

AN ORDER OF THE CLEAN ENVIRONMENT COMMISSION  
UNDER THE CLEAN ENVIRONMENT ACT

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843

RE: THE CLEAN ENVIRONMENT COMMISSION and INCO METALS COMPANY (formerly known as INTERNATIONAL NICKEL COMPANY OF CANADA, LIMITED), Applicant;

WHEREAS pursuant to the provisions of The Clean Environment Act, INCO Metals Company (formerly known as International Nickel Company of Canada, Limited) filed an application with the Department of Mines, Natural Resources and Environment in connection with the discharge of treated sewage effluent and mine water effluent to Ospwagan Lake via Kipper Lake from an existing open pit operation and an underground mine known as Pipe No. 2 mine located on Parcel A., Drawing Reg. No. NLTO 5555, Township 75, Range 5 WPM in the Local Government District of Mystery Lake, Manitoba;

AND WHEREAS in the absence of limits being prescribed by a Regulation issued under The Clean Environment Act, the application was referred to The Clean Environment Commission for the prescribing of limits;

AND WHEREAS no representation was made to the Commission by any person who is or who is likely to be affected by an Order of the Commission prescribing limits on the said operation;

AND WHEREAS the Commission considered the said application on the 16th day of July, 1979;

IT IS HEREBY ORDERED THAT:

1. In this Order,

(a) "monthly arithmetic mean concentration" for each substance means the average value of the determined concentrations of each such substance in all the composite and grab samples collected, analyzed and reported during that month, with the exception that should the Applicant collect only one composite or grab sample during any month, the single set of analytical results shall be construed as being representative of the effluent quality for that month and shall be designated as the monthly arithmetic mean;

(b) "composite sample" means a quantity of effluent consisting of a minimum of three equal volumes of effluent collected at approximately equal time intervals over a sampling period of not less than seven consecutive hours and not more than twenty-four consecutive hours, or consisting of effluent collected continuously at an equal rate over a sampling period of not less than seven consecutive hours and not more than twenty-four consecutive hours;

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SIGNED BY  
WATER POLLUTION CONTROL  
July 30, 1979

(c) the "final discharge point" of the mining liquid effluent for the purposes of sampling and analysis will be that point in the said effluent stream designated as FINAL DISCHARGE POINT in Appendix "A" to this Order.

2. The Applicant shall ensure that the quality of the mining liquid effluent is such that:

(a) the concentrations of the following substances in the said effluent are not in excess of the maximum allowable concentrations indicated for the categories in the following table:

Substance	Maximum Monthly Arithmetic Mean Concentration	Maximum Concentration In a Composite Sample	Maximum Concentration In a Grab Sample
Total Arsenic	0.5 mg/1	0.75 mg/1	1.0 mg/1
Total Copper	0.3 mg/1	0.45 mg/1	0.6 mg/1
Total Lead	0.2 mg/1	0.3 mg/1	0.4 mg/1
Total Zinc	0.5 mg/1	0.75 mg/1	1.0 mg/1

(b) on and after the 1st day of February, 1982, the concentrations of the following substances in the said effluent are not in excess of the maximum allowable concentrations indicated for the categories in the following table:

Substance	Maximum Monthly Arithmetic Mean Concentration	Maximum Concentration In a Composite Sample	Maximum Concentration In a Grab Sample
Total Nickel	0.5 mg/1	0.75 mg/1	1.0 mg/1
Total Suspended Matter	25.0 mg/1	37.5 mg/1	50.0 mg/1

(c) the pH of the effluent is not less than the minimum allowable levels indicated for the categories in the following table:

	Minimum Monthly Arithmetic Mean pH	Minimum pH In a Composite Sample	Minimum pH In a Grab Sample
	6.0	5.5	5.0

3. The Applicant shall ensure that:

- (a) the effluent discharged at the final discharge point is sampled and analyzed for the following substances not less frequently than as specified in the table below, whereby the applicability of columns I, II, III and IV for any listed substance shall be determined on the basis of arithmetic mean concentration of a substance in the samples of effluent collected and reported in those preceding six months during which discharge occurred:

Substance	Column I At Least Weekly If Concentration Is Equal to Or Greater Than	Column II At Least Every Two Weeks If Concentration Is Equal to Or Greater Than	Column III At Least Monthly If Concentration Is Equal To Or Greater Than	Column IV At Least Every Six Months If Concentration Is Less Than
Total Arsenic	0.5 mg/1	0.2 mg/1	0.10 mg/1	0.10 mg/1
Total Copper	0.3 mg/1	0.1 mg/1	0.05 mg/1	0.05 mg/1
Total Lead	0.2 mg/1	0.1 mg/1	0.05 mg/1	0.05 mg/1
Total Nickel	0.5 mg/1	0.2 mg/1	0.10 mg/1	0.10 mg/1
Total Zinc	0.5 mg/1	0.2 mg/1	0.10 mg/1	0.10 mg/1
Total Suspended Matter	25.0 mg/1	20 mg/1	15 mg/1	15 mg/1

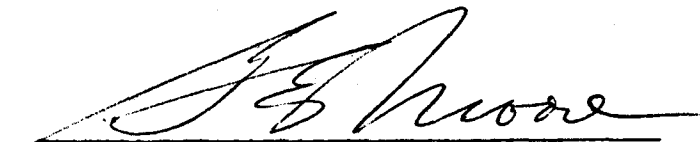
and that

- (b) the effluent discharged at the final discharge point is sampled and analyzed for pH at no less a frequency than:
  - (i) once a week, where the pH of the effluent was less than 5.0 at any time in those preceding six months during which discharge occurred; or
  - (ii) once every two weeks, where pH of the effluent was between 5.0 and 5.5 at any time in those preceding six months during which discharge occurred; or
  - (iii) once a month if (i) and (ii) do not apply.

