the system capability of the joining member equals or exceeds the system capability of the smallest member of CAPCO which enjoys voting rights.*

(5) Applicants shall sell maintenance power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(6) Applicants shall sell emergency power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(7) Applicants shall sell economy energy to requesting entities in the CCCT, when available, on terms and conditions no less favorable than those available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(8) Applicants shall share reserves with any interconnected generation entity in the CCCT upon request. The requesting entity shall have the option of sharing reserves on an equal percentage basis or by use of the CAPCO P/N allocation formula or on any other mutually agreeable basis.

(9) (a) Applicants shall make available to entities in the CCCT access to the Davis-Besse 1, 2, and 3 and the Perry 1 and 2 nuclear units and any other nuclear units for which Applicants or any of them, shall apply for a construction permit or operating license during the next 25 years.

---

* Our objective is to prevent impediments to the operation and development of an area-wide power pool through the inability of lesser entities to respond timely or to make necessary planning commitments. While we grant new member entities the opportunity to participate in CAPCO it is not our intent to relieve joining entities of responsibilities and obligations necessary to the successful operation of the pool. For those smaller entities which do not wish to assume the broad range of obligations associated with CAPCO membership we have provided for access to bulk power service options which will further their ability to survive and offer competition in the CCCT.

Such access, at the option of the requesting entity, shall be on an ownership share, or unit participation or contractual pre-purchase of power basis.* Each requesting entity (or collective group of entities) may obtain up to 10 percent of the capacity of the Davis-Besse and Perry Units and 20 percent of future units (subject to the 25-year limitation) except that once any entity or entities have contracted for allocations totaling 10 percent or 20 percent, respectively, no further participation in any given unit need be offered.

(b) Commitments for the Davis-Besse and Perry Units must be made by requesting entities within two years after this decision becomes final and within two years after a license application is filed for future units (subject to the 25-year limitation).

(10) These conditions are intended as minimum conditions and do not preclude Applicants from offering additional bulk power services or coordination options to entities within or without the CCCT. However, Applicants shall not deny bulk power services required by these conditions to non-Applicant entities in the CCCT based upon prior commitments arrived in the CAPCO Memorandum of Understanding or implementing agreements. Preemption of options to heretofore deprived entities shall be regarded as inconsistent with the purpose and intent of these conditions.

The above conditions are to be implemented in a manner consistent with the provisions of the Federal Power Act and all rates, charges or practices in connection therewith are to be subject to the approval of regulatory agencies having jurisdiction over them.

E. The Applicants are subject to the following additional conditions:

(1) The Applicants will qualify the active pumping components to be placed within the manholes of the underdrain system, to operate in the presence of volatile air/fuel mixtures, including methane. In addition, the Applicants will develop and implement operating procedures which will require that all manholes and the gravity discharge pipes of the underdrain system: (a) be monitored for the presence of methane, prior to entry by operating personnel; and (b) be ventilated by portable equipment if the monitoring program cited above indicates this to be necessary.

---

* Requesting entities' election as to the type of access may be affected by provisions of State law relating to dual ownership of generation facilities by municipalities and investor-owned utilities. Such laws may change during the period of applicability of these conditions. Accordingly, we allow requesting entities to be guided by relevant legal and financial considerations in fashioning their requests.

(2) The Applicants will establish a long term monitoring program to document, interpret and report the performance of the shale foundations. This program will include the provision of settlement monuments on all plant facilities whose settlement or differential settlement could present a hazard to either the safe operation or safe shutdown of the plant.

(3) The Applicants will complete the geologic mapping and photographing of the Chagrin shale under each safety-related building or structure to be founded on shale, prior to placement of any concrete (or other permanent cover) over the founding bedrock. These maps and photographs will be formally submitted to the NRC staff.

(4) The Applicants will install two valves in series, designed to seismic Category I criteria, in the piping system that provides makeup water to both of the cooling tower basins.

(5) The Applicants will submit to the Director of Project Management within 90 days after issuance of this construction permit, a proposed program for research and development of a prompt relief trip system in accordance with the definitions and provisions of Sections 50.2(n) and 50.34(a)(8) of 10 CFR Part 50.

F. The facility is subject to the following conditions for the protection of the environment:

(1) As additional protection, in order to detect effects of the operation of the underdrain system on groundwater levels in excess of those expected, the Applicants will install piezometer arrays to check the drawdown of the water table at distances up to 1000 feet (where possible) in four different directions from the perimeter of the plant.

(2) The Applicants will install a public address system to warn people on the lake within the exclusion area in the event that such a warning were necessary.

