SNAKE RIVER

HYDRO POWER

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IDAHO POWER COMPANY

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IDAHO PUBLIC
UTILITIES COMMISSION

BOX 70 • BOISE, IDAHO 83707

April 25, 1990

Mrs. Myrna J. Walters
Secretary
Idaho Public Utilities Commission
Statehouse
Boise, Idaho 83720

Re: Case No. IPC-E-90-8
Application of Idaho Power Company in
Regard to the Milner Project

Dear Mrs. Walters:

Please find enclosed for filing an original and seven (7) copies of Idaho Power Company's Application in the above entitled matter. As is set forth in the Company's Application, it is requested that copies of all notices, pleadings and orders be served upon Mr. Steven L. Herndon and the undersigned. Thank you for your attention to this matter.

Sincerely,

Larry D. Ripley
Attorney

LDR:mmb

Enclosures

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Attorneys for Idaho Power Company

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF IDAHO POWER COMPANY FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE RATE BASING OF THE MILNER HYDROELECTRIC PROJECT OR IN THE ALTERNATIVE A DETERMINATION OF EXEMPT STATUS FOR THE MILNER HYDROELECTRIC PROJECT	CASE NO. IPC-E-90-8 APPLICATION

IDAHO POWER COMPANY, The Applicant herein, applies to the Commission for a Certificate of Public Convenience and Necessity for the Rate Basing of the Milner Hydroelectric Project or in the alternative a Determination of Exempt Status for that project.

Idaho Power Company (Idaho Power) is a corporation incorporated under the laws of the State of Idaho and is duly qualified to transact business in the States of Idaho, Oregon, Nevada and Wyoming. Idaho Power is engaged in the business of generating, purchasing, transmitting and distributing electrical

energy, and provides retail electric service in the State of Idaho. Idaho Power's principal office is situated in Boise, Idaho, and its address is 1220 West Idaho Street, Boise, Idaho 83707.

It is requested that copies of all notices, pleadings and orders be served on the following:

Larry D. Ripley, Esq.
Legal Department
Idaho Power Company
P.O. Box 70
Boise, ID 83707

Steven L. Herndon, Esq.
Legal Department
Idaho Power Company
P.O. Box 70
Boise, ID 83707

THE MILNER HYDROELECTRIC PROJECT

I.

Idaho Power requests that it be issued a Certificate of Public Convenience and Necessity for the Rate Basing of the Milner Hydroelectric Generation Facilities (Milner Project or Project) and for recognition of the Milner royalty and debt service payments made to the Twin Falls Canal Company and the North Side Canal Company, Ltd. (Canal Companies) as revenue requirement expenses. The power generation facilities will utilize the reconstructed Milner Dam to provide generation capacity of 58,300 kW.

II.

The Project is located in Idaho on the Snake River about 130 miles southeast of Boise and between the cities of Burley and Twin Falls. The Project facilities extend from the existing Twin Falls Main Canal Headworks in Milner Reservoir approximately 1.3 miles along the canal to the powerhouse site where most of the new facilities are to be located.

Milner Dam was constructed in 1905 to provide irrigation storage and diversions. The Dam is owned jointly by the Twin Falls Canal Company, the North Side Canal Company and the American Falls Reservoir District Number Two.

Three canals with their headworks adjacent to the Dam are fed from Milner Reservoir. The Twin Falls Main Canal (or South Side Main Canal) constructed in 1905 will be utilized for the Project. Its headworks is located near the left (south) abutment of the dam and it flows west near the Snake River for about 12 miles.

The proposed Milner Project will use Snake River flows that presently pass through the Milner Dam Spillway. Such flows occur during the non-irrigation season and at times during the irrigation season when there are flows in excess of irrigation diversions. The water will be conveyed in an enlarged Twin Falls Canal and diverted into a forebay and an intake structure, penstock and powerhouse. Head will be obtained through utilization of the difference in elevation between the Twin Falls Canal and the Snake River. Other facilities required for the Project include modifications to the existing headworks, canal and bridge and a new control structure, tailrace channel, access road and transmission line.

III.

On December 15, 1988, the Canal Companies were granted a license under Part I of the Federal Power Act (FPA) to construct, operate, and maintain the Milner Project to be located at the existing Milner Dam and Twin Falls Main Canal on the Snake River. The Project as licensed consisted of the Milner Dam and Reservoir, modifications to 6,500 feet of the Twin Falls Main Canal to increase its capacity, a control structure on the canal that would divert the

additional flow into a forebay, a penstock, a powerhouse located on the Snake River 1.6 miles downstream of the dam and containing a single generating unit rated at 43,650 kilowatts, and a 1.4-mile-long transmission line.

Subsequently, the Canal Companies informed the Federal Energy Regulatory Commission (FERC) that there was a serious concern for the structural integrity of the 85-year-old Milner Dam and that failure of the dam during the irrigation season could result in near total crop failure on the 440,000 acres served by the dam. Following a meeting with Canal Companies and an inspection of Milner Dam, the FERC's Division of Dam Safety and Inspections concluded that there was a high risk of failure at the Milner Dam in the event of a seismic event (earthquake). A complete dam failure could lead to partial or total crop failure, since such a failure would prevent diversion of water into the irrigation canal. The Canal Companies intended to use the revenues from the sale of electric power to be generated by the Project to obtain the funds necessary to strengthen Milner Dam and upgrade its spillway. The Canal Companies contended that, absent these revenues, funding repair of the dam would result in severe economic hardship to many of the 7,500 Canal Companies' shareholders who depend on irrigation water from Milner Dam for their livelihood.

IV.

Although the FERC issued a license to the Canal Companies based upon the construction of a single generating unit rated at 43,650 kilowatts to be located on the Twin Falls main canal, the FERC ordered that within one year of issuance of the license, the Canal Companies were required to submit a report evaluating the feasibility of also constructing a power plant at Milner Dam to utilize the power potential of the flows released to the bypass reach of the

river below the dam and therefore not usable by the power plant to be located approximately 1.6 miles downstream. If the feasibility study showed that also developing a power plant at the dam would be economically beneficial, the Canal Companies were required to submit a schedule and plans for also developing a power plant at the dam.

V.

On May 2, 1989, the FERC issued an order adding Idaho Power as a co-licensee for the Milner Project. From and after that date the license for the Milner Project is now jointly held by Twin Falls Canal Company, North Side Canal Company, Ltd., and Idaho Power with all conditions of the previous license being applicable to the three licensees. The license is attached as Attachment 1.

VI.

Idaho Power and the Canal Companies prepared the analysis required to determine the feasibility of increasing the capacity of the Milner Project. Based upon that analysis, Idaho Power and the Canal Companies have proposed to the FERC that a new powerhouse be constructed near the north abutment of Milner Dam and that a second unit be added to the main powerhouse 1.6 miles downstream of the dam. The powerhouse at the dam will consist of a single-propeller turbine which will discharge a constant 200 CFS when in operation with a net head of 50 feet. It will be coupled to a 1000 kVA induction generator. Maximum output will be about 770 kW.

The turbine will be fed through a steel penstock coming off of an intake located either on the reservoir or on the North Side Canal upstream of a relocated control structure. Gates to allow start-up and to unwater the unit for

maintenance will be included. Provisions for release of the 200 CFS target flow when the plant is not being operated will be provided in the spillway.

Based upon the new analysis, the turbines located at the Main Powerhouse 1.6 miles downstream will be vertical shaft Kaplan type directly coupled to the generators. The large unit will have a rated output of 46,000 kilowatts (kW) at a net head of 150 feet, a discharge of 4,000 CFS and a speed of 200 revolutions per minute (RPM). The small unit will have a rated output of 11,500 kilowatts (kW) at a net head of 157 feet, a discharge of 1,000 CFS, and a speed of 400 revolutions per minute (RPM).

An Application to amend the license to conform the license to the above feasibility analysis has been prepared and sent to relevant state and federal resource agencies for their review and comment prior to filing with the FERC.

VII.

Idaho Power and the Canal Companies initially entered into an agreement to explore the feasibility of power generation at Milner Dam in 1981. The Canal Companies were guaranteed a royalty with a net present value over the life of any development equal to approximately $5,638,000. At that time, the Parties were concerned about the integrity of the Dam itself and agreed to negotiate a common solution to the repair issue if necessary at a later date.

VIII.

As a result of various inspections, it has been determined that the cost of necessary repairs to Milner Dam is approximately $11,700,000 and that immediate repair is required to insure the structural integrity of the dam. Idaho Power has agreed to provide interim financing for the rehabilitation of the

Canal Companies' dam and the Canal Companies have agreed to repay this initial loan with interest from funds obtained elsewhere at or near the time that the Project and the dam are completed. Idaho Power has agreed to guaranty the payment of complete debt service on the permanent loan for the Dam through a base royalty equal to the original present value of $5,638,000 plus 1/2 of the total cost of repairing the dam over the term of the FERC License. Additionally, the Canal Companies will receive an incentive royalty whenever the annual Project generation is in excess of an agreed upon base of 142,000 MWh.

If Idaho Power's investment in the Project is not recognized for revenue requirement purposes by the Idaho Public Utilities Commission, the Canal Companies may exchange the set royalty option described above for 50% of the net benefits derived from the off system sale of the power after all costs including a return on Idaho Power's equity investment in the Project are deducted.

IX.

Idaho Power and the Canal Companies have entered into an Agreement Regarding the Ownership, Construction, Operation and Maintenance of The Milner Project. The Canal Companies will maintain the ownership of the dam, and Idaho Power will own the generation facilities. A copy of the Agreement is attached as Attachment 2.

X.

As set forth above, the Canal Companies were required to rehabilitate the Milner Dam and the source of funds available for that rehabilitation was to be the revenues derived from power sales. The Canal Companies had already received a license from FERC. Since the Project had to be constructed, Idaho Power was presented with a unique opportunity to participate with the Canal

Companies in the rehabilitation of the dam, thus securing the hydro power for the benefit of its customers. The timing of the Project, however, could not be deferred.

COMMITMENT ESTIMATE

I.

In addition to the information set forth above, Idaho Power acknowledges that it is required to provide the Commission with a cost estimate regarding the Project.

II.

Large hydroelectric projects involve design and construction which must be customized to the particular site. As a result, preliminary estimates contain many unknowns for both the final project layout and scope. Detailed engineering to finalize the layout and scope in order to obtain a more precise estimate would result in extremely high front end costs on all projects. In the event a particular project was not built, a significant expenditure would be lost and would have to be written off. Changes required as part of the environmental and regulatory review process could also result in the need to completely redesign a project, thus radically changing the original preliminary estimate.

III.

For most hydroelectric projects, the first major expenditure of funds, other than for engineering design, is the purchase of the hydroelectric turbines and generators. The design and acceptance of bids for the Milner Project's turbines and generators has been accomplished and Idaho Power is now able to make a cost estimate. This estimate, which Idaho Power has termed a "Commitment Estimate", is the best estimate of the Project's cost after the award

of the contracts for the turbines and generators plus an additional amount of 5% to establish a cost ceiling for the Project. Idaho Power will commit to building the Project for the Commitment Estimate (as it may be adjusted to account for documented changes in escalation rates or scope[1/]). If the final costs exceed the "Commitment Estimate", Idaho Power will absorb the extra costs, and will include in its Idaho ratebase only the amount up to the Commitment Estimate.

IV.

The Milner Project's costs are currently projected to be $60,334,000 at completion in 1992, with a dam reconstruction cost of $11,700,000. With an additional 5%, Idaho Power's Commitment Estimate for the powerhouse is $63,350,600. The installed turbine capacity will be 58,300 kW.

Depending upon the number of water years utilized in the Computation, the cost per kWh would range from a maximum of 52.93 mills/kWh based upon a cost for the powerhouse of $63,350,600, 60 years of water data and a 50 year levelized cost; to 37.80 mills/kWh based upon a powerhouse cost of $60,334,000, 20 years of water data and a 50 year levelized cost (or less if the Project is built for less than Idaho Power's present Project estimate). The cost estimates are attached as Attachment 3.

[1/]The Wharton 2nd Quarter 1989 Forecasted CPI and Handy-Whitman Construction Cost Indices for the Plateau Region for Total Hydro Production were used to develop the cost estimate. If major inflation occurs, resulting in higher cost indices, the Committment Estimate would be adjusted to reflect these inflated cost indices.

Examples of possible scope changes which could affect the project ceiling are:

1. Force Majeure or acts of God impacting the construction;
2. Design optimization for which increased energy more than offsets the increase in initial investment;
3. Foundation or site conditions significantly more expensive than indicated by exploratory drilling.

V.

Updated Project cost estimates will be submitted to the Commission as part of the Company's Quarterly Report of Construction Projects. The updated cost estimate will include any scope or escalation changes. The final cost report on the Project will still compare the actual costs to the Commitment Estimate.

THE COMPANY IN THE ALTERNATIVE REQUESTS A DETERMINATION OF EXEMPT STATUS

I.

As set forth above, the FERC has issued an order making Idaho Power a co-licensee for the Milner Project.

II.

If the Commission determines that Idaho Power's investment in the Milner Project should not be Rate Based for revenue requirement purposes, the Commission should issue an order determining that the Milner Project should have an exempt status.

III.

The order determining the exempt status should be issued for a period of 20 years from the date of commercial operation to permit Idaho Power to enter into a long term sale of the energy to another utility.

IV.

Idaho Power would propose that two years prior to the expiration of the order determining the exempt status, Idaho Power would apply for a redetermination of the status of the exempted Milner Plant. The Commission, after notice, would determine if the Order of Exemption should be continued or if a Certificate of Public Convenience and Necessity for the Rate Basing of the

Milner Project should be issued at that time. The order determining the status of the generating electric plant would be issued by the Commission within one year of the date the application for redetermination is filed.

V.

If the Commission determines in the second proceeding that a Certificate of Public Convenience and Necessity for the Rate Basing of the Milner Project should be issued, the Commission should issue a Valuation Order for revenue requirement purposes within three months of the order issuing a Certificate of Public Convenience and Necessity. The value of the plant for revenue requirement purposes in the 20th year will be based upon the then reproduction cost new less depreciation.

VI.

Reproduction cost new less depreciation means the total investment that would be required by Idaho Power to duplicate the Milner Project at then current costs for all materials, supplies, labor, land and land rights, transportation, and miscellaneous direct and indirect expenses (including overhead, engineering and supervision costs that are normally capitalized) that would be required; the costs that would be required to obtain all necessary approvals and permits; and any other costs that would be appropriately applicable to the reproduction cost of the Milner Project less an amount representing the straight line depreciation of such Reproduction Costs of any depreciable items.

VII.

If the Commission determines that the Milner Project should not be ratebased, the Commission's order should declare that the investment, expenses, current or accrued tax benefits and revenues incident to the Milner Project will

not be considered for regulatory purposes in the State of Idaho including, but not limited to, revenue requirement and power supply purposes.

VIII.

In the event the Commission determines in a second proceeding that a Certificate of Convenience & Necessity should be issued, the Commission should not consider in a revenue requirement proceeding any profit or loss or accrued tax benefits that were accumulated as a result of the Milner Project having previously operated under an Order of Exemption. However, it is recognized that the Commission could assume the availability of tax depreciation benefits associated with the restated value of the plant on a prospective basis on a straight-line method consistent with the book depreciation if the Project is later rate based.

W H E R E F O R E

Idaho Power Company respectfully requests that the Commission issue an Order authorizing the Rate Basing of the Milner Project with an upper limit of $63,350,700 allowed for the Company's investment in the powerhouse. Idaho Power also requests that the Commission's Order permit the Milner royalty payments to the Twin Falls Canal Company and the North Side Canal Company, Ltd. be recognized as proper ratemaking expenses.

OR IN THE ALTERNATIVE, if the Commission determines Idaho Power's investment in the Milner Project should not be ratebased, that the Commission issue its order determining that the Milner Project should have an exempt status

for Idaho Public Utilities Commission regulatory purposes for a period of 20 years.

DATED at Boise, Idaho this 25th day of April, 1990.

/s/ Larry D. Ripley

IDAHO POWER COMANY
IPC-E-90-8

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BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. IPC-E-90-8

IDAHO POWER COMPANY

ATTACHMENT 1
TO
APPLICATION

47 FERC ¶ 62,124

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Twin Falls Canal Company,
North Side Canal Company, Ltd.,
Idaho Power Company

Project No. 2899-006
Idaho

ORDER APPROVING TRANSFER OF LICENSE

(Issued May 2, 1989)

Twin Falls Canal Company, and North Side Canal Company, Ltd. (Transferors), seek Commission approval to add Idaho Power Company (IPC) as a co-licensee for their license for the Milner Hydroelectric Project, to be jointly known as the Transferees. The project is located on the Snake River in Twin Falls, Cassia, Jerome, and Minidoka Counties, Idaho. The license transfer is necessitated to effectuate the existing contractual relationship between the transferors and IPC.

The transferors have fully complied with the terms of the license and agree to pay annual charges that have accrued to the date of the transfer. The transferees are qualified to hold the license and operate the property under license and agrees to be bound by the license as if it were the original licensee.

No motions to intervene, comments, or protests were filed in response to the public notice of the application to transfer the license. Transfer of the license for this project is consistent with the Commission's regulations and is in the public interest.

The Director orders:

(A) Transfer of the license for this project is approved.

(B) Approval of the transfer is contingent upon transfer of the title of the properties under license and delivery of all license instruments to the transferees, which shall be subject to all terms and conditions of the license as though it were the original licensee. The transferees shall submit certified copies of all instruments of conveyance within 60 days from the date of this order.

(C) This order is issued under authority delegated to the Director and is final unless appealed to the Commission within 30 days from the date of this order. The transferees shall acknowledge acceptance of this order and its terms and conditions by signing and returning the attached acceptance sheet within 60 days from the date of this order.

Dean L. Shumway
Director, Division
of Project Review

Project No. 2899-006

IN TESTIMONY of its acknowledgement of acceptance of this order and its terms and conditions, Twin Falls Canal Company, North Side Canal Company, Ltd., and Idaho Power Company this 13th day of June, 1989, have caused their names to be signed hereto by their presidents, and attested by JOHN A. ROSHOLT

By
PRESIDENT--TWIN FALLS CANAL COMPAN

By Russell Woolley
PRESIDENT--NORTH SIDE CANAL COMPAN

By
PRESIDENT--IDAHO POWER COMPANY

Attest:

JOHN A. ROSHOLT

(Executed in triplicate)

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Martha O. Hesse, Chairman;
Charles G. Stalon, Charles A. Trabandt,
Elizabeth Anne Moler and Jerry J. Langdon.

Twin Falls Canal Company)
North Side Canal Company, Ltd.)

Project No. 2899-003

ORDER ISSUING LICENSE
(Major Project)

(Issued December 15, 1988)

On July 27, 1984, the Twin Falls Canal Company and the North Side Canal Company, Ltd. (CC) filed a joint application for license under Part I of the Federal Power Act (FPA) to construct, operate, and maintain the Milner Hydroelectric Project No. 2899, to be located at the existing Milner Dam and Twin Falls Main Canal on the Snake River in Twin Falls, Cassia, Jerome, and Minidoka Counties, Idaho. Parts of the project would occupy lands of the United States managed by the Bureau of Land Management (BLM) of the Department of the Interior. The project would consist of the Milner Dam and Reservoir, modifications to 6,500 feet of the Twin Falls Main Canal to increase its capacity, a control structure on the canal that would divert the additional flow into a forebay, a penstock, a powerhouse located on the irrigation canal 1.6 miles downstream of the dam and containing a single generating unit rated at 43,650 kilowatts, and a 1.4-mile-long transmission line.

Notice of the application has been published. The Idaho Department of Fish and Game (IDFG) and the Idaho Department of Water Resources (IDWR) became intervenors in the proceeding. The motions to intervene and comments filed by agencies and individuals have been fully considered in determining whether to issue this license. The issues raised by the intervenors are discussed below.

I. Dam Safety and National Environmental Policy Act Compliance

The Commission currently is in the process of preparing an environmental impact statement (EIS) assessing, inter alia, the potential cumulative impacts of the Milner Project No. 2899 and three other proposed hydroelectric projects on the environmental resources of the Snake River Basin. A draft EIS (DEIS) was

issued in November 1987. 1 Due to new circumstances and new information received after the DEIS was issued, a Notice of Intent to Prepare a Supplement to the DEIS and to hold public meetings was issued on July 15, 1988; public meetings were held in Twin Falls, Idaho, on August 19, 1988. At these meetings, CC informed the Commission that there was a serious concern for the structural integrity of the 85-year-old Milner Dam and that failure of the dam during the irrigation season could result in near total crop failure on the 440,000 acres served by the dam. 2

Following a meeting with CC and an inspection of Milner Dam, the Commission's Division of Dam Safety and Inspections concluded that there is a high risk of failure at the Milner Dam in the event of a seismic event (earthquake). A complete dam failure could lead to partial or total crop failure, since such a failure would prevent diversion of water into the irrigation canal.

CC intends to use the revenues from the sale of electric power to be generated by the project to obtain the funds necessary to strengthen Milner Dam and upgrade its spillway. CC states that, absent these revenues, funding repair of the dam would result in severe economic hardship to many of the 7,500 CC shareholders who depend on irrigation waters from Milner Dam for their livelihood. According to CC, having the shareholders bear the total cost of repairs could cause some shareholders to lose their farms and would cause significant adverse impacts to a local economy that is already suffering the effects of the general economic problems of the farming industry.

The final EIS (FEIS) for the four projects on the Snake River is not expected to be completed until late summer or early fall of 1989. Thus, waiting for completion of the FEIS before action on the license application for Project No. 2899 could cause a delay of up to two years in starting the repair of Milner Dam, during which time there would be a risk of dam failure. If a license for the Milner Project is issued at this time, the necessary financing and other arrangements could be made so as to complete the dam repairs in one year or less.

1 Draft Environmental Impact Statement for the Twin Falls (FERC No. 18), Milner (FERC No. 2899), Auger Falls (FERC No. 4797), and Star Falls (FERC No. 5797) Hydroelectric Projects on the Mainstem Snake River, Idaho, Federal Energy Regulatory Commission, Washington, D.C., November 1987.

2 See the attached Safety and Design Assessment (S&DA) for a more detailed description of the dam safety concerns regarding this project.

Council on Environmental Quality (CEQ) regulations implementing the procedural provisions of the National Environmental Policy Act (NEPA) state that, where emergency circumstances make it necessary to take an action with significant environmental impacts without following CEQ regulations (e.g., without first preparing an FEIS), the agency taking the action should consult with CEQ regarding alternative arrangements. Such arrangements are to be limited to actions necessary to control the immediate impacts of the emergency. 3 Pursuant to CEQ's regulations, the Commission consulted with CEQ and requested concurrence with a plan to proceed with the licensing of the Milner Project prior to completion of the FEIS on the four projects on the Snake River. 4 Consistent with the emergency provisions CEQ's regulations, the CEQ approved the Commission's plan to license the hydroelectric facility at the Milner Dam prior to completion of the FEIS. 5

II. Comprehensive Water Block

Commission staff has proposed development of a Comprehensive Water Block (CWB) for the four projects in the Snake River Basin included in the DEIS. As described in more detail in the Scoping Document Supplement (Supplement) prepared for this proceeding in October 1988, 6 the objective of the CWB is to provide target flows at the projects when water is available in excess of irrigation needs. The CWB represents the combined amount of water needed to provide target flows for protection and enhancement of environmental resources associated with the four projects addressed in the DEIS. Under the CWB proposal, each of the four projects, if licensed and constructed, would provide a sub-block to the CWB; the size of the individual sub-blocks would be different for each project, due to the fact target flows would be based on what is needed to mitigate impacts at each specific project. The size of the CWB would also vary from year to year depending on the amount of flow in the river and the availability of water in excess of irrigation needs.

3 See 40 C.F.R. 1506.11 (1988).

4 Letter from Martha O. Hesse, Chairman, Federal Energy Regulatory Commission, October 25, 1988).

5 Letter from A. Alan Hill, Chairman, CEQ, October 27, 1988.

6 Information regarding the Supplement was published in the Federal Register on October 15, 1988. See 53 Fed. Reg. 42,997. Scoping meetings on the Supplement were held in Boise and Twin Falls, Idaho, on November 2, 1988.

The CWB proposal would require the licensees for the four projects to lease water for the CWB from the Upper Snake Water Supply Bank (Water Bank). The State of Idaho established the Water Bank as a convenient means to allow and account for the rental of water by those irrigators in need of additional water from those who have excess water. Irrigators who estimate that their water storage rights would be in excess of their requirements in any year may place a portion of their storage right in the Water Bank, to be leased by others, with irrigators receiving first priority. Any water that is not leased in any year is lost if all of the upstream storage is refilled in the following year.

IDWR, by letter dated September 30, 1988, stated that it appears that structured reliance on the Water Bank through the CWB mechanism can be successful in meeting prescribed mitigative flows on the mainstem of the Snake River. Furthermore, Commission staff discussions with IDWR staff regarding the operation of the Water Bank revealed that: (1) water has been available for lease from the Water Bank in all years since its creation; (2) Idaho Power Company has leased water for power generation from the Water Bank in every year since its creation; (3) future water availability likely will increase due to increased irrigation efficiencies; (4) it is highly probable that water will be available in the Water Bank in excess of irrigation demand in the future, except in very bad water years; and (5) the cost of water from the bank is currently very reasonable, and is expected to remain so in the foreseeable future.

Under the CWB proposal, each licensee would be responsible for providing project-specific target flows. Target flows to be set for the projects would recognize the physical limitations of the river system so that they would not interfere with irrigation operations and would not flood low-lying areas. Flows to be released for project-specific target flows would be accounted for when the water is released from the upstream American Falls Reservoir and measured below Milner Dam. Thus, the CWB would be an accounting mechanism for licensees to equitably share the responsibility for mitigative flows, since water which is released from American Falls Reservoir would flow through all of the four proposed projects.

As discussed below, we believe the CWB proposal is an appropriate means to provide mitigative flows while recognizing the need to protect irrigation needs in the area. Accordingly, Article 401 of the license requires CC to meet the target flows specified by Article 407 of the license by renting water from the Water Bank when it is available.

III. Environmental Impacts

A. Erosion, Sedimentation, and Slope Stability

Rehabilitation of Milner Dam would involve excavation of rock materials, construction of access roads leading from the excavations to the dam, associated staging areas, and a cofferdam to dewater a small area in the reservoir when reconstructing the spillway. These activities would cause minor erosion, sedimentation, localized movement of loose rock materials, and temporary increases in suspended sediment in Milner Reservoir during placement and removal of cofferdams. In order to ensure that impacts on soils and geologic resources are minimized, Article 402 requires CC to include measures to minimize erosion and sedimentation and to control slope stability when submitting final design specifications for rehabilitation of Milner Dam.

During project construction, localized erosion, sedimentation, and temporary increases in turbidity and suspended sediments would occur until disturbed land surfaces are stabilized. Blasting for the powerhouse and tailrace excavation and construction of the access road could cause localized rockfall and mass movement of loose materials, and placement and removal of cofferdams would temporarily increase suspended sediments and turbidity within the Snake River.

With implementation of a detailed, site-specific erosion, sediment, and slope stability control plan that incorporates CC's proposed mitigation and the mitigation measures recommended in the DEIS, the effects on soil and geologic resources would be minor. [7] Article 402 requires CC to prepare a detailed, site-specific plan to control erosion, sedimentation, and slope stability that includes control measures proposed by CC and recommended in the DEIS.

B. Water Quality

1. Water Quality Certification

In a letter dated January 27, 1984, CC requested water quality certification pursuant to Section 401(A)(1) of the Clean Water Act from the Idaho Department of Health and Welfare (IDHW). IDHW granted water quality certification for the Milner Project on September 30, 1985. Since IDHW did not act on the certification request within one year from the date it received the request, water quality certification was deemed waived by

[7] See Section 4.1.1.1 of the DEIS.

Order No. 464. 8 However, since we believe the three conditions contained in the water quality certificate, which address erosion control, spoil disposal, and storage of fuels and chemicals are necessary, we are including them as part of Article 402 of the license.

2. Milner Reservoir and the Snake River below Milner Dam

The water quality in the Upper Snake River Basin is generally good, and is categorized as Class A by IDHW. Water uses to be protected include domestic and industrial water supply, irrigation, livestock watering, and salmonid fish spawning and rearing.

In the 1960's, Milner Reservoir had poor water quality conditions resulting from municipal and industrial point source discharges. During periods of reduced discharges, low dissolved oxygen concentrations (DO) in Milner Reservoir resulted in major fish kills. Substantial reductions in these point source discharges in the 1970's, however, have contributed to better water quality conditions in the reservoir.

Temperature and DO sampling conducted by CC's consultant in June to September 1983 and in August to December 1987 indicate that Milner Reservoir does not thermally or chemically stratify and that DO and temperature levels in the river below Milner Dam are similar to those in Milner Reservoir. These levels met the state water quality standards at all depths sampled in Milner Reservoir and in the Snake River below Milner Dam.

