

## INTERNATIONAL JOINT COMMISSION

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IN THE MATTER OF THE REQUEST BY THE GREAT LAKES POWER CORPORATION LIMITED FOR PERMISSION TO PROCEED WITH REDEVELOPMENT OF THE HYDRO-ELECTRIC GENERATING FACILITIES AT SAULT STE. MARIE, ONTARIO.

SUPPLEMENTARY ORDER OF APPROVAL

(27 September 1978)

WHEREAS

The St. Marys River is a boundary water within the meaning of Article III of the Boundary Waters Treaty of 1909;

On May 26, 1914 (Docket 6) and May 27, 1914 (Docket 8) the Commission issued Orders of Approval for the regulation of Lake Superior whereby, in part, the predecessor in title of The Great Lakes Power Corporation Limited (hereinafter referred to as the Applicant) was granted approval for the diversion of certain waters for power purposes, subject to certain conditions therein set forth;

On November 10, 1977, the Applicant requested the concurrence of the Commission to redevelop its hydro-electric generating facilities at Sault Ste. Marie, Ontario (hereinafter referred to as the Project) including the construction of a temporary cofferdam near the head of the power canal of the Applicant, known as the Stage II cofferdam, to use its share of waters for power purposes accorded under Order of Approval of May 27, 1914 (hereinafter referred to as the Request);

The Applicant submitted reports dated November 1977, entitled "Effects of Proposed Hydro-electric Plant on Lake Superior Water Levels" and "Environmental Assessment for the St. Marys River Project" in support thereof;

During construction of the Project it will be necessary to erect the Stage II cofferdam for a period of time, thereby limiting the ability of the Applicant to operate its power canal to maintain the level of Lake Superior as nearly as may be between the levels 600.5 and 602.0 IGLD (1955), as provided for in the 1914 Order of Approval;

By letter dated December 15, 1977, the Commission notified the Applicant of the continuing jurisdiction of the Commission under the 1914 Order of Approval and that a formal Application would not be required;

By letters of December 15, 1977, and subsequent thereto, the Commission requested its International Lake Superior Board of Control (hereinafter referred to as the Board) to study the Applicant's Request and to advise the Commission;

The Commission also advised parties directly affected by the Project and all correspondence was placed on the record available to the public;

By Notice of Receipt of the Request published in the Federal Register, the Canada Gazette and in newspapers in the area during the last week of April 1978, comments on the Project from Governments and all interested persons were invited, and notice was given of the availability of documents and comments;

A pre-hearing meeting was held by the Commission at Sault Ste. Marie, Ontario on May 31, 1978, to determine the status of the study on the Project proposed, to identify and arrange for any additional information required to complete the study and to define the issues for hearing;

At the pre-hearing meeting, the Applicant presented a Submission in support of the Project, and explained that the Project was necessary because of the inefficiency of the existing plant, and because of the risk of sudden failure of the existing facility. The Applicant recognized the jurisdiction of the Commission under the 1914 Orders of Approval and requested its approval for the Project;

At the pre-hearing meeting, a representative of the Government of Canada presented a statement in favour of approval by the Commission of the Applicant's Request, and a similar position was advanced by the Minister of Natural Resources of the Province of Ontario provided, however, that provision be made for the breaching of the cofferdam in the event of an emergency;

Prior to and at the pre-hearing meeting, the Edison Sault Electric Company, the successor in title to the Michigan Northern Power Company, the applicant under the May 26, 1914 Order of Approval and an interested party, acknowledged the right of the Applicant to its entitlement to the equal division of the water available for power purposes, pursuant to the 1914 Orders;

By letter of June 7, 1978, the United States Government requested that the Commission consider near and long-term environmental and regulatory consequences of the Project;

