

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

33 FERC 162, 182

Independence County, Arkansas)

Project No. 4660-001

ORDER ISSUING LICENSE (MAJOR)

(Issued November 8, 1985)

Independence County, Arkansas, (Applicant or Licensee) filed, on September 28, 1983, an application for license under Part I of the Federal Power Act (Act) to construct, operate, and maintain the White River Lock and Dam No. 2 Hydroelectric Project No. 4660. The project is located on the White River, a navigable waterway of the United States in Independence County, Arkansas. White River Lock and Dam No. 2 was built by the U.S. Army Corps of Engineers (Corps) in 1905 for navigational purposes. In 1952 the Corps navigation project was determined to be not economical, and the White River Lock and Dam No. 2 was sold to Arkansas Light and Power Company, the present owner.

Notice of the application has been published and comments have been received from interested Federal and State agencies. No protests or motions to intervene were received, and none of the agencies object to issuance of the license. The significant concerns of the commenting agencies are discussed below.

The Proposed Project

The proposed project would consist of: (1) the existing White River Lock and Dam No. 2, an approximately 658-foot-long and 29-foot-high concrete and timber crib structure with an integral navigation lock, 36 feet wide and 175 feet long, located on the right side of the dam; (2) a reservoir with a surface area of approximately 1,072 acres and a gross storage capacity of approximately 8,581 acre-feet; (3) a new multi-level intake flume, utilizing the existing defunct navigation lock; (4) a new powerhouse containing 3 generating units with a total capacity of 7,080 kW; (5) an open flume tailrace, approximately 120 feet long; (6) a 13.8 kV transmission line, approximately 6 1/2 miles long; and (7) appurtenant facilities.

A more detailed project description is contained in ordering paragraph (B).

Safety and Adequacy

Based on prelicense inspections made by Commission Regional Office personnel in February and March, 1984, the hazard potential of the project was classified as low. The inspections did not reveal any significant problems or deficiencies. The proposed project structures have a low hazard potential and will be safe and adequate if constructed in accordance with sound engineering practices.

The Corps, by letter dated April 13, 1984, commented that the powerhouse would be inundated by lesser magnitude floods than the 100-year flood and would restrict the cross section, thereby increasing the 100-year flood water elevation. The Corps stated that it does not have the detailed daily river level fluctuation data necessary to determine the new 100-year-flood river stage and, therefore, hydraulic model studies may be necessary for the final design. The Applicant has agreed to conduct further hydrologic and hydraulic studies as the Corps recommended.

The proposed design will be safe and adequate after refinement and modification of the design based on further geotechnical investigations and hydraulic studies.

ENVIRONMENTAL CONSIDERATIONS

The proposed project will have no substantive direct or indirect effects on vegetation, wildlife, and visual resources.

A. Erosion and Sediment Control

Minor erosion and sedimentation will result from soil and riverbed disturbing activities and disposal of excavated spoils during construction of the intake, powerhouse, tailrace, transmission line, and recreational facilities. Suitable design and construction techniques are available which, if utilized in conjunction with the Applicant's proposed bank stabilization and temporary cofferdam, will minimize project related erosion and sedimentation. Article 35 requires the Licensee to consult with the U.S. Army Corps of Engineers and appropriate resource agencies in preparing and implementing a detailed project erosion and sediment control plan.

B. Project Operation

The proposed multi-level intake will withdraw water from depths ranging from 5 to 27 feet below the surface of the 29-foot-deep impoundment. The U.S. Fish and Wildlife Service (FWS) states that the reach of the White River on which the project will be located is a transition zone between the coldwater fishery of the upper White River and the warmwater fishery of the lower White River. Although a diverse warmwater fishery exists in this river segment, FWS notes that coldwater discharges from the deep impoundments at the upstream Bull Shoals and Norfolk projects reduce downstream water temperatures to levels which are not optimal for supporting a warmwater fishery. FWS is concerned that the withdrawal of cool water from the reservoir at Lock and Dam No. 2 during operation of the proposed project would further reduce the existing temperatures downstream. FWS, therefore, recommends that the Applicant provide water temperature data to FWS and the Arkansas Game and Fish Commission (AGF) to ensure that project operation does not substantially modify existing thermal conditions.

