

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Otis Hydroelectric Company )

Project No. 8277-008  
MaineORDER ISSUING NEW LICENSE  
(Major Project)

SEP 16 1998

## INTRODUCTION

On October 25, 1997, Otis Hydroelectric Company (OHC/Applicant) filed a license application and an applicant prepared environmental assessment (APEA) under Part I of the Federal Power Act (FPA) and Section 2403(b) of the 1992 Energy Policy Act, for a new major license for the Otis Hydroelectric Project (Otis Project). The project is located on the Androscoggin River <sup>1/</sup> in the western portion of central Maine in the Village of Riley and the Towns of Canton, Jay, Livermore and Livermore Falls at the junction of Franklin, Androscoggin, and Oxford Counties, Maine. The Otis Project consists of one development located near International Paper Company's (IP) Riley-Jay-Livermore Project on the Androscoggin River.

## BACKGROUND

The Otis Project is located between the Jay and Livermore developments of the Riley-Jay-Livermore Project (Project No. 2375), owned and operated by IP. OHC is a partnership that was formed to specifically redevelop, own, and operate the Otis Project. IP is a managing partner. Because of its status as a managing partner and the proximity of the projects, IP coordinated preparation of a single APEA for both projects.

OHC participated in coordinating the relicensing effort with Commission staff and with members of a Collaborative Team consisting of representatives from Federal and State resource agencies, nongovernmental organizations (NGOs), and the public. Since September of 1994, members of the Collaborative Team have been meeting regularly to address resource concerns, and to develop an enhancement package that protects and enhances the natural and human environment. This collaborative process culminated in the preparation of an APEA (for both the Otis Project and the Riley-Jay-Livermore Project) that was filed with OHC's application for license. The proposed action contained in the APEA represents an agreement among the Collaborative Team members on operational and environmental enhancement measures

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<sup>1/</sup> The Androscoggin River is a navigable waterway of the U.S.  
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needed at the proposed project.

Notice of OHC's application and the APEA for the Otis Project and Riley-Jay-Livermore Project was published on October 14, 1997. Motions to intervene, but not in opposition, were filed by the Maine State Planning Office (dated October 30, 1997), the U.S. Environmental Protection Agency (dated December 15, 1997), and the Town of Jay (dated December 12, 1997). A motion to intervene, in support of the application, was filed by the Conservation Law Foundation, Appalachian Mountain Club, and American Rivers (filed December 15, 1997). No party objected to issuance of this license. Comments received from interested agencies and individuals have been fully considered in determining whether and under what conditions to issue this license.

Under the same public notice of October 14, 1997, the Commission staff indicated that the license application was ready for environmental analysis and solicited comments, recommendations, and final terms and conditions. The U.S. Department of the Interior (Interior) and U.S. EPA responded timely.

On April 9, 1998, the Commission staff issued a draft environmental assessment (DEA) for the Otis Project and the Riley-Jay-Livermore Project based on the APEA and staff's independent analysis. The DEA recommended that the project be licensed with the enhancement measures identified in the APEA and with additional staff-recommended environmental measures. All members of the Collaborative Team generally supported the Commission staff's DEA. Staff made minor changes to the DEA, primarily to clarify some issues noted by the Collaborative Team. Comments on the DEA have been addressed in staff's final environmental assessment (FEA), which was issued on June 23, 1998, and is attached to this license.

The Commission staff also prepared a Safety and Design Assessment (S&DA) for the project, which is available in the Commission's public file.

#### PROJECT DESCRIPTION

The Otis Project is an existing, licensed hydroelectric facility owned by OHC and managed by IP. The current FERC license expires September 30, 1999. The Otis Project is located on the Androscoggin River at river mile 54.0, approximately 2.5 miles downstream of the Jay development and 0.75 mile upstream of the Livermore development. The original rock-filled timber dam was constructed in 1888. The project was redeveloped in 1984 to the maximum practical extent. The total existing installed capacity of the project is currently 10.35 MW with an average annual generation of 49,556 megawatt hours (MWh). No new

capacity or construction is proposed for the Otis Project. A more detailed project description is contained in ordering paragraph (B) (2).

#### APPLICANT'S PLANS AND CAPABILITIES

In accordance with Sections 10 and 15 of the FPA, we have evaluated OHC's record as a licensee for these areas: (1) conservation efforts; (2) compliance history and ability to comply with the new license; (3) safe management, operation, and maintenance of the project; (4) ability to provide efficient and reliable electric service; (5) need for power; (6) transmission line improvements; (7) compliance history; and (8) actions affecting the public.

Here are the findings:

##### 1. Consumption Efficiency Improvement Programs (Section 10(a) (2) (C))

All the power generated by the Otis Project is currently sold to Central Maine Power Company (CMP) and then re-purchased by IP for use in IP's Androscoggin Mill. The Otis Project provides about 5 percent of the mill's energy needs. IP has implemented ongoing conservation and efficiency improvement programs to reduce long-term increases in demand for electricity at the mill. IP recently conducted an energy audit of the mill and in its license application, filed a report "A Study of Energy Opportunities at the International Paper Company Androscoggin Mill". The report identified opportunities to reduce electricity consumption at the Androscoggin Mill by about 5% to 10%. IP has implemented many of these measures.

Staff reviewed the details of OHC's and IP's conservation program and conclude that the applicant is making a good faith effort to conserve electricity, reduce peak-hour demands, and to support the objectives of Section 10(a) (2) (C) of the FPA.

##### 2. The Plans and Abilities of the Applicant to Comply with the Articles, Terms, and Conditions of Any License Issued to It and Other Applicable Provisions of Part I of the FPA (Section 15(a) (2) (A))

Staff reviewed OHC's license application and compliance history with the existing license in an effort to judge its ability to comply with the articles, terms, and conditions of any license issued, and with other applicable provisions of this part of the FPA.

Based on that review, staff concludes OHC has or can acquire the resources and expertise necessary to carry out its plans and comply with all articles, terms and conditions of a new license.

3. The Plans of the Applicant to Manage, Operate, and Maintain the Project Safely (Section 15(a)(2)(B))

The Otis Project has been operated successfully on a number of occasions during flood conditions and OHC plans no changes to the current operating scheme. The project will continue to operate in a run-of-river mode and the project reservoir does not contain sufficient storage to significantly influence river flows. Due to run-of-river operation and the limited storage, the development requires no downstream warning devices for public safety. The project dam is classified as low-hazard, which means that a hypothetical dam failure would pose no threat to downstream life or a significant threat to downstream property.