The Environmental Protection Agency (EPA) reports that in past years the surface waters of Milner Reservoir contained high concentrations of heavy metals. Since 1979, EPA reports that concentrations of zinc, cadmium, and copper in Milner Reservoir and in the Snake River below Milner Dam have ranged from 0 to 50 micrograms per liter (ug/l), from .2 to 2 ug/l, and from 1 to 8 ug/l, respectively. However, these concentrations are below levels reported by EPA that adversely affect freshwater aquatic organisms. 9

8
52 Fed. Reg. 5446 (February 23, 1987), FERC Stats. and Regs. III, 30,370 (effective May 11, 1987); reh'g denied, 52 Fed. Reg. 13,234 (April 22, 1987), 39 FERC 61,021 (Order No. 464-A), petitions for reconsideration dismissed, 41 FERC 61,206 (1987) (Order No. 464-B).

9
See generally Section 4.2.1 of the DEIS.

(A) Project Construction

Construction activities in Milner Reservoir and in the Snake River below Milner Dam would disturb sediments and other unconsolidated deposits that likely contain heavy metals or other toxic substances. Improper removal and disposal of sediments or unconsolidated deposits could disperse heavy metals or other toxic substances into the water column and would adversely affect the aquatic resources downstream. Although the entire project area need not be tested, Article 403 requires CC to test any sediment or unconsolidated materials within the Snake River and Milner Reservoir that would be dredged or excavated in conjunction with project construction for the presence of any heavy metals or other toxic substances, so that any contaminated materials would be identified, safely removed, and disposed of with minimal adverse effects on water quality and aquatic organisms.

(B) Project Operation

The proposed powerhouse would have the capacity to use flows of from 900 to 4,000 cubic-feet-per-second (cfs). Typically, the flows that pass Milner Dam in the summer are low, not generally exceeding 500 cfs, and the proposed powerhouse would not be expected to operate from approximately mid-June through mid-September.

Operation of the proposed project would not affect the water quality in Milner Reservoir; however, CC's proposed minimum flow of 58 cfs in summer during the irrigation season would likely result in substantial adverse impacts on water temperature and DO within the 1.6-mile-long bypassed reach. The DO and temperature of the water released from Milner Dam during summer would likely change as it flows downstream through the bypassed reach. The magnitude of these changes would depend on a number of factors, with the major controlling factor being the rate of stream discharge through the bypassed reach.

A reduction in the volume of water flowing through the bypassed reach would reduce water velocity and depth and increase the travel time. Consequently, the effect of solar radiation would be intensified and water temperature would increase in summer. Much slower velocities in the bypassed reach could also contribute to the growth of the already abundant aquatic plants. Increased plant respiration and decomposition would cause DO reductions.

Based on the cross-sectional and longitudinal profiles of the river channel below Milner Dam and the available data relating discharge to DO and water temperature, a flow of 200 to 300 cfs would likely have minimal impact on water temperature and

DO in the bypassed reach. Flows within this range would likely provide sufficient water velocity and depth, and in turn reduce the travel time through the bypassed reach, thus minimizing the effect of solar radiation on water temperature. A target flow established within this range would likely provide water quality conditions that are suitable for maintaining a put-and-grow trout fishery. 10 The target flows required by Articles 407 and 415 during project operation for the maintenance of the fish and recreational resources, respectively, would minimize the impacts of project operation on water temperature, DO, and sedimentation in the bypassed reach.

The DEIS recommended that CC implement a water quality monitoring plan that should include provisions for discharging sufficient water to the bypassed reach to minimize the effects of the proposed project on the water quality of the Snake River during project operation. Water quality impacts would be most critical during low water years and during summer months that coincide with low flows, high nutrient levels, and elevated water temperatures.

CC should implement a water quality monitoring plan along the bypassed reach. Therefore, Article 404 of the license requires CC to monitor the water quality of the Snake River to determine if water temperatures and DO necessary for the survival of a trout fishery within the bypassed reach are being maintained by the target flow released from Milner Dam. If the results of the monitoring required by Articles 404 and 409 show that levels of DO and temperature in the bypassed reach are not sufficient for maintaining a put-and-grow trout fishery, Article 409 requires CC to implement other fishery mitigation.

C. Fishery Resources

1. Existing Environment

(A) Milner Reservoir

Milner reservoir supports both warmwater and coldwater fisheries. The warmwater species include smallmouth bass, largemouth bass, yellow perch, channel catfish, brown bullhead, and black crappie. The coldwater species are rainbow trout, cutthroat trout, brown trout, and mountain whitefish. Also, numerous nongame species inhabit the reservoir. The coldwater species occur primarily at the headwaters of the reservoir. IDFG stocks catchable rainbow trout in the headwaters of Milner Reservoir near Burley, Idaho.

10 This fishery resource is discussed in Part II C 4, infra.

Milner reservoir has a sandy substrate and is devoid of three dimensional structure such as rocks or boulders. The sandy substrate probably limits the production of aquatic invertebrates typically fed upon by fish. Further, the lack of structure limits warmwater fish production because structure is used by warmwater fish for spawning and for cover. 11

The Idaho Fisheries Management Plan 12 states that warmwater fish such as smallmouth bass, and channel and blue catfish will be stocked in the reservoir to meet the demand for the warmwater fishing in Milner Reservoir. The Fisheries Management Plan states that the management direction for Milner Reservoir include improving warmwater fish habitat.

(B) Snake River Bypassed Reach

Game fish use below Milner Dam is seasonal and depends on flow levels. Rainbow trout, cutthroat trout, brown trout, rainbow-cutthroat trout hybrids, mountain whitefish, channel catfish, largemouth and smallmouth bass, and yellow perch have been collected in the Snake River below Milner Dam. Nongame fish such as Utah dace, redside shiners, and mottled sculpins dominated the catch during the low flow period. 13

Water diversions for irrigation limits trout use of the proposed bypassed reach primarily to the non-irrigation season. Water diversions from April through October for irrigation deliveries significantly reduce the amount of water flowing downstream of Milner Dam. These flow reductions during the irrigation season, along with the likely changes to water quality, increased water temperature and decreased DO concentration, decreases the suitability of the downstream area for trout.

The Fisheries Management Plan for the Snake River below Milner Dam calls for a "yield trout fishery" with an approximate catch rate of 0.5 fish per hour. According to the Fisheries Management Plan, rainbow trout consisting of wild and hatchery fish would support the yield fishery.

11
See Section 3.3.2.1.1 of the DEIS.
12
Idaho Department of Fish and Game, 1986, Fisheries Management Plan 1986 - 1990, Boise, Idaho, 274 pp.
13
See Section 3.3.2.1.2 of the DEIS.

2. Impacts

(A) Project Construction

Constructing the Milner Project and upgrading the dam would cause short-term increases in suspended and dissolved solids which would ultimately be deposited in downstream areas. The siltation could negatively affect mountain whitefish spawning in the bypassed reach, but would have actual little effect, due to the fact that so few fish occur or spawn in the bypassed reach. Siltation from construction activities would have little effect on other aquatic resources, because the siltation would be flushed out during the next high flow period. Further, implementing the erosion control and sedimentation plan required by Article 402 would limit sources of sediment. The potential for toxic substances affecting the downstream aquatic resources would be low because of the sediment testing and sediment removal requirements of Article 403.

(B) Project Operation

Operating the Milner Project would increase the time period for diverting water from the reservoir to the Twin Falls Main Canal. Typically, CC now diverts water during the irrigation season from April through October. With the project operating, CC would divert water all year and would reduce the frequency of spillage over Milner Dam. Fish passing over Milner Dam with the high spillage flows is probably the primary mechanism by which trout populate the bypassed reach. Project operation would substantially increase the number of fish diverted to the canal, where they would enter the project intake and would be killed or injured by the turbines or would no longer be recruited to the bypassed reach or downstream areas.

CC proposes to mitigate for adverse project impacts by enhancing the fish habitat in Milner Reservoir instead of installing a fish screen to mitigate the turbine-induced fish losses. The DEIS agreed with CC's reservoir enhancement proposal, but expressed reservations about the probability for success. 14 In its motion to intervene, IDFG stated that enhancing the habitat in Milner Reservoir would partially mitigate for turbine-induced fish mortality.

Enhancing the warmwater fish habitat by providing structures for holding and rearing habitat, or increasing spawning areas and stocking warmwater fish in Milner Reservoir as described in the Fishery Management Plan, would adequately mitigate turbine-induced fish losses. Therefore, CC should finance the

14
See Section 4.2.2.1.2 of the DEIS.

development of the Milner Reservoir warmwater fishery as described in the Fisheries Management Plan. In addition, CC should fund stocking of warmwater fish species in the reservoir in cooperation with the IDFG. Stocking warmwater fish in the reservoir in cooperation with the IDFG and enhancing the reservoir habitat would be consistent with the Fisheries Management Plan. Article 405 requires CC, after consultation with IDFG, to develop, implement, and finance a warmwater fish stocking program and a habitat enhancement plan that is consistent with the Fisheries Management Plan for Milner Reservoir to mitigate the adverse effects of the project on the fishery resources.

CC should consult with IDFG and develop a plan to monitor the effectiveness of the reservoir enhancement structures and the fish stocking program. Specifically, CC should determine if additional warmwater fish stocking is necessary to meet the objectives of the Fisheries Management Plan for Milner Reservoir. The monitoring would also assist in determining the length of time the structures would remain in place and provide fish habitat. We conclude that a five-year monitoring program would provide sufficient information to determine if the mitigative measures are adequate. The monitoring also allows for correcting those that are not working. Therefore, Article 406 requires CC to conduct a reservoir fish habitat and fishery study for at least five years to determine if the fish habitat enhancement structures have remained in place and are functioning as desired and to determine if additional warmwater fish need to be stocked.

3. Instream Flow

CC proposes to release 58 cfs during the irrigation season and 150 cfs during the non-irrigation season. However, CC did not provide a biological rationale for these flow proposals or for the seasonal difference in the flows. The DEIS found that 58 cfs would prevent fish movement in the bypassed reach and would degrade fish food production by increasing channel sedimentation. [15] The proposed 58 cfs minimum flow would provide slightly improved instream flow conditions, because it would prevent the extreme low flow events that occasionally occur.

Operating the project during the non-irrigation season with the proposed 150 cfs minimum flow would significantly reduce the amount of trout habitat in the 1.6-mile-long bypassed reach according to conventional instream flow methodologies, would severely reduce trout recruitment and use of the bypassed reach during the non-irrigation season, and would reduce invertebrate

15 See Section 4.2.2.1.1.3.1 of the DEIS.

production. 16 Proposed project operation would reduce the amount of trout habitat and eliminate spillage over the dam much of the time and, therefore, preclude trout movement over the dam to the bypassed reach. Thus, the proposed non-irrigation season minimum flow would conflict with the management direction of the yield fishery, because trout recruitment and suitable trout habitat would not be maintained in the bypassed reach.

The DEIS recommended that CC maintain minimum flows of 58 cfs and 1,260 cfs in the irrigation and non-irrigation seasons, respectively, to protect the downstream fishery resources. 17 The DEIS also recommended a minimum flow of 300 cfs in the irrigation season to partially mitigate the cumulative adverse impacts to the resident trout and other resources. 18 Since the DEIS' 300 cfs recommendation to mitigate cumulative impacts superceded the 58 cfs minimum flow for fishery resource protection, the DEIS concluded that minimum flows of 300 cfs in the irrigation season and 1,260 cfs in the non-irrigation season were needed. Flows derived by the Tennant Methodology, 19 the stream resource maintenance flow study, 20 and the minimum flows recommended in the DEIS to protect the fishery resources in the bypassed reach during the non-irrigation season range from 720 cfs to 2,190 cfs.

Release of the above flows for fishery protection purposes during the irrigation season would interfere with irrigation and thus could have a severe impact on the farm-based economy of the area. Furthermore, the release of the flows recommended for the non-irrigation season would reduce generation and hence the revenues necessary to repair Milner Dam. We believe that the

16
Id.
17
See Section 4.2.2.1.2 of the DEIS.
18
See Section 5.1.2 of the DEIS.
19
D.L. Tennant, 1976, Instream flow regimes for fish, wildlife, recreation, and related environmental resources, Pages 359-373. In Orsborn, J. F., and C. H. Allman, (ed.), Proceedings of the Specialty Conference on Instream Flow Needs, Volume II, American Fisheries Society, Bethesda, Maryland.
20
T. Cochnauer, 1976, Stream Flow Investigation, Project F-9-R-1, Job I, evaluation of applicability of water surface profile predictive modeling in reference to stream resource maintenance flow (SRMF) determinations, Job II, stream resource maintenance flow determinations on the Snake River, Idaho Department of Fish and Game, Boise, Idaho, 44 pp.

need to protect irrigation usage and provide sufficient generation outweigh the need to protect the fishery resources. Accordingly, we will not require CC to release the flows referenced above. However, we are requiring CC, by Article 407, to release a target flow of 200 cfs.

The loss of trout habitat in the non-irrigation season is offset somewhat by eliminating the extreme low flows that have occurred during the irrigation season, thus allowing trout to use the bypassed reach more consistently. A stable flow of 200 cfs would slightly enhance the fishery resources by continually maintaining a limited amount of habitat that would occasionally be eliminated by the low flow events. Therefore, 200 cfs would probably maintain sufficient water quality to maintain a put-and-grow trout fishery in the bypassed reach. As just indicated, Article 407 requires CC to maintain a target flow of 200 cfs below Milner Dam. 21

The Snake River downstream of the proposed powerhouse would benefit from the 200 cfs target flow. Releases from Milner Dam would prevent the extreme low flow periods. In addition to the releases from Milner Dam, the incentive to operate the powerhouse would provide water to downstream areas that would not typically have occurred during the irrigation season. Therefore, the fishery resources downstream of the bypassed reach would benefit more than those in the bypassed reach.

4. Trout Fishery Enhancement

The primary source of trout to the bypassed reach is recruitment from upstream areas. As mentioned above, proposed operation would reduce spill from Milner Dam and eliminate much of this recruitment..

In order to mitigate for the decreased recruitment to the downstream Snake River fishery and the loss of trout habitat in the Snake River in the non-irrigation season, CC should institute a put-and-grow trout fishery 22 in the 1.6-mile-long bypassed reach of the Snake River. CC should consult with IDFG to determine the sizes and numbers of trout to stock and to determine the area or areas in which to stock the trout. CC should stock the trout in areas that provide easy and safe access

21
The 200 cfs target flow is not a minimum flow, and CC does not have to release the flow unless water is available.

22
The Idaho Fisheries Management Plan defines a put-and-grow fishery as one where the fish are expected to survive and grow and contribute to the fishery for a extended period of time.

for anglers. This would provide a high value recreational fishery in this area.

Article 408 requires CC to develop and to implement a put-and-grow trout fishery in the 1.6-mile-long bypassed reach of the Snake River. We conclude that developing this trout fishery would mitigate the lost trout habitat in the Snake River resulting from reduced flows and would mitigate the reduced fish recruitment to the bypassed reach. Enhancing the trout fishery in the bypassed reach through hatchery supplementation would not conflict with the management direction for this section of the Snake River as described in the Fisheries Management Plan.

There is the possibility that the stocked fish would move downstream with the current where they would no longer be available to the anglers or where they could perish due to insufficient habitat or poor water quality. Therefore, CC should conduct a study to determine if the trout move downstream and if the trout are surviving long enough, depending on water temperature and DO concentration, to remain available to anglers.

CC should file annual reports about the survival, growth, and movement of the trout and how the water quality at 200 cfs affects their survival, growth, and movement. If it is determined that the trout stocked in the bypassed reach are not surviving, are not growing sufficiently, or are moving out immediately, then CC should consider stocking trout in other areas of the Snake River such as the head of Milner Reservoir near Burley, Idaho. In conjunction with this study, the results from the water quality monitoring required by Article 404, particularly water temperature and DO, will provide valuable information to determine if 200 cfs provides conditions conducive for establishing a year round trout fishery.

We conclude that a five-year monitoring program would provide sufficient information to determine if the trout stocking program is successful. If the results indicate that the trout stocking program is not successful, the monitoring allows for changing the stocking rates, the size and species of trout stocked, and the stocking location. Article 409 requires CC to conduct a five-year trout monitoring study and to file annual reports on the results of each years studies.

C. Ramping Rate

Rapid alteration of streamflows during project startup would strand fish in the bypassed reach when submerged areas quickly drain, because of rapid decreases in the amount of water available to maintain existing habitat. To protect the fish and other aquatic resources from rapid, project-induced flow

reductions, the DEIS recommended that CC limit the maximum rate of change in the flow in the Snake River. 23

The ramping rate of one foot per hour recommended to protect whitewater boaters would also provide a measure of protection for fish and invertebrates inhabiting the bypassed reach. We believe that a one foot per hour ramping rate would adequately protect the fishery resources of the bypassed reach during project startup. Article 410 requires CC to implement a ramping rate of one foot per hour and to determine if this rate would adequately prevent stranding of fish and would protect the recreationists using the bypassed reach and downstream areas based on a site specific study. CC should consider structural measures during the design of the powerhouse(s) to facilitate implementing the ramping rate.

D. Raptor Protection

Transmission lines, particularly those in open, relatively treeless areas with few perching sites, may pose an electrocution hazard to raptors and other large birds. 24 Collisions with the lines may be an additional source of mortality. The U.S. Department of the Interior recommends that the project transmission line be designed and constructed to minimize these sources of avian mortality. CC has agreed to use an appropriate design to prevent electrocution of raptors. To ensure the protection of raptors and other large birds in the project area, Article 411 requires CC, after consultation with the fish and wildlife agencies, to design and construct the transmission line according to accepted guidelines for raptor protection.

E. Revegetation of Disturbed Upland Habitat

During construction of the proposed project, approximately 22 acres of upland shrub-grassland habitat would be disturbed. 25 CC proposes to reseed the disturbed areas with a mixture of grasses and native shrubs, but does not provide a detailed revegetation plan. As discussed in the DEIS, CC should develop and implement a detailed plan to revegetate disturbed upland areas, with the goal of establishing high quality wildlife habitat. 26 The plan, required by Article 412, should be developed in consultation with the appropriate agencies, and should contain, at a minimum, a description of plant species to

23
See Section 4.2.2.1.2 of the DEIS.
24
See Section 4.3.1.1 of the DEIS.
25
Id.
26
See generally Section 4.3 of the DEIS.

be used, an implementation schedule, a description of planting methods, fertilization and irrigation requirements, and a monitoring program.

F. Wildlife Habitat Enhancement Structures

To enhance the project area for wildlife, CC proposes to: (1) construct two osprey nesting platforms in Milner reservoir; (2) develop artificial burrows for use by burrowing owls; and (3) construct an unspecified number of nesting structures for Canada geese in the project vicinity. CC does not, however, provide final designs, locations, and monitoring plans for these enhancement measures. The proposed measures, if successfully implemented, could enhance wildlife use of the project area. Therefore, Article 413 requires CC to provide a detailed plan for providing the proposed wildlife enhancement measures, including, at a minimum: (1) the final design of the goose nesting structures, osprey-nesting platforms, and burrowing owl burrows; (2) the location of the enhancement features; (3) a schedule for providing the enhancement features; and (4) a description of a program to monitor and maintain the enhancement features.

G. Replacement of Riparian Wetlands and Upland Habitat

Approximately 6.1 acres of riparian wetlands will be eliminated by project development. [27] CC has identified four sites totalling 18.2 acres along the project canal where wetlands could be created. Of those 18.2 acres, CC proposes to create 10.2 acres to satisfy the wildlife agencies' recommended 1.0 to 1.5 loss to replacement ratio for riparian wetlands. Construction would also result in the permanent loss of 26.6 acres of upland shrub-grassland, including 2.0 acres of BLM's isolated tract No. 23. The IDFG recommends that 26.6 acres of upland habitat, off-site if necessary, be developed and donated to IDFG as mitigation for upland losses. CC has agreed to replace lost upland habitat according to accepted IDFG guidelines.

Rather than develop another mitigative plan using upland habitat, possibly at an off-site location, we believe that it would be more beneficial to wildlife, as well as more practical, to provide additional riparian habitat in the immediate project area. Sufficient mitigation for both upland and wetland losses would be provided by adding 5.3 acres of riparian wetland habitat to the 18.2 acres of potential replacement habitat already identified by CC. This total of 23.5 acres of riparian wetland replacement habitat would include 13.3 acres for replacing 26.6 acres of lost upland habitat. This 1.0 for 2.0 ratio seems

27
See Section 4.3.1.1 of the DEIS.

reasonable considering the much greater wildlife value of riparian wetlands, the wetlands comparative scarcity in the project area, and the high priority given to the protection of wetlands compared to upland habitat.

IDFG agrees with this approach for replacing upland habitat with riparian habitat 28 CC should have little difficulty providing the additional 5.3 acres by either enlarging the four sites already identified or by developing additional nearby sites along the canals or adjacent to Milner Reservoir. Article 414 requires CC to develop and maintain 23.5 acres of riparian wetland habitat to replace riparian wetlands and upland habitats lost to project development.

H. Socio-economic Considerations

The operation of the 85-year-old Milner Dam is essential for the diversion of Snake River flows to the three gravity canals that provide water to irrigate approximately 440,000 acres of agricultural land in south-central Idaho. 29 If Milner Dam were to fail during the yearly irrigation season, from April 1 through October 31, area farms that rely on the continuous delivery of water from the three canals would experience a major crop failure, because they would not be able to develop alternative irrigation systems in time to save their cultivated acreage.

Based on 1982 data collected by the Census of Agriculture, irrigated and harvested cropland in Twin Falls and Jerome Counties in Idaho produced agricultural sales of $270 per acre. Thus, the loss of irrigation water for 440,000 acres would result in a $118,800,000 revenue loss for the area's farm sector. Food processing establishments in south central Idaho, such as Universal Frozen Foods, Ore-Ida Foods, and Amalgamated Sugar Company, also would be adversely affected, since they would be unlikely to locate alternative economic sources of potatoes, beans, and sugar beets. Consequently, these companies would decrease their production and local employment. Moreover, employment cutbacks by the area's farms and food processing establishments would cause subsequent reductions in spending at area retail trade and service establishments, with a commensurate decline in their sales, employment, and profits.

I. Whitewater for Boaters

1. Flows

28
Personal communication, Dale Turnipseed, IDFG, Jerome, Idaho, November 28, 1988.

29
Twin Falls Canal Company and North Side Canal Company, Ltd., Response to DEIS, March 30, 1988.

In the 1.6-mile-long reach of the Snake River immediately below Milner Dam, expert whitewater boaters run continuous Class V rapids during high flows that occur in early spring and late fall. In 1986, about 200 visitor days of whitewater boating occurred in the Milner reach. Much of this use occurs in April and May when the weather is relatively warm and spring runoff is at its peak. The vast majority of boating use consists of kayaking; however, some rafting does occur. Boaters typically put in at a bridge located 0.5 miles downstream of Milner Dam and take out either 1.1 miles below the bridge where the Class V rapids end, or continue 7.0 miles downstream to a take-out point above Star Falls. Most boaters, however, choose to take out at the first location, since the stretch of river below this point is relatively calm, with only a few widely-spaced rapids.

Since the Milner reach has only become known to whitewater boaters within the past few years, the minimum flow needed to maintain the unique Class V experience has not been firmly established, although boaters generally prefer flows between 5,000 and 15,000 cfs. According to the BLM, at flows below 7,500 cfs, the reach is not runnable by rafts, but can be successfully run at flows of 3,000 cfs, or perhaps below, in a kayak. 30 The Class V experience is apparently completely changed at flows below 3,000 cfs, because many rocks are exposed, creating a whitewater run that can be negotiated only by kayakers skilled at technical maneuvering. 31

Because of the short length of the Milner reach, the whitewater experience found at certain flows at the Milner Project can be found in greater amounts on other sections of the Snake River and other Idaho rivers. For instance, the North Fork of the Payette River, near Boise, Idaho, provides several miles of continuous Class V rapids. In addition, the 14-mile Murtaugh reach of the Snake River, between Star Falls and Twin Falls Reservoir, provides a day-long Class IV-to-V whitewater run which has been compared favorably to the Colorado River. The Milner reach does not become a unique whitewater resource until very high flows occur (generally 10,000 cfs or above). The large volume of water at these high flows, concentrated in the narrow

30
Personal communication, Jeff Jarvis, Outdoor Recreation Planner, BLM, Boise, Idaho, December 1, 1988; letter from Todd Graeff, Director, Idaho Department of Parks and Recreation, Boise, Idaho, October 10, 1985.

31
Letter from Delmar D. Vail, State Director, BLM, Boise, Idaho, January 20, 1987; personal communication, Jeff Jarvis, Outdoor Recreation Planner, BLM, Boise, Idaho, December 1, 1988.

gorge below Milner Dam, creates Class V waves that are internationally known among expert kayakers.

The DEIS recommended that bypass flows between 5,000 and 15,000 cfs, when available, be released on as many as 10 weekend days during May and June for whitewater boaters. 32 Such flows would provide opportunities for expert kayakers to run the 1.6-mile-long Class V rapids below Milner Dam. Based on comments received on the DEIS from the IDWR and CC, and information gathered by the staff during a project site visit and public meetings held in August 1988, we agree that providing these flows at times when such flows are not made available by normal regulation of the storage and release patterns governing flows at Milner Dam would not be feasible.

Between April and October all water at Milner Dam appropriated for use by CC is diverted for irrigation. Providing flows between 5,000 and 15,000 cfs in May and June would require the entire irrigation system for the North Side Canal Company and Twin Falls Canal Company to be readjusted after each flow release. This would adversely affect water delivery to crops in the area. However, when flows exceed system requirements by the magnitude that would allow customary boating use below Milner Dam, such flows could be maintained when available to allow boaters to continue using this unique resource.

Table 1 below shows the occurrence of various whitewater flows both with and without project operation based on IDWR 56-year flow record for the Milner reach. Assuming that the minimum flow needed to boat the Milner reach is approximately 2,000 cfs, whitewater boating opportunities at Milner occur approximately 96 days per year during the boating season. However, project operation would reduce these opportunities by 60 percent, leaving approximately 38 days a year for whitewater boating.

Table 1. Average percent of Occurrence of Flows Below Milner Dam for March, April, May, June, October, and November, with average number of days at flow or greater.

Flow at least	6-month percentage	Number of days	With project 6-month project percentage	With project number of days

32
See Section 4.5.1.2 of the DEIS.

(cfs)	of occurrence	per year	of occurrence	per year
15,000	2.9	5.3	0.5	0.9
14,000	4.7	8.6	0.8	0.9
13,000	5.1	9.3	1.3	2.4
12,000	6.5	11.9	1.9	3.5
11,000	8.4	15.4	2.9	5.3
10,000	9.5	17.4	4.7	8.6
9,000	10.6	19.4	5.1	9.3
8,000	12.9	23.6	6.5	11.9
7,000	17.0	31.1	8.4	15.4
6,000	21.0	38.4	9.5	17.4
5,000	24.0	43.9	10.6	19.4
4,000	33.6	61.5	12.9	23.6
3,000	38.4	70.3	17.0	31.1
2,000	52.8	96.6	21.0	38.4

Although project operation would have an adverse effect on the total continuum of whitewater boating opportunities offered at Milner, from low flow technical kayaking to high flow Class V boating, it is important to note the impacts that project operation would have on the unique high flows (10,000 cfs and above). Flows of 10,000 cfs and above occur on the average about 17.4 days. With project operation, the occurrence of these flows would be reduced by almost half (49 percent), leaving about 8.6 days for boating at high flows. This represents a loss to boaters of approximately eight days (8.8 days).

Since these rare high flows are what make the Milner reach important to whitewater boaters, these flows should be preserved. This could be accomplished by requiring CC to stop operating the project on eight days when flows at 10,000 cfs or above are available. To ensure that these flows are available when boaters use the reach, they should be released during April and May for eight hours during daylight hours. Flows below 10,000 cfs, however, would be reduced during project operation. To help mitigate these impacts, when flow conditions available make it impossible for CC to meet their obligation of providing eight days of flows of 10,000 cfs or more, they should release flows between 4,000 and 10,000 cfs until their obligation is met. This would reduce project impacts on mid-range flows and ensure that whitewater flows would be available during years when high flows do not occur.

Article 415 requires CC, upon starting project operation, and in consultation with the appropriate agencies and whitewater boaters, to stop operating the project for eight hours on eight days in April and May when flows of 10,000 cfs or above occur.

Article 415 also requires CC to release flows between 4,000 and 10,000 cfs, when available, to meet its eight-day obligation when eight days of flows of 10,000 cfs or above do not occur during April and May.

Ceasing project operation at the above-mentioned times would result in a yearly loss to irrigators of $8,400 in revenues generated by the project. To determine whether a better arrangement of flow could be provided to more closely match whitewater boater needs and to reduce the impact on project generation, Article 418 requires CC to conduct a study in consultation with the Idaho Whitewater Association (IWA), the National Park Service (NPS), BLM, the U.S. Bureau of Reclamation (BR), IDWR, and the Idaho Department of Parks and Recreation (IDPR). Since boaters may not spend an entire day on the river, it is possible that higher whitewater flows could be maintained in the bypassed reach for less than eight hours according to boaters needs as long as CC meet their obligation for providing the equivalent of eight eight-hour days of project shutdown at flows of 10,000 cfs or above.