The Applicant disagrees with the FWS's contention that project operation will substantially modify the existing thermal conditions in the White River downstream of the project. The Applicant states that the rapid turnover rate of the impoundment (less than 1 day), in conjunction with the proposed run-of-river mode of operation and multi-level intake will prevent substantial modification of downstream thermal conditions. The Applicant further states that operation of the Bull Shoals and Norfolk projects causes greater impact on temperatures in the White River than would the operation of the proposed project. The Applicant recognizes that the White River is a transition zone and does not plan to substantially alter existing temperature regimes.

Maintenance of existing conditions downstream of the project is necessary to preserve the transition zone characteristics of the White River. The transition zone provides habitat in which gradual adjustment to varying thermal conditions protects fish resources from thermal shock that would occur when fish acclimatized to the warmer water move into reaches of the White River that receive cold discharges from the large upstream impoundments at Bull Shoals and Norfolk. Similarly, fish inhabiting the White River in the vicinity of these impoundments would be acclimatized to colder temperatures and would gradually adjust physiologically to warmer temperatures as fish swim downstream.

Maintenance of existing thermal conditions is essential for protecting and enhancing fish resources in the project vicinity. The proposed run-of-river operation, in conjunction with the mixing of thermally-stratified layers, should maintain the existing thermal characteristics of the White River downstream of the powerhouse. Article 36 requires the Licensee to operate the proposed project in the run-of-river mode. To monitor the impacts of the proposed operational mode and to assess any changes in water temperature or dissolved oxygen (DO) levels due to the diversion of water through the turbines, the Applicant shall install water quality monitoring equipment downstream of the powerhouse. Article 37 requires the Licensee to monitor water temperature and DO to ensure maintenance of state water quality standards.

Recreation and Other Land and Water Uses

The Arkansas Department of Parks and Tourism (ADPT) recommends the provision of public access and canoe portage facilities in the vicinity of the lock and dam. The ADPT concludes that the project will only have minor negative impacts upon recreation and will be limited to the construction phase only.

The Applicant acknowledges the recreational values of the White River, especially for fishing, swimming, and boating. As a mitigative measure, the Applicant proposes in its Report on Recreation and Other Land and Water Use (Report) to install additional boat portage and

other recreational facilities at the site in order to compensate for any negative impacts the project may impose on the recreational value of the area. The Applicant contends that these facilities will encourage a greater utilization of the impoundment and river by recreationists.

Applicant's proposed recreational development will provide for the existing recreational needs of the project. All recreational facilities will be installed during project construction and will be completed prior to project operation. The Report is approved.

Cultural Resources

White River Lock and Dam No. 2 is potentially eligible for listing in the National Register of Historic Places. Portions of the lock structure will be removed during project construction. No other cultural resources would be affected. The Arkansas State Historic Preservation Officer recommended that the portions of the lock structure that will be removed be recorded prior to construction according to the documentation standards of the Historic American Engineering Record of the U.S. Department of the Interior, and that a map be made for public display indicating the location of the Lock and Dam No. 2 in relation to other such historic structures on the White River. Article 38 requires the implementation of these cultural resources protection measures. The article also protects any archeological or historic sites that may be discovered during construction of the project. The Advisory Council on Historic Preservation has been consulted.

Other Environmental Concerns

Water quality certification, as required by Section 401 of the Federal Water Pollution Control Act (Clean Water Act), was issued by the State of Arkansas, Department of Pollution Control and Ecology, on May 3, 1983.

No Federally listed threatened or endangered species or critical habitat will be affected by the project.

FINDING OF NO SIGNIFICANT IMPACT

Minor short-term impacts related to project construction will include increased erosion, river sedimentation and turbidity, noise, vehicular exhaust emissions, and disturbances to aquatic and cultural resources and local wildlife populations. Proposed mitigative measures and provisions of license articles will provide protection for the fishery, soil, and cultural resources of the project.

