

# Environment Act Licence Loi sur l'environnement Licence

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Licence No./Licence n° 1919 S2 RR

Issue Date/Date de délivrance June 16, 1995

Revised: January 30, 1998

Revised: March 10, 2000

IN ACCORDANCE WITH THE MANITOBA ENVIRONMENT ACT (C.C.S.M. c. E125)  
THIS LICENCE IS ISSUED PURSUANT TO SECTIONS 11(1) AND 14(2) TO:

**HUDSON BAY MINING AND SMELTING CO., LIMITED; "the Licencee"**

**as the Stage 2 Licence (revised)**

to operate the Development called "Photo Lake Mine", located off Provincial Highway #395 at about 5 radial kilometres southwest of the Town of Snow Lake, within Township 68, Range 18 WPM, in accordance with the Proposal dated June 30, 1994, the Notice of Alteration dated January 5, 1998, and the Notice of Alteration dated January 31, 2000, filed under The Environment Act and subject to the following specifications, limits, terms and conditions:

In this Licence:

**"accredited laboratory"** means an analytical facility accredited by the Standard Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Conservation to be equivalent to the SCC, or able to demonstrate, upon request, that it has the quality assurance/quality control (QA/QC) procedures in place equivalent to accreditation based on the Canadian Standard Can/CSA-Z753, extension of the international standard ISO 9000, Guide 25, or otherwise approved by the Director;

**"AP"** means the maximum acid-generation potential, expressed as tonnes of CaCO<sub>3</sub> per 1000 tonnes of a material tested, determined in accordance with a static Acid-Base Accounting method satisfactory to the Director;

**"approved"** means approved by the Director in writing;

**"Director"** means an employee of the department appointed as such by the Minister;

**"effluent"** means treated or untreated mine water designated for release into the environment;

**"grab sample"** means a quantity of undiluted mine water or effluent collected at any given time;

- “mine”** includes all the surface and connected underground workings, overburden, waste rock and ore stockpiles, all ancillary buildings, wastewater treatment facilities and other infrastructure located on the mine site associated with the Development shown in Appendix 'A' attached to this Licence;
- “mine site”** includes the whole operational or disturbed area of land within the boundaries of those surface rights acquired and held by the Licencee for the operation of the Development;
- “mine water”** means water pumped to the surface from underground mine workings or an open pit, or leachate from ore or waste rock stockpiles, or sillage, or polluted surface runoff, or any combination thereof, but excluding surface runoff from the small area on the northern side of the mine site occupied by the backfill cement plant, the downcast fan building, and the electrical sub-station;
- “mothballed”** means placed into a state of non use, or temporarily closed, while at the same time maintained in a state of readiness for potential re-use or re-opening;
- “net neutralizing potential”** means the arithmetic difference between NP and AP;
- “non acid-generating”** means having a NPR greater than 4, until or unless an appropriate alternate NPR cut-off value is determined, to the satisfaction of the Director, through detailed characterizations, evaluations and interpretations, or through kinetic testing, carried out on representative test material by qualified individuals;
- “NP”** means the maximum neutralizing potential, expressed as tonnes of  $\text{CaCO}_3$  per 1000 tonnes of a material tested, determined in accordance with a static Acid-Base Accounting method satisfactory to the Director;
- “NPR”** means the neutralizing potential ratio as determined from the ratio of NP/AP;
- “potentially acid-generating”** means having the potential or uncertain ability to generate acid as indicated by a NPR of 4 or less, until or unless an appropriate alternate NPR cut-off value is determined, to the satisfaction of the Director, through detailed characterizations, evaluations and interpretations, or through kinetic testing, carried out on representative test material by qualified individuals;
- “sewage”** means sewage as defined in Manitoba Regulation 95/88R respecting private sewage disposal systems and privies, or any future amendments thereto;
- “solid waste”** means substances defined as solid waste in Manitoba Regulation 150/91 respecting waste disposal grounds, or any future amendments thereto;
- “Standard Methods for the Examination of Water and Wastewater”** means the most recent edition of Standard Methods for the Examination of Water and Wastewater published jointly by the American Public Health Association, the American Waterworks Association and the Water Environment Association;



“**stope**” means one of many delineated underground zones of economic mineral deposits designated for sequential mining by any one of numerous mining methods; and

“**undiluted**” means free of extraneous unpolluted sources of water which could feasibly be prevented from mixing with the mine water or effluent prior to its discharge at a designated final discharge point, or not having water added for the purpose of meeting any effluent quality limits specified in Environment Act Licence No. 1501 RR.

### GENERAL SPECIFICATIONS

1. Notwithstanding any of the following limits, terms and conditions specified in this Licence, the Licencee shall, upon the request of the Director:
  - (a) sample, monitor, analyze and/or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, handling, treatment, and disposal or emission systems, for such pollutants or ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, for such duration and at such frequencies as may be specified;
  - (b) determine the environmental impact associated with the release of any pollutant(s) from the Development; or
  - (c) provide the Director, within such time as may be specified, with such reports, drawings, specifications, analytical data, descriptions of sampling and analytical procedures being used, bioassay data, flow rate measurements and such other information as may from time to time be requested.
2. The Licencee shall, unless otherwise specified in this Licence:
  - a) carry out all preservations and analyses of liquid samples in accordance with the methods prescribed in the Standard Methods for the Examination of Water and Wastewater or in accordance with equivalent preservation and analytical methodologies approved by the Director; and
  - b) ensure that all analytical determinations are undertaken by an accredited laboratory.
3. The Licencee shall report all the information requested through the provisions of this Licence in a manner and form acceptable to the Director.