OHC and its affiliate, IP, maintain a very proactive safety program for the public utilizing the project area and its employees which have been effective in preventing serious injury. OHC reports there has been no lost time, accidents, or public injuries related to the project since 1991, the last year for which records are available.

Staff concludes that OHC's plans to manage, operate, and maintain the project safely are adequate.

4. The Plans and Abilities of the Applicant to Operate and Maintain the Project in a Manner Most Likely to Provide Efficient and Reliable Electric Service (Section 15(a)(2)(C))

Staff reviewed OHC's load forecasts and resource planning to meet energy and capacity requirements over the long term, as well as its plans to maintain the project facilities, and concludes that OHC is likely to continue to operate and maintain the project in manner that provides efficient and reliable electric service.

5. The Need of the Applicant Over the Short and Long Term for the Electricity Generated by the Project to Serve Its Customers (Section 15(a)(2)(D))

The Otis Project provides IP with a reliable and stable source of power to help meet the energy demands of the pulp and paper manufacturing processes at the Androscoggin Mill. While the energy requirements of the mill are increasing (e.g., additional energy requirements associated with improved paper quality), the Otis Project will provide approximately 5% of the energy requirements of the mill.

The project is located in the New England Power Pool (NEPOOL) subregion of the Northeast Power Coordination Council, Regional Electric Reliability Council region. NEPOOL forecasts an annual decrease in planned capacity of 0.5% during the summer

months and 0.3% during the winter months for the 1995 to 2004 planning period. However, an average annual increase in peak capacity demand of 1.1% during the summer months and 1.3 during the winter months is expected to occur during this same period. These growth rate projections support the finding of a long-term need for electricity generated by the Otis Project.

The Otis Project plays an integral role in providing power for the mill, particularly during peak load periods. As peak demand continues to rise in the future, Otis's generating capacity will become increasingly more important.

Staff therefore concludes that there is a short and long-term need for the power from the Otis Project.

#### 6. The Impact of Receiving or Not Receiving the Project License on the Operation, Planning and Stability of Applicant's Transmission System (Section 15(a)(2)(E))

Staff concludes that the project's transmission system extends over a small geographic area and is designed primarily to supply the Androscoggin Mill with electricity. Otis Project is connected to the mill via a 13.8-kilovolt (KV) transmission line extending 3.0 miles.

#### 7. Compliance History Pursuant to Section 15(a)(3)(A)

Staff reviewed OHC's compliance with the terms and conditions of the existing license. Staff concludes that OHC's overall record of making timely filings and compliance with its license is satisfactory.

#### 8. Actions Affecting the Public

No adverse public effects have been identified. OHC and IP employs six to eight staff in operating and maintaining the projects. Currently, public outdoor recreation opportunities are available at four sites along the Otis Project impoundment. OHC plans to enhance recreation at the site by providing a formal canoe/small boat access to the project impoundment at Pine Island.

### COASTAL ZONE MANAGEMENT

The Maine State Planning Office (MSPO) is responsible for reviewing the project for consistency with the state's Coastal Zone Management Program pursuant to Section 930.54 of the Coastal Zone Management Act (CZMA) of 1972, as amended. The MSPO has not yet defined a geographic area for federally licensed activities which are outside of the coastal zone but could potentially affect the coastal zone. The project is located at river mile 54.0 of the Androscoggin River, well upstream from the coastal

area. The relicensing of the projects will not affect coastal resources subject to the requirements of the CZMA (Todd Burrowes, MSPD, Coastal Management Program, phone memo dated October 4, 1996). Our assessment is that no coastal zone consistency certification is needed for this project.

#### WATER QUALITY CERTIFICATION

Under Section 401(a)(1) of the Clean Water Act (CWA), <sup>2/</sup> the Commission may not issue a license for a hydroelectric project unless either the licensee obtains water quality certification from the certifying agency of the state in which the project discharge will originate, or the certifying agency waives certification. Section 401(a)(1) states that certification is deemed waived if the certifying agency fails to act on a water quality certification request within a reasonable period of time, not to exceed one year. <sup>3/</sup> Section 401(d) of the CWA <sup>4/</sup> provides that state certification shall set forth conditions necessary to ensure that licensees comply with specific portions of the CWA and with appropriate requirements of state law.

By letter dated September 22, 1997, OHC and IP requested Section 401 Water Quality Certification from the MDEP for both the Riley-Jay-Livermore Project and the Otis Hydroelectric Project. On May 5, 1998 the MDEP issued a single WQC for both the Riley-Jay-Livermore Project and Otis Hydroelectric Project with 19 conditions. These conditions address the following issues: operating the projects in a run-of-river mode, providing minimum flow releases at the Jay and Livermore developments, monitoring dissolved oxygen (D.O.) and water temperature, flashboard installation, fish passage facilities, establishing a brown trout fishery, reducing effluent limits at the IP mills to reduce total suspended solids, monitoring macroinvertebrate communities, analyzing fish samples for polychlorinated biphenyls (PCB's) and mercury, constructing and maintaining recreation and access facilities, controlling erosion and sedimentation during the upgrade of the Livermore development, avoiding contact of concrete with water, solid waste disposal, and complying with and obtaining the proper permits, as needed.

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<sup>2/</sup> 33 U.S.C. § 1341(a)(1).

<sup>3/</sup> Section 401(a)(1) requires an applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters to obtain from the state in which the discharge originates certification that any such discharge will comply with applicable water quality standards.

<sup>4/</sup> 33 U.S.C. Section 1341(d).

Section 401(d) of the CWA provides that the state certification shall become a condition on any federal license or permit that is issued. 5/ The conditions of the WQC are attached in full as Appendix A of this license order. Most of the WQC conditions are included as specific license articles in this license order and all our license conditions are consistent with the terms of the WQC.

#### SECTION 18 OF THE FEDERAL POWER ACT

Section 18 of the FPA 6/ authorizes the Secretary of the Interior or the Secretary of Commerce to prescribe fishways at Commission-licensed projects. 7/ In its letter dated December 17, 1995, Interior requested that the Commission reserve its authority to prescribe the construction, operation, and maintenance of fishways at the Otis Project under Section 18 of the FPA.