In accordance with the National Environmental Policy Act of 1969, an Environmental Assessment was prepared for the White River Lock & Dam No. 2 Project (FERC No. 4660). On the basis of the

record, and Staff's independent environmental analysis, 1/ issuance of a license for the project, as conditioned herein, will not constitute a major Federal action significantly affecting the quality of the human environment.

Other Aspects of Comprehensive Development

The project would be a low head development subject to a wide variation of head and discharges. The stream flow exceeds the 8,500 cfs hydraulic capacity of the project about 43 percent of the time.

The project will have an installed capacity of 7,080 kW and will produce an estimated 40.308 GWh annually. 2/ Additional capacity would not be economically feasible due to more frequent loss of head during high flows. The use of stream flows by the project is typical of other low head developments subject to backwater effects.

Power generated by the Applicant would be sold to Arkansas Light and Power Company. The project is economically feasible based on the sale of project power at the avoided cost of Arkansas Light and Power Company adjusted for escalation.

The project will make good use of the flow and fall of the river, is not in conflict with any planned or authorized development, and will be best adapted to the comprehensive development of the river for beneficial purposes upon compliance with the terms and conditions of the license.

Term of License

The proposed development of this project using an existing dam is similar to the relicensing of an existing licensed project at which a moderate amount of new development is proposed; therefore, consistent with Commission policy, a 40-year license term is reasonable in this instance. 3/

1/ Environmental Assessment, White River Lock & Dam No. 2 Project, FERC Project No. 4660--Arkansas, Division of Environmental Analysis, Office of Hydropower Licensing, Federal Energy Regulatory Commission, July 31, 1985. This document is available in the Division of Public Information and in the Commission's public file associated with this proceeding.

2/ The project would utilize a renewable resource that would save the equivalent of approximately 66,000 barrels of oil or 18,600 tons of coal per year.

3/ Village of Lyndonville, 7 FERC ¶ 61,324 (1979).

The Director of the Office of Hydropower Licensing or the Director's designee, under 18 C.F.R. § 375.314, orders:

(A) This license is issued to Independence County, Arkansas (Licensee), under Part I of the Federal Power Act (Act), for a period of 40 years, effective the first day of the month in which this order is issued, for the construction, operation, and maintenance of the White River Lock and Dam No. 2 Hydroelectric Project No. 4660, located on the White River, a navigable waterway of the United States.

This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(B) The White River Lock and Dam No. 2 Hydroelectric Project No. 4660 consists of:

(1) All lands, to the extent of the Licensee's interest in those lands, constituting the project area and enclosed by the project boundary. The project area and boundary are shown and described by a certain exhibit that forms part of the application for license and that is designated and described as:

<u>Exhibit G</u>	<u>FERC No. 4660-</u>	<u>Showing</u>
G-1	1	Project Location and Transmission Corridor
G-2A	2	Project Boundary

(2) Project works consisting of: (a) an existing concrete and timber crib dam structure, approximately 658 feet long and 29 feet high, with an integral navigation lock, 36 feet wide and 175 feet long on the right side of the dam; (b) a reservoir with a surface area of approximately 1,072 acres and a gross storage capacity of approximately 8,581 acre-feet at the normal maximum pool elevation of 260.2 feet (m.s.l.); (c) a new multi-level intake flume 120 feet long and 100 feet wide to be constructed within the existing navigation lock; (d) a new reinforced concrete powerhouse, 93 feet wide and 116 feet long, containing 3 generating units of 2,360 kW capacity each, for a total capacity of 7,080 kW; (e) a new open flume tailrace, 120 feet long and varying in width from 116 feet to 140 feet; (f) a 13.8 kV overhead transmission line, approximately 6.5 miles in length, and necessary appurtenant facilities to interconnect with the Arkansas Light and Power Company system; and (g) appurtenant facilities.