(3) An energy dissipater for the major stream sediment control dam (Site No. 1) will be installed below the spillway outlet. This energy dissipater will consist of a riprap lined stilling basin. The bottom of the stilling basin will extend the full width of the spillway. A riprapped apron will be constructed on three sides of the basin. For the minor stream diversion sediment control dam (Site No. 3) and the northwest storm drainage sediment control dam (Site No. 2), a riprapped spillway and metal baffle will be installed. Gravel filter blankets will be provided under all riprap slope protection at these three sediment control dams.

(4) Applicants must improve the analysis of milk samples to obtain a sensitivity of 0.5 pCi/per liter for iodine-131 and shall develop a program to establish the iodine-131 baseline data to take into account the air-goat-milk pathway.

(5) Applicants shall take all necessary actions, including those summarized in Section 4.5 of the Final Environmental Statement, to avoid unnecessary adverse environmental impacts during construction of the station and associated transmission lines.

(6) Before engaging in a construction activity that may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than evaluated in the Final Environmental Statement, Applicants shall provide written notification to the Director, Division of Site Safety and Environmental Analyses.

(7) If unexpected harmful effects or evidence of irreversible damage are detected during facility construction, Applicants shall provide to the Commission an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.

(8) A control program shall be established by the Applicants to provide for a periodic review of all construction activities to assure that those activities conform to the environmental conditions set forth in this permit.

G. In accordance with the requirements imposed by the October 8, 1976 Order of the United States Court of Appeals for the District of Columbia Circuit in Natural Resources Defense v. Nuclear Regulatory Commission, No. 74-1385 and 74-1586, that the Nuclear Regulatory Commission "shall make any licenses granted between July 21, 1976 and such time when the mandate is issued subject to the outcome of such proceedings herein," the construction permit issued herein shall be subject to the outcome of such proceedings.

4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicants submit to the Commission the complete final safety analysis report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements were satisfied; and (d) the Applicants submit proof of financial protection and execute an indemnity agreement as required by Section 170 of the Act.

5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

~~FOR THE~~ NUCLEAR REGULATORY COMMISSION

Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance:

MAY 3 1977

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

THE TOLEDO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-441

PERRY NUCLEAR POWER PLANT, UNIT 2

CONSTRUCTION PERMIT

Construction Permit No. CPPR-149

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

   A. The application for a construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission; there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission; and all required notifications to other agencies or bodies have been duly made;

   B. The Toledo Edison Company, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the Applicants) have described the proposed design of the Perry Nuclear Power Plant, Unit 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and have identified the major features or components incorporated therein for the protection of the health and safety of the public;

   C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report;

   D. Safety features or components, if any, which require research and development have been described, with one exception as described in E. below, by the Applicants and the Applicants have identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;

E. The Applicants have not described the research and development program for the prompt relief trip system and, accordingly, this construction permit is conditioned upon Applicants submitting a method of demonstrating the operational adequacy of a prompt relief trip system in accordance with paragraph 3.E(5);

F. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

G. The Cleveland Electric Illuminating Company is technically qualified to design and construct the proposed facility;

H. The Applicants are financially qualified to design and construct the proposed facility;

I. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and

J. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit, subject to the conditions for protection of the environment set forth herein, is in accordance with 10 CFR Part 51 (formerly Appendix D to 10 CFR Part 50) of the Commission's regulations and all applicable requirements have been satisfied.

2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," the Nuclear Regulatory Commission (the Commission) hereby issues a construction permit to the Applicants for a utilization facility designed to operate at 3579 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicants and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Perry Nuclear Power Plant, Unit 2, will be located on the Applicants' site in Lake County, Ohio, on the southern shore of Lake Erie, about 35 miles northeast of Cleveland.

3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55, of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:

A. The earliest date for the completion of the facility is October 1, 1982, and the latest date for completion is June 30, 1984.

B. The facility shall be constructed and located at the site as described in the application, in Lake County, Ohio.

C. This construction permit authorizes the Applicants to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.

D. The Applicants are subject to the following antitrust conditions:

The following "definitions" and "licensing conditions" were ordered by the Atomic Safety and Licensing Board presiding over the combined Davis-Besse 1, 2, 3 and Perry 1 and 2 antitrust hearings, and are in the words of the Licensing Board. The word "Applicants" refers to the five companies listed in paragraph 1.B. above.

Definitions

Entity shall mean any electric generation and/or distribution system or municipality or cooperative with a statutory right or privilege to engage in either of these functions.

Wheeling shall mean transportation of electricity by a utility over its lines for another utility, including the receipt from and delivery to another system of like amounts but not necessarily the same energy. Federal Power Commission, The 1970 National Power Survey, Part 1, p. I-24-8.