The Commission recognizes that future fish passage needs and management objectives cannot always be determined at the time of project licensing. The Commission's practice has been to include a license article that reserves its authority to require fishways when the Secretary of the Interior prescribes them. 8/ Therefore, consistent with Commission practice, Article 407 of this license reserves the Commission's authority to require the licensee to construct, operate, and maintain such fishways as may be prescribed by the Secretary of the Interior under Section 18 of the FPA.

#### RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES

Section 10(j) of the FPA 9/ requires the Commission, when issuing a license, to include license conditions based on

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5/ 33 U.S.C. §1341(d).

6/ 16 U.S.C. §811.

7/ Section 18 of the FPA states: "The Commission shall require the construction, maintenance, and operation by a licensee at its own expense of... such fishways as may be prescribed by the Secretary of Commerce or the Secretary of the Interior as appropriate."

8/ The Commission has specifically sanctioned the reservation of fishway prescription authority at relicensing. See Wisconsin Public Service Corporation, 62 FERC ¶61,095 (1993); affirmed, Wisconsin Public Service Corporation v. FERC, 32 F.3d 1165 (1994).

9/ 16 U.S.C. § 803(j)(1).

recommendations of federal and state fish and wildlife agencies submitted pursuant to the Fish and Wildlife Coordination Act, to "adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife (including related spawning grounds and habitat)" affected by the project.

During the course of the collaborative process, Federal and state fish and wildlife resource agencies provided OHC with recommendations for operational and environmental enhancement measures at the proposed project. These recommendations were included as part of the proposed action in the Collaborative Team's APEA. In addition, the Commission's Ready for Environmental Assessment Notice issued October 14, 1997 solicited comments, recommendations, and final terms and conditions to be considered under Sections 10(j) and 10(a) of the Act. Interior and U.S. EPA responded timely.

In the FEA, staff adopted the Collaborative Team's proposed action alternative with additional staff-recommended environmental measures. The staff has addressed the concerns and recommendations of the state and federal resource agencies and made a determination that its recommendations are consistent with those of the resource agencies.

Staff has adopted all environmental measures to protect and enhance fish and wildlife resources consistent with the resource agencies recommendations.

#### COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving waterways affected by the project. Under Section 10(a)(2) of the FPA, federal and state agencies filed ten plans that address various resources in Maine. We found eight plans relevant to this project. 10/ The Collaborative Team and

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10/ Atlantic Sea-Run Salmon Commission. 1984. Strategic Plan for Management of Atlantic Salmon in the State of Maine. Augusta, Maine. July 1984. 52 pp. and Appendices.

Maine Department of Conservation. 1982. Maine River's Study - Final Report. Augusta, Maine. May 1982. 181 pp. [This study comprises Volume 2 of Maine's Comprehensive Rivers Management Plan issued in 1987.]

Maine State Planning Office (MSPO). 1987. State of Maine's Comprehensive Rivers Management Plan. Volumes 1-3. Augusta, Maine. May 1987.



Commission staff reviewed these plans and no conflicts were found.

#### COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA, §§ 16 U.S.C. 797(e) and 803(a)(1), require the Commission, in acting on applications for license, to give equal consideration to the power development purposes and to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for all beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflect such consideration.

In determining whether a proposed project will be best adapted to a comprehensive plan for developing a waterway for beneficial public purposes, pursuant to Section 10(a)(1) of the FPA, the Commission considers a number of public interest factors, including the economic benefits of project power.

Under the Commission's approach to evaluating the economics of hydropower projects, as articulated in Mead Corporation, Publishing Paper Division, 11/ the Commission employs an analysis that uses current costs to compare the costs of the project and likely alternative power with no forecasts concerning potential

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MSPO. 1992. State of Maine's Comprehensive Rivers Management Plan. Volume 4. Augusta, Maine. December 1992.

MSPO. 1993. State of Maine's Comprehensive Rivers Management Plan. Volume 5. Augusta, Maine.

U.S. Fish and Wildlife Service (USFWS). Undated. Fisheries USA: The Recreational Fisheries Policy of the U.S. Fish and Wildlife Service. Department of the Interior, Washington, D.C. 11 pp.

USFWS and Canadian Wildlife Service. 1986. North American Waterfowl Management Plan. Department of the Interior, Washington, D.C. May 1986. 19 pp.

USFWS. 1989. Final Environmental Impact Statement - Restoration of Atlantic Salmon to New England Rivers 1989-2021. Department of the Interior, Newton Corner, Massachusetts. May 1989. 88 pp. and appendices.

future inflation, escalation, or deflation beyond the license issuance date. The basic purpose of the Commission's economic analysis is to provide a general estimate of the potential power benefits and the costs of a project, and reasonable alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

An economic analysis of the relicensing of the Otis Project, based on current economic conditions, without future escalation or inflation, and if licensed for 30 years per Commission practice, with staff recommended enhancements would produce an average of 49,556 MWh per year over a 30-year license period. The annual value of this energy is about \$2,477,800 (or about 50.0 mills per kilowatthour (mills/kWh)) in 1997 dollars, based on the average cost of alternative capacity and energy in the region. 12/ The annual cost of producing this energy, including environmental measures, is about \$2,284,169 (or about 46 mills/kWh). Therefore, the project, with environmental enhancement measures, would have a positive net annual benefit of about \$193,631 (about 4.5 mills/kWh).

The annual cost of environmental measures would be \$33,865, or about 20% of the gross annual benefit. About \$21,930 per year would be required to provide fish passage facilities in the future. About \$10,904 per year is attributed to the cost of implementing the proposed recreation measures.

The FEA analyzes the effects associated with the issuance of a license for the Otis Project. The FEA recommends a variety of

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12/ This analysis uses the least cost alternative power source to determine the value of power generated at the Otis Project. OHC currently sells its generation to the local utility, Central Maine Power (CMP). Its existing contract expires concurrent with the expiration of the project license. After that, OHC could expect to obtain a new contract from CMP for CMP's avoided costs, which are expected to be less than \$30/MWh. However, for this analysis it is assumed that OHC would negotiate a contract to sell and deliver its generation to IP for \$50/MWh rather than selling power to CMP for a lower rate. The Otis Project currently produces 49,556 MWh per year. At \$50/MWh the project power would have a value of \$2,477,800.

measures to protect and enhance the environmental resources, which we adopt, as discussed herein. Staff's recommended environmental measures were developed after the consideration of the license terms and conditions submitted by federal and state agencies.

