

Office Consolidation

IN THE MATTER OF THE APPLICATIONS OF THE ALGOMA STEEL CORPORATION, LIMITED, AND OF THE MICHIGAN NORTHERN POWER COMPANY FOR APPROVAL OF THE OBSTRUCTION, DIVERSION, AND USE OF THE WATERS OF THE ST. MARYS RIVER ON THE CANADIAN SIDE AND ON THE UNITED STATES SIDE RESPECTIVELY OF THE INTERNATIONAL BOUNDARY AT SAULT STE. MARIE, MICHIGAN AND ONTARIO.

ORDERS OF APPROVAL

May 26, 1914 and May 27, 1914

NOTE:

1. The wording common to both Orders is in Courier type. *Wording applicable only to the Algoma Steel Corporation Order is in Light Italic type. Wording applicable only to the Michigan Northern Power Company Order is in Script type.*
2. The paragraph numbering in some instances is not identical with the Orders.
3. All elevations have been converted to International Great Lakes Datum (1955).

ORDERS OF APPROVAL

The above applications having come on for final hearing at the city of Detroit, in the State of Michigan, March 9 and 10, 1914, and the hearing having been continued to and concluded at the city of Washington April 9, 1914, the commission, after hearing all the parties, examining the locus in quo, and carefully considering the application and all the evidence presented, including the statements of engineer representatives of the United States and of the Dominion of Canada in respect thereto, finds as follows, viz:

- 1. Algoma Steel Corporation (Ltd.), a corporation duly organized and existing under the laws of the Province of Ontario, filed with the commission on October 7, 1913, an application for approval of the obstruction of the waters of the St. Marys River on the Canadian side of the boundary at Sault Ste. Marie, Ontario, as described therein.*
- 1. The Michigan Northern Power Co. is a corporation duly organized and existing under the laws of the State of Michigan; it is the owner and successor in title and interest to all the property and to all the rights and privileges claimed and set forth by Clarence M. Brown, receiver for the Michigan Lake Superior Power Co., in its application for approval of the obstruction, diversion, and use of the waters of the St. Marys River on the United States side of the boundary at Sault Ste. Marie, Mich., filed June 30, 1913, as described therein; and by order of the commission entered at Ottawa October 7, 1913, the said Michigan Northern Power Co. was duly substituted for said receiver of the said Michigan Lake Superior Power Co. as applicant.*

2. Due and official notice of the filing of said application and of the time and place of the final hearing thereon was given to all parties interested in both countries; the right to appear and be heard on the final hearing was duly extended, under the rules of the commission, to all municipalities on both sides of the international boundary and to private corporations and to others, who appeared and were heard and participated in the examination of witnesses: and no application was made by anyone so appearing for additional protective works, or for any other relief on account of anticipated injury or damage in consequence of the construction, maintenance, and operation of the proposed works, upon said final hearing.
3. *The compensating or remedial works mentioned and described in the said application as amended on the final hearing will, when constructed, be located wholly within the jurisdiction of and upon property situate within the Dominion of Canada, north of the international boundary, in the St. Marys River at Sault Ste. Marie, Ontario, and upon the upper side of the international bridge crossing the St. Marys River. The applicant has represented that it already owns certain compensating works in the bed of the St. Marys River, consisting of a crib and a rock-and-fill dam above the tenth span of the international bridge and four Stoney sluice gates about 50 feet in the clear operated between piers above the ninth span of said bridge, which said works are located on the Canadian side of the said river. The applicant proposes to construct additional compensating works in the bed of the St. Marys River extending southerly from the said above-mentioned works practically to the international boundary, of similar construction*

to those above described. The character of the proposed additional compensating works is shown on plans filed in the present cause and numbered 953 and 954. The said plans were duly submitted to the Governor General in council, and approved by an order dated March 5, 1914, under certain conditions, viz:

- i That the company shall furnish legal evidence that it has the right to use the site of the said works.*
 - ii Full control of the works and the discharges on the Canadian side of the boundary line is to be vested in the department of public works, or as directed by the International Joint Commission, and all expenses for upkeep, of the works are to be borne by the company.*
 - iii That the works shall be completed on the Canadian side of the boundary line within three years from the date of the approval of the plans.*
 - iv That the Government of the Dominion of Canada may take over the works on the Canadian side of the boundary line, at any time, on terms to be arranged between the company and the Government, or by expropriation.*
 - v That the provincial government of Ontario may, at any time, make such alterations and additions to the works on the Canadian side of the boundary line, at its own cost, as may be called for in connection with the development of power, as shown on the plan submitted with the statement in response on behalf of the Province of Ontario, dated November 3, 1913, which was filed with the International Joint Commission when the matter was before the commission.*
- 3A. *By an amendment to its application the applicant has prayed for the approval of the diversion, for power purposes, by itself, its successors or assigns, or by the Province of Ontario, of primary or continuous water from*

St. Marys River, up to an aggregate maximum, including the amount of water heretofore permitted, of 30,000 cubic feet per second, and in addition thereto a further flow of secondary water, that may be intermittently available for power purposes, up to an aggregate maximum of 5,000 cubic feet per second.

3. The compensating or remedial works mentioned and described in the said application as amended on the final hearing will, when constructed, be located wholly within the jurisdiction and upon property owned by the United States south of the international boundary line in the St. Marys River, at Sault Ste. Marie, Mich., and upon the upper side of the International Bridge crossing the St. Marys River. According to the plans therefor, as finally approved, said compensating works when completed will consist of a certain dike about 200 feet in length and 8 Stoney sluice gates about 50 feet in the clear, and are intended to obstruct and divert the waters of said river on the United States side thereof through a power canal. The Government of the United States in time will become the owner of said compensating works.
4. Said St. Marys River is the natural outlet of Lake Superior, and said river and lake are boundary waters as defined by the treaty of January 11, 1909, between Great Britain and the United States.
5. It is conceded by the applicant and both Governments that the construction and operation of the proposed works will affect the natural level and flow of the waters of said river and of Lake Superior on the other side of the line, and that the effect will therefore be international; and the interest of both Governments, as well as the interests of navigation and other public and private interests in both countries, will be

suitably and adequately protected and indemnified by international or joint control of said works. Said compensating works when constructed according to the finally approved plans and under the conditions with respect to their construction and operation hereinafter prescribed will constitute a mechanically operated discharge cross section for the discharge of the waters of said lake on the *Canadian (United States)* side of the international boundary:

which, with the existing power canal of the applicant, which has a discharge capacity of about 15,000 cubic feet per second,

which, with the existing power canal of the applicant, which has a discharge capacity of about 30,000 cubic feet per second, and the United States power canal, known as the Chandler-Dunbar Canal, which has a discharge capacity of about 5,000 cubic feet per second,

will afford an aggregate discharge capacity *fully* equal to the existing discharge capacity of said river on the *Canadian (United States)* side of the international boundary, and the levels of Lake Superior under these conditions can be regulated within a more restricted range than is *now* possible under existing conditions of discharge.

6. From 1860 to 1913, or for a period of 54 years, the extreme range of levels of Lake Superior - that is, between the highest and the lowest monthly mean level - as shown by the United States official records thereof, was about 3.5 feet. From the evidence it would seem that if the said compensating and other works of the applicant are constructed, maintained, and operated according to the said

approved plans and the conditions hereinafter stated in respect to their construction and operation, the range of monthly mean levels of Lake Superior may be reasonably confined within 2.5 feet and ordinarily within the lesser range of 1.5 feet, between an elevation of 600.5 and 602.0 feet; and that under proper international joint control the levels of said lake may be regulated so as to benefit navigation and reasonably protect the property and interests, public and private, in both countries above said works.

7. The equal division of the waters of said St. Marys River between the United States and Canada was conceded upon the hearing by their duly appointed representatives.
8. At the time and place of the final hearing, *the applications of the Algoma Steel Corporation (Ltd.), a corporation organized and existing under the laws of the Province of Ontario, (and) of the Michigan Northern Power Co., a corporation organized and existing under the laws of the State of Michigan, for approval of their proposed obstruction, diversion, and use of the waters of the said St. Marys River on the Canadian (United States) side of the International boundary by constructing certain compensating or remedial and other works therein for that purpose, were finally heard and approved.*
9. Said Algoma Steel Corporation (Ltd.) and Michigan Northern Power Co. are separate and distinct organizations; they are in no way related in interest, financially or otherwise, and they are not owned or in any way operated or controlled by the same interests, and have no working or other relations between them. Their several works are intended, planned, and will accomplish only the

obstruction and diversion of the waters on the respective sides of said river in Canada and the United States for power purposes, and each of said works will be constructed and can be operated independently of the other; when the said works are finally completed on both sides of the international boundary in said river, the interests of navigation and reasonable protection to public and private property on both sides of the international boundary will require that they be operated under international joint control as one complete work or project.