The location, nature, and character of these project works are generally shown and described by the exhibit cited above and more specifically shown and described by certain other exhibits that also form a part of the application for license and that are designated and described as:

<u>Exhibit</u>	<u>FERC No. 4660-</u>	<u>Showing</u>
F-1	3	One-Line Diagram
F-2	4	Site Plan
F-3	5	Powerhouse Plan
F-4	6	Powerhouse Profile
F-5	7	Elevation at Intake
F-6	8	Dam Sections

(3) All of the structures, fixtures, equipment, or facilities used or useful in the operation or maintenance of the project and located within the project boundary, all portable property that may be employed in connection with the project, located within or outside the project boundary, as approved by the Commission, and all riparian or other rights that are necessary or appropriate in the operation of maintenance of the project.

(C) Exhibit A, Paragraphs (b)(1)(a), (b)(3) through (5) and Exhibit E, Paragraphs (f)(5)(i) through (vi) are approved and made a part of the license.

(D) This license is also subject to Articles 1 through 28 except Article 20, set forth in Form L-4 (revised October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Navigable Waters of the United States" attached to and made a part of this license. The license is also subject to the following additional articles:

Article 29. The Licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

(a) For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 9,440 horsepower.

Article 30. The Licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 31. The Licensee shall file revised Exhibit F drawings showing the final design for project structures for approval of the Director, Office of Hydropower Licensing. The revised Exhibit F drawings shall be accompanied by a supporting design report and the Licensee shall not commence construction of any project structure until the corresponding revised Exhibit F drawing has been approved.

Article 32. The Licensee shall provide to the Commission's Regional Engineer and the Director, Office of Hydropower Licensing, one copy each of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures, at least 60 days prior to start of construction. The Director, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 33. The Licensee shall review and approve the design of contractor-designed cofferdams and deep excavations other than those approved according to Article 32 prior to the start of construction and shall ensure that construction of cofferdams and deep excavations are consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the Licensee shall provide to the Director, Division of Inspections, the Commission's Regional Engineer and the Corps of Engineers one copy of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 34. The Licensee shall within 90 days of completion of construction file for Commission approval of revised Exhibits A, F, and G to describe and show the project as-built, including the project transmission line.

Article 35. The Licensee shall, after consultation with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Soil Conservation Service, and Arkansas Game and Fish Commission, prepare and file with the Commission, within 1 year from the date of issuance of this license, a plan to control erosion and dust, and to minimize the quantity of sediment or other potential water pollutants resulting from construction and operation of the project, including the transmission line and spoil disposal areas. The plan shall also include: functional design drawings and map locations of control measures; implementation schedule; monitoring and maintenance programs for project construction and operation; and provisions for periodic review of the plan and for making any necessary revisions to the plan. Documentation of agency consultation on the plan and copies of any agency comments or recommendations shall be included in the filing.

In the event that the Licensee does not concur with any agency recommendations, Licensee shall provide a discussion of the reasons for not concurring based on actual site geological, soil, and ground-water conditions. The Commission reserves the right to require changes to the plan. Unless the Director, Office of Hydropower Licensing, directs otherwise, the Licensee may commence ground disturbing activities at the project 90 days after filing the above plan.

Article 36. The Licensee shall operate the Lock and Dam No. 2 Hydroelectric Project in an instantaneous run-of-river mode for the protection of fish and wildlife resources in the White River. The Licensee, in operating the project in an instantaneous run-of-river mode, shall at all time act to minimize the fluctuation of the reser-

voir surface elevation, i.e., maintain discharge from the project so that flow in the White River, as measured immediately downstream from the project tailrace, approximates the instantaneous sum of inflow to the project reservoir. Instantaneous run-of-river operations may be temporarily modified if required by operating emergencies beyond the control of Licensee, and for short periods upon mutual agreement between Licensee and the Arkansas Game and Fish Department and the U.S. Fish and Wildlife Service.

Article 37. The Licensee shall, within 6 months of the issuance of this license, and after consultation with the Arkansas Department of Pollution Control and Ecology, the Arkansas Game and Fish Department, and the U.S. Fish and Wildlife Service, install continuous dissolved oxygen and temperature monitoring equipment in the White River immediately downstream of the tailrace discharge. The Licensee shall monitor dissolved oxygen concentrations and water temperatures and maintain records of the monitoring data for a 5 year period, and shall file with the Arkansas Department of Pollution Control and Ecology, the Arkansas Game and Fish Department, the U.S. Fish and Wildlife Service, and the Commission, an annual data summary, filed annually on the anniversary date of the license, that shall include observed daily minimum, maximum and average dissolved oxygen concentrations and water temperatures.