Licensing Conditions

(1) Applicants shall not condition the sale or exchange of electric energy or the grant or sale of bulk power services upon the condition that any other entity:

(a) enter into any agreement or understanding restricting the use of or alienation of such energy or services to any customers or territories;

(b) enter into any agreement or understanding requiring the receiving entity to give up any other bulk power service options or alternatives or to deny itself any market opportunities;

(c) withdraw any petition to intervene or forego participation in any proceeding before the Nuclear Regulatory Commission or refrain from instigating or prosecuting any antitrust action in any other forum.

(2) Applicants, and each of them, shall offer interconnections upon reasonable terms and conditions at the request of any other electric entity(ies) in the CCCT (Combined CAPCO Company Territories), such interconnection to be available (with due regard for any necessary and applicable safety procedures) for operation in a closed-switch synchronous operating mode if requested by the interconnecting entity(ies). Ownership of transmission lines and switching stations associated with such interconnection shall remain in the hands of the party funding the interconnection subject however to any necessary safety procedures relating to disconnection facilities at the point of power delivery. Such limitations on ownership shall be the least necessary to achieve reasonable safety practices and shall not serve to deprive purchasing entities of a means to effect additional bulk service options.

(3) Applicants shall engage in wheeling for and at the request of other entities in the CCCT:

(a) of electric energy from delivery points of Applicants to the entity(ies); and,

(b) of power generated by or available to the other entity, as a result of its ownership or entitlements* in generating facilities, to delivery points of Applicants designated by the other entity.

Such wheeling services shall be available with respect to any unused capacity on the transmission lines of Applicants, the use of which will not jeopardize Applicants' system. In the event Applicants must reduce wheeling services to other entities due to lack of capacity, such reduction shall not be effected until reductions of a least 5 percent have been made in transmission capacity allocations to other Applicants in these proceedings and thereafter shall be made in proportion to reductions imposed upon other Applicants to this proceeding.**

---

* "entitlement" includes but is not limited to power made available to an entity pursuant to an exchange agreement.

** The objective of this requirement is to prevent the pre-emption of unused capacity on the lines of one Applicant by other Applicants or by entities the transmitting Applicant deems noncompetitive. Competitive entities are to be allowed opportunity to develop bulk power services options even if this results in re-allocation of CAPCO (Central Area Power Coordination Group) transmission channels. This relief is required in order to avoid prolongation of the effects of Applicants' illegally sustained dominance.

Applicants shall make reasonable provisions for disclosed transmission requirements of other entities in the CCCT in planning future transmission either individually or within the CAPCO grouping. By "disclosed" is meant the giving of reasonable advance notification of future requirements by entities utilizing wheeling services to be made available by Applicants.

(4) (a) Applicants shall make available membership in CAPCO to any entity in the CCCT with a system capability of 10 MW or greater;

(b) A group of entities with an aggregate system capability of 10 MW or greater may obtain a single membership in CAPCO on a collective basis;*

(c) Entities applying for membership in CAPCO pursuant to License Condition 4 shall become members subject to the terms and conditions of the CAPCO Memorandum of Understanding of September 14, 1967, and its implementing agreements; except that new members may elect to participate on an equal percentage of reserve basis rather than a P/N allocation formula for a period of twelve years from date of entrance.** Following the twelfth year of entrance, new members shall be expected to adhere to such allocation methods as are then employed by CAPCO (subject to equal opportunity for waiver or special consideration granted to original CAPCO members which then are in effect).

---

* e.g., Wholesale Customer of Ohio Edison (WCOE).

** The selection of the 12-year period reflects our determination that an adjustment period is necessary since the P/N formula has a recognized effect of discriminating against small systems and forcing them to forego economies of scale in generation in order to avoid carrying excessive levels of reserves. We also found that P/N is not entirely irrational as a method of reserve allocation. We have observed that Applicants themselves provided adjustment periods and waivers to integrate certain Applicants into the CAPCO reserve requirement program. The 12-year period should permit new entrants to avoid initial discrimination but to accommodate and adjust to the CAPCO system over some reasonable period of time. Presumably new entrants will be acquiring ownership shares and entitlements during the 12-year period so that adverse consequences of applying the P/N formula will be mitigated.

(d) New members joining CAPCO pursuant to this provision of relief shall not be entitled to exercise voting rights until such time as the system capability of the joining member equals or exceeds the system capability of the smallest member of CAPCO which enjoys voting rights.*

(5) Applicants shall sell maintenance power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(6) Applicants shall sell emergency power to requesting entities in the CCCT upon terms and conditions no less favorable than those Applicants make available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(7) Applicants shall sell economy energy to requesting entities in the CCCT, when available, on terms and conditions no less favorable than those available: (a) to each other either pursuant to the CAPCO agreements or pursuant to bilateral contract; or (b) to non-Applicant entities outside the CCCT.