Based on review and evaluation of the project as proposed by the Applicant, and with the additional staff-recommended environmental measures, we conclude that the continued operation and maintenance of the project in the manner required by the license will protect and enhance fish and wildlife resources, water quality, recreational, and cultural resources. The electricity generated from renewable water power resources will be beneficial because it will continue to offset the use of fossil-fueled, steam-electric generating plants, thereby conserving nonrenewable resources and reducing atmospheric pollution. I, therefore, find that the Otis Project, with the recommended measures, is best adapted to a comprehensive plan for the use, conservation, and development of the waterway for beneficial public purposes.

I am requiring the licensee to implement at the Otis Project, the environmental measures summarized below:

- (1) operate the project in run-of-river mode and minimize fluctuations of the water surface elevation in the project headpond (Article 401);
- (2) develop and implement a final monitoring plan to monitor run-of-river operation and reservoir elevations (Article 402);
- (3) in coordination with IP, develop a final plan to monitor water quality including D.O. concentrations, water temperature, and aquatic invertebrates, (Article 403);
- (4) in coordination with IP, file an annual report which evaluates D.O., water temperature, and macroinvertebrate data and the ability of the projects to meet the state water quality standards and, if necessary, implement the operational measures needed to maintain the minimum state standards for water quality (Article 404);
- (5) cooperate with IP and the MDEP in testing white suckers and smallmouth bass for PCB's and mercury in the Otis impoundment and the river below Livermore Dam (Article 405);
- (6) reserve the Commission's authority to require changes in project operations and/or environmental enhancements needed to maintain the state water quality standards (Article 406);
- (7) reserve the Commission's authority to require upstream and downstream fishways that may be prescribed by Interior (Article

407);

(8) monitor recreation use periodically (Article 408);

(9) construct and provide for the operation of recreation facilities at Pine island (Article 409);

(10) implement the provisions of the Programmatic Agreement for managing historic properties that may be affected by the project (Article 410); and

(11) in cooperation with IP, develop and implement a soil erosion control plan (Article 411);

#### LICENSE TERM

Section 15(e) of the FPA <sup>13/</sup> specifies that any license issued shall be for a term that we determine to be in the public interest, but the term may not be less than 30 years nor more than 50 years.

Members of the Collaborative Team recommend that the Commission issue 50-year licenses for both the Riley-Jay-Livermore Project and the Otis Project. This recommendation is a direct result of undertaking and successfully completing an alternative licensing process, Commission adoption of the Collaborative Team's preferred alternative, and agreement among the Collaborative Team members.<sup>14/</sup> We have identified no parties that object to issuing 50-year licenses for the Riley-Jay-Livermore and Otis Projects. The license conditions which are included in this license order adequately addresses project effects on resources expressly related to the project over such a term. Accordingly, the term of license for the Otis Project will be 50 years. Because Section 15(e) of the FPA restricts licenses to a term of 50 years from the date on which they are issued, the license for the Otis Project will expire 50 years from issuance, even though the license will not be effective until October 1, 1999.

#### SUMMARY OF FINDINGS

The FEA, issued June 23, 1998, contains background

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<sup>13/</sup> 16 U.S.C. § 808(e)

<sup>14/</sup> The Maine Department of Environmental Protection (letter dated August 11, 1998), Appalachian Mountain Club (letter dated September 4, 1998), and State of Maine, State Planning Office (letter dated September 1, 1998) recently submitted letters to the Commission supporting a 50-year license term.

information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment. The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if operated and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment, which is available in the Commission's public files for this project.

Based upon a review of the agency and public comments filed on the project, and staff's independent analysis pursuant to sections 4(e), 10(a)(1), and 10(a)(2) of the FPA, I conclude that issuing a license for the Otis Project, with the required environmental measures and other special license conditions, would not conflict with any planned or authorized development, and would be best adapted to the comprehensive development of the Androscoggin River for beneficial public uses.

The Director orders:

(A) This license is issued to Otis Hydroelectric Company (licensee) to operate and maintain the Otis Project for a period of 50 years from the date of issuance of this license, and the license to be effective October 1, 1999, the day after expiration of OHC's current license. This license is subject to the terms and conditions of the Federal Power Act (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 licensee's interests in those lands, shown by exhibit G:

<u>Exhibit G Drawing</u>	<u>FERC No.</u>	<u>Showing</u>
G-1	8277-6	Project Boundary
G-2	8277-7	Project Boundary Detail

(2) Project works consisting of:

The Otis Project has one development located at river mile 54.0 of the Androscoggin River, approximately 2.5 miles downstream of IP's Jay Dam and 0.75 mile upstream of the Livermore dam. The project has a total installed capacity of 10,350 KW and an average annual generation of approximately 49,556 MWh.

The Otis Project consists of: (1) a dam comprised of two contiguous spillway sections totaling 577 feet in length (the

east section being 198 feet in length and topped by 2.21-foot-high flashboards and the west section being 379 feet in length and topped by 2-foot-high flashboards) and a 189-foot-long concrete non-overflow section; (2) a 2.5-mile-long impoundment with an estimated surface area of 115 acres at the normal high water elevation of 339.5 feet; (3) a 95-foot-long forebay wall and spillway section extending at right angles from the dam to the powerhouse intake; (4) a 43-foot-wide by 80-foot-long powerhouse intake that contains two 20-foot-wide by 20-foot-high headgates; (5) a powerhouse, measuring 70 feet wide by 86.5 feet long, contains two identical 5.175-MW generating units (turbines and generators) that operate at 26 feet of head for a total hydraulic capacity of 6,000 cfs; and (6) a substation containing a three-phase, 4.16-13.8-KV step-up transformer connected to a three mile-long, 13.8-KV transmission line which supplies power to the Androscoggin Mill.

The project works generally described above are more specifically shown and described by those portions of exhibits A and F shown below:

Exhibit A: The following section of exhibit A filed October 25, 1997:

Pages A-3 to A-9 describing the existing mechanical, electrical and transmission equipment within the application for license.