Now, therefore, it is hereby ordered, that subject to the conditions of the order in council of March 5, 1914, hereinabove in part recited (except that the time for the completion of the said works, if extended by the Government of Canada, shall expire only on the day fixed by the said Government), and to the conditions hereinafter stated in respect to the construction of said compensating or remedial works of said applicant, its successors, or assigns, and subject also to such conditions and rules as hereinafter stated and authorized in respect to the control and operation of said works, the obstruction, diversion, and use of the

Now, therefore, it is hereby ordered, that subject to the conditions hereinafter stated in respect to the construction of said compensating or remedial works of said applicant, its successors or assigns, and subject also to such conditions and rules as are hereinafter stated and authorized in respect to the control and operation of said works, the obstruction, diversion, and use of the waters of said river on the United States side of the international boundary for power purposes as prayed and found herein, and the construction and maintenance of said compensating works to be constructed for that purpose, together with the plans therefor as finally

waters of said river on the Canadian side of the international boundary for power purposes, as applied for as aforesaid, together with the plans therefor as finally approved by the Governor General in council, March 5, 1914,

approved by the Secretary of War and the Chief of Engineers of the United States, April 6, 1914,

and submitted upon the final hearing, be and the same are all hereby, approved upon the conditions following as to their construction, maintenance, and operation, and as to their control, which conditions with the said remedial, protective, or compensating works the commission deems to be and requires as suitable and adequate conditions for the protection and indemnity of all interests on both sides of the international boundary, and which conditions are hereby made a part of this order of approval.

CONDITIONS AS TO CONSTRUCTION (CANADA)

1. *The works to be built in St. Marys River at Sault Ste. Marie, in the Province of Ontario, shall consist of certain Stoney sluice gates running parallel to the international bridge and about 150 feet therefrom on its upstream side and extending from the existing Stoney sluice gates of the applicant southerly to the international boundary, each gate to be about 52 feet in the clear, the details as shown on plans Nos. 953 and 954 approved by the order of the Governor General in council hereinabove mentioned.*
2. *The sills of all Stoney sluice gates on the Canadian side shall not be higher than 588.6 feet, and the river bed both upstream and downstream from the works so to be built, to a distance to be determined by the Board of Control, shall be excavated at least one-half foot lower than the intervening sills.*

3. *All the detail plans of the works shall be approved by the Governor General in council or such officer as he may designate.*
4. *The order in which the works are to be proceeded with, subject to the approval of the Governor General in council or such officer as he may designate shall be -*

(a) The removal by the applicant within 60 days or within such further time not exceeding 30 days as the Board of Control hereinafter authorized may direct of the dike, cofferdam, and all works appertaining to the temporary structures used in connection with the construction of the existing four sluice gates. The gates shall thereafter be tested and put in effective working order. Should it be found that in order to secure the effective working of the sluices rock will have to be removed from the bed of the river, the applicant shall forthwith remove such rock as may be necessary to render the discharge of the sluices effective.

(b) The necessary enlargement of the applicant's power canal so as to provide for the carrying of 30,000 second-feet of water at level 602.1 above said mean tide.

(c) The channel of the stream not to be closed at any time by more than one cofferdam of a sufficient size for the construction of a set of four Stoney sluice gates.

(d) The order of construction of the works thereafter to be determined by the Board of Control, with the approval of the Governor General in council.