(8) Applicants shall share reserves with any interconnected generation entity in the CCCT upon request. The requesting entity shall have the option of sharing reserves on an equal percentage basis or by use of the CAPCO P/N allocation formula or on any other mutually agreeable basis.

(9) (a) Applicants shall make available to entities in the CCCT access to the Davis-Besse 1, 2, and 3 and the Perry 1 and 2 nuclear units and any other nuclear units for which Applicants or any of them, shall apply for a construction permit or operating license during the next 25 years.

---

* Our objective is to prevent impediments to the operation and development of an area-wide power pool through the inability of lesser entities to respond timely or to make necessary planning commitments. While we grant new member entities the opportunity to participate in CAPCO it is not our intent to relieve joining entities of responsibilities and obligations necessary to the successful operation of the pool. For those smaller entities which do not wish to assume the broad range of obligations associated with CAPCO membership we have provided for access to bulk power service options which will further their ability to survive and offer competition in the CCCT.

Such access, at the option of the requesting entity, shall be on an ownership share, or unit participation or contractual pre-purchase of power basis.* Each requesting entity (or collective group of entities) may obtain up to 10 percent of the capacity of the Davis-Besse and Perry Units and 20 percent of future units (subject to the 25-year limitation) except that once any entity or entities have contracted for allocations totaling 10 percent or 20 percent, respectively, no further participation in any given unit need be offered.

(b) Commitments for the Davis-Besse and Perry Units must be made by requesting entities within two years after this decision becomes final and within two years after a license application is filed for future units (subject to the 25-year limitation).

(10) These conditions are intended as minimum conditions and do not preclude Applicants from offering additional bulk power services or coordination options to entities within or without the CCCT. However, Applicants shall not deny bulk power services required by these conditions to non-Applicant entities in the CCCT based upon prior commitments arrived in the CAPCO Memorandum of Understanding or implementing agreements. Preemption of options to heretofore deprived entities shall be regarded as inconsistent with the purpose and intent of these conditions.

The above conditions are to be implemented in a manner consistent with the provisions of the Federal Power Act and all rates, charges or practices in connection therewith are to be subject to the approval of regulatory agencies having jurisdiction over them.

E. The Applicants are subject to the following additional conditions:

(1) The Applicants will qualify the active pumping components to be placed within the manholes of the underdrain system, to operate in the presence of volatile air/fuel mixtures, including methane. In addition, the Applicants will develop and implement operating procedures which will require that all manholes and the gravity discharge pipes of the underdrain system: (a) be monitored for the presence of methane, prior to entry by operating personnel; and (b) be ventilated by portable equipment if the monitoring program cited above indicates this to be necessary.

---

* Requesting entities' election as to the type of access may be affected by provisions of State law relating to dual ownership of generation facilities by municipalities and investor-owned utilities. Such laws may change during the period of applicability of these conditions. Accordingly, we allow requesting entities to be guided by relevant legal and financial considerations in fashioning their requests.

(2) The Applicants will establish a long term monitoring program to document, interpret and report the performance of the shale foundations. This program will include the provision of settlement monuments on all plant facilities whose settlement or differential settlement could present a hazard to either the safe operation or safe shutdown of the plant.

(3) The Applicants will complete the geologic mapping and photographing of the Chagrin shale under each safety-related building or structure to be founded on shale, prior to placement of any concrete (or other permanent cover) over the founding bedrock. These maps and photographs will be formally submitted to the NRC staff.

(4) The Applicants will install two valves in series, designed to seismic Category I criteria, in the piping system that provides makeup water to both of the cooling tower basins.

(5) The Applicants will submit to the Director of Project Management within 90 days after issuance of this construction permit, a proposed program for research and development of a prompt relief trip system in accordance with the definitions and provisions of Sections 50.2(n) and 50.34(a)(8) of 10 CFR Part 50.

F. The facility is subject to the following conditions for the protection of the environment:

(1) As additional protection, in order to detect effects of the operation of the underdrain system on groundwater levels in excess of those expected, the Applicants will install piezometer arrays to check the drawdown of the water table at distances up to 1000 feet (where possible) in four different directions from the perimeter of the plant.

(2) The Applicants will install a public address system to warn people on the lake within the exclusion area in the event that such a warning were necessary.