Exhibit F: The following exhibit F filed October 25, 1997:

<u>Exhibit F Drawing</u>	<u>FERC No.</u>	<u>Description</u>
Sheet F-1	8277-1	Otis Site Plan
Sheet F-2	8277-2	Otis Dam Elevation and Sections
Sheet F-3	8277-3	Otis Powerhouse Floor Plan
Sheet F-4	8277-4	Otis Powerhouse Longitudinal Section
Sheet F-5	8277-5	Otis Powerhouse Elevations

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

(C) The exhibits A, G, and F described above are approved and made part of the license.

(D) This license is subject to the articles set forth in Form L-3 (October 1975), entitled, "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters of the United States," and the following additional articles:

Article 201. The licensee shall pay the United States the following annual charge, effective October 1, 1999.

For the purposes of reimbursing the United States for the costs of administering Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 10.35 kilowatts.

Article 202. The licensee 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. 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 203. Within 30 days of the effective date of the license, the licensee shall file an original set and two complete duplicate sets of aperture cards of the approved exhibit drawings. The set of originals must be reproduced on silver or gelatin 35mm microfilm. The duplicate sets are copies of the originals made on diazo-type microfilm. All microfilm must be mounted on type D (3-1/4" x 7-3/8") aperture cards.

Prior to microfilming, the FERC Drawing Number (8277-1 through 8277-07) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number must be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., F-1, G-1, etc.), Drawing Title, and date of issuance of this license must be typed on the upper left corner of each aperture card.

The original and one duplicate set of aperture cards must be filed with the Secretary of the Commission, ATTN: DLC/ECRB. The second set of aperture cards shall be filed with the Commission's New York Regional Office.

Article 204. If the Otis Project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater

improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

Article 205. The Commission reserves authority, in the context of any licensing, relicensing, amendment, or surrender proceeding involving upstream projects, or the upstream storage impoundments (Union Water Power Company's Upper Middle Dam Storage, Project No. UL-94-1, and other licensed or unlicensed impoundments upstream of the Otis Project) to require the licensee herein, in a proceeding specific to this license, to conduct studies, modify minimum flow releases, or otherwise make reasonable provisions for modifying project facilities or operation as necessary to mitigate or avoid cumulative effects identified in environmental analyses of the upstream projects.

Article 206. Pursuant to Section 10(d) of the FPA, 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. The licensee shall set aside in a project amortization reserve account at the end of each fiscal year one half of the project surplus earnings, if any, in excess of the specified rate of return per annum on the net investment. To the extent that there is a deficiency of project earnings below the specified rate of return per annum for any fiscal year, the licensee shall deduct the amount of that deficiency from the amount of any surplus earnings subsequently accumulated, until absorbed. The licensee shall set aside one-half of the remaining surplus earnings, if any, cumulatively computed, in the project amortization reserve account. The licensee shall maintain the amounts established in the project amortization reserve account until further order of the Commission.

The specified reasonable rate of return used in computing amortization reserves shall be calculated annually based on current capital ratios developed from an average of 13 monthly balances of amounts properly includible in the licensee's long-term debt and proprietary capital accounts as listed in the Commission's Uniform System of Accounts. The cost rate for such ratios shall be the weighted average cost of long-term debt and preferred stock 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 301. Within 90 days of completion of construction



of the project recreation facilities authorized by this license, the licensee shall file, for Commission approval, revised exhibits F and G, to show those final constructed project facilities as-built.

Article 401. The licensee shall operate the Otis Project in a run-of-river mode for the protection of water quality, aquatic resources, and recreational opportunities along the Androscoggin River. The licensee shall at all times act to minimize the fluctuation of the reservoir surface elevation, with a target elevation within one foot of the top of the flashboards, or within one foot of the crest of the dam when the flashboards are not in place. The licensee shall maintain discharges from the project dam so that, at any point in time, flow, as measured immediately downstream from the powerhouse, approximate the sum of inflows to the reservoir.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, or for short periods upon mutual agreement among the licensee, the Maine Department of Environmental Protection (MDEP), Maine Department of Inland Fisheries and Wildlife (MDIFW) and U.S. Fish and Wildlife Service (FWS). During atypical periods of operation (e.g. after flashboard replacement) the flow release from the project dam should be 1,245 cfs, or inflow minus process-cooling water withdrawn, whichever is less. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 402. Within 30 days of the effective date of the license, the licensee shall provide a final plan to monitor project operation and reservoir elevation as stipulated in Article 401. The monitoring plan should include descriptions of all methods and structures that will be used for providing flows and maintaining reservoir elevations, and the methods for recording and providing data to the Commission on project operation and flows. The plan should include, but not be limited to maintaining the existing water level sensors in the project impoundment, maintaining a daily log of the elevations of the impoundment and turbine operation, and any other measures that will insure that the monitoring system will operate under all conditions. The licensee shall provide the above data to the U.S. Fish and Wildlife Service (USFWS), the Maine Department of Environmental Protection (MDEP), and the Maine Department of Inland Fisheries and Wildlife (MDIFW) within 30 days of receiving a written request for such information. This plan may be a joint plan developed in coordination with International Paper Company which has a similar requirement for the Riley-Jay-Livermore Project.

The Commission reserves the right to require changes to the plan. The plan shall not be implemented until the licensee is

notified that the plan is approved. Upon Commission approval, the licensee shall implement the monitoring plan, including any changes required by the Commission.

Article 403. Within 30 days of the effective date of the license, the licensee shall, after consultation with the Maine Department of Environmental Protection (MDEP), the Maine Department of Inland Fisheries and Wildlife (MDIFW), and the U.S. Fish and Wildlife Service (FWS), file with the Commission for approval, a final plan to monitor dissolved oxygen (D.O.) and water temperatures in the project area. The purpose of the monitoring plan is to ensure that stream flows below the project, as measured immediately downstream of the project tailrace, maintains the minimum state standard for D.O. (D.O. concentrations at or above an instantaneous level of 5.0 mg/l or 60% saturation, whichever is higher, and a 30-day average concentration of 6.5 mg/l). This plan may be a joint plan developed in coordination with International Paper Company which has a similar requirement for the Riley-Jay-Livermore Project.

The Commission reserves the right to require changes to the plan. The D.O. monitoring plan shall not be implemented until the licensee is notified the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 404. The licensee shall prepare an annual report which evaluates dissolved oxygen (D.O.), water temperature, and macroinvertebrate data, as required in part by Article 403, and analyzes project operation and the ability of the Otis Project to meet state water quality standards.