By letter of June 16, 1978, the Applicant submitted additional comments supplementary to its reports, to wit: the Project was considered on the availability of 30,000 cfs primary and 5,000 cfs secondary water; responsibility for increased frequency of low flows must be shared by both countries; the remedial works recommended by the Commission for the sport fishery in the St. Marys River was made prior to the Request; the evidence was inconclusive as to the effects on the fishery of increased frequency of low flows over the Rapids; and the Applicant requested that its Project not be delayed until a

decision was taken by Governments concerning remedial works for the protection of the fishery, construction of which had been recommended to the Governments in 1976 by the Commission. In further support, the Applicant submitted additional documentation, including a report on water quality predictions during Stage II construction;

By letter dated June 30, 1978, the Applicant submitted to the Commission a report entitled "Effect of Proposed Project on Lake Levels" dated June 1978, in support of its Request and which superseded its report of November 1977;

On July 5, 1978, the Commission received its Board's Report which reported, among other things, that the determination of the impacts computed by the Applicant were complete; the Board agreed that there was a need for a pre-discharge program which would offset a possible rise in the level of Lake Superior resulting from the Stage II cofferdam; the Applicant's contingency plan for passing water through the construction area and for breaching the cofferdams was adequate; that if the redevelopment project was not carried out, repair to the existing plant would be necessary, requiring a shut-down for repair of about the same time as that required for redevelopment; for optional protection of the fishery in the St. Marys Rapids, the Board had been advised by the Ontario Ministry of Natural Resources that the following guidelines should apply for flow conditions over the Rapids: .....

1. A setting of 4-6 gates open in the control works would create optimal conditions for spawning and maintain suitable habitat for aquatic fauna.
2. During periods critical to the fishery, flows should not be reduced below 4 gates open. A gate setting of less than 4 gates open will result in dewatering extensive spawning areas and isolation of pools of water in Whitefish Channel, effectively cutting off fish movement.
3. During periods critical to the fishery, flows may be increased gradually to 6 gates open without impacting adversely on the fishery.
4. During periods critical to the fishery, reductions in flow from 6 gates open should not take place; but if reductions in flow must be made, they should take place gradually.
5. Gradual increases and decreases in flow, with 7-16 gates open at times other than the critical periods, will minimize adverse impacts on the fishery in the Rapids Section.

The Board advised the Commission that the Project would result in an increase in frequency of low flows over the Rapids, but made no conclusion and gave no advice to the Commission as to the effect of such flows on the fishery;

By letter of July 28, 1978, the Commission requested additional information of its Board; by further report dated August 1, 1978, the Board advised the Commission concerning water quality prediction, environmental assessment and application to Transport Canada; and, by further report dated August 28, 1978, the Board responded to the Commission's request for additional information;

Pursuant to published notices, a Public Hearing was held at Sault Ste. Marie, Ontario on September 6, 1978, at which all persons interested were afforded opportunity of presenting evidence to, and being heard by, the Commission;

By statement of the President of the Lake Carriers Association, dated August 30, 1978, and received by the Commission after its Public Hearing, the Commission was requested to protect the interests of navigation, both during and after construction of the Project;

At the Public Hearing, testimony was presented on behalf of the Applicant describing the purpose, nature and method of constructing the proposed Project and cofferdam in particular, and a Submission and Supplementary Submission were presented in support thereof. The Applicant produced a copy of a letter from the Ontario Ministry of the Environment, dated September 5, 1978, which stated that the Applicant had obtained the necessary approval under the Ontario Water Resources Act;

At the Public Hearing, several issues were raised, including: a request by Edison Sault Electric Company for compensation for damages it alleged it would suffer as a result of the construction of the Project; a brief by the Ontario Ministry of Natural Resources, on behalf of the Government of Ontario, strongly supporting the Applicant's Request, and reaffirming the guidelines previously submitted to the Board with respect to the fishery in the St. Marys River; a brief by the State of Michigan to express its concerns about the fishery in the St. Marys Rapids; a brief by the State of Minnesota with respect to its concerns about the level of Lake Superior; and a brief from the Sault Ste. Marie Public Utility Commission concerning the water supply situation during the construction period;