(3) An energy dissipater for the major stream sediment control dam (Site No. 1) will be installed below the spillway outlet. This energy dissipater will consist of a riprap lined stilling basin. The bottom of the stilling basin will extend the full width of the spillway. A riprapped apron will be constructed on three sides of the basin. For the minor stream diversion sediment control dam (Site No. 3) and the northwest storm drainage sediment control dam (Site No. 2), a riprapped spillway and metal baffle will be installed. Gravel filter blankets will be provided under all riprap slope protection at these three sediment control dams.

(4) Applicants must improve the analysis of milk samples to obtain a sensitivity of 0.5 pCi/per liter for iodine-131 and shall develop a program to establish the iodine-131 baseline data to take into account the air-goat-milk pathway.

(5) Applicants shall take all necessary actions, including those summarized in Section 4.5 of the Final Environmental Statement, to avoid unnecessary adverse environmental impacts during construction of the station and associated transmission lines.

(6) Before engaging in a construction activity that may result in a significant adverse environmental impact that was not evaluated or that is significantly greater than evaluated in the Final Environmental Statement, Applicants shall provide written notification to the Director, Division of Site Safety and Environmental Analyses.

(7) If unexpected harmful effects or evidence of irreversible damage are detected during facility construction, Applicants shall provide to the Commission an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.

(8) A control program shall be established by the Applicants to provide for a periodic review of all construction activities to assure that those activities conform to the environmental conditions set forth in this permit.

G. In accordance with the requirements imposed by the October 8, 1976 Order of the United States Court of Appeals for the District of Columbia Circuit in Natural Resources Defense v. Nuclear Regulatory Commission, No. 74-1385 and 74-1586, that the Nuclear Regulatory Commission "shall make any licenses granted between July 21, 1976 and such time when the mandate is issued subject to the outcome of such proceedings herein," the construction permit issued herein shall be subject to the outcome of such proceedings.

4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicants submit to the Commission the complete final safety analysis report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements were satisfied; and (d) the Applicants submit proof of financial protection and execute an indemnity agreement as required by Section 170 of the Act.

5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE NUCLEAR REGULATORY COMMISSION

Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance:

MAY 3 1977

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-440 AND 50-441

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL

PERRY NUCLEAR POWER PLANT, UNITS 1 AND 2

NOTICE OF ISSUANCE OF CONSTRUCTION PERMITS

Notice is hereby given that, pursuant to the Initial Decisions dated January 6, 1977 (Antitrust), and April 29, 1977, the Nuclear Regulatory Commission (the Commission) has issued Construction Permits Nos. CPPR-148 and CPPR-149 to The Toledo Edison Company, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company for construction of two boiling water nuclear reactors at the applicants' site in Lake County, Ohio, on the southern shore of Lake Erie, about 35 miles northeast of Cleveland.

The proposed reactors, known as the Perry Nuclear Power Plant, Units 1 and 2 (the facilities), are each designed for a rated power of 3579 megawatts thermal with a net electrical output of 1205 megawatts.

The Initial Decisions are subject to review by an Atomic Safety and Licensing Appeal Board prior to becoming final. Any decision or action taken by an Atomic Safety and Licensing Appeal Board in connection with the Initial Decisions may be reviewed by the Commission.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the construction permits. The construction permits include the condition that the construction permit is subject to the outcome of the proceedings in Natural Resources Defense Council v. Nuclear Regulatory Commission (D.C. Circuit, July 21, 1976) Nos. 74-1385 and 74-1586. The application for the construction permits complies with the standards and requirements of the Act and the Commission's rules and regulations.

The construction permits are effective as of their dates of issuance. The earliest date for completion of Unit 1 is April 1, 1981, and the latest date for completion is December 31, 1982. The earliest date for completion of Unit 2 is October 1, 1982, and the latest date for completion is June 30, 1984. The permits shall expire on the latest dates for completion of the facilities.

A copy of (1) the Initial Decisions dated January 6, 1977 (Antitrust), and April 29, 1977; (2) Construction Permits Nos. CPPR-148 and CPPR-149; (3) the report of the Advisory Committee on Reactor Safeguards, dated December 12, 1974, and May 12, 1975; (4) the Office of Nuclear Reactor Regulation's Safety Evaluation Report dated July 1974, and supplements thereto; (5) the Preliminary Safety Analysis Report and amendments thereto; (6) the Applicant's Environmental Report dated June 22, 1973, and supplements thereto; (7) the Draft Environmental Statement dated November 1973; and (8) the Final Environmental Statement dated

April 1974, are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C., and the Perry Public Library, 3753 Main Street, Perry, Ohio 44081. A copy of the items 2, 4 and 8, may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Dated at Bethesda, Maryland, this 3rd day of May, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief
Light Water Reactors Branch 4
Division of Project Management