If monitoring shows that the state water quality standards have not been met (i.e. D.O. concentrations at or above an instantaneous level of 5.0 milligrams per liter (mg/l) or 60% saturation, whichever is higher, and a 30-day average concentration of 6.5 mg/l), the licensee shall include in the annual report a proposal to study and implement additional measures, as needed, to modify or enhance project operations to increase D.O. concentrations, improve macroinvertebrate populations, and identify any potential effects on electrical availability and project economics. This may include implementing operational measures, or other measures, as necessary. Action would be required when monthly D.O. concentrations, as measured at the Jay gage, average 6.6 mg/l or the daily D.O. concentration reaches one-tenth of a mg/l or less above the D.O. concentration applicable at that river temperature.

This report may be a joint report developed in coordination with International Paper Company which has a similar requirement for the Riley-Jay-Livermore Project. The annual report shall be

filed with agency comments, and the licensee's response to agency comments with the Commission.

The Commission reserves the right to modify any enhancement plans and schedule outlined in the report. Upon Commission approval, the licensee shall implement any enhancement plan that may be deemed necessary by the Commission according to the approved schedule.

Article 405. The licensee shall coordinate efforts with International Paper Company to collect and analyze tissue samples from white suckers and smallmouth bass, from the Otis impoundment and below Livermore Dam, for levels of polychlorinated biphenyls (PCBs) and mercury. Sampling is needed to determine whether the presence of the dam is contributing to high levels of toxins in the river.

After 5 years from license issuance, the licensee shall file a report with the Commission, developed in cooperation with the Maine Department of Inland Fisheries and Wildlife, Maine Department of Environmental Protection, and the U.S. Fish and Wildlife Service, which assesses these sampling efforts, and a proposal to continue, modify, or discontinue sampling.

Article 406. The Commission reserves authority to require changes in project operations and/or other environmental enhancements needed to maintain the state water quality standards, and ameliorate for cumulative effects identified in the future, due to operating the headwater storage impoundments under alternative operations, and for effects on contaminants in the Androscoggin River.

Article 407. Authority is reserved by the Commission to require the licensee to construct, operate, and maintain, or to provide for the construction, operation, and maintenance of, such fishways as may be prescribed by the Secretary of the Interior under Section 18 of the Federal Power Act.

Article 408. The licensee, after consultation with the U.S. Fish and Wildlife Service, National Park Service, Maine Department of Environmental Protection, Maine Department of Conservation, Maine Department of Inland Fisheries & Wildlife, Conservation Law Foundation, and Appalachian Mountain Club, shall monitor recreation use of the project area to determine whether existing recreation facilities are meeting recreation needs. Monitoring studies shall begin within 6 years of the issuance date of this license. Monitoring studies, at a minimum, shall include collection of annual recreation use data.

During the term of the license, concurrent with filing FERC Form 80, required by section 8 of the Commission's Regulations (18 CFR § 8.11), the licensee shall file a report with the

Commission on the monitoring results. This report shall include:

- (1) annual recreation use figures;
- (2) a discussion of the adequacy of the licensee's recreation facilities at the project site to meet recreation demand;
- (3) a description of the methodology used to collect all study data;
- (4) if there is need for additional facilities, a plan proposed by the licensee to accommodate recreation needs in the project area;
- (5) documentation of agency consultation and their comments on the report after it has been prepared and provided to them; and
- (6) specific descriptions of how the agency comments are accommodated by the report.

The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the report with the Commission.

Article 409. Within 2 years of license issuance, the licensee shall construct and provide for the operation and maintenance of the recreation facilities, as described in the licensee's application for license and Applicant Prepared Environmental Assessment (APEA), filed with the Commission on September 24, 1997. The recreation enhancement measures, at the Otis Hydroelectric Project, shall include providing a summer day-use facility, on Pine Island adjacent to the Jay Dam, consisting of a carry-in boat launch, parking area, toilet facilities, picnic tables, a play area, a fishing dock accessible to persons with disabilities, and walking trails.

During the term of the license, the licensee shall, in cooperation with International Paper Company, maintain the approximate 13.5-mile-long Multi-use Trail located along the northern side of the Otis impoundment.

The licensee shall construct the facilities after consultation with the U.S. Fish and Wildlife Service, National Park Service, Maine Department of Environmental Protection, Maine Department of Conservation, Maine Department of Inland Fisheries & Wildlife, Conservation Law Foundation, and Appalachian Mountain Club. The design and construction of the proposed recreational facilities shall consider the needs of the disabled in accordance with the Americans with Disabilities Act. The facilities shall be shown on the as-built drawings filed pursuant to this license.

The licensee shall file a report with as-built drawings, which shall include the entity responsible for operation and maintenance of the facilities, a discussion of soil erosion and sediment control measures used during construction of the recreation facilities and access, documentation of consultation, copies of comments and recommendations on the report after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the report. The licensee shall allow a minimum of 30 days for the agencies to comment before filing the report with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

Article 410. The licensee shall implement the "Programmatic Agreement Among the Federal Energy Regulatory Commission, the Advisory Council on Historic Preservation, and the Maine State Historic Preservation Officer, for Managing Historic Properties That May Be Affected By New Licenses Issued To International Paper Company and Otis Hydroelectric Company For Continued Operation Of The Riley-Jay-Livermore And Otis Hydroelectric Projects In Maine", executed on February 12, 1998, including but not limited to the Cultural Resources Management Plan for the Projects. In the event that the Programmatic Agreement is terminated, the licensee shall implement the provisions of its approved Cultural Resources Management Plan. The Commission reserves the authority to require changes to the Cultural Resources Management Plan at any time during the term of the license. If the Programmatic Agreement is terminated prior to Commission approval of the Cultural Resources Management Plan, the licensee shall obtain Commission approval before engaging in any ground disturbing activities or taking any other action that may affect any Historic Properties within the Project's area of potential effect.

Article 411. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission, for approval, a plan to control soil erosion, slope instability, and to minimize the quantity of sediment resulting from developing and maintaining recreation facilities and public access, and operation.

The plan shall be based on actual-site geological, soil, and groundwater conditions and on project design, and shall include, at a minimum, the following items:

- (1) a description of the actual site conditions;
- (2) measures proposed to control erosion, prevent slope instability, and to minimize the quantity of sediment resulting from project construction and operation;

- (3) detailed descriptions, functional design drawings, and specific topographic locations of all control measures;
- (4) a description of the licensee's measure(s) to dispose of fill or waste materials; and
- (5) a specific implementation schedule and details for monitoring and maintenance programs for project operation.