THE COMMISSION FINDS that the Project is consistent with the intention of the 1914 Orders of Approval to provide for the better regulation of Lake Superior by providing additional ability to pass the flows required under the 1914 Orders through the power canals;

That the existing plant requires considerable repairs which would necessitate a period of shut-down for repair of approximately the same duration as that required for the Project;

That the construction of the Project will interfere with the domestic water intake of the City of Sault Ste. Marie, Ontario, and that an adequate domestic water supply can be provided to the City of Sault Ste. Marie by a temporary water intake system at another location;

That there may be some adverse effects to navigation during the construction period, but that, if the level of Lake Superior is maintained during the navigation season above 600.0 IGLD (1955), the low water datum, or pre-project elevations, whichever is lower, the interests of navigation will be suitably and adequately protected;

That without the maintenance of present flows up to 4 gates over the St. Marys Rapids and in the absence of adequate remedial works, there will be substantial adverse effects on the fishery in the St. Marys River, but that the provisions of Paragraph 11 of this Order and the Commission's Supplementary Order of Approval under Dockets 6 and 8 issued this date will provide suitable and adequate protection for such fishery;

That, if the redevelopment project proceeds in accordance with the plans submitted by the Applicant and pursuant to this Order, there should be no significant adverse environmental effects attributable to the construction of the Project;

That, as found by the Board, during the construction period there should be measurable benefits to shore property interests on Lakes Superior, Michigan, Huron and Erie;

That provisions for the breach of the cofferdam as hereinafter stated provide suitable and adequate protection from high water to shore property interests on Lake Superior;

That, further, there may be some losses to United States power interests during the construction period, but taking into account the surplus benefits received since 1914 as a result of the additional capacity in the United States and the lack of capacity in Canada for its power interests to utilize the equal division of the waters under the Orders of Approval, and considering that said losses, if any, may be offset by additional flows, and considering that these adverse effects are minimal, the Commission finds that United States power will not be unduly harmed and, therefore, the Commission has determined that if the conditions set forth below are met, United States power interests are not entitled to compensation for losses during the redevelopment period;

That, further, subject to these findings and to the conditions provided hereinafter, all interests will be suitably and adequately protected; and

WHEREAS the Commission, after considering the Request, the Reports of the Board, submissions presented at the pre-hearing meeting, testimony received at the Public Hearing, and statements submitted to the Commission has determined that the Request by Great Lakes Power Corporation Limited for permission to proceed with the redevelopment of the hydro-electric generating facilities at Sault Ste. Marie, Ontario, so that it may use its share of waters for power purposes under Order of Approval of May 27, 1914, be approved, subject to the conditions hereinafter set forth

NOW THEREFORE THIS COMMISSION ORDERS AND DIRECTS that the Request by the Applicant to proceed with the Project is hereby approved, subject to the following conditions:

1. No construction shall be undertaken until the plans and specifications for the cofferdams and associated works and the Project construction schedules have been approved by the Commission. Further, any proposed changes to the above plans and specifications and construction schedules shall be submitted to the Commission for approval. The Applicant shall furnish the International Lake Superior Board of Control with ten copies and the Commission with ten copies of the above-noted documents.
2. The Applicant shall enter into an agreement with the City of Sault Ste. Marie, Ontario, to provide for a suitable domestic water intake system during the construction of the Project and shall provide the Commission duplicate copies of the agreement;
3. Before commencing construction of the redevelopment of the existing hydro-electric generating facilities, the Applicant shall provide substantive evidence that the approvals required by the appropriate Canadian federal and Ontario agencies have been obtained. Such evidence shall be submitted in duplicate to the Commission.
4. Prior to closure of the Canadian power canal, waters in addition to those prescribed by the regulation plan shall be discharged from Lake Superior to offset, as necessary, the amount of water that would have flowed through the Canadian power canal if closure had not been effected, provided that the amount of pre-discharge shall not lower the level of Lake Superior below 600.0 IGLD (1955), as nearly as may be. Such pre-discharge shall be conducted under the direction of the Commission.
5. The Commission shall approve the date on which construction of the Stage II cofferdams may commence. Such construction will not commence if the projected peak level of Lake Superior during the approved closure period exceeds 602.0 IGLD (1955), given the level of Lake Superior at the time construction is to commence; and assuming supplies of 5 percent exceedance to that Lake, the ability to fully utilize the compensating gates, and normal capacity of the United States power canals at Sault Ste. Marie.