To protect downstream recreationists from sudden increases in water level and streamflow, water levels in the project bypassed reach should not increase by more than one foot per hour when providing releases for whitewater boating. In addition, a warning system must be implemented in order to alert recreationists of hazardous situation created by increases in flow. A ramping rate and a warning system would allow fishermen and other recreationists below the dam to have enough time to leave the area before water levels and velocities become unsafe. Article 410 requires CC to file for Commission approval a plan for implementing ramping rates that would ensure the protection of fish resources and downstream recreationists. Article 416 requires CC to file a plan for Commission approval to warn recreationists of increases in water level and streamflow downstream of the dam.

2. Communication Network for Whitewater Boaters

In their March 30, 1988 response to the DEIS, CC proposed to develop a communication network that would quickly inform recreationists of anticipated flow conditions below Milner Dam. Under existing conditions, high flows occur rarely and are unpredictable for boaters. A communication network would partially mitigate for the loss of whitewater boating days caused by project operation by giving boaters more opportunity to plan boating trips to coincide with desirable flows. Article 418 requires CC, after consultation with BR, IDWR, IDPR, BLM, NPS, and IWA, to file for Commission approval a plan to provide a communication network to inform whitewater boaters of available whitewater flows.

J. Fishing Access to the Bypassed Reach

We believe that CC should study the feasibility of stocking the project bypassed reach with trout to provide new opportunities for fishing at the project site. A program to inform the public of fishing opportunities at the project site would be needed since presently the Milner reach receives minimal fishing use. Also, access to be provided at the powerhouse and at the bridge below Milner Dam could attract additional fishing use to the project bypassed reach. To ensure that anglers are adequately informed of fishing opportunities in the bypassed reach, Article 408 requires CC to file for Commission approval a plan that includes notification of anglers of fishing opportunities.

K. Recreation Facilities

CC initially proposed to construct the following recreational facilities: (1) a parking area to accommodate 10 vehicles at the powerhouse; (2) kayaker access at the powerhouse; and (3) a boat dock near the existing boat dock at the BLM's Bicentennial Site on Milner Reservoir. In their March 30, 1988 filing, however, CC proposed for consideration additional facilities. These include: (1) an interpretive center with associated picnic facilities at or near Milner Dam, or an alternate location; (2) an additional water ski dock or docks in Milner Reservoir near Milner Dam; (3) further development of public facilities at the BLM Wildlife Habitat Management area; or (4) other better suited public facilities selected as a result of the consultation process.

Since the construction of the project would provide an opportunity to enhance recreation near Milner Dam, some additional facilities should be provided to allow access for whitewater boaters and fishermen. Other facilities mentioned above, however, may not be needed at this time.

Article 419 requires CC to file for Commission approval a recreation plan prepared in consultation with the IDPR, BLM, NPS, and IWA, that includes, but is not limited to: (1) provisions for a kayaker put-in area at the bridge below Milner Dam and a take-out area below the powerhouse with parking facilities; (2) tailwater fishing facilities; (3) design drawings of the proposed facilities; (4) a construction schedule for the facilities; (5) a plan for monitoring recreational use in the project area to determine if additional recreational facilities will be needed in the future; and (6) documentation of agency consultation. Article 419 also requires that CC, in designing these facilities, consider providing the whitewater take-out area below the final Class V rapid below the powerhouse area and away from tailwater

fishing facilities. This would avoid boater interference with fishermen and allow boaters to run an additional Class V rapid.

L. Visual Resource Mitigation

Milner Dam and its associated proposed facilities are visible to visitors to the dam site interpretive area as well as from water users on the river and reservoir. The proposed dam and canal modifications would blend with the existing landscape.

The power generating facilities would be located in an area out of view of Milner Dam and in a visually natural setting within the canyon. The naturalness of the canyon walls is a great asset that should be maintained throughout the installation and operation of the proposed project. The proposed access road to the powerhouse site would cross steep canyon side slopes and its construction would entail earth and rock cuts and fills that would create a linear element in the natural appearing landscape. The proposed penstock would cross over the canyon rim and drop nearly vertical to the powerhouse at the river's edge. This large pipe, with its smooth surfaces, would reflect light and contrast in color, texture, and line, with the existing natural appearing landscape. The proposed powerhouse, substation, transmission line, gantry crane, and tailrace would also contrast with the natural appearing landscape because of their geometric forms. In particular, the transmission line from the powerhouse to the forebay would create a linear element contrasting with the canyon walls.

CC should study the feasibility of placing the transmission line either underground or in a conduit attached to the penstock from the powerhouse to the forebay area. Therefore, to ensure that the proposed facilities are designed to minimize visual impacts, Article 420 requires CC to submit final construction plans and specifications prior to the commencement of any project-related land-disturbing activities.

M. Cultural Resources

Three historic sites listed or considered eligible for inclusion in the National Register of Historic Places are located within or near the impact areas of the project. The listed site is Milner Dam. The eligible sites are the South Side Main Canal and Milner Townsite. Six archeological sites have also been identified in the project vicinity. Based on a review of the archeological report for the project, and a site visit to the project area, the Idaho State Historic Preservation Officer (SHPO) has stated that the sites either are not eligible for inclusion in the National Register or lie outside the area of

potential impacts. 33 Project construction and rehabilitation of the Dam would require modifications to the dam and the canal. No construction or rehabilitation work would occur in the area of the Townsite.

CC has filed a cultural resources management plan, prepared in cooperation with the SHPO, to mitigate the project's effects on the dam and the canal and to ensure that the townsite would not be affected by construction or rehabilitation work. The plan proposes to document in photographs, drawings, and in a report, according to the standards of the Historic American Engineering Record (HAER), the portions of the dam and the canal that would be altered by the project. The plan proposes to fence portions of the townsite and to prohibit construction activities in the vicinity of the townsite to ensure that no impacts to this site would occur. 34

The SHPO reviewed the plan and stated the following: (1) the plan minimizes impacts to the dam and the canal and ensures that the townsite would not be impacted; (2) rehabilitation work would not affect the original historical fabric of the dam; (3) this work would not significantly affect the appearance of the dam; and (4) the plan satisfies the historic preservation requirements for consultation with the Advisory Council on Historic Preservation, as required by the National Historic Preservation Act. 35

The U.S. Department of the Interior (Interior) also reviewed the cultural resources management plan and the cultural resources documentation contained in the application for license, and generally concurs with the plan and the findings of the SHPO. Interior recommends certain revisions to the plan and the cultural resources documentation to ensure that the plan is implemented in a satisfactory manner and that the documentation is complete. Specifically, Interior recommends these actions:

33
Letters from Dr. Thomas Green, State Archeologist, Idaho State Historical Society, Boise, Idaho, May 17, 1984; and John A. Rosholt, Attorney for Twin Falls Canal Company and North Side Canal Company, Ltd., Nelson, Rosholt, Robertson, Tolman & Tucker, Twin Falls, Idaho, February 11, 1986.
34
Letter from John A. Rosholt, Attorney for Twin Falls Canal Company and North Side Canal Company, Ltd., Nelson, Rosholt, Robertson, Tolman & Tucker, Twin Falls, Idaho, February 11, 1986.
35
Letter from Dr. Merle W. Wells, State Historic Preservation Officer, Idaho State Historical Society, Boise, Idaho, February 4, 1986.

(1) completing documentation of the dam, canal, and townsite in accordance with National Register eligibility criteria before determining the specific HAER documentation or avoidance procedures that should be implemented, to ensure that documentation and procedures are directed at the significant historical attributes of these sites; (2) surveying the townsite to precisely determine the boundaries of the site, to ensure that the site is not impacted; (3) avoiding the use of fencing at the townsite so as not to draw the attention of artifact collectors or vandals; and (4) providing further documentation on one archeological site (10-TF-641) to clearly establish that the site is not eligible for inclusion in the National Register. 36

To ensure that the dam, canal, and townsite are documented and protected in an adequate manner and that the cultural resources documentation of site 10-TF-461 is complete, CC should consult with the SHPO, and also the HAER in the case of the dam and canal, to determine the specific procedures that should be implemented, and should implement the plan with Interior's recommended revisions before beginning land-disturbing or land-clearing activities that would impact these sites. The documentation should be filed in a report or in separate reports, if the documentation or avoidance procedures are undertaken at different times, and filed with the Commission for approval. The reports must contain a letter from the SHPO accepting the documentation and procedures for avoiding impacts. In the case of the dam and the canal, letters from the HAER accepting the documentation must also be included. No rehabilitation work or other construction work at the dam or canal or within the vicinity of the townsite and the archeological site may commence until CC are notified by the Commission that the filing has been approved. Article 421 requires implementation of the revised plan.

The project has the potential to impact archeological and historic sites not previously identified at the project. Buried sites may be encountered during construction. Also, project facilities may be relocated or added to the project at some future date in areas not previously inventoried for sites. Any such archeological or historic sites should be afforded protection in accordance with the National Historic Preservation Act. Article 422 requires the implementation of cultural resources protection measures to avoid or minimize impacts to any such sites that may be impacted by the project. Article 421

36
Letters from Bruce Blanchard, Director, Environmental Review, Department of the Interior, Washington, D.C., December 17, 1985; and Helene Dunbar, Acting Chief, Interagency Archeological Services, National Park Service, San Francisco, California, February 4, 1986.

requires CC to finalize and implement its cultural resources management plan in a manner acceptable to the Advisory Council on Historic Preservation.

N. Cumulative Impacts

Cumulative impacts of the four proposed projects, including the Milner Project No. 2899, will be fully assessed in the Supplement and FEIS to take into consideration any changes that occur between the DEIS and the FEIS in configuration, operation, and mitigative measures associated with the other three projects. Standard Articles 15 and 17 of the license 37 reserve sufficient authority for the Commission to order reasonable modifications of the project structures and operations to take into account recommendations made in accordance with the NEPA process.

IV. Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the FPA, as amended by the Electric Consumers Protection Act of 1986 (ECPA), Pub. L. No. 99-495, requires the Commission to include license conditions, based on recommendations of federal and state fish and wildlife agencies, for the protection, mitigation, and enhancement of fish and wildlife. The concerns raised by the federal and state fish and wildlife agencies have been fully addressed in the DEIS, and the conditions contained in this license are consistent with the recommendations made by those agencies.

V. Comprehensive Plans

Section 10(a)(2)(A) of the FPA, as amended by ECPA, requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans (where they exist) for improving, developing, or conserving a waterway or waterways affected by the project. The Commission's interpretation of "comprehensive plan" under Section 10(a)(2)(A) 38 was revised on rehearing by order issued April 27, 1988. 39 On rehearing, the Commission instructed the Director, Office of Hydropower Licensing, to request the state and federal agencies to file plans they believe meet the revised guidelines.

37
See Ordering Paragraph (D) hereof.
38
Order No. 481, 52 Fed. Reg. 39,905 (October 26, 1987), III FERC Stats. & Regs. 30,773 (1987).
39
Order No. 481-A, 43 FERC 61,120 (April 27, 1988).

The Commission reviewed five plans that address various aspects of waterway management in relation to the proposed project. 40 With one exception, the proposed project, as conditioned herein, is consistent with those plans.

The Idaho State Water Plan (ISWP) is a Section 10(a)(2)(A) comprehensive plan. In its September 25, 1985 motion to intervene in this proceeding, IDWR indicated that the ISWP specifies that the use of water by hydroelectric projects must be subordinated to future upstream depletionary uses and requested that such a provision be included in any license issued for Project No. 2899. IDWR did not, however, provide any information regarding the timing and extent of those future depletionary uses or how such uses would affect the operation of Project No. 2899.

As we explained in Horseshoe Bend Hydroelectric Company, 41 in determining whether, and under what conditions, a license should issue, we are required by the comprehensive planning provision of Section 10(a)(1) of the FPA, 16 U.S.C. 803(a)(1), to consider and balance all aspects of the public interest, including the need to protect environmental and irrigation interests and the need for the power to be produced by the project. In so doing, we prescribe conditions that we believe will provide the appropriate level of energy generation and protection for the environment and irrigation and will not issue a license if the conditions we deem necessary to protect environmental and other resources would render a project financially infeasible.

Inclusion in the license of the unsupported open-ended water subordination clause requested by IDWR would in essence vest in IDWR, rather than the Commission, ultimate control over the operation and continued viability of the project. In other words, the subordination clause, which would reserve to IDWR the right to permit unlimited diversion upstream of the project, could nullify the balance struck by us under the comprehensive planning provisions of Section 10(a)(1) of the FPA in issuing the license. Consequently, inclusion of the open-ended water subordination clause in the license as requested by IDWR would interfere with the exercise of our comprehensive planning

40 Idaho Statewide Comprehensive Outdoor Recreation Plan, 1983, IDPR; Idaho State Water Plan, 1986, IDWR; Idaho Fisheries Management Plan, 1986, IDFG; and Northwest Conservation and Electric Power Plan, 1986; and Columbia River Basin Fish and Wildlife Program, 1987.

41 42 FERC 61,072 (1988), appeal pending sub nom. Idaho Power Company v. FERC, No. 88-1078 (D.C. Cir. filed Feb. 3, 1988).

responsibilities under Section 10(a)(1) of the FPA and thus would be inconsistent with the scheme of regulation established by the FPA, which vests in the Commission the exclusive authority to determine whether, and under what conditions, a license should issue. 42

In light of the above, we will not add the requested open-ended subordination clause to the license for Project No. 2899. However, as we explained in Horseshoe Bend, should IDWR in the future determine that it would be desirable for CC to reduce their use of water for generation to accomodate a specific future upstream water use, IDWR can petition the Commission to have us exercise our reserved authority under Standard Article 12 of the license to require such a reduction. We will provide CC with notice of the request and an opportunity to respond and will act on the request after considering all supporting documents and information submitted by IDWR and CC.

The proposed project is otherwise consistent with the ISWP. The ISWP provides for a zero minimum flow below Milner Dam. The license as conditioned herein is consistent with the zero minimum flow provision of the ISWP, since the license would not require that minimum flows be provided below Milner Dam. Instead, it requires CC to provide any additional water needed to meet the environmentally-desirable target flows by leasing water that is in excess of irrigation requirements from the Water Bank, but only if available, and in accordance with the rules of the Water Bank operation.

The Columbia River Basin Fish and Wildlife Program (Program), developed by the Northwest Power Planning Council (Council) to protect, mitigate, and enhance fish and wildlife resources associated with the development and operation of hydroelectric projects within the Columbia River Basin is a Section 10(a)(2)(A) comprehensive plan. 43 Responsible federal agencies are required to provide equitable treatment for fish and wildlife resources, consistent with the other purposes for which hydropower is developed and to take into account to the fullest extent practicable the Program.

The Program directs agencies to consult with federal and state fish and wildlife agencies, appropriate Indian Tribes, and the Council during the study, design, construction, and operation of any hydroelectric development in the Basin. At the time the application for Project No. 2988 was filed, the Commission's

42
See First Iowa Hydro-Electric Coop. v. FPC, 328 U.S. 152 (1946).
43
See 43 FERC 61,120 (1988).

regulations required applicants to initiate prefiling consultation with the appropriate federal and state fish and wildlife agencies and the Tribes and provided these groups with postfiling opportunities to review and to comment on the application. This consultation process has occurred.

The Program states that authorization of new hydroelectric projects should include conditions of development that would mitigate the impacts of the project on fish and wildlife resources. The relevant federal and state fish and wildlife agencies have reviewed and commented on the application. In addition, this license provides for mitigative measures to protect and enhance fish and wildlife resources and is therefore consistent with Section 1200 of the Program. Further, Article 423 of this license reserves to the Commission the authority to require future alterations in project structures and operation in order to take into account to the fullest extent practicable the applicable provisions of the Program.

VI. Project Economics and Need for Power

Commission studies show that the proposed project, operating under its proposed mitigation requirements, would produce approximately 144,300 MWh of energy annually at a levelized cost of about 61.5 mills/kWh. When compared to the levelized cost of alternative energy in the region of about 85 mills/kWh, the levelized net annual benefits of the project power would be approximately $3.4 million. CC's levelized revenues under the terms of their power sales contract are expected to be about $452,000 annually, which would be a significant contribution to their projected financing obligation for the Milner Dam rehabilitation.

The project is financially feasible, because CC have executed a contract for the sale of the project power which obligates the power purchaser to pay the total costs plus two mills/kWh for the project generation, to be escalated by 20 percent every five years.

As discussed in the attached S&DA, a need for power could exist in the region any time from the early 1990s to late 1990s, and that the Milner Project could be useful in meeting a small part of that need for power.

VII. Summary of Findings

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the S&DA attached to this order.

As discussed previously and in the attached S&DA, the 200 cfs target flow required by Article 407 would: (1) not jeopardize the feasibility of the project development; (2) provide flows below Milner Dam without sacrificing irrigation water requirements; and (3) reduce CC's annual power revenues, which will be used to help offset the cost of the Milner Dam rehabilitation, by only $13,300 (less than four percent). Thus, the requirement to lease water in excess of irrigation requirements to meet mitigation flow requirements is reasonable, because water is projected to be available for purchase from the Water Bank at a reasonable price that would not eliminate the economic benefits of the project or jeopardize CC's ability to secure financing for the project. Additionally, the target flow may be necessary for the maintenance of a marginal cold-water fishery in the river reach below Milner Dam.

Based on our independent analysis, we conclude that the Milner Project No. 2899 as conditioned herein would not conflict with any planned or authorized development and would be best adapted to comprehensive development of the waterway for the beneficial public uses specified in Sections 4(e) and 10(a)(1) of the FPA.

The Commission orders:

(A) This license is issued to the Twin Falls Canal Company and the North Side Canal Company, Ltd. (licensees), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Milner Hydroelectric Project No. 2899. This license is subject to the terms and conditions of the FPA, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensees' interests in those lands, enclosed by the project boundary shown by Exhibit G:

Exhibit G-	FERC No. 2899-	Showing
General Map	1	13
Project Boundary Map	2	14
Project Boundary Map	3	15
Project Boundary Map	4	16

Project Boundary Map 5 17

(2) Project works consisting of: (a) the existing Milner Dam, constructed with a trapezoidal-shaped rockfill section at elevation 4,138 feet, the north embankment with a crest length of 480 feet, the middle embankment with a crest length of 404 feet, and the south embankment with a crest length of 462 feet, proposed 15-foot-wide rockfill berms on the downstream slope of the dam, eleven 12-foot-high, 30-foot-wide radial gates proposed for the southern island, and an ungated emergency spillway on the northern island; (b) the existing 1,100-acre reservoir with a gross storage capacity of 26,000 acre-feet at an elevation of 4,130.05 feet; (c) a canal control structure, consisting of six manually-operated gates, 12-feet-wide by 15-feet-high, and one hydraulically operated bascule gate, 24-feet-long by 11-feet-high; (d) new stoplog slots, replacing the existing headworks; (e) a 6,500-foot-long, earth and riprap-lined excavated rock canal, modified to increase the canal capacity from 3,200 cfs to 7,000 cfs; (f) an existing bridge on the Twin Falls Main Canal, raised to an elevation of 4,137.5 feet and lengthened by 60 feet; (g) a new concrete wasteway, providing a water passageway through the right canal embankment of the Twin Falls Main Canal, having a 39-foot-long, 10.5-foot-high, hydraulically operated bascule gate; (h) a forebay, having a maximum capacity of 4,000 cfs; (i) an intake structure at the end of the forebay, consisting of steel trashracks and a 14-foot-wide, 17-foot-high, cable-operated, fixed-wheel gate; (j) a 17-foot-diameter, 385-foot-long steel penstock; (k) an 89-foot-long, 56-foot-wide, 83-foot-deep, semi-outdoor, reinforced concrete powerhouse, containing a single generating unit with a rated capacity of 43.65 megawatts, operating under a head of 151.6 feet; (l) a 170-foot-long tailrace; (m) a 2,300-foot-long access road; (n) a 1.4-mile-long, 138-kilovolt transmission line, tying into the existing Milner substation; (o) 600 feet of river bottom excavation; and (p) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F recommended for approval in the S&DA.

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

(C) The Exhibit G described above and those sections of Exhibits A and F recommended for approval in the S&DA are approved and made part of the license.

(D) This license is subject to the articles set forth in Form L-2 (October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Lands of the United States," except Article 20, and the following additional articles:

Article 201. The licensees shall pay the United States the following annual charges, 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 FPA, 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 58,200 horsepower.

(b) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of its lands, other than for transmission line right-of-way, a reasonable amount, as determined in accordance with the provisions of the Commission's regulations in effect from time to time.

(c) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of its lands for transmission line right-of-way, a reasonable amount, as determined in accordance with the provisions of the Commission's regulations in effect from time to time.

Article 202. Pursuant to Section 10(d) of the FPA, after the first 20 years of operation of the project under license, a specified reasonable rate of return upon the net investment in the project shall be used for determining surplus earnings of the project for the establishment and maintenance of amortization reserves. One-half of the project surplus earnings, if any, accumulated after the first 20 years of operations under the license, in excess of the specified rate of return per annum on the net investment, shall be set aside in a project amortization reserve account at the end of each fiscal year. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year after the first 20 years of operation under the license, the amount of that deficiency shall be deducted from the amount of any surplus earnings subsequently accumulated, until absorbed. One-half of the remaining surplus earnings, if any, cumulatively computed, shall be set aside in the project amortization reserve account. The amounts established in the project amortization reserve account shall be maintained until further order of the Commission.

The annual specified reasonable rate of return shall be the sum of the annual weighted costs of long-term debt, preferred stock, and common equity, as defined below. The annual weighted cost for each component of the reasonable rate of return is the product of its capital ratio and cost rate. The annual capital ratio for each component of the rate of return shall be calculated based on an average of 13 monthly balances of amounts properly includable in the licensees' long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rates for long-term debt and preferred stock shall be their respective weighted average costs for the year, and the cost of common equity shall be the interest rate on 10-year government bonds (reported as the Treasury Department's 10-year constant maturity series) computed on the monthly average for the year in question plus four percentage points (400 basis points).

Article 203. The licensees shall clear and keep clear to an adequate width all 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 result from maintenance, operation, or alteration of the project works. In addition, all trees along the periphery of project reservoirs that may die during operations of the project shall be removed. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 301. The licensees shall begin construction of the 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 302. To ensure completion of construction of the dam safety modifications during the 1989 construction season, the licensees shall file a plan and schedule for the design and construction of the dam safety modifications within 30 days from the issuance date of the license. The plan shall include specific items for activities that are necessary before beginning construction activities.

Article 303. Within 90 days after completion of construction, the licensees shall file for the Commission's approval, revised Exhibits A, F, and G, to describe and show the project as-built, including all facilities determined by the Commission to be necessary and convenient for transmitting all of the project power to the interconnected system.

Article 304. Before the start of construction, the licensees shall review and approve the design of contractor-designed cofferdams and deep excavations and shall ensure that construction of the cofferdams and deep excavations is consistent with the approved design. At least 30 days before starting construction of the cofferdam, the licensees shall submit to the Commission's Regional Director and to the Director, Division of Dam Safety and Inspections, one copy of the approved cofferdam construction drawings and specifications and a copy of the letter(s) of approval.

Article 305. The licensees shall retain a board of two or more qualified, independent, engineering consultants to review the design, specifications, and construction of the project for safety and adequacy. The names and qualifications of the board members shall be submitted for approval to the Director, Division of Dam Safety and Inspections, with a copy to the Commission's Regional Director. Among other things, the board shall assess the following: the geology of the project site and surroundings, the design, specifications, and construction of the reinforcement berms, canal embankments, spillway, powerhouse, electrical and mechanical equipment, and emergency power supply; instrumentation; and construction procedures and progress. Before each meeting, allowing sufficient time for review, the licensees shall furnish to the board, with a copy to the Regional Director and two copies to the Director, Division of Dam Safety and Inspections, the following: documentation showing details and analyses of design and construction features to be discussed; significant events in design and construction that have occurred since the last board of consultants' meeting; drawings; questions to be asked; a list of items for discussion; an agenda; and a statement showing the specific level of review to be performed by the board. Within 30 days after each board of consultants meeting, the licensees shall submit to the Commission copies of the board's report, including the board's recommendations and the licensee's plans for addressing the recommendations.

Article 306. At least 60 days before the start of construction of each major component of the project, such as the dam rehabilitation, spillway reconstruction, all necessary transmission facilities, powerhouse, and water conveyance structures, the licensees shall submit for that component, one copy to the Commission's Regional Director and two copies to the Director, Division of Dam Safety and Inspections, of the final design report, contract drawings and specifications. The Director, Division of Dam Safety and Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 307. The licensees shall develop procedures for the repair of the earthfill sections of Milner Dam in the event there

is excessive leakage. The licensees shall include procedures for the following items: inspection; reservoir drawdown; cofferdam construction; earth embankment repair methods; and other pertinent items. The repair procedure shall be reviewed and approved by the board of consultants required in Article 305. Within one year of issuance of the license, the licensees shall submit one copy to the Commission's Regional Director and two copies to the Director, Division of Dam Safety and Inspections, of a report detailing the procedures. The Director, Division of Dam Safety and Inspections, may require changes in the procedures to assure a safe and adequate project.

Article 308. Within one year of issuance of this license, the licensees shall submit a report evaluating the feasibility of constructing a power plant at Milner Dam to utilize the power potential of the flows released to the bypass reach of the river below the dam and therefore not usable by the proposed power plant to be located approximately 1.6 miles downstream. If the feasibility study shows that developing a power plant at the dam would be economically beneficial, the licensees shall submit a schedule and plans for developing a power plant at the dam in accordance with Article 301.

Article 401. The licensees shall acquire at the earliest possible date each year, by rental on an annual basis from the Upper Snake Water Supply Bank, stored water, to the extent that it is available in excess of irrigation demand, to be released as necessary to meet the target flows specified in Article 407. The licensees may, and are encouraged to, formulate an agreement with any and all of the licensees for projects which, in the future, are licensed to be constructed and operated on the Snake River below American Falls Dam and which have similar requirements to meet recommended flows from short-term water acquisition.

Article 402. The licensees, after consultation with the Soil Conservation Service, the Bureau of Land Management, and the Idaho Department of Fish and Game, and at least 90 days before beginning any project-related land-clearing, land-disturbing, or spoil-producing activities, except for activities specifically required for safety modifications to Milner Dam, shall prepare and file for Commission approval a plan to control erosion, slope stability, and to minimize the quantity of sediment resulting from project construction and operation. The Commission reserves the authority to require changes to the plan.

The plan shall be based on actual-site geological, soil, and groundwater conditions and final project design, and shall include the following: (1) a description of the actual-site conditions; (2) cofferdams, perimeter control measures, measures to divert runoff around disturbed land surfaces and to collect and filter runoff, provisions for energy dissipation, riprap,

measures to stabilize rock cuts, and permanent drainage for access roads; (3) detailed descriptions, functional design drawings, and specific topographic locations of all control measures; (4) specific details of the revegetation plan, including species composition, planting or seeding rates, fertilizer, and mulch; (5) provisions to dispose of spoil materials above the high water mark and store fuels and chemicals used in construction away from the river and reservoir; (6) a specific implementation schedule and details of monitoring and maintenance programs for project construction and operation; and (7) a schedule for periodic review of the plan and for making any necessary revisions to the plan.

The licensees shall include in the filing documentation of consultation with the agencies, copies of agency comments or recommendations on the plan, and specific descriptions of how all of the agency comments and recommendations are accommodated by the plan. The licensees shall allow a reasonable time frame, in no case less than 30 days, for agencies to comment and make recommendations prior to filing the plan.

No project-related land-disturbing, land-clearing, or spoil-producing activities shall begin until the licensees are notified that the plan complies with the requirements of this article, except for activities specifically required for safety modifications to Milner Dam. The licensees shall submit with the plans and specifications required by Article 306 for safety modifications to Milner dam, measures to minimize erosion, sedimentation, and control slope stability.

Article 403. The licensees, after consultation with the Environmental Protection Agency, the Idaho Department of Health and Welfare, the U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game, and at least 90 days before commencing any project related land-clearing, land-disturbing, or spoil-producing activities within the Snake River and Milner reservoir, shall file for Commission approval, a monitoring plan to conduct tests for heavy metals and other toxic substances in any sediments or other unconsolidated deposits in the Snake River and in Milner reservoir that would be removed or otherwise disturbed by dredging, constructing, or operating project facilities and to safely remove and dispose of any sediment and unconsolidated deposits containing heavy metals or toxic substances. The plan also should include an implementation schedule for the monitoring and comments of the consulted agencies on the monitoring plan and implementation schedule. The filing shall include documentation of agency consultation and any agency comments and recommendations on the plan. The Commission reserves the right to require changes to the plan. The licensees shall not commence any land-clearing or land-disturbing

activities within the Snake River and Milner reservoir until the Commission approves the plan.

Article 404. The licensees, after consultation with the Environmental Protection Agency, the Idaho Department of Health and Welfare, the U.S. Fish and Wildlife Service, and the Idaho Department of Fish and Game, and at least 90 days before beginning project operation, shall file for Commission approval, a water quality monitoring plan that would characterize levels of dissolved oxygen (DO) and water temperature in the bypassed reach from immediately below Milner dam to immediately above the powerhouse discharge during project operation. The plan shall describe in detail the methods and shall identify the time periods and locations for collecting water temperature and DO data, and shall include a schedule for providing the data to the consulted agencies and to the Commission. Further, the plan shall include a provision to determine if water temperature and DO necessary for the survival of a trout fishery within the bypassed reach are being maintained by the target flow required by Article 407. The filing shall include documentation of agency consultation and agency comments on the plan. The Commission reserves the right to require changes to the plan. The licensees shall not begin project operation until the Commission approves the plan.