The licensee shall prepare the plan after consultation with the Maine Department of Environmental Protection, the Natural Resources Conservation Service, the Department of the Army, Corps of Engineers, and the Town of Livermore Falls. This plan may be a joint plan developed in coordination with International Paper Company which has a similar requirement for the Riley-Jay-Livermore Project.

The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on geological, soil, and groundwater conditions at the site.

The Commission reserves the right to require changes to the plan. No land-disturbing or land-clearing activities shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 412. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational,

or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and water for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and Federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more

than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any Federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

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

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

(2) Before conveying the interest, the licensee shall



determine that the proposed use of the lands to be conveyed is not inconsistent with any approved exhibit R or approved report on recreational resources of an exhibit E; or, if the project does not have an approved exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

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

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

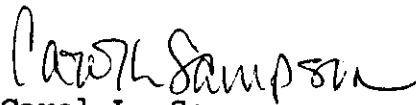
(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion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

(g) The authority granted to the licensee 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 licensee 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) This order is issued under authority delegated to the

Director and constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. Section 385.713. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

A handwritten signature in cursive script, appearing to read "Carol L. Sampson".

Carol L. Sampson  
Director  
Office of Hydropower Licensing

## Appendix A

### Water Quality Certification for the Riley-Jay-Livermore Project, (FERC No. 2375) and Otis Project (FERC No. 8277) Issued By the Maine Department of Environmental Protection on May 5, 1998.

#### 1. STANDARD CONDITIONS OF APPROVAL

The approved expansion of generating capacity at the Livermore Development is subject to the Standard Conditions of Approval for projects under the Maine Waterway Development and Conservation Act, 06-096 CMR Chapter 450.9 (C).

#### 2. WATER LEVELS

A. Except as temporarily modified by (1) approved maintenance activities, (2) inflows to the project area, (3) operating emergencies beyond the applicants' control, as defined below, and (4) agreement between the applicant and appropriate state and/or federal agencies, water levels in the project impoundments shall be maintained within 1 foot of full pond elevation when flashboards are in place, and within 1 foot of spillway crest elevation when flashboards are not in place.

B. Operating emergencies beyond the applicants' control include, but may not be limited to, equipment failure or other temporary abnormal operating condition, generating unit operation or interruption under power supply emergencies, and order from local, state, or federal law enforcement or public safety authorities.

C. The applicant shall, in accordance with the schedule established in the new FERC licenses for the projects, submit plans for providing and monitoring the impoundment water levels required by Part A of this condition. These plans shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

#### 3. MINIMUM FLOWS

A. Except as temporarily modified by (1) approved maintenance activities, (2) inflows to the project area, (3) operating emergencies beyond the applicants' control, as defined below, (4) impoundment refilling after flashboard failure, and (5) agreement between the applicant and appropriate state and/or federal agencies, the following minimum flows shall be released:

a) Outflows approximately equal to inflows shall be maintained from the project developments at all times;

b) A minimum flow of 5 cfs shall be maintained from the southern spillway of the Jay Dam between June 15 and September 15 annually;

c) A minimum flow of 150 cfs during the months of May, June and October and 100 cfs during the remainder of the year shall be maintained from the Livermore Dam into the upper bypass reach at the Livermore Development; and

d) A minimum flow of 550 cfs (consisting of upper bypass flows plus minimum flow turbine releases) shall be maintained from the Livermore Dam and powerhouse into the lower bypass reach at the Livermore Development.

B. During impoundment refilling after flashboard failure and replacement, a minimum flow of 1,245 cfs or inflow, minus process and cooling water withdrawals, whichever is less, shall be maintained from the project developments.

C. Operating emergencies beyond the applicants' control include, but may not be limited to, equipment failure or other temporary abnormal operating condition, generating unit operation or interruption under power supply emergencies, and order from local, state, or federal law enforcement or public safety authorities.

D. The applicants shall, in accordance with the schedule established in the new FERC licenses for the projects, submit plans for providing and monitoring the minimum flows required by Part A of this condition. These plans shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

#### 4. DISSOLVED OXYGEN MONITORING

A. International Paper shall monitor dissolved oxygen and temperature in the Jay impoundment from June 1 through September 30 annually.

B. International Paper shall, in accordance with the schedule established in a new FERC license for the Riley-Jay-Livermore Project, submit plans for monitoring dissolved oxygen and temperature as required by Part A of this condition. These plans shall include provisions for monitoring dissolved oxygen and temperature at an appropriate location in the Jay powerhouse intake area, and determining compliance with applicable dissolved oxygen standards (an instantaneous minimum of 5.0 ppm or 60% of saturation, whichever is higher, and a 30-day average of 6.5 ppm). These plans shall be reviewed by and must receive the

approval of the DEP Bureau of Land and Water Quality.

C. International Paper shall submit an annual report detailing the results of dissolved oxygen and temperature monitoring and the occurrence of any violations of applicable dissolved oxygen standards during the June 1 through September 30 period each year. The Department reserves the right, based on a review of each annual report, and after notice to IP and the opportunity for a public hearing, to require such additional mitigation measures, including but not limited to hydro project modifications or reduced BOD discharges from IP's Androscoggin Paper Mill, as may be deemed necessary to meet applicable dissolved oxygen standards in the Jay impoundment.

5. JAY DAM FLASHBOARDS

Flashboards shall be reinstalled on the Jay Dam before June 1 each year or, failing this, shall not be reinstalled until after July 15.

6. FISH PASSAGE FACILITIES

Based on a written request from the Atlantic Salmon Authority that fish passage facilities be installed on the main stem Androscoggin River above Lewiston Falls to facilitate the restoration of Atlantic salmon, the applicants shall install such fish passage facilities as may be required by the Department, after notice to the applicants and the opportunity for a public hearing, to allow the migration of salmon into and out of the river in and above the project area.

7. BROWN TROUT FISHERY

The applicants shall cooperate with the Department of Inland Fisheries and Wildlife in evaluating the success of efforts to establish a brown trout fishery in the river below the Livermore Development. During each of the first five years following issuance of new FERC licenses for the projects, the applicants shall assist the Department of Inland Fisheries and Wildlife in the annual stocking of up to 250 brown trout in the river, and at the end of the 5-year period shall submit a report to DIFW and the DEP assessing the stocking effort and its success.