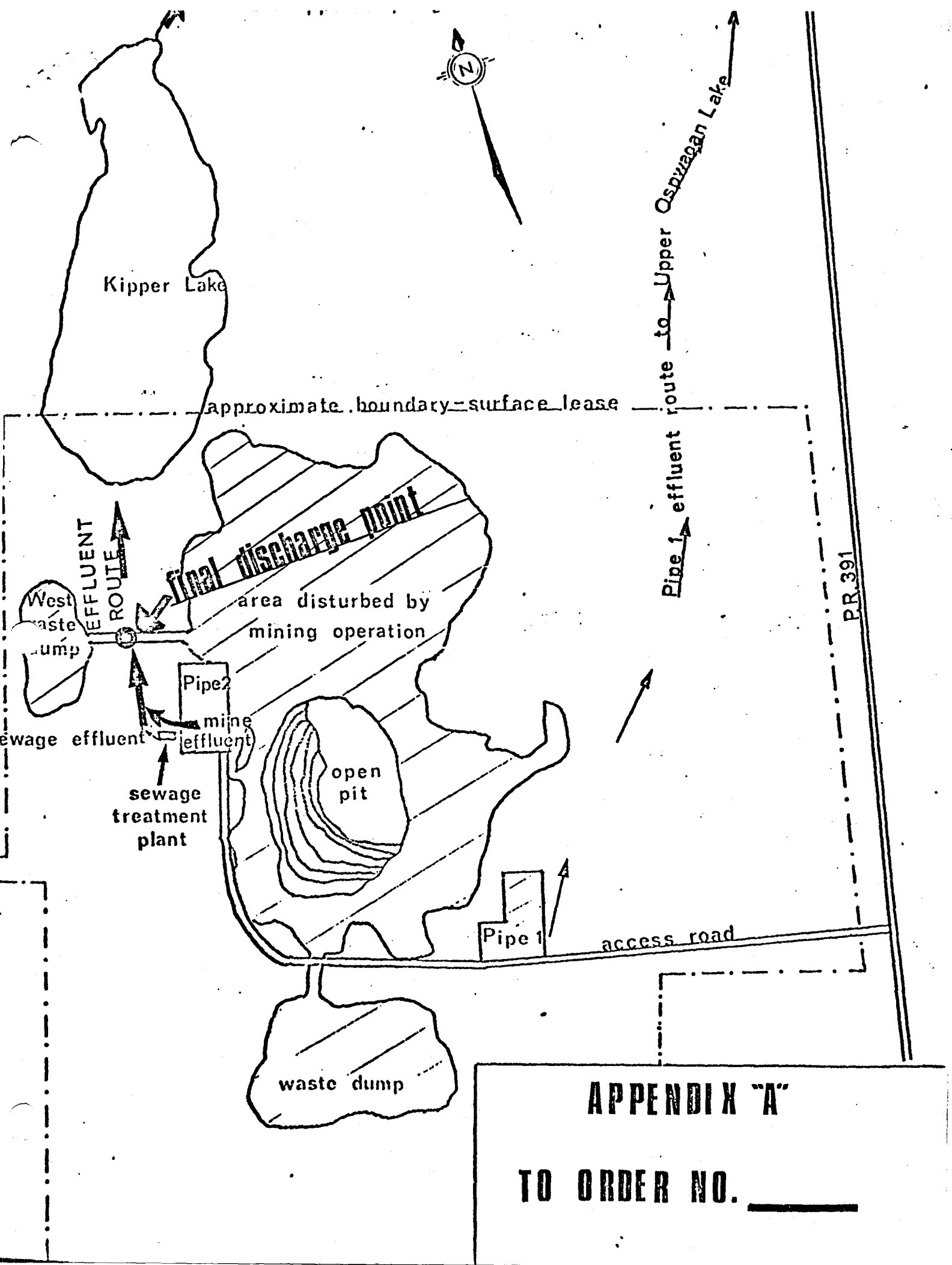
4. The Applicant shall ensure that the effluent discharged at the final discharge point is sampled in such a manner and/or analyzed for such additional parameters and characteristics and/or sampled and analyzed at such frequencies and for such duration of time as may be specified in writing by the Environmental Management Division of the Department of Mines, Natural Resources and Environment.

5. The Applicant shall ensure that the total volume of effluent discharged at the final discharge point is determined monthly by a method of measurement or estimation which is satisfactory to the said Division.
6. The Applicant shall ensure that within 30 days after the month during which the data required pursuant to Clauses 3, 4, and 5, are collected, the said data are submitted to the said Division in a form satisfactory to the said Division.
7. The Applicant shall ensure that solid waste and bulky metallic waste as defined in Manitoba Regulation 208/76 is not discarded in any area other than designated waste disposal grounds.
8. The Applicant shall ensure that whereupon the Environmental Management Division deems it advisable to have the effectiveness of any segment or component of the wastewater treatment system established, or to have specific areas of concern within this system investigated, the said Division is provided with such engineering studies, drawings, specifications, analysis of any wastewater streams and any other information likely to be relevant and as may be requested in writing by the Division.

Order No. 843  
Dated at the City of Winnipeg,  
This 26<sup>th</sup> day of July , 1979.



Chairman,  
The Clean Environment Commission.



Kipper Lake

approximate boundary - surface lease

**final discharge point**

area disturbed by mining operation

West waste pump

EFFLUENT ROUTE

Pipe 2

mine effluent

sewage treatment plant

sewage effluent

open pit

waste dump

Pipe 1

access road

Pipe 1 effluent route to Upper Oswaganan Lake

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**APPENDIX "A"**

**TO ORDER NO. \_\_\_\_\_**