Article 405. The licensees, after consultation with the Idaho Department of Fish and Game, shall develop, implement, and finance a warmwater fish stocking and habitat enhancement plan consistent with the Idaho Fisheries Management Plan 1986-1990 for Milner reservoir. The plan shall include the species of warmwater fish, numbers and sizes to be stocked, a description of specific enhancement structures, and a map showing the proposed locations of these structures in the reservoir. The licensees shall file the plan with the Commission for approval at least 90 days before beginning commercial operation. The licensees shall give the Idaho Department of Fish and Game at least 30 days to comment on the stocking and habitat enhancement program plan. The filing shall include documentation of agency consultation and any agency comments and recommendations. The Commission reserves the right to require modifications to the plan. The licensees shall not commence commercial operation until the Commission approves the plan.

Article 406. The licensees, after consultation with the Idaho Department of Fish and Game, shall develop a monitoring plan to determine if the habitat enhancement structures placed in Milner reservoir have remained in place and are functioning as desired and to determine if additional warmwater fish need to be stocked in Milner reservoir, required by Article 405, to meet the Fisheries Management Plan goal. The licensees shall conduct the monitoring plan for at least five years. The monitoring plan

shall include a schedule for filing the results of the monitoring and the comments of the Idaho Department of Fish and Game on the results and shall include recommendations for incorporating additional enhancement measures or stocking additional warmwater fish if needed. The licensees shall file the plan with the Commission for approval at least 90 days before beginning commercial operation. The filing shall include documentation of agency consultation and any agency comments and recommendations. The Commission reserves the right to require modifications to the plan. The licensees shall not commence commercial operation until the Commission approves the plan.

Article 407. The licensees shall discharge from Milner Dam a target flow of 200 cubic feet per second as measured at the Milner gage located in the bypass reach. The target flow may be temporarily reduced if required by operating emergencies beyond the control of the licensees or for short periods upon mutual agreement between the licensees and the Idaho Department of Fish and Game. Further, the target flow may be reduced if necessary during any periods where sufficient water is not available through lease from the Upper Snake Water Supply Bank in accordance with Article 401, or from water surplus to irrigation needs.

Article 408. The licensees, after consultation with the Idaho Department of Fish and Game, shall develop a plan to stock trout in the 1.6-mile-long bypassed reach of the Snake River. The plan must include the following: (1) stocking location(s); (2) the number, species, and size of trout to be stocked each year; (3) the estimated annual cost of implementing the program; (4) a communication network to inform anglers of the stocking dates and locations; and (5) the comments of the Idaho Department of Fish and Game on the program. The licensees shall file the plan with the Commission for approval at least 90 days prior to commencing commercial operation. The Commission reserves the right to require modifications to the plan. The licensees shall not commence commercial operation until the Commission approves the plan.

Article 409. The licensees, after consultation with the Idaho Department of Fish and Game, shall file a study plan for Commission approval, at least 90 days prior to commencing commercial operations, to determine if the put-and-grow trout fishery in the bypassed reach, required by Article 408, is successful. The plan shall include provisions for filing annual reports by December 31 of each year on the put-and-grow trout stocking program. The annual report shall include information on the growth, movement, and survival of the trout planted in the bypassed reach, water temperature and DO data collected pursuant to Article 404, and an evaluation of the effects of water temperature and DO on the stocking program and the comments of

the Idaho Department of Fish and Game on the results. The licensees shall give the Idaho Department of Fish and Game at least 30 days to comment on the results of the stocking program prior to filing the annual report. The licensees shall conduct the monitoring program for at least five years and file a final comprehensive report on the success of the stocking program and any recommendations for changing the stocking program, including at a minimum stocking new locations or changing the stocking rate. The Commission reserves the right to require modifications to the trout program based on the monitoring results. The licensees shall not begin commercial operation until the Commission approves the plan.

If the results of the annual monitoring or after the five-year study period show that changes to the stocking program are needed, the licensees also shall file for Commission approval a schedule for implementing the changes to the program along with the comments of the Idaho Department of Fish and Game on the recommended changes. The Commission reserves the right to require modifications to the recommendations for changing the stocking program.

Article 410. The licensees shall limit the maximum rate of change in river elevation (ramping rate) to one foot per hour or less for the protection of aquatic resources and downstream recreationists. Further, the licensees, after consultation with the Idaho Department of Fish and Game and the Idaho Department of Parks and Recreation, shall conduct a ramping rate study after the project is operational. The study shall determine if the one foot per hour rate of change in the Snake River's elevation provides adequate protection for the aquatic resources in the bypassed reach during project startup and to protect downstream recreationists when increasing and decreasing flows. The licensees shall file the results of the study along with any recommendations for changing the ramping rate for Commission approval within one year after the project is operational. Agency comments on the study and any proposed changes to the ramping rate shall be included with the filing. The Commission reserves the right to require modifications to the proposed ramping rate.

Article 411. The licensees shall design and construct the transmission line in accordance with guidelines set forth in "Suggested Practices for Raptor Protection on Power Lines--the State of the Art in 1981," by Raptor Research Foundation, Inc. The licensees after consultation with the U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, and the Bureau of Land Management in adopting these guidelines shall develop and implement a design that will provide adequate separation of energized conductors, groundwires, and other metal hardware, adequate insulation, and any other measures necessary to protect

raptors from electrocution hazards. Within 90 days after completion of construction of the transmission line, the licensees shall file as-built drawings of the transmission line design with the Commission.

Article 412. The licensees, after consultation with the U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, the Bureau of Land Management, and the Soil Conservation Service, and at least 90 days prior to commencing any land-disturbing, land-clearing, or spoil-producing activities not specifically required for safety modifications to Milner Dam, shall file for Commission approval a plan to revegetate all disturbed areas with native plant species beneficial to wildlife. The plan shall include at a minimum: (1) a description of the plant species to be used, an indication of each species habitat value and food value, and planting densities; (2) planting methods; (3) fertilization and irrigation requirements; (4) a monitoring program to evaluate the effectiveness of the plantings; (5) a description of procedures to be followed if monitoring reveals that the revegetation is not successful; and (6) an implementation schedule that provides for the revegetation as soon as practicable after completion at a particular site and the filing of periodic monitoring reports. Agency comments shall be included on the filing. The Commission reserves the right to require changes to the plan. The licensees shall not begin any land-clearing or land-disturbing activities not specifically required for safety modifications to Milner Dam until the plan is approved by the Commission.

Article 413. The licensees, after consultation with the U.S. Fish and Wildlife Service, the Idaho Department of Fish and Game, and the Bureau of Land Management, and at least 90 days before beginning any project-related land-clearing or land-disturbing activities not specifically required for safety modifications to Milner Dam, shall file for Commission approval a plan for constructing, maintaining, and monitoring osprey nesting platforms, Canada goose-nesting structures, and artificial burrows for burrowing owls (wildlife enhancement features) in the project area. The plan shall include at a minimum: (1) the final designs for the wildlife enhancement features; (2) the number and location of the wildlife enhancement features; (3) a schedule for providing the wildlife enhancement features; (4) and a program for maintenance and monitoring. Agency comments on the adequacy of the plan shall be included in the filing. The Commission reserves the right to require changes to the plan. The licensees shall not commence any land-clearing or land-disturbing activities not specifically required for safety modifications to Milner Dam, until the plan is approved by the Commission.

Article 414. The licensees, after consultation with the U.S. Fish and Wildlife Service, the Idaho Department of Fish and

Game, the Bureau of Land Management, and the Environmental Protection Agency, and at least 90 days before beginning any project related land-disturbing or land-clearing activities not specifically required for safety modifications to Milner Dam, shall file for Commission approval a plan for developing at least 23.5 acres of riparian wetland habitat to mitigate for the loss of 6.8 acres of riparian wetlands and 26.6 acres of upland habitat. The plan shall include, but shall not be limited to: (1) maps showing the location of all replacement habitat, site boundaries, size of each site, and physical and habitat features; (2) a description of planting methods, fertilization and irrigation requirements, and a planting schedule; (3) a description of the soil and substrate conditions at the replacement sites; (4) a monitoring program that includes goals and criteria for successful establishment of wetland vegetation, sampling procedures, and reporting requirements; (5) procedures to implement if monitoring reveals that establishment of vegetation is not successful; (6) an implementation schedule that provides for habitat replacement as soon as practicable; and (7) a description of the program for the long-term ownership, management, and maintenance of the replacement habitat. Agency comments shall be included in the filing. The Commission reserves the right to require changes to the plan. The licensees shall not commence any land-clearing or land-disturbing activities not specifically required for safety modifications to Milner Dam until the plan is approved by the Commission.

Article 415. The licensees, for a total period of eight days for eight daylight hours each day (64 daylight hours) between April 1 and May 31, shall not operate the main powerhouse, to be located 1.6 miles downstream of Milner dam, when inflow to Milner reservoir, less irrigation withdrawals from Milner Reservoir, is 10,000 cubic feet per second (cfs) or more. When projections of available flows indicate that the flows in April and May will not reach 10,000 cfs, the licensees shall shut down the main powerhouse for eight daylight hours per day for up to eight days, when inflow to Milner reservoir, less irrigation withdrawals from Milner reservoir is between 4,000 and 10,000 cfs. The licensees do not have to shut down the project in the April-May period if the flows do not exceed 4,000 cfs in the period. The timing of the 64-daylight-hour project shutdown to meet the above obligation may be modified by the Commission, based on the results of the whitewater boating study required by Article 418.

Article 416. The licensees, after consultation with the Bureau of Land Management, the National Park Service, the Idaho Department of Parks and Recreation, and the Idaho Whitewater Association, and 90 days before starting project operation, shall file for Commission approval, a plan to warn downstream recreationists of increases in flow downstream of the dam for

whitewater boating. The plan, at a minimum shall include provisions for a warning system (e.g., lights, alarms, warning signs) to alert downstream recreationists of increases in water level and streamflow. Documentation of agency consultation shall be included in the filing. The Commission reserves the right to require changes to the plan.

Article 417. The licensees, after consultation with the Bureau of Reclamation, Bureau of Land Management, the National Park Service, the Idaho Department of Water Resources, the Idaho Department of Parks and Recreation, and the Idaho Whitewater Association, and 90 days before starting project operation, shall file for Commission approval, a plan for a communication network to inform whitewater boaters of available whitewater flows. The plan shall include documentation of agency consultation. The Commission reserves the right to require changes to the plan.

Article 418. The licensees, after consultation with the Bureau of Land Management, the National Park Service, the Bureau of Reclamation, the Idaho Department of Parks and Recreation, the Idaho Department of Water Resources, and the Idaho Whitewater Association, shall conduct a study to determine whether flows required by Article 415 could be modified to more closely match whitewater boater needs and reduce the effects of whitewater releases on project economics. Within six months from the issuance date of this license, the licensees shall file for Commission approval a plan for conducting the whitewater boating study. The licensees shall conduct the study as approved by the Commission and, within 90 days before the start of project operation, the licensee shall file with the Commission, results of the study. Study results must include: (1) an analysis of the range of whitewater flows necessary to maintain the Class V whitewater experience preferred by boaters running the Milner reach; (2) the time of day and week when boaters put in and take out of the Milner reach; (3) the average number of runs boaters make in a given day; (4) a proposed schedule for releasing flows for whitewater boating that describes the range of flows to be provided, the duration of the flows, and time of day and week these flows will be provided; (5) a discussion of recommendations provided by the consulted agencies and entities; and (6) documentation of consultation with the above-named entities. The Commission reserves the right to require changes to the plan.

Article 419. The licensees, after consultation with the Bureau of Land Management, the National Park Service, the Idaho Department of Parks and Recreation, and the Idaho Whitewater Association, and 90 days before starting any project-related land-clearing, land-disturbing, or spoil-producing activities (except rehabilitation of Milner Dam), shall file for Commission approval a recreation plan that includes, but is not limited to: (1) provisions for a whitewater boater put-in area at the bridge

below Milner Dam and a take-out area below the project powerhouse with parking facilities; (2) provisions for a tailwater fishing area below the powerhouse; (3) final design drawings showing the type and location of the proposed facilities; (4) a construction schedule for proposed recreational facilities; (5) a plan for monitoring recreational use in the project area to determine the for additional recreational facilities in the future; and (6) documentation of agency consultation. In the plan, the licensees shall also consider the feasibility of (1) providing the whitewater take-out area below the final Class V rapid below the powerhouse area and (2) locating the take-out area in a location where it does not interfere with tailwater fishing facilities. The Commission reserves the right to require changes to the plan.

Article 420. The licensees, at least 90 days before the start of any land-clearing, land-disturbing, or spoil-producing activities for each segment of the project, shall file for Commission approval, either separately or in combination, the following plans to blend all project features and project related areas of land disturbance with the surrounding landscape:

1. detailed site-grading and revegetation design plans for each soil, gravel, or rock borrow site, and spoil disposal site;

2. a design for eliminating the visual impact of the transmission line from the powerhouse to the forebay area;

3. detailed design drawings which describe the planned vegetation clearing, the specific tower or pole locations and design, and the specifications for the materials to be used in each transmission line facility;

4. designs, alignments, profiles, construction limits, planned vegetation clearing, proposed surfacing, and the construction specifications for all access roads, parking lots, construction laydown areas, canals, and surface or buried penstock routes, including the required rights-of-way; and

5. detailed design drawings which describe the planned architectural features, colors, surface textures, site grading, and landscape plantings for each structure.

The licensee shall include with the filing documentation of consultation with Bureau of Land Management (BLM) and copies of BLM comments and recommendations. The Commission may require changes to the plans. No land-clearing, land-disturbing, or spoil-producing activities shall begin until the licensees are notified that the above plans comply with the requirements of this article.

Article 421. The licensees, after consultation with the Idaho State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation (Council), and the Historic American Engineering Record (HAER) of the Department of the Interior, shall finalize and implement the cultural resources management plan as filed by letter dated February 11, 1986, and shall include the revisions recommended by the National Park Service by letter dated February 4, 1986. Within one year from the date of this license, the licensees shall file for Commission approval a report containing the HAER documentation of Milner Dam and the South Side Canal, the procedures for avoiding impacts to Milner Townsite, and the documentation of archeological site 10-TF-461. The documentation and avoidance procedures at these sites may be filed in separate reports as the items are completed. The reports must contain letters from the SHPO, the Council, and in the case of the dam and the canal, also from the HAER, accepting the documentation. No rehabilitation work or land-disturbing or land-clearing work may begin at the historic or archeological sites addressed in the report until the licensees are notified that the filing or filings have been approved. The licensees shall make funds available in a reasonable amount for implementation of the plan. If the licensees, the SHPO, the Council, and the HAER cannot agree on the amount of money to be spent for implementation of the plan, the Commission reserves the right to require the licensees to conduct the necessary work at the licensees' own expense.

Article 422. The licensees, before starting any land-clearing or land-disturbing activities within the project boundaries, other than those specifically authorized in this license, shall consult with the Idaho State Historic Preservation Officer (SHPO), shall conduct a cultural resources survey of the area that will be impacted, and shall file for Commission approval a cultural resources management plan, prepared by a qualified cultural resources specialist. If the licensees discover any previously unidentified archeological or historic sites during the course of construction or developing project works or other facilities at the project, the licensees shall stop all land-clearing and land-disturbing activities in the vicinity of the sites, shall consult with the SHPO, and shall file for Commission approval a new cultural resources management plan, prepared by a qualified cultural resources specialist.

Either management plan shall include the following: (1) a description of each discovered site, indicating whether it is listed or eligible to be listed on the National Register of Historic Places; (2) a description of the potential effect on each discovered site; (3) proposed measures for avoiding or mitigating effects; (4) documentation of the nature and extent of consultation; (5) a schedule for mitigating effects and conducting additional studies, and (6) a copy of a letter from

the SHPO accepting the plan. The Commission may require changes to the plan.

The licensees shall not begin land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a site discovered during construction, until informed by the Commission that the requirements of this article have been fulfilled.

Article 423. The Commission, upon its own motion or upon the recommendation of federal or state fish and wildlife agencies or affected Indian Tribes, reserves the authority to order alterations of project structures and operations to take into account to the fullest extent practicable at each stage of the decision-making process the Columbia River Basin Fish and Wildlife Program developed and amended in accordance with the Pacific Northwest Electric Power Planning and Conservation Act.

Article 424. (a) In accordance with the provisions of this article, the licensees 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 types of use and occupancy, without prior Commission approval. The licensees 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 licensees also shall have continuing responsibility to supervise and control the use and occupancies for which they grants permission and to monitor the use of and to ensure compliance with the covenants of the instrument of conveyance for any interests that they convey under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensees for the 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 licensees 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 noncomplying structures and facilities.

(b) The types of use and occupancy of project lands and water for which the licensees may grant permission without prior Commission approval are these: (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 and where the facility is intended to serve single-family 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 licensees shall require multiple use and occupancy of facilities for access to project lands or waters. The licensees also shall ensure to the satisfaction of the Commission's authorized representative that the use and occupancies for which they grant 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 licensees shall do the following: (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 licensees, among other things, may establish a program for issuing permits for the specified types of use and occupancy of project lands and waters that may be subject to the payment of a reasonable fee to cover the licensees' costs of administering the permit program. The Commission reserves the right to require the licensees to file a description of their standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensees may convey easements or rights-of-way across or leases of project lands for these purposes: (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) nonproject 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 1 million gallons per day from a project reservoir. No later than January 31 of each year, the licensees shall file three copies of a report that briefly describes 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 licensees may convey fee title to, easements or rights-of-way across, or leases of project lands for the following: (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 certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) nonproject overhead electric transmission lines requiring 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 an approved report on recreational resources of an exhibit E; and (7) other uses, if these conditions exist: (i) the amount of land conveyed for a particular use is 5 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 licensees shall submit a letter to the Director, Office of Hydropower Licensing, stating the licensees' intent to convey the interest and briefly describing the type of interest and the 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 licensees may convey the intended interest at the end of that period.

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

(1) Before conveying the interest, the licensees shall consult with appropriate federal and state fish and wildlife or recreational agencies and with the State Historic Preservation Officer.

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

(3) The instrument of conveyance shall include covenants running with the land adequate to ensure the following: (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 occur in a manner that protects the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensees 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 shall be excluded from the project only on 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 the preservation of 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 are filed for approval for other purposes.

(g) The authority granted to the licensees under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(E) The licensees shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(F) Within 60 days of the issuance of this order, the licensees shall submit the following information for each county in which federal lands, utilized by the project, are included: (1) the number of nontransmission line acres of U.S. lands; and (2) the number of transmission line right-of-way acres of U.S. lands.

(G) This order is final unless an application for rehearing is filed within 30 days from the date of its issuance, as provided in Section 313 of the FPA. The filing of an application for rehearing does not operate as a stay of the effective date of its issuance or of any other date specified in this order, except as specifically ordered by the Commission. The licensees'

failure to file an application for rehearing shall constitute acceptance of this license.

By the Commission. Commissioner Moler concurred with a separate statement attached.

(S E A L)

Lois D. Cashell,
Secretary.

SAFETY AND DESIGN ASSESSMENT
MILNER HYDROELECTRIC PROJECT
FERC NO. 2899-001, ID

Project Design

Milner Dam is located at a site on the Snake River where the river divides into three channels, separated by two islands. Before the dam was built, the north channel carried the main flow of the river, the south channel carried water only during extreme flood events, and the middle channel was dry, except during periods of high water. Milner reservoir provides water to three canals, the Twin Falls, North Side Main, and Milner Gooding Canals, and to three pumping stations, Milner Low Lift, A and B Irrigation, and North Side Pumping Company. Cumulatively, the canals and the pumping plants serve approximately 500,000 acres.

Construction of Milner Dam started in 1903 and was completed in 1905. The dam has three embankments (north, middle, and south); each embankment is constructed with a trapezoidal shaped rockfill section with a vertical wood cutoff wall in the center of each embankment. The rockfill sections consist primarily of angular boulder and cobble-size blocks of olivine basalt rock. The cutoff walls were damaged during construction, and when the builder first tried to fill the reservoir, the dam leaked; on the upstream side of the embankments, nonplastic sandy silt was sluiced into the rockfill to stop the leakage. Each embankment was built with a horizontal-to-vertical downstream slope of 1.5 to 1 (1.5:1) and an upstream slope of 4:1. The north embankment has a crest length of 280 feet and a crest elevation of 4,138 feet; 44 the middle embankment has a crest length of 404 feet and a crest elevation of 4,138 feet; and the south embankment has a crest length of 462 feet and a crest elevation of 4,138 feet.

Presently, flows are released from the dam by a gated spillway located on the southern island. The spillway is a concrete structure, 487 feet long, with a crest elevation of 4,122.5 feet and with 99 wood slide gates, each 4 feet wide by 12 feet high, which are individually lifted by a hydraulic mechanism. An ungated emergency spillway with a concrete-core cutoff wall is located on the north island; the emergency spillway is 290 feet long and has a crest elevation of 4,134 feet. The dam has no operable low-level outlet or reservoir drain.

44 All elevations are relative to mean sea level.

Flows from Milner Lake to Twin Falls Main Canal are controlled by a concrete structure with seven manually operated radial gates. The headworks is located on the south abutment.

The applicants propose to construct rockfill berms on the downstream slopes of the three existing dam embankments. The top of each berm would be 15 feet wide and 10 feet below the crest of the existing embankments, and the downstream slope of each berm would be 3.75:1.

The applicants would replace the existing gated spillway with a new spillway that would have 11 radial gates, each 12 feet high and 30 feet wide. One gate would have a hinged gate flap at its crest to provide for passing floating debris. The crest elevation would remain at 4122.5 feet. The spillway outlet channel which would be lined with concrete to prevent erosion, would have a capacity of 58,000 cubic feet per second (cfs) at a reservoir elevation of 4,133.5 feet.

The Twin Falls Main Canal has a maximum design hydraulic capacity of 3,200 cfs. The applicants propose to do the following: increase the canal capacity; modify the headworks; build a wasteway; and build a new control structure. The applicants would increase the canal's capacity to 7,000 cfs, raise the right embankment of the canal near Milner Dam to elevation 4,137.5 feet to provide four feet of freeboard and widen the crest to 20 feet. The applicants would modify the existing canal headworks structure to install stoplogs for dewatering the canal and forebay area when needed. The applicants would build a wasteway for sluicing ice from the canal and for removing flows in the canal if there is a powerplant load rejection. The concrete wasteway would control flows with one hydraulically operated bascule gate designed to pass the maximum powerhouse flow of 4,000 cfs and would return flows to the Snake River. To control irrigation releases to the canal, the applicants would build a new control structure, approximately 1,600 feet downstream from the wasteway. The concrete structure would have six manually operated radial gates, each 12-foot-wide by 15-foot-high and one hydraulically operated bascule gate, 24-feet- long by 11-feet-high.

The applicants would build a forebay to convey flows from the canal to the project intake and a concrete intake structure to convey flows to the penstock. A cable-operated, fixed-wheel gate, 14-foot-wide by 17-foot-high, would permit closing the penstock for emergency shut down or maintenance of the penstock and turbine. The penstock would be a 17-foot-diameter steel pipe, approximately 385 feet long.

The powerhouse would be a semi-outdoor, reinforced-concrete structure, approximately 89-feet-long by 56-feet-wide, housing

one generating unit, rated at 43.65 megawatts (MW). The powerhouse would be located near the bottom of the Snake River Canyon. The generator would be connected to a Kaplan turbine, rated at 59,650 horsepower under a net head of 151.6 feet and a discharge of 4,000 cfs. Flows from the powerhouse would be returned to the Snake River through a 170-foot-long tailrace channel. The tailrace would have a 46-foot-wide base with side slopes of 0.25:1.

Project Safety

The hazard potential of a dam is the potential for loss of human life or property damage that would result from failure of the dam.

Starting at Milner Dam, the Snake River flows into the Snake River Gorge, a narrow, practically inaccessible, steep-walled canyon. Development downstream of Milner Dam, includes four hydroelectric projects, two golf courses and a sewage treatment plant. The four hydroelectric projects do not have full time operators, and the sewage treatment plant is located 25 miles downstream of the dam. The poor access and ruggedness of the canyon limit recreational use of the Snake River below Milner Dam. Failure of the project, therefore, would result in minimal downstream impacts.

Milner Dam was inspected by the Portland Regional Office on October 13, 1988. The inspector determined that even though it poses only a minimal threat to downstream life and property, failure of Milner Dam would have the potential to cause catastrophic damage to the economy of the area, "the Magic Valley of Idaho". Approximately 500,000 acres of farm land is dependent upon irrigation water diverted at Milner Dam, and the economy of the Magic Valley depends on the agricultural production of the 500,000 acres of farmland.

Because the Regional Office rates Milner Dam as having a significant hazard potential, the dam should be modified to make it safe against failure under earthquake loading and under one-half probable maximum flood (PMF) loading (58,000 cfs) conditions.

Each of the three dam embankments, discussed earlier, consists of a large, trapezoidal rockfill section with a zone of hydraulic-fill earth material, placed directly against the upstream face, as the water barrier. Each embankment has a vertical wooden core in the center of the rockfill section. The wooden cores were damaged during construction and are assumed to be an ineffective barrier to seepage. Because there is no filter between the rockfill and the upstream earthen barrier, the upstream hydraulic-fill material, when disturbed, can be washed

into and through the rockfill (piping leak or piping failure). Engineering studies performed by the consultant for the applicant show that the upstream hydraulic-fill material is comprised of very loose to loose nonplastic sandy silts and silty sands that are susceptible to liquefaction (complete loss of strength) under seismic loading conditions. The slumping of the upstream fill could open a path for water from the reservoir to pass through the earthen barrier and to enter the rockfill in the embankments. Analysis, by the applicants' consultant, of flows through the rockfill sections of the embankments, shows that a large leak could release enough water to destablize the downstream slopes of the rockfill zones. If this happens, progressive raveling of the downstream face could breech an embankment.

According to the applicants' records, since 1905, Milner Dam has experienced 10 piping leaks, the first occurring in 1905 with the initial filling of the reservoir and the last in March 1983. All of the piping leaks were repaired soon after they occurred with little disruption to irrigation service. To reduce the needed time to begin leak repairs, the applicants currently stockpile earthen repair material on both banks of the river.

To stabilize the slopes if an earthquake causes a piping failure, the applicants' consultant proposes to construct a rockfill berm on the downstream slope of each embankment. The berms would increase the downstream slope of the embankment from 1.5:1 to 3.75:1; the major portion of the berms would consist of rock averaging 24 inches in size, while the lower portion would be faced with rock averaging 48 inches in size or larger. This repair approach would still require the applicants to maintain stockpiles of material to repair any leaks which could develop in the earthfill section.

Since the license would authorize major modifications of a dam with a significant hazard potential, the staff recommends the inclusion of special license Article 305 requiring the licensees to retain a board of consultants to review the design and construction of the project for safety and adequacy.

Because the water diverted by Milner Dam is critical to the wellbeing of the Magic Valley, the staff recommends the inclusion of special license Article 307, requiring the licensees, in consultation with the board of consultants, to develop a detailed manual of procedures for repairing Milner Dam if there is excessive leakage.

Based on an inspection of the project and on discussions with the applicants, the staff finds the project to be satisfactorily maintained. The staff found minor seepage areas on the north, middle, and south embankments. These areas will continue to be monitored in the future. The staff had trouble

inspecting the toe of the dam because it is covered with vegetation. The Director of the Portland Regional Office will direct the licensees, if a license is issued, to remove the vegetation that interferes with the Commission's dam safety inspection programs.

To improve winter operations, the applicants propose to replace the existing spillway. The 99 wooden gates of the spillway now have to be raised individually. The process is slow, because the applicants have only two hoisting mechanisms. The 11 new gates would greatly improve operation and would reduce the time needed to adjust the spillage under flood conditions. The new spillway would be designed to pass an inflow design flood (IDF) of 58,000 cfs; the IDF represents a spillway capacity of one-half of the PMF. An IDF that is less than the full PMF is acceptable because the failure of Milner Dam would not threaten downstream life.

The proposed project would be safe and adequate if constructed and/or rehabilated according to sound engineering practice, and the requirements of a license.

Primary Transmission Facilities

The primary transmission line segment would include the 1.4-mile-long 138-kilovolt (kV) transmission line connecting the project generator to the interconnected transmission system at the Milner substation 138-kV bus and its support facilities.

Water Resource Planning

As stated earlier, the applicants propose to use the existing Twin Falls main irrigation canal to convey water left over from irrigation requirements to the proposed power facilities, 1.6 miles downstream of the existing Milner Dam. Any flows used for generation in the proposed powerhouse thus would bypass the 1.6 miles of river channel below Milner Dam.

The proposed powerhouse would have the capacity to use flows of from 900 to 4,000 cfs. Typically, the flows that pass Milner Dam in the summer are low, not generally exceeding 500 cfs, and the proposed powerhouse would not be expected to operate from about mid-June through mid-September.