- 4A. *The Governor General in council or any officer duly designated by him for that purpose may guard against undue rise of Lake Superior during the construction of the compensating works of the applicant by requiring said applicant to do such things for said purpose as in his judgment may be deemed necessary.*

CONDITIONS AS TO CONSTRUCTION (USA)

1. The works to be built hereunder by the said Michigan Northern Power Co., its successors or assigns, shall consist of a dike about 200 feet long and eight Stoney sluice gates and their appurtenances, each gate to be about 52 feet in the clear and located in said river, as described in said application and shown by the approved plans therefor.
2. The sills of said Stoney sluice gates shall not be higher than elevation 589.6 feet, and the river bed, both upstream and downstream from said works, shall be excavated to an elevation of 589.2 feet or lower if required by the Secretary of War.
3. All the detail plans for the construction of said works by the said Michigan Northern Power Co., its successors or assigns, and the order in which they are to be built shall be subject to the approval of the Secretary of War of the United States or of any officer duly designated by him for that purpose; and the Secretary of War or any officer designated by him shall guard against any undue rise of Lake Superior during the construction of the compensating works of the Michigan Northern Power Co. by requiring said company to do any and all things which, in his judgment, may be deemed necessary for that purpose: Provided, however, That at no time during the construction of any of said works shall there be more than one cofferdam in the whole width of the St. Marys River, and such cofferdam shall not be larger than is ample for the construction of four Stoney sluice gates of the dimensions above mentioned.
4. The said works shall be constructed by the applicant within such time and upon such further requirements as to the detail of construction as the Secretary of War may hereafter prescribe.

CONDITIONS AS TO CONTROL AND OPERATION

Ordered further, that as additional conditions of approval of said application, the said compensating works, power canal, head gates, and by-passes of the applicant, the Algoma Steel Corporation (Ltd.), (Michigan Northern Power Co.,) its successors or assigns, shall be maintained, operated, and controlled, whether operated independently or in

connection with the works of the said *Michigan Northern Power Co.*, (*Algoma Steel Corporation Ltd.*), its successors or assigns, or in connection with any other works in said river in accordance with the following provisions, viz:

5. All compensating works heretofore built and all such works built under this order of approval and all power canals, including their head gates and by-passes, shall be so operated as to maintain the level of Lake Superior as nearly as may be between 600.5 and 602.0, and in such manner as not to interfere with navigation. The operation of all the said works, canals, head gates, and by-passes for the above purposes shall be under the direct control of the board hereinafter authorized, which board shall be known as "The board of control."
6. The mean elevation of Lake Superior shall be ascertained by taking the mean of the readings of at least four automatic gauges, half the number to be maintained by the United States and half by Canada; these gauges to be located so that their combined readings will indicate as nearly as may be the mean or average condition of the whole lake. The records of these gauges shall be furnished to the board charged with the control of the compensating works referred to at such intervals as it may require.
7. The officer of the Corps of Engineers charged with the improvement of the Falls of the St. Marys River on the American side and an officer appointed by the Canadian Government shall form said board, whose duty it shall be to formulate rules under which the compensating works and power canals and their head gates and by-passes shall be operated so as to secure as nearly as may be the regulation of Lake Superior as set forth herein. It shall be the further duty of said board to see that any rules or regulations now or hereafter made by proper authority for the control of said works

are duly obeyed: *Provided, That said board shall consist of the same persons who will be appointed under the order of approval of the works of the said Michigan Northern Power Co., and their powers and duties hereunder may be exercised jointly over the compensating and other works on either or both sides of the international boundary.*

8. To guard against unduly high stages of water in Lake Superior the rules formulated by said board, when tested by the physical conditions which existed during any year of recorded high water in Lake Superior, when the monthly mean elevation of the lake exceeded 602.0, shall give no monthly mean level of the lake greater than the maximum monthly mean actually experienced in said year.
9. To guard against unduly high stages of water in the lower St. Marys River, the excess discharge at any time over and above that which would have occurred at a like stage of Lake Superior prior to 1887 shall be restricted so that the elevation of the water surface immediately below the locks shall not be greater than 582.9 feet.

(Amendment adopted Feb. 4, 1915, and filed with both Governments)

10. Each power company shall keep continuous records satisfactory to said board which will show the quantity of water used by it, and shall furnish to the board when required full information from said records.
11. At all times said board shall determine the amount of water available for power purposes. Said board will cause the amount of water so used to be reduced whenever, in its opinion, such reductions are necessary in order to prevent unduly low stages of water in Lake Superior, and will fix the amounts of such reductions; provided, that whenever the monthly mean level of the lake is less than 600.5 feet, the

total discharge permitted shall be no greater than that which it would have been at the prevailing stage and under the discharge conditions which obtained prior to 1887; provided further, before any flow of primary water on either side of the river is reduced, the use of all secondary water shall be discontinued.