6. The Applicant shall design, construct, maintain and remove the cofferdams and other Project works so as to minimize erosion. The Applicant shall permit the Commission or its duly authorized representatives to inspect the works at reasonable times. In the event that the Commission determines that, for safety or other reasons, the cofferdams and other Project works require modifications, the Applicant shall forthwith comply with the written instructions of the Commission.
7. The Applicant shall breach the Stage II cofferdams upon receiving written instructions from the Commission, if during the period beginning with closure through the next annual peak level following removal of the cofferdams, the projected level of Lake Superior will exceed elevation 602.0 IGLD (1955) or the pre-project level, whichever is higher, assuming supplies of 5 percent exceedance probability and reflecting pre-discharge as directed by the Commission. Pre-project level shall be determined by the International Lake Superior Board of Control and is defined as the regulated level that would have occurred had the redevelopment not taken place and had there not been pre-discharge. The Applicant shall also breach the cofferdams, at the direction of the Commission, in the event of an unforeseen emergency defined by the Commission.
8. The Applicant shall be responsible for additional costs incurred by the Board attributable to the Project. These include, but are not limited to:
  - (a) maintenance and operation of additional water level gauges and making additional discharge measurements;
  - (b) additional environmental monitoring including water quality and sediment disposition;
  - (c) winter operation of the compensating gates during the period of redevelopment of its hydro-electric generating facilities.
9. The Applicant shall be responsible for the disposition of claims and for the satisfaction of such claims which are valid for damage to persons or property, other than losses to navigation and power interests which are attributable to pre-discharge for Stage II construction, occurring in the United States or Canada as a result of a pre-discharge of waters, as provided for in Paragraph 4 hereof, or the construction, maintenance and removal of the Stage II cofferdam.

10. The International Lake Superior Board of Control shall monitor the progress of the Project during redevelopment and for a reasonable time thereafter to ensure that the conditions of this Supplementary Order are met. The said Board shall submit to the Commission a monthly progress report as well as keeping the Commission currently informed of all developments.
11. Upon completion of the Project, the compensating works and the power canals shall be operated as directed by the Commission or the Board to maintain the present pattern of flows over the Rapids, up to 4 gates, in accordance with the regime of levels and flows established by the 1914 Orders of Approval, as amended this date and hereafter.

AND IT IS FURTHER ORDERED that the Commission retains jurisdiction over the subject matter of this Request and, after giving such notice and opportunity to all interested parties to make representations as the Commission deems appropriate, may make further Order or Orders relating thereto as may be necessary in the judgment of the Commission.

This approval shall terminate:

- (a) sixty days after the date of signing, unless within that time the Great Lakes Power Corporation Limited informs the Commission in writing that it accepts all conditions set forth herein;
- (b) unless the Applicant substantially commences construction of its Project within a reasonable time not to exceed twelve months from the date of approval by the Commission of the construction plans;
- (c) five years after the date of signing, unless before that date the temporary cofferdam at the upstream end of the Applicant's power canal is in place and work is proceeding in accordance with the schedule approved by the Commission.

Signed this 27th day of September 1978.

R.J. Sugarman

Maxwell Cohen

Charles R. Ross

Bernard Beaupré

Kenneth M. Curtis

K.A. Henry