The staff, on page 5-3 of its Snake River Draft Environmental Impact Statement (DEIS) for the Twin Falls, Milner, Auger Falls, and Star Falls projects, recommended that any license issued for the Milner Project require a minimum bypass flow in the 1.6 mile reach below Milner Dam. The public, irrigators, the applicant, and the Idaho Department of Water Resources (IDWR) apprised the staff that requiring the licensees

to maintain minimum flows below Milner Dam would be inconsistent with state requirements. All of the reservoir storage available above Milner Dam is committed and the minimum flow specified by Idaho State Water Plan (Water Plan) for the river immediately below Milner Dam is zero cfs. Because the applicants, the Northside and Twin Falls Canal Companies, are only service companies, which distribute the irrigation water to their shareholders, who hold the water rights, requiring them to maintain a minimum flow below Milner Dam other than zero would require that they release water that Idaho water law has appropriated to others.

After issuing the DEIS, the staff evaluated the feasibility of requiring any licensees of the proposed Snake River projects to rent or lease water on a short-term basis from upstream water rights holders in order to provide flows in the bypass reaches of the projects. Such flows could reduce impacts of the projects and/or improve conditions by providing flows that are greater than those that now exist. The staff uses the term Comprehensive Water Block (CWB) to refer to the volume of water that a licensee would have to rent to supplement the available river flow in order to meet the recommended target flows.

The staff identified the Upper Snake Water Supply Bank (Water Bank) as a possible source for acquiring flows for environmental mitigation and enhancement purposes. The state established the Water Bank as a convenient means to allow and account for the rental of water by those irrigators in need of additional water from those who have excess water. Irrigators who estimate that their water storage rights would be in excess of their requirements in any year may place a portion of their storage right in the Water Bank, to be leased by others, with irrigators receiving first priority. Any water that is not leased in any year is lost if all of the upstream storage is refilled in the following year.

In a letter filed with the Commission on September 30, 1988, IDWR commented on the staff's proposal, stating: "Not withstanding the applicant's increased costs in obtaining the water, it appears that structured reliance on the Water Bank through the Comprehensive Water Block mechanism can be successful in meeting prescribed mitigative flows on the mainstem of the Snake River."

The staff discussed the operation of the Water Bank with Alan Robertson, Supervisor, Hydrology Section, IDWR. It is the staff's understanding from those discussions that water has been available for lease from the Water Bank in all years since its creation and that, because of increased irrigation efficiencies, future water availability likely will increase. Idaho Power Company (IPC) has leased water for power generation from the

Water Bank in every year since its creation. It is highly probable that in the future, water will be available in the Water Bank in excess of irrigation demand, except in very bad water years.

It is the staff's opinion that the short-term leasing or rental of water that is in excess of the irrigation demand each year for purposes such as environmental mitigation and enhancement, would be in the public interest, would not commit water storage to a non-agricultural use, and therefore would not violate the intent for which the Water Bank was created or the purposes for which the upstream storage projects were authorized.

The staff evaluated numerous scenarios for requiring in any license issued that mitigation and enhancement flows should be provided in the bypass reach below Milner Dam. In addition, the staff, recognizing that it might be economically beneficial to develop the hydropower potential of the target flows that may be recommended to be released at Milner Dam, performed reconnaissance-level economic analyses of the benefits of developing a powerhouse at Milner Dam, in addition to the powerhouse proposed by the applicants to be located 1.6 miles downstream. The preliminary studies showed that depending on the magnitude of target flows specified in a license for the Milner Project, it may be economically beneficial to construct a power plant at the dam. The staff, therefore, recommends the inclusion of special license Article 308, requiring the licensees to study the feasibility of constructing such a power plant, and if it is found to be feasible and economically beneficial, to submit a plan for constructing the power plant. The staff's economic analyses are discussed in the Economic Evaluation section of this assessment.

Section 10(a)(2)(A) of the Federal Power Act (FPA) requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project.

The staff reviewed the Northwest Power Planning Council's Northwest Conservation and Electric Power Plan (Power Plan) to determine if the project is consistent with the Power Plan. The Council's Power Plan envisions meeting the growing regional energy requirements in the most economical manner with environmentally acceptable resources. The Power Plan considers any environmentally acceptable resource that is less expensive than coal-fueled steam electric generation as an acceptable resource for development before the development of coal-fueled power plants (the Council's planned marginal resource).

The staff developed life-cycle costs of energy from the Council's planned generic coal plant, assumed to be needed in the year 2002, for determining if proposed hydroelectric projects are, consistent in the long term with the Power Plan, as required under Section 10(a)(2)(A) of the FPA. The staff assumed that new coal plant generating resources would be required within the region by the year 2002, based on the need for additional generating resources projected for the investor-owned utilities in the Pacific Northwest Region, as discussed in the Need for Power section of this assessment.

The staff found that the life-cycle levelized cost of the proposed project is less, as of its projected on-line date, than the levelized life-cycle cost of the least cost or marginal long term alternative, included in the Power Plan. Therefore, the project as proposed is not inconsistent with the Council's Power Plan, and is economically beneficial within the long-term objectives of the Power Plan.

The staff reviewed the Water Plan and found that the proposed project, both including and excluding the staff's target flow recommendations, would be consistent with the Water Plan, which requires a minimum flow below Milner dam of zero cfs. The staff's recommendation for including target flow conditions in any license issued is consistent with the Water Plan. The staff is not recommending that minimum flows be provided below Milner dam, but rather that the licensees should provide any additional water needed to meet the target flows by leasing water that is in excess of irrigation requirements from the Water Bank, but only if available, and in accordance with the rules of the Water Bank operation.

The staff reviewed the Idaho Fisheries Management Plan, the Idaho Outdoor Recreation Plan, the Idaho Water Quality Standards, and the Department of the Interior's Monument Proposed Resource Management Plan and found that the plans do not affect the proposed project's development or operation with respect to irrigation, flood control, or navigation.

A review of the Commission's Planning Status Report for the Upper Snake River Basin and the Hydroelectric Site Data Base show that there are no proposed or existing projects that would conflict with the proposed project.

Economic Evaluation

A proposed project is economically beneficial so long as its levelized cost is less than the long-term levelized cost of alternative energy to any utility in the region that can be served by the project.

The staff calculates the 50-year projected levelized alternative energy cost in the region in 1992 to be about 85 mills per kilowatthour (kWh). This is the levelized unit cost of energy from coal-fueled steam electric plants assumed to be needed in the year 2002, and the value of displaced fuel consumption in existing coal-fueled steam plants until that time. The staff assumed that new coal plant generating resources would be required within the region by the year 2002, based upon the projected need for additional generating resources, by the investor-owned utilities in the Pacific Northwest Region, as discussed in the Need for Power section of this assessment.

The applicants entered into a contract with IPC for the development of power facilities at the Milner site. Under the terms of the contract, IPC would receive the total project power production and would pay the total project costs plus two mills/kwh (escalating 25 percent every 5 years) for all energy produced. The applicants would use the escalating energy payment, which is equivalent to 3.13 mills/kwh when levelized over 50 years, to help offset the costs of repairing the dam, as described in the Dam Safety section of this assessment.

The staff evaluated the economics of the 44-MW project the applicant proposes to construct under various target flow conditions, assumed to be required in the bypass reach of the river between Milner Dam and the proposed powerhouse, to be located 1.6 miles downstream, as shown in Table 1.

Table 1. Summary of the generation, levelized net annual benefits, rate of return on investment (ROI), and levelized annual revenue to the licensee for the project, as proposed to be constructed by the licensee and to be operated under various mitigation/enhancement bypass-flow scenarios.

Bypass flows	Average generation (GWh)	Levelized annual benefits	ROI	Levelized annual revenues
58 cfs year round	154	$4,233,000	18.6%	$482,400
58 cfs summer, 150 cfs winter	151	$3,995,000	18.2%	$473,400
200 cfs year round	147	$3,665,000	17.6%	$460,100
300 cfs year round	143	$3,305,000	17.0%	$447,400
300 cfs summer,				

720 cfs winter	134	$2,522,000	15.6%	$419,400

The staff performed reconnaissance level feasibility studies evaluating the economic benefits of installing small units at the base of Milner Dam to utilize the flows that would be released at the dam. The potential power facilities to be located at Milner Dam were sized as shown in Table 2.

Table 2. Milner Dam hydraulic capacity for various environmental mitigation/enhancement bypass flows.

Bypass flow	Unit hydraulic capacity
58 cfs year round	50-150 cfs unit
58 cfs summer, 150 cfs winter	50-150 cfs unit
200 cfs year round	200-600 cfs unit
300 cfs year round	300-900 cfs unit
300 cfs summer, 720 cfs winter	300-900 cfs unit

The staff evaluated the economic benefits of developing capacity at Milner Dam to utilize the bypass flows as shown in Table 3.

Table 3. Summary of the generation, levelized net annual benefits, ROI, and levelized annual revenue to the licensee for generating capacity installed at Milner Dam, for various mitigation/enhancement bypass flows.

Bypass flows	Average generation (GWh)	Capacity	Levelized annual benefits	ROI	Levelized annual revenues
58 cfs	3.8	1 MW	($ 46,200)	9.5%	$11,700
58-150 cfs	4.4	1 MW	$ 5,000	11.2%	$13,700
200 cfs	11.3	3 MW	$304,000	16.4%	$35,400
300 cfs	13.5	4 MW	$304,000	15.2%	$42,200
300-720 cfs	16.2	4 MW	$525,500	18.2%	$50,700

Since the reconnaissance-level feasibility studies show that the addition of capacity at Milner Dam may be economically beneficial compared to the alternative cost of energy in the region, any license issued should include Article 308, requiring that the licensees study the feasibility of installing generating capacity at the dam, and, if the installation is feasible,

requiring the licensees to submit a plan for developing the capacity.

The staff evaluated the economic benefits of developing the combination of the proposed project powerhouse, and a power plant at the dam as shown in Table 4.

Table 4. Summary of levelized annual benefits of combined development of a powerhouse at Milner Dam as well as the power plant proposed to be developed downstream, for various mitigation/enhancement bypass flows.

Bypass flows	Combined capacity	Gen. (GWh)	Levelized annual benefits	Levelized annual revenues
58 cfs	44 MW 1/	154	$4,233,000	$482,400
58-150 cfs	45 MW	155	$4,238,000	$487,400
200 cfs	47 MW	158	$3,969,000	$494,500
300 cfs	48 MW	156	$3,609,000	$497,700
300-720 cfs	48 MW	150	$3,048,000	$469,500

1/ This scenario is the same as the proposed scenario with a downstream powerhouse only, since installing a unit at the dam would not be economically beneficial under this bypass flow.

The staff evaluated the amounts and levelized costs of water that the applicants would need to lease from the Water Bank to meet the recommended mitigation/enhancement bypass flows as shown in Table 5.

The current cost of water from the Water Bank is $2.50 per acre-foot per year. In its studies, the staff used a cost of $4.32 per acre-foot, which is the levelized cost of water over 50 years, assuming that the cost of water would escalate at 5 percent annually.

Table 5. Amounts and levelized costs of the CWB needed to be leased from the Water Bank to meet various mitigation/enhancement bypass flows.

Bypass flows	Storage required (acre-feet)	Levelized average annual cost
58 cfs	3,586	$15,500
58-150 cfs	3,586	$15,500
200 cfs	11,246	$48,600
300 cfs	22,729	$98,200
300-720 cfs	22,729	$98,200

The staff evaluated the net annual benefits of the project including the projected cost the CWB water for various mitigation/enhancement bypass flows, as shown in Table 6.

Table 6. Summary of the levelized net annual benefits of the project, and combined project (including a power plant at the dam) for various mitigation/enhancement bypass flow requirements including the levelized annual cost of the CWB.

Bypass flows	Proposed project lev. annual benefits	Combined project lev. annual benefits
58 cfs year round	$4,217,500	$4,217,500
58 cfs summer, 150 cfs winter	$3,979,500	$4,222,500
200 cfs year round	$3,616,400	$3,920,400
300 cfs year round	$3,206,800	$3,510,800
300 cfs summer, 720 cfs winter	$2,423,800	$2,949,800

In order to preserve the high-flow-condition kayaking opportunities that occur in the April-May period in the bypass

reach of the river below Milner Dam, the environmental staff recommends requiring the main powerhouse to be shut down during daylight hours in the April-May period, for the equivalent of eight full-load hours of operation (4000 cfs) for eight days, in accordance with proposed license Article 413. A shutdown of the main power plant during the spring would reduce the project generation by 42,000 kWh for each hour of shutdown. The total reduction in project generation for the equivalent of 64 hours of full-load shut down is 2,688,000 kWh. At the regional levelized energy value of 85 mills/kWh, the shutdown would reduce the project benefits by approximately $228,000 annually. The shutdown would reduce the project generation and therefore the revenues that the licensees would receive under the power purchase contract with IPC. The levelized value of the lost revenues to the licensees over the license period would be approximately $8,400 annually.

The net annual benefits of the project including the projected cost of the spring bypass flow for kayaking under and for the other various mitigation/enhancement bypass flows, and the revenues to be received by the licensees are shown in Table 7.

Table 7. Summary of the licensees' levelized annual revenues, and the levelized net annual benefits of the project as proposed, and the combined project (including a power plant at the dam) for various water quality and fishery mitigation/enhancement bypass flow requirements, including the levelized annual cost of the CWB, and the cost of plant shutdown for kayaking mitigation.

Bypass flows	Proposed project lev. annual benefits	Proposed project licensee revenues	Combined project lev. annual benefits	Combined project licensee revenues
58 cfs year round	$3,989,500	$474,000	$3,989,500	$474,000
58 cfs summer, 150 cfs winter	$3,751,500	$465,000	$3,994,500	$479,000
200 cfs year round	$3,388,400	$451,700	$3,692,400	$486,100
300 cfs year round	$2,978,800	$439,000	$3,282,800	$489,300
300 cfs summer, 720 cfs winter	$2,195,800	$411,000	$2,721,800	$461,100

The benefits and revenues for the combined project development scenario, as shown in on Table 7., is the same as for the proposed project, with a downstream powerhouse only, because installing a unit at the dam would not be economically beneficial under a 58-cfs bypass flow.

The levelized net annual benefits and revenues of the project to the licensees and IPC under the purchase power contract between the two with the mitigation/enhancement provisions discussed herein are summarized in Table 8 (without the generating unit at the dam) and Table 9 (with the generating unit at the dam).

Table 8. Summary of levelized net annual benefits and revenues to the licensees and IPC with mitigation/enhancement provisions without a generating unit at the dam.

Total Project Benefits or Revenues as proposed	Project	To Licensees	To IPC
58 cfs Summer, 150 cfs Winter	$3,979,500	$473,400	$3,506,100
Loss of Benefits or Revenues for Proposals			
200 cfs Bypass Flow	330,000	13,300	316,700
Water Bank Purchase	33,100	0	33,100
8-day Kayaking Flows	228,000	8,400	219,600
Total Mitigation Costs	591,100	21,700	569,400
Total Project Benefits or Revenues as Mitigated	$3,388,400	$451,700	$2,936,700

Table 9. Summary of levelized net annual benefits and revenues to the licensees and IPC with mitigation/enhancement provisions with a generating unit at the dam.

Total Project Benefits or Revenues as proposed	Project	To Licensees	To IPC
58 cfs Summer, 150 cfs Winter	$3,979,500	$473,400	$3,506,100
Loss of Benefits or Revenues for Proposals			
200 cfs Bypass Flow	26,000	(21,100)	47,100
Water Bank Purchase	33,100	0	33,100
8-day Kayaking Flows	228,000	8,400	219,600
Total Mitigation Costs	287,100	(12,700)	299,900
Total Project Benefits or Revenues as Mitigated	$3,692,400	$486,100	$3,206,300

Because the economic studies for the proposed project, for all cases evaluated, show that the project power costs less than the levelized alternative regional cost of power, the project is economically beneficial. Because the applicants have entered into a contract to sell all of the project power to IPC, the proposed project is financially feasible.

The applicants stated that the primary purpose of proposing this project is to provide revenues to aid in paying for the dam rehabilitation, previously discussed in the Project Safety section of this assessment. In 1984, the cost of rehabilitating Milner Dam was projected to be approximately $7 million. The staff estimates the minimum long-term annual carrying charges of

financing the work to be approximately $700,000. The annual revenues that the applicant would receive from IPC under the power purchase contract are projected to range from about $411,000 to about $489,000 for the various bypass-flow scenarios evaluated, so that the applicants would be required to provide from about $200,000 up to about $300,000 of the annual debt service from irrigation revenues.

Need for Power

The Northwest Power Planning Council's (NPPC) August 1988 draft update of its 1986 Northwest Power Plan (Update) shows regional resource deficits in the NPPC area in about 1992 and 2000 with medium-high and medium-low load growth scenarios, respectively. A medium load growth scenario, developed cooperatively with the Bonneville Power Administration (BPA) and included in the Update but not in the Update resource portfolios, could produce deficits about 1996. All three of these forecasts are considered to be equally probable in the probability distribution of load uncertainty assumed for development of the Update power plan. The high load projection could produce deficits by 1991, and under the low load scenario deficits would not occur before 2010. The probability distribution assumes a 76 percent probability that load will equal or exceed the medium-low load growth scenario.

The 1988 projections of the Pacific Northwest Utilities Conference Committee (PNUCC) project that regional resource deficits would occur in about 1994-1995 under medium load growth assumptions.

NPPC, BPA, AND PNUCC all acknowledge that resource deficits could occur on the investor-owned utility (IOU) systems in the NPPC area before occurring in the NPPC area as a whole. The PNUCC shows IOU deficits occurring as early as 1992-1993 under medium load growth assumptions and currently planned power purchases from BPA. The NPPC Update states that there has been little evidence to date that the NPPC area is moving toward coordinated resource development (the primary theme upon which the plan is formulated). Public utilities in the area are said to perceive the BPA future as being uncertain and to seek a higher degree of independence from BPA. This same perception of an uncertain future has discouraged IOU's from placing any significant amounts of load on the BPA system. Many of NPPC's area high load growth areas are served by IOU's that have fewer resources to meet their power requirements than the publicly owned systems. The absence of area wide coordinated planning could cause resource deficits on the IOU systems as early as 1989 and a need for additional generating resources on the IOU systems as early as 1993, under a medium-high load scenario.

Based on these predictions, a need for power could exist in the NPPC area any time from the early 1990's to late 1990's, and hydro resources coming on-line in the early 1990's could be useful in meeting a small part of that need for power. NPPC has also identified 630 average MW of new hydro power potential that adheres to development constraints imposed by the federal stream protection program and the NPPC protected areas program. The proposed project could provide a small portion of this hydro requirement.

Alternatives to the Proposed Project

Because the applicants are not electric utilities, the available options are to construct or not construct the project. If the license is not issued, the project would not be constructed, and the power that would have been developed from a renewable resource would be lost and eventually would have to be provided using nonrenewable fuels.

If the license is not issued, the applicants will not receive power generation revenues, and would therefore have to provide the total costs for the Milner Dam rehabilitation from irrigation revenues.

Exhibits

The following sections of Exhibit A and Exhibit F drawings, filed July 27, 1988, conform to the Commission's rules and regulations and should be approved and made a part of the license:

Exhibit A - Section III Turbine and Generator, Section IV Electrical Transmission, and Section V Accessory Equipment.

Exhibit F -

Exhibit	FERC No.	Title
F-1	2899-1	Key and General Plans and Canal Sections
F-2	2899-2	Canal and Forebay Embankment Sections
F-3	2899-3	Headworks and Wasteway Plans, Sections & Details
F-4	2899-4	Control Structure Plan and Sections

F-5	2899-5	Intake Structure Plan and Section
F-6	2899-6	Powerhouse and Vicinity Plan, Profile and Sections
Sections		
F-7	2899-7	Powerhouse Plans
F-8	2899-8	Powerhouse Sections
F-10	2899-10	Milner Dam Rehabilitation Plan
F-11	2899-11	New Spillway Plan and Section
F-12	2899-12	Dam Embankment Sections

Form L-2
(Revised October, 1975)

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR
UNCONSTRUCTED MAJOR PROJECT
AFFECTING LANDS 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, of the 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 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 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 Commission may prescribe for the 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. Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 22. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

Article 23. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 24. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

Article 25. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment

of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

Article 26. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 27. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

Article 28. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

Article 29. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

Article 30. 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 31. 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 32. 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.

Twin Falls Canal Company)
North Side Canal Company, Ltd.) Project No. 2899-003

(Issued December 15, 1988)

MOLER, Commissioner, concurring:

I support the Commission's expedited action issuing the license in this proceeding. I do so principally because of the need to act quickly so that the applicants will be able to obtain the funds necessary to strengthen the dam.

I am aware that there are important water law issues embodied in this case. The order is consistent with the Commission's prior actions interpreting its statutory responsibilities under Section 10(a)(1) of the FPA 1/, however, it represents the first time I have participated in a case involving this particular matter of statutory interpretation. Ordinarily I would have asked to delay this case until I had a lengthier opportunity to review the legal issues presented. In this case, however, the public safety issue argues against a delay.

I would note that the United States Court of Appeals for the Ninth Circuit is currently considering a case involving the Commission's interpretation of Section 10(a)(1). 2/

I await the results of that litigation with interest. I do not want my participation in this case to indicate that I have come to any definitive legal conclusion on the matter.

Elizabeth A. Moler

Elizabeth Anne Moler
Commissioner

1/ See, e.g., Horseshoe Bend Hydroelectric Company, 42 FERC ¶ 61,071.

2/ State of Calif. ex. rel. Water Resources Control Board v. FERC (9th Cir. No. 87-7538).

BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. IPC-E-90-8

IDAHO POWER COMPANY

ATTACHMENT 2
TO
APPLICATION

COPY

AGREEMENT REGARDING THE OWNERSHIP, CONSTRUCTION,

OPERATION AND MAINTENANCE

OF

THE MILNER HYDROELECTRIC PROJECT (FERC NO. 2899)

BY AND BETWEEN

THE TWIN FALLS CANAL COMPANY,

NORTHSIDE CANAL COMPANY, LIMITED

AND

IDAHO POWER COMPANY

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AGREEMENT REGARDING THE OWNERSHIP, CONSTRUCTION,

OPERATION AND MAINTENANCE

OF

THE MILNER HYDROELECTRIC PROJECT (FERC NO. 2899)

BY AND BETWEEN

THE TWIN FALLS CANAL COMPANY,

NORTH SIDE CANAL COMPANY, LIMITED

AND

IDAHO POWER COMPANY

THIS AGREEMENT, entered into this 22nd day of January, 1990, between the Twin Falls Canal Company, a corporation domiciled in and authorized to do business in the State of Idaho, with its principal office therein located in Twin Falls, Idaho, the North Side Canal Company, Limited, a Corporation domiciled in and authorized to do business in the State of Idaho, with its principal office therein located in Jerome, Idaho, and the Idaho Power Company, a corporation domiciled in and authorized to do business in the State of Idaho, with its principal office therein located in Boise, Idaho,

W I T N E S S E T H:

WHEREAS, the Canal Companies, together with the American Falls Reservoir District No. 2, are the owners of the Milner Dam and, pursuant to agreement dated October 6, 1981, with the Canal Companies, the American Falls Reservoir District No. 2 has waived any claim which it may have in the development of a power resource at the Milner Dam and in connection with such development the Canal Companies have agreed to hold the American Falls Reservoir District No. 2 harmless for rehabilitation, replacement or any other costs that are incurred as a direct result of any requirements of the Commission over and above the normal safety requirements or other

requirements to maintain the Milner Dam as irrigation facilities; and

WHEREAS, pursuant to agreement dated April 15, 1977, between the North Side Canal Company and the Twin Falls Canal Company it was agreed that if a power site at Milner Dam be developed using only a point of diversion on the south side of the Snake River, the Twin Falls Canal Company's share in the development of the power site would be 7/11ths and the share of the North Side Canal Company would be 4/11ths; and

WHEREAS, the Canal Companies and the Power Company entered into Agreement No. 1, dated as of April 23, 1981, as later amended by February 24, 1983 Letter Agreement, Agreement of December 20, 1983 and Agreement of March 21, 1988, relating to the Parties participating in the construction of the Project, pursuant to which Agreement No. 1 the Canal Companies, with the assistance of the Power Company as provided in Agreement No. 1, obtained the License to construct and operate the Project issued by the Commission on December 15, 1988, no application for a rehearing having been filed by the Canal Companies; and

WHEREAS, under date of February 7, 1989, the Parties entered into the February 7, 1989 Agreement amending Agreement No. 1 setting forth a common solution to the requirements of the License with respect to the Milner Dam Rehabilitation Project, thereby permitting the Parties to proceed to the design and construction phase of the Project, restating certain of the provisions of Agreement No. 1, providing for the Power Company to become a joint or co-licensee with the Canal Companies as to the Project under the License, and to provide the basis for the relationship between the Parties as joint or co-licensees for the ownership, construction, operation and maintenance of the Project under the terms and conditions of the License; and

WHEREAS, under date of February 28, 1989, the Parties filed an application with the Commission for the addition of the Power Company as a co-licensee under the

License to effectuate the contractual arrangements between the Parties, which application was approved by the Commission by Order issued May 2, 1989, which Order was accepted by the Canal Companies on June 13, 1989, and pursuant thereto, the Power Company is a co-licensee with the Canal Companies under the License with respect to the Project; and

WHEREAS, the Power Company and the Canal Companies desire to enter into a definitive agreement whereby the Parties, having received the License from the Commission with respect to the Project, shall proceed with the engineering, financing, construction, ownership, operation and maintenance of the Milner Dam Rehabilitation Project and the Power Plant, including the coordination of the construction of the Power Plant with the Milner Dam Rehabilitation Project, and whereby the Parties will set forth the ownership interests and clarify the responsibilities of the Parties in the Project; and

WHEREAS, the Parties wish to recognize and provide for the construction of Additional Generation Facilities as part of the Project in accordance with the terms and conditions of the License or otherwise; and

WHEREAS, the Parties wish to recognize and to provide for the mechanism whereby the Canal Companies may exercise options to share in the Net Benefits of any sale of electric energy by the Project if the Power Plant is not placed in the rate base of the Power Company; and

WHEREAS, the Parties wish to delineate the responsibilities of the Canal Companies for the payment of Pre-License Advances and Annual Mitigation Expenses;

NOW, THEREFORE, in consideration of the mutual and dependent stipulations and covenants herein contained, it is agreed by and among the Parties hereto, as follows:

ARTICLE I

DEFINITIONS

The following words and phrases shall have the following meanings, unless the context clearly indicates to the contrary:

"Additional Generation Facilities" shall mean any facilities for the generation of electric energy added to the Project pursuant to Section 308 of the License, or otherwise, during the Original Term of this Agreement.

"Agreement" shall mean this "Agreement Regarding the Ownership, Construction, Operation and Maintenance of the Milner Hydroelectric Project (FERC No. 2899) by and between the Twin Falls Canal Company, North Side Canal Company, Limited, and Idaho Power Company," as the same may be supplemented or amended.

"Agreement No. 1" shall mean the "Agreement No. 1 General Understanding" between the Canal Companies and the Power Company, dated as of April 23, 1981, as amended by February 24, 1983 Letter Agreement, Agreement of December 20, 1983 and Agreement of March 21, 1988, and as supplemented by the February 7, 1989 Agreement.

"American Falls Reservoir District No. 2" shall mean the American Falls Reservoir District No. 2, an irrigation district organized and existing under the provisions of Title 43, Idaho Code, as amended, and its successors and assigns.

"Annual Mitigation Expense Budget" shall mean the budget to be prepared annually pursuant to the provisions of Section 4.7 hereof providing for Annual Mitigation Expenses, including any additional annual expenses required under the License as added to the Annual Mitigation Expense Budget by the Authorized Representatives from time to time.

"Annual Mitigation Expenses" shall mean the annual charges incurred by the Parties under the License required by Articles 404, 405, 406, 408, 409, 410, 412, 413, 414, 416, 417 and 419 of the License or as may be required by future Commission orders and which are not capitalized as part of the Capitalized Mitigation Costs.

Leased Mitigation Water Costs shall not be calculated as a part of Annual Mitigation Expenses.

"Authorized Representatives" shall mean collectively, the Authorized Representatives appointed by each of the Parties pursuant to the provisions of Article VI hereof.

"Bypass Flows" shall mean the flows in the Snake River immediately downstream of the Milner Dam as measured at the present site of the Milner gage.

"Canal Companies" shall mean collectively, the North Side Canal Company and the Twin Falls Canal Company.

"Canal Company Annual Mitigation Expenses" shall mean the share of the Annual Mitigation Expenses incurred each year and assigned to the Canal Companies pursuant to the provisions of Section 4.7 hereof to be paid by the Canal Companies pursuant to Section 5.7 hereof.

"Canal Company Capitalized Mitigation Cost Advances" shall mean the advances made to the Canal Companies by the Power Company from time to time pursuant to the provisions of Section 4.6 hereof, to be repaid by the Canal Companies to the Power Company under Section 5.6 hereof to pay Capitalized Mitigation Costs.

"Canal Company Construction Advances" shall mean the advances made to the Canal Companies by the Power Company from time to time pursuant to the provisions of Section 4.5 hereof, to be repaid by the Canal Companies under Section 5.5 hereof, to pay the Costs of Construction of the Milner Dam Rehabilitation Project.