12. If the compensating works constructed in accordance with the plans hereby approved, together with those already constructed, and the power canals, head gates, and by-passes can not be operated independently or in conjunction with similar works in the St. Marys River on the *American (Canadian)* side of the international boundary so as to secure the regulation of the level of Lake Superior as provided herein, they may be altered so as to provide for a greater flow, and in a manner to be determined by the International Joint Commission upon the application of either or both Governments, or upon the application of any person or corporation, either public or private, transmitted to said commission through his or its Government; and any change or alterations in said works or in the discharge cross-section area in said river at the outlet of Lake Superior ordered by this commission on such application shall be made in accordance with said order by either or both of the owners of the compensating works in said river, their successors or assigns, as a further condition of approval herein. Whenever it is required that the said works shall be altered, any greater flow desired shall be secured in equal parts on each side of the boundary line, and the cost of securing such total greater flow shall be borne equally by the owners of the two parts of the said works, or the commission may, on like application, make such other order as it may deem necessary.

13. Should ice interfere with navigation, due to the presence of the compensating works, the board shall take measures to obviate this difficulty, and may call upon the owners of said works to do any work necessary for this purpose.
14. Should currents which unduly interfere with navigation be developed by the operation of the power works on either side of the river, the power company operating said works shall alter them or construct such other works as its Government may deem necessary to remedy this condition and in a manner approved by such Government.
15. The cost of maintaining all parts of the compensating works shall be borne by the respective owners thereof, and this work of maintenance shall be done in a manner satisfactory to said board. The rules to be adopted by said board for the operation of the compensating works shall be framed so as to equalize the cost of maintenance between the owners of the component parts of the entire system as nearly as may be in proportion to the amount of primary water used for power development on each side of the international boundary.
16. Should the Government of the *Dominion of Canada* (*the United States*) or any corporation or municipality acquire title to the said power canal, head gates, by-passes, and compensating works of the *Algoma Steel Corporation (Ltd.)* (*Michigan Northern Power Co.*) already constructed, or the compensating works by this order approved, the approval of the construction and maintenance of all said works hereby given shall, subject to the conditions herein provided, inure to the benefit of such government or corporation, and all the powers, duties, and obligations hereby conferred or imposed upon the

Algoma Steel Corporation (Ltd.) (Michigan Northern Power Co.) shall apply to and are hereby conferred and imposed upon its successors or assigns.

17. In the event of a disagreement between the members of said board, in respect to anything required of said board herein or in respect to the duties or powers of said board or as to the exercise of such duties or powers, the question at issue shall upon the application of either Government be referred to this commission for its decision.
18. The approval herein granted is subject to all rights of navigation in the St. Marys River now or hereafter existing.
19. Until the compensating works of the said *Michigan Northern Power Co. (Algoma Steel Corporation Ltd.)*, or any other compensating works of the like character and extent, are constructed in said river on the *American (Canadian)* side thereof the conditions herein not reasonably applicable to the control and operation of the compensating works and power works of the *Algoma Steel Corporation (Ltd) (Michigan Northern Power Co.)*, its successors or assigns, or that can not be complied with independently of said compensating works on the *American (Canadian)* side of the river, shall not be operative, but as to such conditions they shall become operative when said works on the *American (Canadian)* side of the boundary are constructed and in operation: Provided, however, That this shall not be construed so as to render inoperative the conditions that said compensating works of said applicant, its successors or assigns, are to be operated under international joint control as herein provided and subject to any rules hereafter prescribed by said Board of Control for their operation.

20. "Primary water" as used herein shall be understood to mean the amount of water which is *continually* (*continuously*) available for use for power purposes.

"Secondary water" shall be understood to mean an amount of water, over and above that designated as primary water, which is intermittently available for use for power purposes.

Dated at New York City, N.Y., *this 27th day of May*
(*May 26*), 1914.