Further, if the results contained in any annual report indicate that changes in project structures or operations are necessary to maintain a minimum dissolved oxygen concentration of 5 milligrams per liter and maximum water temperature of 90°F, and do not substantially modify existing thermal conditions, the Licensee shall, within 2 months from the date of the annual report submission, file with the Commission for approval, with copies to the agencies consulted, a schedule for implementing the specific changes in project structures or operations that are needed. Documentation of agency consultation on the schedule and specific changes shall be included in the filing.

Article 38. The Licensee shall consult with the Arkansas State Historic Preservation Officer (SHPO) to determine: (1) the scope of documentation necessary to record the historic Lock and Dam No. 2 (Lock and Dam) according to the standards of the Historic American Engineering Record (HAER) of the U.S. Department of the Interior; and (2) the scale and detail of a map to show the relation of the Lock and Dam to other historic lock and dam complexes on the White River, and the appropriate location for the public display of such a map. A report containing the HAER documentation and the map of lock and dam complexes, together with letters from the HAER and the SHPO accepting the documentation and map, shall be filed with the Commission within 18 months of the date of this license and prior to any construction activity in the vicinity of the Lock and Dam. Unless the Director, Office of Hydropower Licensing, within 60 days from the filing date, instructs otherwise, the Licensee may commence ground disturbing or spoil disposal activities at the Lock and Dam at the end of that period. The Licensee shall make available funds in a reasonable amount for any such work as required. If any previously

unrecorded archeological or historical sites are discovered during the course of construction or development of any project works or other facilities at the project, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and the Licensee shall consult with the SHPO to develop a mitigative plan for protection of significant archeological or historical resources. If the Licensee and the SHPO cannot agree on the amount of money to be expended on archeological or historical work related to the project, the Commission reserves the right to require Licensee to conduct, at its own expense, any such work found necessary.

Article 39. (a) In accordance with the provisions of this article, the Licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The Licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the Licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the Licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the Licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the Licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the Licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The Licensee shall also ensure, to the satisfaction of the

Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable State and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the Licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the Licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the Licensee's costs of administering the permit program. The Commission reserves the right to require the Licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The Licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary State and Federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69 kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the Licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The Licensee may convey fee titles to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary State and Federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary Federal and State water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary Federal and State approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit

E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the Licensee must file a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any Federal or State agency official consulted, and any Federal or State approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the Licensee to file an application for prior approval, the Licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the Licensee shall consult with Federal and State fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the Licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the Licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(E) This order is final unless appealed to the Commission by any party within 30 days from the issuance date of this order under 18 C.F.R. 385.1902 (1985).

(F) The Licensee's failure to file a petition appealing this order to the Commission shall constitute acceptance of this license. In acknowledgment of acceptance of this order and its terms and conditions, it shall be signed by the Licensee and returned to the Commission within 60 days from the date this order is issued.



Kenneth M. Pusateri
Acting Director, Office
of Hydropower Licensing

Project No. 4660-001

IN TESTIMONY of its acknowledgment of acceptance of all of the terms and conditions of this order, Independence County, Arkansas, this _____ day of _____, 19____, has caused its corporate name to be signed hereto by _____, its President, and its corporate seal to be affixed hereto and attested by _____, its Secretary, pursuant to a resolution of its Board of Directors duly adopted on the _____ day of _____, 19____, a certified copy of the record of which is attached hereto.

By _____
President

Attest:

Secretary

(Executed in quadruplicate)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR
UNCONSTRUCTED MAJOR PROJECT AFFECTING
NAVIGABLE WATERS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Power Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a non-power licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner

as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

Article 22. Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

Article 23. The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

Article 24. The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

Article 25. The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

Article 26. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee

or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 27. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 28. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.