"Capitalized Construction Advance Interest" shall mean interest on the Canal Company Construction Advances prior to the date the Construction Debt is incurred or the Project Completion Date, which ever is earlier, calculated at the effective Short Term Borrowing Cost of the Power Company.

"Capitalized Construction Debt Interest" shall mean, if Construction Debt is incurred prior to the Project Completion Date, the interest capitalized as part

of the Construction Debt between the date the Construction Debt is incurred and the Estimated Completion Date. The Capitalized Construction Debt Interest shall be the responsibility of the Canal Companies.

"Capitalized Mitigation Cost Budget" shall mean the Capitalized Mitigation Cost Budget to be prepared pursuant to the provisions of Section 4.6 hereof providing for the Capitalized Mitigation Costs, including any additional costs as added to the Capitalized Mitigation Cost Budget by the Authorized Representatives from time to time.

"Capitalized Mitigation Costs" shall mean the costs of the Project required under Articles 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 416, 417, 418, 419, 420, 421 and 422 of the License, which are capitalized and not expensed, all as approved by the Authorized Representatives, as provided for under Section 6.2(a)(14) hereof.

"Commercial Operation" shall mean 12:01 A.M. on the date when, pursuant to Prudent Utility Practices, the Power Plant's largest unit located approximately 1.5 miles downstream of Milner Dam is installed, tested and ready to deliver continuous electrical energy, irrespective of the availability of water.

"Commission" shall mean the Federal Energy Regulatory Commission and its successors and assigns.

"Construction Budget" shall mean the Construction Budget prepared pursuant to the provisions of Section 4.5 hereof for the Costs of Construction of the Milner Dam Rehabilitation Project.

"Construction Contractor" shall mean the entity or entities authorized by the Authorized Representatives to be employed for the construction of the Milner Dam Rehabilitation Project.

"Construction Debt" shall mean the debt of the Canal Companies from the Lender secured by the Guaranty to repay the Canal Company Construction Advances and

Capitalized Construction Advance Interest and shall include the Capitalized Construction Debt Interest.

"Construction Management Agreement" shall mean the Letter Agreement between the Canal Companies and the Power Company, dated as of October 6, 1989, providing for the Power Company to act as Construction Manager.

"Construction Manager" shall mean the entity employed by the Canal Companies in accordance with the provisions of Section 4.4(c) to oversee and manage the construction of the Milner Dam Rehabilitation Project.

"Costs of Construction" shall mean all costs, except Prelicense Advances, properly attributable to the design and construction of the Milner Dam Rehabilitation Project and all expenses preliminary and incidental thereto incurred by, or on behalf of the Canal Companies in connection therewith, including all engineering, fiscal and legal expenses for which funds are advanced by the Power Company as Canal Company Construction Advances.

"Debt Service Charge" shall mean the principal of and interest due on the Construction Debt, pursuant to the provisions of Section 5.9 hereof.

"Design Engineer" shall mean Morrison-Knudsen Engineers, Inc., heretofore employed pursuant to the Technical Service Agreement for the design of the Milner Dam Rehabilitation Project.

"Equipment Supplier" shall mean the entity or entities selected by the Authorized Representatives to supply the spillway gates or other equipment as part of the Milner Dam Rehabilitation Project.

"Estimated Completion Date" shall mean the date, as determined by the Authorized Representatives from time to time in accordance with the provisions of Section 6.2(a)(18) hereof, which is estimated to be the Project Completion Date.

"February 7, 1989 Agreement" shall mean the supplement to Agreement No. 1 between the Canal Companies and the Power Company, dated February 7, 1989, as

ratified by the Boards of Directors of the Canal Companies on February 8, 1989 and by the Board of Directors of the Power Company on March 9, 1989.

"Guaranty" shall mean the guarantee by the Power Company of the payment of the Debt Service Charge to the Lender pursuant to the provisions of Section 5.9 hereof, which shall be unconditional pursuant to the terms of Section 5.10 hereof.

"Incentive Royalty" shall mean the annual incentive royalty payments to be paid to the Canal Companies as their respective interests appear, by the Power Company pursuant to the provisions of Section 5.3 hereof for annual generation of electric energy at the Project in excess of 142,000 MWh.

"Incentive Royalty Calculation Period" shall mean initially the period commencing on the first day of the calendar month next succeeding the Project Completion Date and ending on the last day of the 12th calendar month succeeding the commencement of the initial Incentive Royalty Period, and thereafter each succeeding 12 month period during the Original Term of the Agreement.

"Lender" shall mean the entity secured by the Guaranty, lending funds represented by the Construction Debt as contemplated in Section 5.9 hereof.

"Leased Mitigation Water" means water purchased by the Power Company on behalf of the Parties, pursuant to the requirements of Section 401 of the License in order to meet the Target Flows.

"Leased Mitigation Water Costs" shall mean the costs incurred pursuant to Section 4.9 hereof for the purchase of Leased Mitigation Water required to be purchased by the Parties under the terms and conditions of Section 401 of the License.

"License" shall mean the License for Project No. 2899 issued by the Commission on December 15, 1988, and expiring on November 30, 2038, as supplemented by Order issued May 2, 1989, approving the transfer of the License to the Power

Company as a co-licensee, and by Order issued August 4, 1989, amending Section 201 hereof, and any other supplement, amendment, continuance or renewal thereof authorizing the Parties to construct the Project, to operate and maintain the Power Plant and to undertake the Milner Dam Rehabilitation Project.

"License Year" shall mean a twelve-month period calculated by reference to December 1, 1988, during the License Term.

"Milner Dam" shall mean the existing diversion structure located on the Snake River, together with all related facilities, including but not limited to, appurtenant spillways, canals, headworks and facilities owned and operated for irrigation purposes by the Canal Companies and the American Falls Reservoir District No. 2, as rehabilitated by the Milner Dam Rehabilitation Project.

"Milner Dam Rehabilitation Project" shall mean the program to be undertaken by the Parties to reconstruct, rehabilitate and improve the Milner Dam, all in accordance with the provisions of the License and this Agreement.

"Milner Gage" shall mean the existing USGS gage below Milner Dam, to be used to measure the Bypass Flows.

"Net Benefits" shall, for purposes of (i) the provisions of Section 3.5 hereof, and (ii) the option granted the Canal Companies in Section 4.11 hereof, mean the annual residual remaining after deduction of all costs associated with the sale of electric energy generated by the Power Plant, including, but not limited to, transmission expenses, energy firming and shaping expenses (if required), operation and maintenance expenses, taxes, environmental mitigation expenses, debt service and a return on equity investment to the Power Company consistent with the debt component of capitalization utilized in financing the Power Plant, from Project revenues.

"North Side Canal Company" shall mean the North Side Canal Company, Limited, a corporation organized and existing under the laws of the State of Idaho, and its successors and assigns.

"Original Term" shall mean the duration of this Agreement as specified in Article XI hereof, ending concurrently with the expiration of the initial term of the License on November 30, 2038.

"Parties" shall mean collectively, the Canal Companies and the Power Company.

"Post Project Completion Date Interest" shall mean interest on the Canal Company Construction Advances and the Capitalized Construction Advance Interest from the Project Completion Date to the date on which the Construction Debt is incurred, calculated at the Short Term Borrowing Cost of the Power Company.

"Power Company" shall mean the Idaho Power Company, a corporation organized and existing under the laws of the State of Idaho, and its successors and assigns.

"Power Plant" shall mean the hydroelectric generating facility, together with all related facilities required under the License, consisting initially of a 46 MW power facility located downstream of the Milner Dam on the Twin Falls canal, to be constructed, operated and maintained by the Power Company as its part of the Project, including, without limitation, any Additional Generation Facilities, the penstocks, intake structure, and forebay but not the canal or irrigation water control structures, in accordance with the License and this Agreement, or otherwise.

"Pre-License Advances" shall mean those advances made by the Power Company on behalf of the Canal Companies as set forth in Section 3.3 hereof, to pay certain expenses, including the Dam Safety Study as contemplated in Agreement No. 1, incurred by or on behalf of the Parties prior to the issuance of the License on December 15, 1988, a portion of which is to be repaid to the Power Company by the Canal Companies pursuant to the provisions of Section 5.4 hereof.

"Project" shall mean collectively, the Power Plant and the Milner Dam Rehabilitation Project, including but not limited to, all facilities associated with Commission Project No. 2899, and all related structures and works together with all

necessary appurtenances related thereto, including, but not limited to the canal enlargement, construction of the penstocks, construction of new or additional control gates, construction of all related transmission facilities and construction of all recreational, fish and wildlife facilities required by the License.

"Project Completion Date" shall mean the date, as determined by the Authorized Representatives in accordance with the provisions of Section 6.2(a)(18) hereof, on which the Power Plant is deemed to be in Commercial Operation.

"Prudent Utility Practices" shall mean any of the practices, methods and acts engaged in or approved by a significant proportion of the electrical utility industry, or any practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time, could have been expected to accomplish the desired result at the lowest reasonable cost consistent with reliability, safety and expedition, and the requirements of governmental agencies having jurisdiction. Prudent Utility Practices are not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be a range of possible practices, methods or acts.

"Renewal Term" shall mean any term following the Original Term of this Agreement.

"Royalty" shall mean the annual royalty payments required to be made by the Power Company to or on behalf of the Canal Companies as their respective interests appear, pursuant to the provisions of Section 5.1 hereof.

"Short Term Borrowing Cost" shall mean the actual short term borrowing costs or temporary cash investment rate, as applicable, of the Power Company, for the time period in question, as certified by the Power Company to the Authorized Representatives from time to time.

"Target Flows" means the target flow in the bypass reach of the Snake River downstream of the Milner Dam required to be maintained pursuant to the provisions

of Section 407 of the License, measured as required by the Commission. "Technical Service Agreement" shall mean the Technical Service Agreement between the Parties and Morrison-Knudsen Engineers, Inc., dated as of March 16, 1989, providing for the design of the Milner Dam Rehabilitation Project.

"Total Flows" shall mean the flows in the Snake River downstream of all Power Plant units.

"Twin Falls Canal Company" shall mean the Twin Falls Canal Company, a corporation organized and existing under the laws of the State of Idaho, and its successors and assigns.

"Uncontrollable Forces" shall mean any cause beyond the control of the Party affected and which by the exercise of reasonable diligence the Party is unable to avoid and shall include, but not be limited to, an act of God, fire, flood, explosion, strike, sabotage, and act of the public enemy, civil or military authority, including court orders, injunctions, and orders of government agencies with proper jurisdiction prohibiting acts necessary to performance hereunder or permitting any such act subject to unreasonable conditions, insurrection or riot, an act of the elements, failure of equipment, or inability to obtain or ship materials or equipment because of the effect of similar causes on suppliers or carriers.

"Water Permit" shall mean Permit No. 01-7011 issued by the Idaho Department of Water Resources providing for the appropriation of public waters of the State of Idaho for use at the Power Plant as now or hereinafter in effect.

ARTICLE II

REPRESENTATIONS

Section 2.1 General Representations. The Canal Companies and the Power Company represent and warrant one to the other that:

(a) This Agreement is an agreement entered into by the Parties in order to carry

out the reconstruction, rehabilitation and improvement of the Milner Dam through the construction of the Milner Dam Rehabilitation Project and the construction and operation of the Power Plant, as contemplated in the License.

(b) In consideration of the transfer to the Power Company of an interest in the License as co-licensee and the delivery of water to the Power Plant for the purposes of generation of electric energy, the Power Company shall construct, operate, maintain and own the Power Plant, and shall make the payments required to be made to or on behalf of the Canal Companies in Article V hereof. In consideration of the advances made on behalf of the Canal Companies by the Power Company, the Canal Companies shall make the payments to the Power Company required to be made in Article V hereof.

(c) The primary uses of the water and canal facilities constituting the Milner Dam shall be irrigation and stock watering purposes and the Project shall not be operated in such manner as to interfere with, deprive, terminate or reduce the traditional irrigation and stock watering demands of the Canal Companies limited by the number of outstanding shares of record as of April 23, 1981.

(d) The canals and related facilities constituting the Milner Dam are now and shall continue to be for all times under the sole ownership, maintenance and control of the Canal Companies and the American Falls Reservoir District No. 2, and by this Agreement it is understood among the Parties that the Power Company is not assuming any of the obligations, duties or liabilities of the Canal Companies or the American Falls Reservoir District No. 2 relating to the operation of the canals and related water facilities constituting the Milner Dam.

Section 2.2. Representations of the Power Company. The Power Company represents and warrants as follows:

(a) It is a corporation duly incorporated under the laws of, and is in good standing, in the State of Idaho, has power under the laws of Idaho and its

Articles of Incorporation and By-Laws to enter into this Agreement and by proper corporate action has been duly authorized to execute and deliver this Agreement.

(b) Except as specified in paragraph (c) below, no additional or further approval, consent or authorization of any governmental unit, public agency or authority is required to be obtained by the Power Company in connection with the execution of this Agreement and the carrying out by it of its various undertakings and obligations provided for or contemplated herein.

(c) As a regulated utility, the authority of the Power Company to undertake the transactions contemplated by this Agreement, to carry out its obligations hereunder including, but not limited to, operation and maintenance of the Power Plant, the payment of the Royalty and the Incentive Royalty and the Guaranty, as contemplated herein, is subject to the obtaining by the Power Company of various regulatory approvals, authorizations and permits of and by local, state and federal regulatory agencies having jurisdiction thereof, and all such approvals, authorizations and permits shall be duly and timely obtained by the Power Company.

(d) There is no action, suit, proceeding or investigation at law or in equity before or by any court, public board or body, pending or, to the best of the knowledge and information of the Power Company, threatened against or affecting the Power Company, or, to the best of the knowledge and information of the Power Company, any basis for such action, suit, proceeding or investigation, wherein an unfavorable decision, ruling or finding which would adversely affect the validity or enforceability of this Agreement.

(e) Neither the execution and delivery of this Agreement, the consummation of the transactions contemplated hereby, nor the fulfillment of or compliance with the terms and conditions of this Agreement, conflict with or result in a breach of any of the terms, conditions or provisions of any corporate restriction of any

agreement or instruments or of any order, ruling or regulation of any court or administrative agency, whether state or federal, to which the Power Company is now a party or by which it is bound, constitute a default under any of the foregoing, or result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of the Power Company under the terms of any instrument or agreement.

(f) The Power Company will take such action consistent with the requirements of this Agreement as shall be necessary under the Guaranty with respect to the Construction Debt of the Canal Companies contemplated to be incurred by the Canal Companies to repay the Canal Company Construction Advances and the Capitalized Construction Advance Interest under the provisions of Section 5.10 hereof.

(g) The Power Company will supply the Canal Companies and the Authorized Representatives of the Canal Companies from time to time such information as shall be reasonably requested by the Canal Companies, so as to enable the Canal Companies to make an informed decision with respect to the option granted to the Canal Companies in Section 4.11 hereof with respect to the Royalty and Incentive Royalty in the event that the Project is not included in the rate base of the Power Company.

Section 2.3. Representations of the Canal Companies. The Canal Companies represent and warrant as follows:

(a) The Canal Companies will hold the Power Company harmless with respect to any claims of the American Falls Reservoir District No. 2 as the owner of an interest in the Milner Dam with respect to any actions taken by the Power Company under this Agreement or in contemplation of this Agreement with respect to the Milner Dam and the Milner Dam Rehabilitation Project.

(b) The Canal Companies will use their best efforts to make water available to the

Power Company at the Power Plant to the maximum extent reasonably possible after meeting all of the Canal Companies' traditional irrigation and stock water demands, limited by the number of outstanding shares of record as of April 23, 1981. The water right at Milner for power generation shall be considered senior to other power projects on the Canal Companies' systems.

(c) The Canal Companies will be solely responsible for furnishing the water to be used in the Power Plant pursuant to the water permit for the generation of electric energy and to that end will jointly exert their best efforts with the Power Company to secure all water necessary to satisfactorily protect the Parties in the use of the water needed for the generation of electric energy at the Power Plant as part of the Project.

(d) The Canal Companies shall be solely responsible for all costs and expenditures of the Canal Companies in conducting their ordinary business affairs, particularly if related to this Agreement, the Milner Dam or the Milner Dam Rehabilitation Project and including any subsequent agreements or activities which the Parties hereto may enter into or engage in.

Section 2.4. Representations of the North Side Canal Company. The North Side Canal Company represents and warrants as follows:

(a) It is a corporation duly incorporated under the laws of, and is in good standing, in the State of Idaho, has power under the laws of Idaho and its Articles of Incorporation and By-Laws to enter into this Agreement and by proper corporate action has been duly authorized to execute and deliver this Agreement.

(b) No additional or further approval, consent or authorization of any governmental unit, public agency or authority is required to be obtained by the North Side Canal Company in connection with the execution of this Agreement and the carrying out by it of its various undertakings and obligations provided for or contemplated herein.

(c) There is no action, suit, proceeding or investigation at law or in equity before or by any court, public board or body, pending or, to the best of the knowledge and information of the North Side Canal Company, threatened against or affecting the North Side Canal Company, or, to the best of the knowledge and information of the North Side Canal Company, any basis for such action, suit, proceeding or investigation, wherein an unfavorable decision, ruling or finding which would adversely affect the validity or enforceability of this Agreement.

(d) Neither the execution and delivery of this Agreement, the consummation of the transactions contemplated hereby, nor the fulfillment of or compliance with the terms and conditions of this Agreement, conflict with or result in a breach of any of the terms, conditions or provisions of any corporate restriction of any agreement or instruments or of any order, ruling or regulation of any court or administrative agency, whether state or federal, to which the North Side Canal Company is now a party or by which it is bound, or constitute a default under any of the foregoing, or result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of the North Side Canal Company under the terms of any instrument or agreement.

Section 2.5. Representations of the Twin Falls Canal Company. The Twin Falls Canal Company represents and warrants as follows:

(a) It is a corporation duly incorporated under the laws of, and is in good standing, in the State of Idaho, has power under the laws of Idaho and its Articles of Incorporation and By-Laws to enter into this Agreement and by proper corporate action has been duly authorized to execute and deliver this Agreement.

(b) No additional or further approval, consent or authorization of any governmental unit, public agency or authority is required to be obtained by the Twin Falls Canal Company in connection with the execution of this Agreement and the

carrying out by it of its various undertakings and obligations provided for or contemplated herein.

(c) There is no action, suit, proceeding or investigation at law or in equity before or by any court, public board or body, pending or, to the best of the knowledge and information of the Twin Falls Canal Company, threatened against or affecting the Twin Falls Canal Company, or, to the best of the knowledge and information of the Twin Falls Canal Company, any basis for such action, suit, proceeding or investigation, wherein an unfavorable decision, ruling or finding which would adversely affect the validity or enforceability of this Agreement.

(d) Neither the execution and delivery of this Agreement, the consummation of the transactions contemplated hereby, nor the fulfillment of or compliance with the terms and conditions of this Agreement, conflict with or result in a breach of any of the terms, conditions or provisions of any corporate restriction of any agreement or instruments or of any order, ruling or regulation of any court or administrative agency, whether state or federal, to which the Twin Falls Canal Company is now a party or by which it is bound, or constitute a default under any of the foregoing, or result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of the Twin Falls Canal Company under the terms of any instrument or agreement.

ARTICLE III

LICENSE

Section 3.1. License. The License for Project No. 2899 was issued December 15, 1988, by the Commission to the Canal Companies and was supplemented by Commission Order issued May 2, 1989, adding the Power Company as a co-licensee. The License expires on November 30, 2038. The License is conditioned upon commencement of construction of the Project within two years from December 1, 1988, and upon

completion of the Project within four years from December 1, 1988. Separate commencement and completion dates are prescribed in the License with respect to the Milner Dam Rehabilitation Project.

Section 3.2. Compliance with the License. The Parties recognize that as co-licensees under the License, they are jointly and severally liable to fulfill all statutory and regulatory obligations under the License regardless of their varying interests in Project property and their contractual obligations to each other regarding the Project, as set forth herein. So long as the License shall be in full force and effect the Parties shall operate or cause the Project to be operated in good faith pursuant to the terms of the License and shall not fail to comply at all times with the terms and provisions of the License. Recognizing the ownership interests and allocation of responsibilities set forth in this Agreement, the Power Company agrees to hold the Canal Companies harmless for each and every failure of the Power Company to conform to or otherwise comply with the provisions of the License with respect to the construction, operation and maintenance of the Power Plant. The Canal Companies agree to hold the Power Company harmless for each and every failure of the Canal Companies to comply with the terms of the License in connection with the construction, operation, maintenance and ownership of the Milner Dam and the Milner Dam Rehabilitation Project.

Section 3.3. Pre-License Advances. Pursuant to the provisions of Agreement No. 1, the Power Company incurred Pre-License Advances. Under the terms of Agreement No. 1 the Canal Companies were obligated to repay 50% of the Pre-License Advances exceeding $200,000, plus interest at 10% per annum from the date of each advance, with the total liability of the Canal Companies to repay Pre-License Advances, including interest, not to exceed $800,000. Notwithstanding anything in Agreement No. 1 to the contrary, the Parties hereby agree that the amount of Pre-License Advances, including interest to date, required to be reimbursed to the Power Company by the

Canal Companies is $570,967.00. This amount includes one-half of a $341,935.00 request for reimbursement from the Canal Companies the full amount of which is payable to the Canal Companies upon the signing of this Agreement and subject to post payment audit by the Power Company. The Canal Companies shall repay their allocated share of the Pre-License Advances, determined in accordance with the respective Canal Company interests set forth in Section 4.2 hereof, in accordance with the provisions of Section 5.4 hereof.

Section 3.4. License Responsibilities. Recognizing the respective ownership interests of the Parties in the Project and the Agreement with respect to the Project contained herein, it is agreed and understood that, except for the responsibilities of the Canal Companies with respect to (i) the construction, ownership, maintenance and operation of Milner Dam, and the Milner Dam Rehabilitation Project, (ii) Canal Company Annual Mitigation Expenses, as set forth in Section 5.7 hereof, (iii) Canal Company Capitalized Mitigation Cost Advances as set forth in Section 5.6 hereof, and (iv) Leased Mitigation Water Costs as set forth in Section 5.8 hereof, the Power Company shall have responsibility for all operational expenses under the License and for complying with the terms and conditions of the License, including, but not limited to, charges imposed by the Commission for the use of federal lands within the Project boundaries and for the power benefits obtained from upstream federal projects, subject to any different allocation of responsibilities by the Authorized Representatives consistent with the terms of the License and this Agreement.

Section 3.5. Renewal of License. Under Section 15(b)(1) of the Federal Power Act in force on date of the execution of this Agreement, the Parties as co-licensees under the License must notify the Commission, at least five years before the expiration of the License, whether the Parties intend to file an application for a new or renewal License. Under Section 15(c)(1) of the Federal Power Act in force on the date of the execution of this Agreement, each application for a new or renewal

License shall be filed with the Commission at least twenty-four (24) months before the expiration of the term of the existing License. Recognizing the above stated provisions of the Federal Power Act, the Parties mutually agree jointly to engage in any and all activities that are reasonably necessary to comply with the above requirements of the Federal Power Act as now or hereinafter in effect in order to renew the License under the terms and conditions required by the Commission or its successors, as those terms and conditions exist or may be changed from time to time during the term of the License. Not less than six years prior to the expiration of the Original Term of this Agreement, the Parties agree to enter into good faith negotiations for the purpose of setting forth the terms and conditions under which the Project will be owned and operated during any renewal, extension or license period granted to the Parties during the renewal, extension or license period by the Commission or its successors, and the obligations of the Parties, one to the others, including the payment of a reasonable royalty to the Canal Companies for the continued availability of the Milner Dam and water made available by the Canal Companies through the Milner Dam to the Power Company for the generation of electric energy at the Power Plant. In the event the parties cannot reach agreement on new terms, then the amount which will be paid to the Canal Companies annually during the Renewal Term for all purposes including but not limited to royalties, rentals, or falling water charges will be one half of the Net Benefits.

Section 3.6 Failure to Renew License If, upon the expiration of the License on November 30, 2038, the Commission fails to issue a renewal or extension license to the Parties, the Parties shall make all reasonable efforts to have the Commission require as a condition to the granting of a license to a party other than the Parties, that (i) any new licensee shall pay the net investment of the Parties in the Project and such other damages which are then permitted by law, plus reasonable severance damages of the Parties, and (ii) any new licensee shall assume all

obligations and contracts of the Parties with respect to the Power Plant. In the absence of an agreement between the Parties, any severance damages shall be shared between the Power Company and the Canal Companies as their respective interests then appear.

ARTICLE IV

THE PROJECT

Section 4.1. Ownership of the Project. The ownership interests of the Parties in the Project shall be as set forth in this Article IV.

Section 4.2. Ownership of Milner Dam. The Canal Companies shall at all times during the term of this Agreement and of the License maintain the ownership and operation of Milner Dam, as contemplated in the October 6, 1981, agreement with American Falls Reservoir District No. 2, for all purposes of this Agreement. For purposes of the obligations of the Canal Companies to make payments under Article V hereof or otherwise under this Agreement, in accordance with the agreement dated April 15, 1977, between the Twin Falls Canal Company and the North Side Canal Company, inasmuch as the point of diversion for the Power Plant is to be on the south side of the Snake River, the ownership interests of the Canal Companies in the Milner Dam and the several obligations of each under this Agreement shall be assumed to be 4/11ths in the North Side Canal Company and 7/11ths in the Twin Falls Canal Company. The Canal Companies shall at all times during the term of the License and this Agreement remain responsible for all operation, maintenance and replacement costs of the Milner Dam and payment of the expenses thereof, irrespective of any obligation of the American Falls Reservoir District No. 2 to the Canal Companies in connection therewith.

Section 4.3. Construction and Ownership of Power Plant

(a) The Power Company shall construct and own the Power Plant pursuant to and in compliance with the requirements of the License. The Power Company shall be

solely responsible for the design, engineering and construction cost of the Power Plant. The Power Company shall at all times during the term of the License and the Agreement remain financially responsible for the construction, maintenance, operation and repair and replacement costs of the Power Plant for the generation of electric energy at the Project.

(b) The Power Company shall be solely responsible for the design, engineering and construction of the Power Plant subject only to a duty to coordinate its activities in good faith with the Authorized Representatives or their designee. The Power Company agrees to coordinate in good faith the design, engineering and construction of the Power Plant with the design, engineering and construction of the Milner Dam Rehabilitation Project through the Authorized Representatives or their designee.

(c) As a part of the Power Plant Construction, the Power Company shall be solely responsible for the design, engineering and construction of necessary modifications to the existing Twin Falls Canal from the reservoir downstream to and including the new control structure downstream of the Power Plant forebay, but the Power Company shall obtain the approval of the Authorized Representatives for the design, construction, operation and maintenance of the facilities in this area of the Project. Construction of necessary modifications to the existing Twin Falls canal will not change the ownership or responsibilities for the operation and maintenance of the Twin Falls canal, as so modified, by the Canal Companies for irrigation purposes as part of the traditional operation of Milner Dam.

Section 4.4. Acquisition of the Project; Estimated Project Completion Date; Project Completion Date.

(a) If requested by the Power Company, the Canal Companies will exert their best efforts to negotiate for and acquire and sell to the Power Company all real property, or interests therein, not otherwise acquired by the Power Company and necessary for the construction, operation and maintenance of the Power Plant, including, but not limited to, the powerhouse and the related penstocks. All costs of the Canal Companies for such negotiations and acquisitions, as approved by the Power Company shall be reimbursed to the Canal Companies.

(b) The Power Company, subject to the approval of the Authorized Representatives, shall as agent for the Canal Companies, cause all plans and specifications for the construction of the Milner Dam Rehabilitation Project to be prepared by the Design Engineer and shall enter into all contracts with the Construction Contractor and the Equipment Supplier necessary for the completion of the Milner Dam Rehabilitation Project. All costs incurred by the Power Company pursuant to this subsection (b) shall be considered to be Canal Company Construction Advances.

(c) The Canal Companies have pursuant to the Construction Management Agreement, designated the Power Company to act as Construction Manager of the Milner Dam Rehabilitation Project. The Construction Manager and the Canal Companies have entered into the Construction Management Agreement delineating the duties, responsibilities and liabilities of the Construction Manager and the Canal Companies. All costs related to the management of construction of the Milner Dam Rehabilitation Project and the Construction Manager shall constitute a portion of the Cost of Construction and shall be paid by the Power Company as a part of the Cost of Construction to be reimbursed by the Canal Companies as part of the Canal Company Construction Advances.

(d) The Power Company, shall obtain the approval of the Authorized Representatives with respect to any portion of the construction of the Power Plant or the Milner Dam Rehabilitation Project which shall require any disturbance of or use of the canals or other property interests of the Canal Companies or the American Falls Reservoir District No. 2 appurtenant to the Milner Dam.

(e) The Authorized Representatives shall establish the Estimated Completion Date and shall determine the Project Completion Date. The Authorized Representatives shall approve a final accounting of the Costs of Construction and of the Capitalized Construction Advance Interest based on the records of account required to be maintained by the Power Company pursuant to the provisions of Section 7.1.