8. DISCHARGE OF TOTAL SUSPENDED SOLIDS

International Paper shall, no later than December 31, 1998, submit an application to the DEP to amend and renew Waste Discharge License #W-000623 for the discharge of treated

industrial process waste water from IP's Androscoggin paper mill to incorporate the following reduced effluent limits for the discharge of total suspended solids:

Effluent/Period	Monthly Average	Daily Maximum
TSS--May 1 to Sept 30	12,000 lb/day	22,300 lb/day
TSS--Oct 1 to Apr 30, Starting Oct 1, 1999	31,330 lb/day	44,600 lb/day
TSS--Oct 1 to Apr 30, Starting Oct 1, 2002	25,000 lb/day	44,600 lb/day

Following approval by the DEP in a renewed Waste Discharge License, and except where otherwise specifically noted, these limits shall go into effect concurrent with the October 1, 1999 effective date of the new FERC licenses for the Riley-Jay-Livermore Project and the Otis Project.

9. MACROINVERTBRATE MONITORING--IMPOUNDMENTS

A. As a condition of its renewed Waste Discharge License for the Androscoggin paper mill, and after the reduced limits for the discharge of total suspended solids required by Condition 8 above have become effective, International Paper shall, in consultation with the DEP and the Town of Jay, monitor the macroinvertebrate communities in the lower Jay, Otis and Livermore impoundments annually to determine whether these communities are meeting applicable water quality standards for aquatic life.

B. International Paper shall, in accordance with the schedule established in the renewed Waste Discharge License for the Androscoggin paper mill, submit plans for monitoring macroinvertebrate communities as required by Part A of this condition. This monitoring shall be conducted in accordance with established biological assessment criteria. These plans shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

C. International Paper shall submit an annual report detailing the results of macroinvertebrate monitoring in the project impoundments and an analysis of the classification standards met by the monitored macroinvertebrate communities. The Department reserves the right, based on a review of each annual report, and after notice to IP and the opportunity for a public hearing, to require such additional mitigation measures, including but not limited to a further reduction in the discharge of total suspended solids, as may be deemed necessary to meet applicable aquatic life standards in the project impoundments.

10. MACROINVERTEBRATE STUDY--LIVERMORE BYPASS

A. International Paper shall, in consultation with the DEP, conduct a study to determine whether the macroinvertebrate community in the bypass reach at the Livermore Development is meeting applicable water quality standards for aquatic life following implementation of the minimum bypass flow requirements of this certification. IP shall submit the details of a study plan no later than the October 1, 1999 effective date of a new FERC license for the Riley-Jay-Livermore Project. This study shall be conducted in accordance with established biological assessment criteria. The study plan shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

B. The results of the macroinvertebrate study shall be submitted to the Department in accordance with the schedule established in the study plan. After reviewing the study results and comments from IP, and after notice to IP and the opportunity to request a public hearing, the Department may order such modification of the minimum bypass flow established in this certification as may be deemed necessary to meet applicable aquatic life standards in the Livermore bypass reach.

11. FISH TISSUE SAMPLING

A. The applicants shall, in cooperation with the DEP, collect and analyze tissue samples from white suckers and smallmouth bass from the Otis impoundment and the river below the Livermore Dam for levels of PCBs and mercury, respectively.

B. Based on the results of this and other available fish tissue analysis, the Department reserves the right, after notice to the applicants and the opportunity for a public hearing, to require such additional fish tissue collection and analysis as may be deemed necessary to determine whether the presence of the dams is contributing to the issuance of fish consumption advisories on the river.

12. RECREATIONAL ACCESS AND USE FACILITIES

A. The applicants shall construct, improve and maintain new and existing public recreational access and use facilities as described in Section 7 of this order.

B. The applicants shall, in accordance with the schedule established in the new FERC licenses for the projects, submit plans for constructing, improving and maintaining the recreational access and use facilities required by Part A of

this condition. These plans shall be reviewed by and must receive the approval of the DEP Bureau of Land and Water Quality.

13. EROSION AND SEDIMENTATION CONTROL

A. In addition to any specific erosion and sedimentation control measures proposed by the applicants, International Paper and its agents shall take all necessary measures to ensure that their activities do not result in measurable erosion or sedimentation during or after the approved expansion of the Livermore Development.

B. Cofferdam fill placed in the waterway shall consist of clean granular material free from vegetative matter, lumps or balls of clay and other deleterious substances. That portion passing a 3-inch (No. 200) sieve shall not exceed 10 % fines, by weight.

C. International Paper shall, no less than one month prior to construction mobilization, prepare and submit a detailed erosion and sedimentation control plan for the approved expansion of the Livermore Development. This plan must be reviewed and approved by the DEP Bureau of Land and Water Quality prior to the start of construction.

14. CONCRETE CURING

With the exception of limited amounts of concrete used where necessary to seal the interface between steel cofferdams and the underlying bedrock, uncured concrete shall not be placed in direct contact with surface waters. Concrete shall be precast and cured at least three weeks before placing in the water, or where necessary, shall be placed in forms and shall cure at least one week prior to contact with surface water. No washing of tools, forms, etc. shall occur in or adjacent to the waterway.

15. DEMOLITION/EXCAVATION SPOILS DISPOSAL

All solid waste generated by the approved expansion of the Livermore Development, including used cofferdam fill, excavated forebay sediments, excavated rock and demolition debris, shall be disposed of at suitable upland sites in accordance with the Maine Solid Waste Management Rules.

16. PERMITS FOR RECREATIONAL FACILITIES

The applicants shall obtain permits as may be required under the Natural Resources Protection Act to authorize the construction of new recreational access facilities or the improvement of existing recreational access facilities.



17. LIMITS OF APPROVAL

This approval is limited to and includes the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicants. All variances from the plans and proposals contained in said documents are subject to the review and approval of the Board or Department prior to implementation.

18. COMPLIANCE WITH ALL APPLICABLE LAWS

The applicants shall secure and appropriately comply with all applicable federal, state and local licenses, permits, authorizations, conditions, agreements and orders required for the operation of the projects.

19. EFFECTIVE DATE

This water quality certification shall be effective concurrent with the October 1, 1999 effective date of the new hydropower licenses issued for the Riley-Jay-Livermore Project and the Otis Project by the Federal Energy Regulatory Commission.