(f) To the extent necessary to resolve any operation arrangements which shall become necessary in order to ensure the efficient coordination of the operation of the Milner Dam and the Power Plant, the Parties shall hereafter enter into an operating agreement which shall govern those operating arrangements, a copy of which operating agreement shall be filed with the Authorized Representatives.

Section 4.5. Milner Dam Rehabilitation Project; Construction Budget; Canal Company Construction Advances.

(a) Within 90 days after the execution of this Agreement the Authorized Representatives shall cause the initial Construction Budget setting forth the Costs of Construction of the Milner Dam Rehabilitation Project to be prepared and supplied to the Parties. Upon the request of either the Power Company or the Canal Companies the Authorized Representatives may approve the amendment of the Construction Budget from time to time in order to provide for the completion of the Milner Dam Rehabilitation Project in accordance with the requirements of the License or otherwise. The Power Company shall pay the Costs of Construction of the Milner Dam Rehabilitation Project as incurred, which

costs shall be the basis for calculating the Costs of Construction paid by the Power Company and the Canal Company Construction Advances thereby made by the Power Company to the Canal Companies for purposes of Section 5.5 hereof.

(b) The Canal Company Construction Advances shall bear Capitalized Construction Advance Interest from the middle of the month within which each advance is made to the date the Construction Debt is incurred or the Project Completion Date, whichever is earlier. If the Construction Debt has not been incurred on the Project Completion Date, the Canal Company Construction Advances and the Capitalized Construction Advance Interest shall bear Post Project Completion Date Interest from the Project Completion Date to the date the Construction Debt is incurred. The Canal Companies shall reimburse the Power Company for the Costs of Construction by paying the Canal Company Construction Advances, the Capitalized Construction Advance Interest, and the Post Project Completion Date Interest in accordance with the provisions of Section 5.5 hereof.

(c) The Authorized Representatives, or their designated agent, shall be responsible for designing, engineering and managing the construction of the Milner Dam Rehabilitation Project, including selecting the Construction Contractor and each Equipment Supplier.

Section 4.6. Capitalized Mitigation Costs; Capitalized Mitigation Cost Budget.

(a) The Power Company shall pay the Capitalized Mitigation Costs as incurred which costs shall be the basis for determining the payment by the Canal Companies for the Capitalized Mitigation Cost Advances. The Power Company shall prepare the Capitalized Mitigation Cost Budget for review by the Authorized Representatives of the Capitalized Mitigation Costs required under the License. The Capitalized Mitigation Cost Budget, as initially approved by the Authorized Representatives, may be amended from time to time upon approval by the Authorized Representatives at the request of the Power Company or the Canal Companies in order to conform

to the requirements of the License or otherwise.

(b) The Canal Companies shall pay 50% of the Capitalized Mitigation Costs pursuant to Section 5.6 hereof, exclusive of those Capitalized Mitigation Costs associated with Articles 411, 412, 413, 414 and 419 of the License in force on the date of execution of this Agreement.

Section 4.7. Annual Mitigation Expenses; Annual Mitigation Expense Budget.

(a) The Power Company shall pay the Annual Mitigation Expenses as incurred which costs shall be the basis for determining the Annual Mitigation Expense payment by the Canal Companies. Not less than 30 days prior to the Estimated Project Completion Date the Power Company shall prepare and supply to the Authorized Representatives for their review and approval the Annual Mitigation Expense Budget for the first year of operation of the Project. Annual Mitigation Expense Budgets for succeeding years shall be prepared and submitted to the Authorized Representatives for review in accordance with procedures established by the Authorized Representatives under Section 6.2(b)(2) hereof. The Annual Mitigation Expense Budget for any year, as initially approved by the Authorized Representatives, may be amended from time to time upon approval by the Authorized Representatives at the request of the Power Company or the Canal Companies in order to conform to the requirements of the License or otherwise.

(b) The Canal Companies shall pay 50% of the Annual Mitigation Expenses pursuant to Section 5.7 hereof.

Section 4.8. Royalty and Incentive Royalty. In consideration of the use of the falling water made available at the Power Plant by the Canal Companies pursuant to this Agreement, the Power Company agrees to pay the Royalty and the Incentive Royalty to the Canal Companies in the amounts and at the times as contemplated in Sections 5.1 and 5.3 hereof during the Original Term of this Agreement.

Section 4.9. Leased Mitigation Water.

(a) The Authorized Representatives shall from time to time in order to remain in compliance with the requirements of Section 401 of the License, approve the Power Company's purchase of Leased Mitigation Water. The Authorized Representatives shall from time to time adopt and revise procedures for measuring the Bypass Flows, the Target Flows and the Total Flows.

(b) The Canal Companies shall reimburse the Power Company for Leased Mitigation Water Costs pursuant to Section 5.8. The amount to be reimbursed shall be calculated as follows:

When Total Flows Are	Percentage Obligation to Canal Companies to Reimburse Leased Mitigation Water Costs	
Below 249 cfs	50%	(but not exceeding 100 cfs)
Between 250 and 299 cfs	37.5%	(but not exceeding 75 cfs)
Between 300 and 399 cfs	25%	(but not exceeding 50 cfs)
Over 400 cfs	0%	

Section 4.10. Additional Generation Facilities. If Additional Generation Facilities are constructed or acquired by the Power Company as part of the Project subject to the License, the Power Company shall construct, own, maintain and operate the Additional Generation Facilities in accordance with the provisions of the License and this Agreement. The generated output of the Additional Generation Facilities shall be included in calculating the Incentive Royalty pursuant to Section 5.3 hereof and the calculation of Net Benefits pursuant to Section 3.5 or Section 4.11 hereof, if applicable. The Power Company agrees to hold the Canal Companies harmless in connection with the acquisition, construction and operation of the Additional Generation Facilities and will construct and operate the Additional Generation Facilities in such manner so as not to adversely affect the ownership or operation of the Milner Dam and will reimburse the Canal Companies for any costs or damages associated with the construction of the Additional Generation Facilities, insofar

as such construction may affect or require the use of any facility included as part of the Milner Dam or any portion of the canals or other property interests of the Canal Companies.

Section 4.11. Option of Canal Companies - Deregulated Sale of Energy. If the Power Company delivers a notice to the Canal Companies in writing prior to the Project Completion Date that the generated output of the Project is not to be placed in the regulated rate base of the Power Company, but is to be sold to a third party on a deregulated basis, the Canal Companies may elect an option to receive 50% of the Net Benefits of the sale of the generated output of the Project, in which event the Power Company shall have no obligation to pay the Royalty or the Incentive Royalty contemplated in Sections 5.1 and 5.3 hereof, provided however, the obligation of the Power Company to pay the Debt Service Charge pursuant to the Guaranty in Section 5.9 hereof shall remain in effect with respect to the Construction Debt. The Canal Companies shall, not less than ninety (90) days subsequent to the receipt of the notice from the Power Company provided for above, deliver a notice to the Power Company in writing if they wish to exercise the option contained in this Section 4.11 hereof with respect to Net Benefits.

Section 4.12. Termination of Deregulated Sale of Energy. In the event, after the exercise of the option contained in Section 4.11 hereof to receive 50% of the Net Benefits of the sale of the generated output of the Project, the Power Company notifies the Canal Companies in writing of its intention to terminate the sale of the generated output of the Project to a third party on a deregulated basis and to place the Project in the regulated rate base of the Power Company, upon such termination the amount of the Royalty and the Incentive Royalty paid by the Power Company to the Canal Companies shall in no event in any year be less than what would have been the Royalty and the Incentive Royalty paid in such year calculated under the provisions of Sections 5.1 and 5.3 hereof, as shown in Schedule I as contemplated

therein, provided, however, the provisions of Section 5.2 hereof which permit deferred installments shall not be applicable.

Section 4.13. Insurance. At all times following the start of construction and prior to the acceptance of the Power Plant for operation by the Power Company on the Project Completion Date the Power Company shall procure and maintain in effect adequate liability and property damage insurance in connection with the construction of the Milner Dam Rehabilitation Project and the Power Plant with each of the Canal Companies and the Power Company as named insureds. The Authorized Representatives shall allocate to the Construction Budget an aliquot portion of the premiums for such insurance coverage properly assignable to the Milner Dam Rehabilitation Project.

Section 4.14. Liabilities of Canal Companies in Event Project Completion Date does not Occur; Canal Company Option.

(a) If the Project Completion Date does not occur for any reason, including, without limitation, abandonment of the License or failure of the Power Company to complete construction of the Power Plant, the Parties shall enter into good faith negotiations for the purpose of setting forth the terms and conditions under which the Canal Companies will be obligated to repay the Canal Company Construction Advances and Capitalized Construction Advance Interest at a term of not less than 25 years with interest at not more than 10% per annum.

(b) The Canal Companies shall have no obligation to reimburse the Power Company for Pre-License Advances in the event the Project Completion Date does not occur as contemplated in subsection (a), except to the extent of the liability of the Canal Companies based on an assignment of responsibility to the Canal Companies for failure of the Project Completion Date to occur pursuant to a submission to arbitration by the Parties under Section 12.1 hereof, or otherwise. Any obligation of the Canal Companies to pay Pre-License Advances in the event the Project Completion Date does not occur, as determined in the preceding sentence,

shall be paid in equal annual installments of principal, plus interest at ten percent (10%) per annum over a period equaling what would have otherwise been the remaining portion of the Original Term of this Agreement.

(c) In the event the Power Company is unable to complete construction of the Power Plant, the Canal Companies shall have a right of first refusal to take over the responsibility under the License to complete the construction of the Power Plant under such terms and conditions as the Parties then agree to.

ARTICLE V

PAYMENT OBLIGATIONS

Section 5.1. Royalty. Commencing on the first business day of the calendar month next succeeding the calendar month during which the Project Completion Date occurs and annually thereafter, the Power Company will pay the Royalty to the Canal Companies during the Original Term of the Agreement. The aggregate amount of the Royalty will equal the net present value of $5,638,000, plus one-half of the Costs of Construction of the Milner Dam Rehabilitation Project, including (i) the Capitalized Construction Advance Interest and (ii) the Capitalized Construction Debt Interest. The Royalty is to be calculated by the Power Company and approved by the Authorized Representatives as of the Project Completion Date using a discount rate of ten percent (10%) per annum. The Royalty will be applied first, to repayment of any Post Project Completion Date Interest, as contemplated in Section 5.9(b) hereof, and second, to repayment of the principal and interest on the Construction Debt, as contemplated in Section 5.11 hereof. The payment of the Royalty shall be subject to the provisions of Section 5.2 and Section 5.9 hereof. Schedule I attached hereto sets forth a sample calculation of the Royalty under certain assumptions, the principles of which Schedule I shall govern the actual calculation of the Royalty pursuant to the provisions of this Section 5.1.

Section 5.2. Canal Company Option to Defer Commencement of Royalty. After the Project Completion Date and for a period of 90 days after the Power Company certifies the final balance of all Canal Company Construction Advances and Capitalized Construction Advance Interest, the Canal Companies, by written notice to the Power Company, may exercise an option, subject to the net present value limitation of the calculation of the Royalty as set forth in Section 5.1 hereof, to have the portion of the Royalty remaining, if any, after payments due with respect to the Construction Debt and Post Project Completion Date Interest, if any, have been made or duly provided for, paid to the Canal Companies in equal annual or other mutually agreed upon deferred installments during the last thirty (30) years of the Original Term of this Agreement. The Authorized Representatives shall utilize the principles contained in Schedule I in calculating the portion of the Royalty to be paid in deferred installments should the Canal Companies exercise the option contained in this Section 5.2.

Section 5.3. Incentive Royalty.

(a) Commencing in the first Incentive Royalty Calculation Period and in each Incentive Royalty Calculation Period thereafter, in addition to the payment of the Royalty pursuant to Section 5.1 hereof, the Power Company shall pay the Incentive Royalty to the Canal Companies during the Original Term of the Agreement based on the generation of the Power Plant during each Incentive Royalty Calculation Period. The Incentive Royalty shall be based upon the generation of electric energy at the Power Plant during each Incentive Royalty Calculation Period in excess of 142,000 MWh, as determined by the Authorized Representatives pursuant to Section 6.2(b)(5) hereof. The Incentive Royalty, if any, due in each Incentive Royalty Calculation Period shall be paid as follows: (i) commencing no later than the 25th day of the calendar month next succeeding the calendar month of each Incentive Royalty Calculation Period

during which the generation of electric energy at the Project for that Incentive Royalty Calculation Period exceeds 142,000 MWh, and (ii) on the 25th day of each succeeding calendar month, until the Incentive Royalty for the current Incentive Royalty Calculation Period has been paid. Except as provided in subsection (b), the Incentive Royalty shall be based upon the following generation of electric energy at the Project in excess of 142,000 MWh in each Incentive Royalty Calculation Period as determined by the Authorized Representatives:

1.5 mills per kWh for generation of electric energy at the Project from 142,000 MWh and to and including 191,999 MWh;

2.0 mills per kWh for generation of electric energy at the Project from 192,000 MWh and to and including 216,999 MWh; and

2.5 mills per kWh for generation of electric energy at the Project in excess of 216,999 MWh.

(b) Beginning in the Incentive Royalty Calculation Period commencing in License Year twenty-one (21) and every five years thereafter during the Original Term of this Agreement, the Incentive Royalty millage rate set forth in subsection (a) shall be increased by thirty percent (30%), calculated as follows:

License Years	142,000 MWH to 191,999 MWH	200,000 MWH to 216,999 MWH	217,000 MWH and Over MWH
1-20	1.500 Mills	2.000 Mills	2.500 Mills
21-25	1.950	2.600	3.250
26-30	2.535	3.380	4.225
31-35	3.296	4.394	5.493
36-40	4.284	5.712	7.140
41-45	5.569	7.426	9.282
46-50	7.240	9.654	12.067

Section 5.4. Pre-License Advances. Pre-License Advances calculated to be due to the Power Company by the Canal Companies in accordance with the provisions of Section 3.3 hereof shall be repaid by the Canal Companies in accordance with the provisions of this Section 5.4. The obligation of each Canal Company to repay Pre-License Advances, including interest, which shall be several and not joint according to the

ownership interests set forth in Section 4.2, is as set forth in Section 3.3 hereto, and is payable in equal annual installments of principal and interest over the remainder of the Original Term of this Agreement commencing on the first business day of the calendar month occurring next succeeding the Project Completion Date, according to a schedule of the installments to be approved by the Authorized Representatives pursuant to Section 6.2(b)(6) hereof. Unpaid Pre-License Advances shall bear interest at the rate of 10% per annum from the Project Completion Date until paid. Anything herein to the contrary notwithstanding, each Canal Company shall be entitled to prepay any of the installments, in any amount, at any time without a prepayment penalty.

Section 5.5. Canal Company Construction Advances; Capitalized Construction Advance Interest.

(a) Canal Company Construction Advances and the Capitalized Construction Advance Interest calculated to be due to the Power Company by the Canal Companies in accordance with the provisions of Section 4.5 and Section 5.9(a) hereof, and Post Project Completion Date Interest, if any, calculated to be due to the Power Company pursuant to the provisions of Section 4.5 and Section 5.9(d) hereof, shall be repaid by the Canal Companies in accordance with the provisions of this Section 5.5. Canal Company Construction Advances made by the Power Company, together with the Capitalized Construction Advance Interest thereon calculated as provided in Section 4.5(b) hereof, shall be due and payable by the Canal Companies from the proceeds of the Construction Debt, as provided in Section 5.9 hereof. Post Project Completion Date Interest calculated as provided in Section 4.5 hereof shall be due and payable by the Canal Companies from the proceeds of the Royalty, as provided in Section 5.1 hereof.

(b) Attached hereto as Schedule II is the latest itemization of the Costs of Construction advanced by the Power Company prior to the date of execution of

the Agreement, together with the applicable Short Term Borrowing Cost of the Power Company, as applicable.

Section 5.6. Canal Company Capitalized Mitigation Cost Advances. Canal Company Capitalized Mitigation Cost Advances calculated to be due to the Power Company by the Canal Companies in accordance with the provisions of Section 4.6, shall be repaid by the Canal Companies in accordance with the provisions of this Section. The obligation of each Canal Company to repay Canal Company Capitalized Mitigation Cost Advances, which shall be several and not joint according to the ownership interests set forth in Section 4.2, shall be payable in equal annual installments of principal and interest over the remainder of the Original Term of this Agreement commencing on the first business day of February next succeeding the Project Completion Date, according to a schedule of installments to be approved by the Authorized Representatives pursuant to Section 6.2(b)(8) hereof. Unpaid Canal Company Capitalized Mitigation Cost Advances shall bear interest at the rate of 10% per annum from the middle of the month during which each advance is made as certified by the Power Company from time to time to the Authorized Representatives, until paid. Anything herein to the contrary notwithstanding, each Canal Company shall be entitled to prepay any of the installments in any amount at any time without a prepayment penalty.

Section 5.7. Canal Company Annual Mitigation Expenses. Canal Company Annual Mitigation Expenses calculated to be due to the Power Company by the Canal Companies in accordance with the provisions of Section 4.7 hereof, shall be paid by the Canal Companies in accordance with the provisions of this Section. Commencing on the Project Completion Date Canal Company Annual Mitigation Expenses shall be payable by the Canal Companies in each calendar year on the date, or dates, established from time to time by the Authorized Representatives. The obligation of each Canal Company to pay Canal Company Annual Mitigation Expenses shall be several and not joint

according to the ownership interests set forth in Section 4.2.

Section 5.8. Leased Mitigation Water Costs. Leased Mitigation Water, if water is available to the Parties in accordance with the requirements of Section 401 of the License, shall be acquired and paid for by the Power Company as Leased Mitigation Water Costs. The portion of Leased Mitigation Water Costs due to be reimbursed to the Power Company by the Canal Companies pursuant to the provisions of Section 4.9 shall be paid by the Canal Companies in accordance with the provisions of this Section 5.8. The obligation of each Canal Company to reimburse the Power Company for Leased Mitigation Water Costs shall be several and not joint according to the ownership interests set forth in Section 4.2 hereof. Payments for Leased Mitigation Water Costs shall be due and payable by the Canal Companies annually in accordance with procedures to be established for that purpose by the Authorized Representatives.

Section 5.9. Construction Debt; Guaranty.

(a) The Canal Companies agree to incur the Construction Debt from the Lender secured by the Guaranty after such time as the Cost of Construction has been reviewed and certified by the Authorized Representatives in accordance with the provisions of Section 6.2(a)(17) hereof in order to provide funds to repay the Canal Company Construction Advances and the Capitalized Construction Advance Interest to the Power Company.

(b) The Parties agree to solicit proposals for the Construction Debt. The solicitation will be made using a term sheet format similar to that attached in Exhibit 1, or as amended if approved by the Parties. Timing for the solicitation will be within one year prior to or after the Estimated Completion Date to obtain the most favorable terms and conditions, or as otherwise agreed to by the Parties. The Power Company shall review and approve the final term sheet to be used for the solicitation, which approval, if the solicitation term sheet is in substantially the form attached hereto as Exhibit 1, shall not be

unreasonably withheld.

(c) The Power Company shall have the right to approve the terms and conditions of the Construction Debt secured by the Guaranty, which approval shall not be unreasonably withheld. The Power Company may withhold its approval of the terms and conditions of the Construction Debt if the term of the Construction Debt is for a period of less than twenty (20) years or if the terms and conditions of the Construction Debt are otherwise financially disadvantageous to the Power Company, as specifically set forth in writing to the Authorized Representatives.

(d) If the Construction Debt is incurred prior to the Project Completion Date, Capitalized Construction Debt Interest shall be included as part of the Construction Debt from the date the Construction Debt is incurred to the Estimated Project Completion Date. If the Project Completion Date occurs prior to the incurring of the Construction Debt, Post Project Completion Date Interest shall be paid by the Canal Companies to the Power Company pursuant to the provisions of Section 5.5 hereof from the proceeds of the Royalty for the period from the Project Completion Date to the date of incurring the Construction Debt.

(e) The obligation of each of the Canal Companies to repay the Construction Debt shall be several and not joint according to the ownership interests set forth in Section 4.2. Anything in this Agreement to the contrary not withstanding, the Royalty and the Incentive Royalty due from the Power Company under Section 5.1 and 5.3 hereof, or Net Benefits due from the Power Company under Section 5.2 hereof, shall be first used to reimburse the Power Company for payment of the Debt Service Charge or any other costs associated with the Construction Debt, with the remaining balance, if any, of the Royalty and Incentive Royalty or Net Benefits being credited by the Power Company to the Canal Companies in accordance with the provisions of Section 5.11 or paid to the Canal Companies, all pursuant to procedures established by the Authorized Representatives in

accordance with the provisions hereof.

(f) The Parties shall use their best efforts to ensure that the annual Debt Service Charge or any other costs associated with the Construction Debt are less than the annual Royalty and Incentive Royalty or Net Benefits; however, if the proceeds of the Royalty and Incentive Royalty or Net Benefits are calculated to be less than required to reimburse the Power Company for payments of the Debt Service Charge pursuant to the Guaranty, the Canal Companies shall reimburse the Power Company for any payments of the Debt Service Charge in excess of the proceeds of the Royalty and Incentive Royalty or Net Benefits in any year, plus interest at the rate of ten percent (10%) per annum from the date upon which such payments of the Debt Service Charge in excess of proceeds to the Canal Companies herein are made by the Power Company to the date reimbursement is made by the Canal Companies to the Power Company.

Section 5.10. Guarantee by Company of Debt Service Charge. The Power Company shall, upon approving the terms and conditions of the Construction Debt, unconditionally guarantee payment of the Debt Service Charge directly to the Lender on the dates and in the amount determined in accordance with the provisions of Section 5.9 hereof pursuant to a separate guaranty agreement.

Section 5.11. Use of Proceeds of Royalty and Incentive Royalty to pay certain Canal Company Obligations. The Royalty and the Incentive Royalty or Net Benefits payable in any year, to the extent remaining after satisfying the annual obligations of the Canal Companies under Section 5.9 with respect to the Post Project Completion Date Interest, if any, or the Construction Debt, shall be credited against the obligation of the Canal Companies to pay the Pre-License Advances, the Canal Company Capitalized Mitigation Cost Advances, the Canal Company Annual Mitigation Expenses or the Leased Mitigation Water Costs, or any combination thereof.

ARTICLE VI

AUTHORIZED REPRESENTATIVES

Section 6.1. Authorized Representatives. As a means of securing effective cooperation and of dealing on a prompt and orderly basis with various administrative, technical, financial, construction and operation subjects which might arise in connection with performance under this Agreement and further, recognizing the need to coordinate the construction of the Power Plant with the construction of the Milner Dam Rehabilitation Project, the Power Company and each of the Canal Companies shall name an Authorized Representative. Each Authorized Representative shall be given authority by the Party or Parties by whom he is designated to act on their behalf with respect to those matters herein provided to be responsibilities of the Authorized Representatives. The Parties shall promptly notify each other in writing of the designation of their Authorized Representative or any subsequent changes in such designation. The Parties shall each have the power to appoint one or more alternate Authorized Representatives to act on specified occasions with respect to specific matters, as for example, legal, engineering or financial.

Section 6.2. Responsibilities of Authorized Representatives.

(a) The responsibilities of the Authorized Representatives prior to the Project Completion Date shall be to:

(1) Establish and revise from time to time general policies to be followed in the administration of this Agreement prior to the Project Completion Date, including, without limitation, the construction of the Milner Dam Rehabilitation Project, and, to the extent such policies are relevant to the subject matter of this Agreement, the construction of the Power Plant;

(2) Establish and revise from time to time general policies and practices to be followed in the coordination of the construction of the Power Plant with the construction of the Milner Dam Rehabilitation Project;

(3) Approve the plans and specifications with respect to the design and construction of the Milner Dam Rehabilitation Project pursuant to Section 4.4 hereof, including, the necessary interface with the canal system of the Canal Companies contemplated in Section 4.4 hereof;

(4) Approve, and from time to time amend and revise as necessary, the Construction Budget pursuant to Section 4.5 hereof;

(5) Approve payment of the Costs of Construction;

(6) Review and approve the determination of Capitalized Construction Advance Interest pursuant to Section 4.5(b) hereof and the determination of Capitalized Construction Debt Interest pursuant to Section 5.9(b) hereof;

(7) Whenever necessary, assign amounts between Costs of Construction and costs attributable to the Power Plant;

(8) Approve the award of the Construction Contract and each contract with an Equipment Supplier with respect to the Milner Dam Rehabilitation Project;

(9) Approve progress payments and the final payment to the Design Engineer and the Construction Manager;

(10) Approve progress payments and the final payment to the Construction Contractor;

(11) Approve progress payments and the final payment to the Equipment Supplier;

(12) Approve resolution of claims as the result of contracts with the Design Engineer, Construction Contractor or Equipment Supplier;

(13) Approve change orders and extra work orders to contracts of the Design Engineer, Construction Contractor or Equipment Supplier.

(14) Approve, and from time to time amend and revise as necessary, the Capitalized Mitigation Cost Budget pursuant to Section 4.6 hereof and payment of the Capitalized Mitigation Costs;

(15) Approve the initial Annual Mitigation Expense Budget pursuant to Section

4.7 hereof;

(16) Allocate insurance costs to the Milner Dam Rehabilitation Project pursuant to Section 4.13 hereof;

(17) Review the calculation of the Cost(s) of Construction and the Capitalized Construction Advance Interest for purposes of Section 5.9 hereof;

(18) Establish from time to time the Estimated Completion Date and determine the Project Completion Date, based upon the recommendation of the Power Company;

(19) Do such other things as are specifically assigned to the Authorized Representatives by the Parties prior to the Project Completion Date.

(b) The responsibilities of the Authorized Representatives after the Project Completion Date shall be to:

(1) Consult with respect to and to establish and from time to time revise any general policies to be followed in the administration of this Agreement subsequent to the Project Completion Date, including maintenance of insurance by the Parties on the respective portions of the Project represented by their respective ownership interests;

(2) Approve, and from time to time amend and revise as necessary, the Annual Mitigation Expense Budget pursuant to Section 4.7 hereof;

(3) Review the Calculation of Net Benefits for purposes of Section 3.5 hereof and of Section 4.11 hereof, if applicable, under the option selected by the Canal Companies;

(4) Review of the calculation of the amounts due under the Royalty under Section 5.1 hereof, and to the extent applicable under Section 5.2 hereof;

(5) Review the calculation of the Project generation of electric energy for purposes of calculating the Incentive Royalty under Section 5.3 hereof;

(6) Approve the schedule for the repayment of Pre-License Advances pursuant

to Section 5.4 hereof;

(7) Review the procedures for use of the proceeds of the Royalty and the Incentive Royalty or Net Benefits as credits against the obligations of the Canal Companies to pay Pre-License Advances, Canal Companies Capitalized Mitigation Cost Advances or Canal Company Annual Mitigation Expenses, Leased Mitigation Water Costs or any combination thereof, pursuant to Section 5.11 hereof;

(8) Review the calculation of the interest due on Canal Company Capitalized Mitigation Cost Advances and the schedule of installments of repayment pursuant to Section 5.6 hereof;

(9) Establish the date, or dates, for payments of the Canal Company Annual Mitigation Expenses;

(10) Review the calculation of the obligation of Canal Companies to pay Leased Mitigation Water Costs;

(11) Establish procedures for payments by Canal Companies of Leased Mitigation Water Costs pursuant to Section 5.8 hereof;

(12) Establish procedures for crediting the Royalty and the Incentive Royalty or Net Benefits for payment of any Post Project Completion Date Interest and the Debt Service Charge pursuant to Section 5.9 hereof;

(13) Establish procedures for determining Bypass Flows, Total Flows and Target Flows pursuant to Section 4.9 hereof; and

(14) Do such other things as are specifically assigned to the Authorized Representatives by the Parties after the Project Completion Date.

Section 6.3. Procedures of Authorized Representatives. The establishment of any procedure or practice or any other action or determination by the Authorized Representatives under this Article VI shall be made by unanimous agreement to become effective when signed by each of the Authorized Representatives. The Authorized

Representatives shall have no authority to modify any of the provisions of this Agreement, nor shall they establish policies, rules, or regulations which conflict with the provisions of the License.

Section 6.4. Dispute Resolution. The Authorized Representatives shall exercise their best efforts to arrive at an amicable settlement of any dispute (including any deadlock) which may arise with respect to any matter contemplated by this Agreement. If, however, no such settlement is reached in connection with any such dispute, then upon written notice by any Party, a three member panel comprised of the President of the Power Company and the President of each Canal Company shall be formed and such panel shall exercise its best efforts to arrive at an amicable settlement of such dispute. If, however, no such settlement is reached, then upon written notice by any Party such dispute may be settled by arbitration in accordance with the provisions of Section 12.1 hereof, or as otherwise provided in Article IX hereof.

ARTICLE VII

SPECIAL COVENANTS

Section 7.1. Construction Records Required to be Maintained.

(a) The Power Company shall at all times maintain and appropriately preserve books of account and appropriate records containing detailed entries of the Pre-License Advances, the Costs of Construction and the Capitalized Mitigation Costs. Accounting for all Pre-License Advances, Costs of Construction and Capitalized Mitigation Costs shall be in accordance with the requirements of the Federal Power Act, if any, and the requirements of the Commission as such requirements are modified by the Commission from time to time. The basic records and documents relating to the construction of the Milner Dam Rehabilitation Project, the Costs of Construction and the Capitalized Mitigation Costs shall be made available to the Authorized Representatives, to the Canal Companies and to the Commission for inspection during regular business hours

upon reasonable notice and request therefor.

(b) Within 120 days after each calendar year during the period of construction of the Project and upon the Project Completion Date, the Power Company shall have an audit made of the books of account relative to the Costs of Construction and the Capitalized Mitigation Costs, the expense of which shall be included in the Costs of Construction. Such audits shall be made by an independent certified public accountant, licensed, registered or entitled to practice as such under the laws of Idaho. A copy of each such audit shall be furnished promptly to the Canal Companies.

Section 7.2. Books and Records Related to Annual Mitigation Expenses and Leased Mitigation Water Costs.

(a) The Power Company shall maintain books to record the Annual Mitigation Expenses and Leased Mitigation Water Costs in accordance with Commission Accounts, and as reported in Commission Form I under "Hydroelectric Generating Plant Statistics". The basic records and documents recording the Annual Mitigation Expenses and the Leased Mitigation Water Costs shall be made available to the Authorized Representatives, to the Canal Companies and to the Commission for inspection during regular business hours upon reasonable notice and request therefor.

(b) The Power Company shall have an audit of the books of account relative to the Annual Mitigation Expenses and the Leased Mitigation Water Costs made within 120 days after each calendar year, the expense of which audits shall be included as part of the Annual Mitigation Expenses and the Leased Mitigation Water Costs to the extent applicable. Such audits shall be made by an independent certified public accountant, licensed, registered or entitled to practice as such under the laws of Idaho. A copy of each such audit shall be furnished promptly to the Canal Companies.

Section 7.3. Compliance with Laws, Rules and Regulations. The Canal Companies and the Power Company shall, in the performance of their respective obligations under this Agreement and the License, comply fully with all laws, rules and regulations pertaining to the construction, operation and maintenance of the Project and the subject matter of this Agreement, including, particularly, the Federal Power Act, the Federal Energy Regulatory Act, the Idaho Public Utilities Act, and the rules and regulations of the Commission and the Idaho Public Utilities Commission, and, to the extent that the operations of any of the Canal Companies or the Power Company may be subject to the jurisdiction of any state or federal regulatory agency, such other terms of all valid and applicable orders, rules and regulations of any such agencies. This Agreement is subject to the laws of the State of Idaho and is subject to the approval, to the extent required by law, of any state or federal regulatory agency having jurisdiction thereof. All costs and expenses of the Canal Companies and the Power Company incurred prior to the Project Completion Date in effecting compliance with any such laws, rules, regulations and orders which apply to the design or construction of the Milner Dam Rehabilitation Project shall be deemed to be a Cost of Construction. All costs and expenses of the Canal Companies and the Power Company in effecting compliance with any such laws, rules, regulations and orders which apply to construction, operation and maintenance of the Power Plant shall be deemed to be an expense to be paid for by the Power Company, except to the extent allocable to the Canal Companies as part of the Annual Mitigation Expenses or the Leased Mitigation Water Costs. The Canal Companies, before incurring any such costs or expenses, shall consult with the Power Company, and such costs and expenses must be approved by the Authorized Representatives.

Section 7.4. Corporate Existence of Power Company; Mergers and Consolidations. During the Original Term and any Renewal Term of this Agreement, the Power Company shall maintain its corporate existence, shall continue to be a corporation either

organized under the laws of or duly qualified to do business as a foreign corporation in the State of Idaho, and will not dispose of all or substantially all of its assets nor consolidate with nor merge into another corporation unless the acquirer of its assets or the corporation with which it shall consolidate or into which it shall merge shall be a corporation organized and existing under the laws of one of the States of the United States of America and shall be qualified and admitted to do business in the State of Idaho, shall be, or as a result of the transaction shall become, a public utility, shall have a net worth immediately subsequent to such acquisition, consolidation or merger at least equal to that of the Power Company immediately prior to such acquisition, consolidation or merger, and shall assume in writing all of the obligations of the Power Company herein.

Section 7.5. Approvals.

(a) Whenever, under the provisions of this Agreement, the approval of the Power Company is required or the Canal Companies, or any of them are required to take some action at the request of the Power Company, such approval or such request shall be made by the Authorized Power Company Representative unless otherwise specified in this Agreement, and the Canal Companies, or any of them, or the Lender shall be authorized to act on any such approval or request, and the Power Company shall have no complaint against the Canal Companies, or any of them, or the Lender as the result of taking any such action.

(b) Whenever under the provisions of this Agreement the approval of the Canal Companies, or either of them, is requested or the Power Company is requested to take some action at the request of the Canal Companies, or either of them, such approval or such request shall be made by the respective Authorized Canal Company Representative or Representatives, unless otherwise specified in this Agreement, and the Power Company or the Lender shall be authorized to act on any such approval or request, and the Canal Companies, or either of them, shall

have no complaint against the Power Company or the Lender as a result of taking any such action.

ARTICLE VIII

ASSIGNMENT

Section 8.1. Condition of Assignments by Power Company. This Agreement may be assigned as a whole or in part, by the Power Company with the consent of the Canal Companies, which consent shall not be unreasonably withheld, subject, however, to each of the following conditions:

(1) The assignee of the Power Company shall expressly agree in writing to perform all of the obligations of the Power Company hereunder to the extent of the interest assigned.

(2) The Power Company shall, within thirty (30) days after delivery of each such assignment, furnish or cause to be furnished to the Canal Companies and to the Lender a true and correct and complete copy thereof.

Section 8.2. Assignments or Dissolution by Canal Companies.

(a) The Canal Companies may each assign their respective interests in, and pledge any moneys receivable pursuant to this Agreement to, the Lender as security for payment of the Debt Service Charge, but each such assignment or pledge shall not affect or impair the rights of the Power Company under this Agreement.

(b) If during the term of this Agreement or any extension or renewal thereof, the Canal Companies desire to assign or transfer their interest in this Agreement or any Project facility, the Power Company shall have the right, but not the obligation, to purchase said interest at the same price that the Canal Companies could receive from a third party. The Power Company will have ninety (90) days from the receipt of written notification of a third party offer in which to exercise this right. If the Power Company does not exercise this right, then the Canal Companies shall be free to transfer said interest to the third party

subject to said third party's agreement to comply fully with all of the terms, conditions and duties imposed by this Agreement.

(c) Each of the Canal Companies, to the extent that each may legally so covenant, covenants and agrees with the Power Company and with the other Canal Company and the Lender that it will not dissolve or otherwise abandon its existence so long as this Agreement is in existence without the written consent of the Power Company, the other Canal Company, and so long as Construction Debt is outstanding, without the written consent of the Lender.

ARTICLE IX

EVENTS OF DEFAULT AND REMEDIES

Section 9.1. Events of Default Defined; Uncontrollable Forces.

(a) The following shall be "events of default" under this Agreement and the terms "events of default" or "defaults" shall mean, whenever they are used in this Agreement, any one or more of the following events:

(1) Failure by a Party to pay all or any part of any amount required to be paid by it under the provisions of Article V hereof at the times and places specified therein and continuance of said failure with respect to any default for a period of sixty (60) days after notice of such failure given under the provisions of Section 9.2 hereof; or

(2) Failure by a Party to observe and perform any covenant, condition or agreement on its part to be observed or performed hereunder for a period of sixty (60) days after written notice, specifying such failure and requesting that it be remedied, given pursuant to the provisions of Section 9.2 hereof to such Party by one or more of the Parties not in default unless the alleged default is cured or disputed as contemplated in Section 9.2 hereof; or

(3) The dissolution or liquidation of a Party; or the filing by a Party of a

voluntary petition in bankruptcy; or failure by a Party promptly to lift or bond any execution, garnishment or attachment of such consequence as will impair its ability to make any payments under this Agreement; or the filing of a petition or answer proposing the entry of an order for relief by a court of competent jurisdiction against a Party under Title 11 of the United States Code, as the same may from time to time be hereafter amended, or proposing the reorganization, arrangement or debt readjustment of a Party under the provisions of any bankruptcy act or under any similar act which may be hereafter enacted and the failure of said petition or answer to be discharged or denied within 90 days after the filing thereof; or the entry of an order for relief by a court of competent jurisdiction in any proceeding for its liquidation or reorganization under the provision of any bankruptcy act or under any similar act which may be hereafter enacted; or an assignment by a Party for the benefit of its creditors; or the entry by a Party into an agreement of composition with its creditors (the term "dissolution or liquidation of a Party," as used in this subsection (3), shall not be construed to include the cessation of the corporate existence of a Party resulting either from a merger or consolidation of a Party into or with another corporation or a dissolution or liquidation of a party following a transfer of all or substantially all its assets as an entirety, under the conditions permitting such actions contained in Article VIII hereof); or

(4) A transfer of a Party's interest to any purchaser from a mortgage or secured party having realized upon its security or otherwise; or

(5) A purported termination, transfer, sale, assignment, pledge or encumbrance of a Party's interest in this Agreement, except as permitted herein.

(b) The provisions of Section 9.1(a)(2) are subject to the limitations that if, by

reason of Uncontrollable Forces, a Party is unable, in whole or in part, to carry out its agreements on its part herein contained, other than the obligations of the Party to make the payments required in Article V hereof, the Party shall not be deemed to be in default hereunder during the continuation of such inability. Nothing herein contained shall be construed to require a Party to settle on an unreasonable basis any strike or labor dispute in which it may be involved which directly affects the Project. If a Party is rendered unable to fulfill any obligation by reason of Uncontrollable Forces, it shall exercise due diligence to remove such inability with all reasonable dispatch.

Section 9.2. Remedies for Defaults.

(a) If a Party believes that another Party has committed an event of default, the nondefaulting Party shall notify the other Party in writing, describing the alleged default, and if the alleged default is not cured or disputed within sixty (60) days from the date of such notice, it shall at the expiration of such period constitute a default under Section 9.1 hereof. If a Party in good faith disputes in writing to the nondefaulting Party or Parties the existence or extent of an alleged default as to which a notice has been given as above provided, that Party shall within the 60-day period from the date of the written disputation nevertheless make such payment or perform such obligation to cure the alleged default. Upon resolution of such dispute by the Parties, pursuant to arbitration under Section 12.1, or by a court of competent jurisdiction, as the case may be, then the payments, if any advanced or made among the Parties as in this subsection (a) provided, shall be adjusted appropriately. Notwithstanding the foregoing, the defaulting Party or Parties shall remain liable to the Party or Parties not in default and to the creditors of the Project for obligations incurred prior to the cure of any such default. Payments not made when due by either Party shall bear interest until paid at

the highest lawful rate.

(b) Except as otherwise provided in subsection (a), the Parties shall have the right from time to time to begin and maintain successive proceedings in law or equity against the Party or Parties in default to enforce any of the provisions of this Agreement to the extent permitted by law, including but not limited to, injunctive relief in the case of the violation or threatened violation of this Agreement, or a decree concerning performance of any of the provisions of this Agreement, for a judgment in an amount equal to any payments to and owing under Article V, or any other remedy.

(c) No right or remedy in this Section 9.2 herein conferred upon or reserved to the Parties is intended to be exclusive of any other right or remedy, and each and every right and remedy shall be cumulative and in addition to any other right or remedy given hereunder, or now or hereafter legally existing, upon the occurrence of any event of default to which this Section 9.2 applies. Failure of a Party to insist at any time on the strict observance or performance by a Party or Parties of any of the provisions of this Agreement, or to exercise any right or remedy provided for in this Agreement shall not impair any such right or remedy nor be construed as a waiver or relinquishment thereof for the future. Receipt by a Party of any payment required to be made under Article V hereof with knowledge of the breach of any provisions of this Agreement shall not be deemed a waiver of such breach.

(d) If any proceedings shall be brought for the enforcement for any right or remedy provided for in this Section 9.2 in which shall be determined that any event of default under Section 9.1 to which this Section 9.2 is applicable has occurred and was continuing at the time of commencement thereof, the Party or Parties in default shall pay to the other Parties all expenses incurred in connection therewith, including without limitation, reasonable attorney's fees

and expenses.

Section 9.3. No Additional Waiver Implied by One Waiver. Any waiver by a Party of its rights with respect to an event of default under this Agreement, or with respect to any other matter arising in connection with this Agreement shall not be deemed to be a waiver with respect to any other matter arising in connection with this Agreement. No delay in asserting or enforcing any rights hereunder shall be deemed a waiver of such rights.

ARTICLE X

LIABILITIES AND DAMAGES

Section 10.1. Liabilities. Any loss, cost, liability, damage or expense incurred by any Party resulting from the maintenance, reconstruction or repair of any portion of the Project because of injury to any individual, or because of damage to property of one or more of the Parties or of other persons, to the extent not covered by collectible insurance, shall be chargeable by the Authorized Representatives to the Party or Parties based solely upon the ownership interest in any Project facility which is basis for any such loss, cost, liability, damage or expense.

Section 10.2. Damage to the Milner Dam. In the event that the Milner Dam or any portion thereof suffers damage resulting from causes other than ordinary wear, tear or deterioration to the extent that the estimated cost of repair as agreed to by the Authorized Representatives exceeds the estimated available proceeds, if any, of insurance, the Parties will proceed as follows:

(a) If the Parties agree to repair the Milner Dam or the damaged portion thereof, the Authorized Representatives shall proceed to repair the Milner Dam, and each Party shall pay its percentage share of the cost thereof based upon said Party's ownership interest, if any, in the facility or facilities which have been damaged.

(b) If the Parties do not agree that the Milner Dam or the damage portion thereof

should be repaired any Party or Parties may proceed to repair the Milner Dam or the damaged portion thereof, and thereafter submit to arbitration in accordance with the provisions of Section 12.1 hereof, the question of whether pursuant to Prudent Utility Practices the Milner Dam or the damaged portion thereof will be repaired. The Party or Parties failing to participate in the cost of the repair of the Milner Dam, or the damage portion thereof, will be obligated to pay a percentage share of the cost thereof based upon the ownership interest of such Party or Parties in the facility or facilities which have been repaired, whereupon each such Party shall pay such amount as determined by arbitration within thirty (30) days of the arbitration award or during such other period as may be mutually agreed upon by the Parties.

Section 10.3. No Ownership Interest by Virtue of Article V Payments. For purposes of this Article X, the Canal Companies shall not be deemed to have any ownership interest in the Power Plant by virtue of their obligation under Article V to repay the Canal Company Capitalized Mitigation Cost Advances or to pay the Canal Company Annual Mitigation Expenses. For purposes of this Article X, the Power Company shall not be deemed to have any ownership interest in the Milner Dam or any appurtenant canals of the Canal Companies by virtue of its obligation under Article V to make the Canal Company Construction Advances or to pay the Debt Service Charge pursuant to the Guaranty.

ARTICLE XI

TERM

Section 11.1. Original Term. This Agreement shall become effective upon its execution by the Canal Companies and the Power Company and, unless extended as provided in Section 3.5 hereof, the Original Term of this Agreement shall terminate on November 30, 2038, being fifty (50) years from the first day of the month in which the License was issued.

Section 11.2. Renewal Term. If, after the expiration of the initial term of the License the License is continued or renewed, this Agreement shall thereupon be continued in effect during such period of continuance or for a Renewal Term or Terms for a period or periods not exceeding such period of continuance or renewal of the License.

Section 11.3. Payments during Renewal Terms. Subject to the provisions of Section 3.5 hereof the Canal Companies and the Power Company shall mutually agree to such annual royalty payments to be made by the Power Company to the Canal Companies during each Renewal Term as shall be embodied in one or more supplements to this Agreement.

ARTICLE XII

MISCELLANEOUS

Section 12.1. Arbitration.

(a) Any dispute, controversy or claim arising among the Parties involving any of the items, covenants and conditions of this Agreement may be submitted to arbitration by the Parties in accordance with the rules then obtaining of the American Arbitration Association, subject to the provisions of this Section 12.1, and judgment upon the award rendered by the arbitrators may be introduced in any court having jurisdiction thereof.

(b) If the Parties agree to submit any dispute, controversy or claim to arbitration, each Party or group of parties representing one side of the dispute shall designate an arbitrator. The arbitrators selected by the Parties shall request from the American Arbitration Association a list of arbitrators who are qualified and eligible to serve as the third arbitrator. The arbitrators so selected shall meet within twenty (20) days following their selection and shall select an additional arbitrator from the list so obtained from the American Arbitration Association. If the arbitrators selected by the Parties, as above provided, shall fail to select an additional arbitrator from such list, then

a judge of the District Court of the United States for the State of Idaho or such tribunal as may at the time be the successor of such Court, shall select the third arbitrator. The judge shall select an arbitrator from the list submitted. All arbitrators shall be persons skilled and an expert in the field which gives rise to the dispute, and no person shall be eligible for appointment as an arbitrator who is an officer or an employee of any of the Parties to the dispute or who is otherwise interested in the matter to be arbitrated. If, pending any arbitration under this Agreement, the arbitrator, or successor or substitute arbitrator shall for any reason be unable or unwilling to act, his successor shall be appointed as he was appointed, and such successor or substitute arbitrator as to all matters then pending shall act the same as if he had been originally appointed as an arbitrator. The award of the arbitrator so chosen shall be final and binding upon all Parties, and if necessary and appropriate in the premises, the arbitrator may make an order requiring specific performance of any of the terms and conditions of said award. The award rendered by the arbitrator shall be final, and judgment may be entered upon it in any court having jurisdiction thereof. Each Party shall bear the expense of preparing and presenting its own case, and the expense of the arbitrator shall be equitably divided between the Parties by the arbitrator.

Section 12.2. Applicable Laws. The Parties in the performance of their obligations hereunder shall conform to all applicable laws, rules, regulations and administrative orders. This Agreement shall be construed under the laws of the State of Idaho. This Agreement is subject to the approval of any state or federal regulatory agency having jurisdiction thereof.

Section 12.3. Notices and Computation of Time. Any notice or demand by any Party under this Agreement shall be deemed properly given if mailed postage prepaid and addressed to each of the other Parties at the addresses indicated below for those

Parties. In computing any period of time from such notice, such period shall commence at 12:01 a.m. on the date mailed. The designations of the name and address to which any such notice or demand is directed may be changed at any time and from time to time by any Party by giving notice as above provided. The following persons are designated and appointed the representatives of the following Parties:

Party	Addressee	Address
Idaho Power Company	Vice President of Power Supply	1220 West State Boise, Idaho 83702
North Side Canal Company	President	921 North Lincoln Jerome, Idaho 83338
Twin Falls Canal Company	President	163 Second West Twin Falls, Idaho 83301

Any notice, demand or request provided for in this Agreement, or given or made in connection with this Agreement to or upon the Lender shall be deemed to be properly given or made if delivered or sent by registered mail to the principal corporate office of the Lender.

Section 12.4. Additional Documents. Each Party upon request by the other Parties shall make, execute and deliver any and all documents reasonably required to implement the terms of this Agreement, including the Guaranty.

Section 12.5. Entire Agreement. This Agreement constitutes the entire agreement between the Parties relating to the subject matter hereof, and supersedes any previous agreements or understandings.

Section 12.6. Supplements and Amendments. Prior to the incurring of the Construction Debt this Agreement may be supplemented or amended by the Parties hereto. Subsequent to the incurring of the Construction Debt and prior to the payment in full (or provision for the payment thereof having been made in accordance with the provisions thereof) of the Construction Debt, this Agreement may not be effectively amended, changed, modified, altered or terminated without the written

consent of the Lender, which consent shall not be unreasonably withheld.

Section 12.7. Severability. In the event any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

Section 12.8. Execution in Counterparts. This Agreement may be executed in several counterparts, each of which shall be an original, and all of which shall constitute and be one and the same instrument.

Section 12.9. Captions and Headings. The captions and headings appearing in this Agreement are inserted merely to facilitate reference and shall have no bearing upon the interpretation of the provisions of this Agreement.

IN WITNESS WHEREOF, the Canal Companies and the Power Company have caused this Agreement to be executed in their respective names and their respective seals to be hereunto affixed and attested by their duly authorized officers, all as of the date first above written.

IDAHO POWER COMPANY

By _____
Its _____

ATTEST:

By _____
Its Secretary

NORTH SIDE CANAL COMPANY, LIMITED

By Russell Woolley
Its President

ATTEST:

By Ted Diehl
Its Sec-Treasurer

TWIN FALLS CANAL COMPANY

By Robert Pickett
Its Pres.

ATTEST:

By Robert W. Schaer
Its secretary

SCHEDULE I

MILNER ROYALTY COMPUTATION

Royalty = $5,638,000 + 0.5 x (Cost of Construction) = $10,138,000
(Assuming Cost of Construction is $9,000,000 and
Construction Debt Interest Rate is 10%) - Remaining Royalty is $1,138,000

Year	Present Value Factor (10%)	Debt Service Charge ($9 Million) (20 yrs, 10%)	Debt Service Charge (Present Value) (10%)	Royalty	Royalty (Present Value) (10%)
Column Number	1	2	3	4	5
			Col. 1 x Col 2		Col. 1 x Col. 4
1	0.9091	$1,057,137	$ 961,033	$ 0	$ 0
2	0.8264	1,057,137	873,667	0	0
3	0.7513	1,057,137	794,242	0	0
4	0.6830	1,057,137	722,039	0	0
5	0.6209	1,057,137	656,399	0	0
6	0.5645	1,057,137	596,726	0	0
7	0.5132	1,057,137	542,478	0	0
8	0.4665	1,057,137	493,162	0	0
9	0.4241	1,057,137	448,329	0	0
10	0.3855	1,057,137	407,572	0	0
11	0.3505	1,057,137	370,520	0	0
12	0.3186	1,057,137	336,836	0	0
13	0.2897	1,057,137	306,215	0	0
14	0.2633	1,057,137	278,377	0	0
15	0.2394	1,057,137	253,070	0	0
16	0.2176	1,057,137	230,064	0	0
17	0.1978	1,057,137	209,149	0	0
18	0.1799	1,057,137	190,135	0	0
19	0.1635	1,057,137	172,850	0	0
20	0.1486	1,057,137	157,137	0	0
21	0.1351			550,000	74,322
22	0.1228			550,000	67,565
23	0.1117			550,000	61,423
24	0.1015			550,000	55,839
25	0.0923			550,000	50,763
26	0.0839			750,000	62,929
27	0.0763			750,000	57,208
28	0.0693			750,000	52,008
29	0.0630			750,000	47,280
30	0.0573			750,000	42,981
31	0.0521			1,000,000	52,099
32	0.0474			1,000,000	47,362
33	0.0431			1,000,000	43,057
34	0.0391			1,000,000	39,143
35	0.0356			1,000,000	35,584
36	0.0323			1,300,000	42,054
37	0.0294			1,300,000	38,231
38	0.0267			1,300,000	34,755
39	0.0243			1,300,000	31,596
40	0.0221			1,300,000	28,723
41	0.0201			1,750,000	35,151
42	0.0183			1,750,000	31,955
43	0.0166			1,750,000	29,050
44	0.0151			1,750,000	26,409
45	0.0137			1,750,000	24,009
46	0.0125			2,125,000	26,503
TOTALS		$21,142,732	$9,000,000	$28,875,000	$1,138,000

SCHEDULE I

Milner Royalty Computation

Notes

Column 1 — Present value factor for each year using the discount rate of 10% as fixed by the Contract for all present value computations. A year-end payment is assumed in this example. The actual present value factor will be adjusted if some other periodic payment is used.

Column 2 — Actual Debt Service Charge (principal and interest) for the Construction Debt and any Post Project Completion Date Interest.

Column 3 — The present value of Column 2. The sum of the individual year present values of the Debt Service Charges will be greater than the Cost of Construction if the effective interest rate of the Construction Debt is greater than 10% annually and will be less than the Cost of Construction if the effective interest rate of Construction Debt is less than 10% annually.

Column 4 — The balance of the Royalty to be paid to the Canal Companies in each year under Article 5.1

Column 5 — The present value of the Royalty in Column 4. The sum of the total of Column 3 and Column 5 must be equal to the sum of $5,638,000 plus one-half of the Cost of Construction (herein assumed to be $9.0 million). Column 4 shall be adjusted to produce this result.

Schedule II

Costs of Construction Advanced by Power Company prior to execution of Agreement

Month 1989	Months Charges	Interest	Total For The Month	Interest Rate (%)
January			0.00	
February			0.00	
March	$ 1,103.89	$ 4.54	$ 1,108.43	9.87
April	2,120.79	18.18	2,138.97	10.06
May	6,957.30	54.93	7,012.23	9.80
June	38,924.03	240.25	39,164.28	9.70
July	44,825.97	567.51	45,393.48	9.48
August	174,692.46	1,385.96	176,078.42	9.13
September	73,682.96	2,333.67	76,016.63	9.10
October	51,636.94	2,817.22	54,454.16	9.07
November	64,156.27	3,146.09	67,302.36	8.71
December				
Total For the Year	$458,100.61	$10,568.35	$468,668.96	

Memo: Breakdown of Total Costs:

Description	Amount
Land	$ 5,025.27
Home Office Engineering	28,901.59
Home Office Other Dept	3,865.35
Field Office Cost	10,014.47
Contract Costs	397,198.51
Receivables	0.00
Admin, Legal, Interest	23,663.77
	$468,668.96

EXHIBIT 1

SUMMARY OF TERMS

MILNER DAM REHABILITATION PROJECT

Long-Term Debt Offering

The Parties:

Twin Falls Canal Company, a corporation domiciled in and authorized to do business in the State of Idaho, with its principal business office located in Twin Falls, Idaho.

North Side Canal Company, Limited, a corporation domiciled in and authorized to do business in the State of Idaho, with its principal office located in Jerome, Idaho.

Idaho Power Company, a corporation domiciled in and authorized to do business in the State of Idaho, with its principal office in Boise, Idaho.

The Project:

The Milner Dam Rehabilitation Project is the program undertaken by the parties to reconstruct, rehabilitate and improve the Milner Dam in accordance with Federal Energy Regulatory Commission (FERC) License for Project No. 2899 (attached). The Milner Dam includes the diversion structure located on the Snake River near Twin Falls, Idaho, together with all appurtenant spillways, canals, headworks and facilities owned and operated for irrigation purposes by the Twin Falls and North Side Canal Companies and American Falls Reservoir District No. 2 as rehabilitated.

The Issue:

Term:	Proposals for long-term debt are solicited for terms of 20 to 30 years. The parties prefer the longer term, but are sensitive to any interest rate differential which may exist and will consider shorter term proposals with an interest rate advantage.
Form:	A Sinking Fund structure with approximately equal annual payments including principal and interest.
Security:	Idaho Power Company will unconditionally guarantee payment directly to the lender/bondholder of the

	principal and interest on the Long-Term Debt to be issued by the Twin Falls and North Side Canal Companies pursuant to an Agreement Regarding the Ownership, Construction and Operation of The Milner Hydroelectric Project (FERC No. 2899) by and between the parties (attached), subject to negotiation and acceptance of the loan documents described under Loan Documentation.
Principal Amount:	Not to exceed the cost of the Milner Dam Rehabilitation Project (including capitalized interest) estimated at $_____.
Date:	Proposed date of issuance, estimated to be _____.
Interest Rate:	The parties desire an interest rate [of 10% or lower] fixed for the term of the loan.
Closing:	Proposed date of closing.
Redemption Provisions:	The parties will favor a proposal which contains one or more prepayment options during the term.
Loan Documentation:	The parties will include additional terms and conditions in the solicitation which are considered important to the Idaho Power Company's unconditional guarantee of the debt. The parties intend to jointly participate in negotiating the loan documents with the selected lender to assure approval by all parties of the final loan package.

BEFORE THE

IDAHO PUBLIC UTILITIES COMMISSION

CASE NO. IPC-E-90-8

IDAHO POWER COMPANY

ATTACHMENT 3
TO
APPLICATION

IDAHO POWER COMPANY

MILNER HYDROELECTRIC PROJECT
POWERHOUSES

	(1) PROJECT ESTIMATE (x 1,000)
MAIN POWERHOUSE:	
DIRECTS:	
GENERAL CONSTRUCTION CONTRACTS	$24,861.7
PROCUREMENT CONTRACTS	$18,224.2
OTHER CONTRACTS & FACILITIES	$ 1,414.3
TOTAL DIRECTS	$44,500.2
INDIRECTS	$ 293.6
OVERHEADS	$ 7,718.7
AFUDC	$ 5,804.8
TOTAL MAIN POWERHOUSE	$58,317.3
POWERHOUSE AT DAM:	
DIRECTS:	
GENERAL CONSTRUCTION CONTRACTS	$ 559.8
PROCUREMENT CONTRACTS	$ 786.7
OTHER CONTRACTS & FACILITIES	$ 80.0
TOTAL DIRECTS	$ 1,426.5
INDIRECTS	
OVERHEADS	$ 456.9
AFUDC	$ 133.2
TOTAL POWERHOUSE AT DAM	$ 2,016.6
TOTAL MILNER POWERHOUSE COSTS	$60,333.9
	1.05
TOTAL COMMITMENT ESTIMATE	$63,350.6

(1) ESTIMATE STATED IN COSTS AT COMPLETION.
FIGURES ARE NOT ROUNDED.