### LIMITS, TERMS AND CONDITIONS

#### Respecting Liquid Effluent

4. The Licencee shall not release any effluent generated at the Development into the environment other than through:
  - (a) the 3,500 metre mine water discharge line leading via surface from Photo Lake Mine to Chisel Lake Mine; or

(b) via a pipeline in a raise leading from the Chisel North underground workings to the surface at Chisel Lake Mine;

and into the "mine water reservoir" or to the "final discharge point #1", as shown in Appendix 'A' attached to Environment Act Licence No. 1501 RR, from where effluent releases to the environment are controlled through Environment Act Licence No. 1501 RR.

5. The Licencee shall maximize the recycling of mine water, wherever practical, to minimize the net amount of effluent released into the environment.
6. The Licencee shall:
  - (a) direct all sewage generated at the mine site, except shower water only into an on-site sewage holding tank, wherefrom sewage is withdrawn only by a licensed contractor for disposal only into a treatment facility which has a Licence or Permit authorizing the acceptance of sewage; and
  - (b) ensure that the on-site sewage holding tank complies with the requirements of Manitoba Regulation 95/88R, or any future amendment thereto, respecting private sewage disposal systems and privies, whereby the sewage disposal system proposed for use is registered with The Pas Regional Office of Manitoba Environment before being placed into use.

#### **Respecting Solids**

7. The Licencee shall not use any contaminated soil or potentially acid-generating rock as a construction material in the surface development of this mine site or any other surface construction site, nor release such material to any other person as a construction material.
8. The Licencee shall store mined ore on the surface of the mine site only on:
  - (a) the "ore pad" identified in Appendix 'A' attached to this Licence, and limit the on-site ore stockpile on this ore pad to no more than 10,000 tonnes of ore; and
  - (b) the "proposed expansion for uncrushed ore storage" identified in Appendix 'A' attached to this Licence, and limit the on-site ore stockpile on this uncrushed ore pad to no more than 5,000 tonnes of ore;

at any time during the operating years of the Development, with the balance of the ore transported directly to the Stall Lake mill.

9. The Licencee shall, except for such non acid-generating rock which is used as construction material:
  - (a) store non acid-generating waste rock mined at the Development only at:
    - (i) the Photo Lake mine site, on the "clean waste rock stockpile" pad shown in Appendix 'A' attached to this Licence, up to a limit of 120,000 cubic metres in total volume, with a stockpile height not exceeding 15 metres above the base grade level; or



- (ii) at the "Photo Lake Project Mine Rock Stockpile" at the Chisel Lake Mine as shown in Appendix 'B' attached to Environment Act Licence No. 1501 RR;
  - (b) store potentially acid-generating waste rock mined at the Development only at:
    - (i) the Photo Lake mine site, on the "acid waste rock stockpile" pad shown in Appendix 'A' attached to this Licence, up to a limit of 30,000 cubic metres in total volume, with a height not exceeding 15 metres above the base grade level; or
    - (ii) at the "Photo Lake Project Mine Rock Stockpile" at the Chisel Lake Mine as shown in Appendix 'B' attached to Environment Act Licence No. 1501 RR; and
  - (c) upon the completion of mining at this Development:
    - (i) remove all materials stockpiled on the "ore pad" and the "acid waste rock stockpile" pad, along with the underlying sand and any other potentially acid-generating material, and deposit them in the mined-out stopes in the Development or remove them from mine site to a site approved by the Director; and
    - (ii) if the remaining "clean waste rock stockpile" is less than 50,000 cubic metres, remove all materials stockpiled on the "clean waste rock stockpile" along with the underlying sand, and deposit them in the mined-out stopes in the Development or remove them from the mine site to a site approved by the Director; or
    - (iii) if the remaining "clean waste rock stockpile" is greater than 50,000 cubic metres, implement the decommissioning measures for the materials stockpiled on the "clean waste rock stockpile" in accordance with the approved detailed Closure Plan.
10. The Licencee shall not deposit solid waste into the environment except into a waste disposal ground operating under the authority of a permit issued pursuant to Manitoba Regulation 150/91, or any future amendment thereto.

#### **Respecting Recyclable Waste**

11. The Licencee shall not deposit bulky metallic wastes, used tires, used oil and other fluid lubricants, and any other class of recyclable waste substances as may be specified by the Director, into the environment except to:
- (a) a facility or infrastructure which accepts such materials for recycling, or
  - (b) a waste disposal ground operating under the authority of a permit issued pursuant to Manitoba Regulation 150/91, or any future amendment thereto, where these recyclable substances are kept distinctly segregated from each other and are not buried (unless otherwise specified by the Director) so as to readily facilitate their recycling.
12. The Licencee shall make an effort to initiate and maintain a recycling program for those substances identified in, or through the provisions of, Clause 11 of this Licence.

#### **Respecting Dangerous Goods or Hazardous Wastes**

13. The Licencee shall comply with all the applicable requirements of:
- (a) Manitoba Regulation 97/88R, or any future amendment thereto, respecting the storage and handling of gasoline and associated products; and

(b) the Manitoba Dangerous Goods Handling and Transportation Act, and regulations issued thereunder, respecting the handling, transport, storage and disposal of any dangerous goods brought onto or generated at the Development.

14. The Licencee shall ensure that used oil and hydraulic fluids removed from on-site machinery and vehicles are collected and transported in secure, properly labeled and non-leaking containers until recycled, and if temporarily stored on site, that the storage area consists of a base and dikes lined on the interior to the satisfaction of the Director.

**Respecting Operational Monitoring, Record Keeping and Reporting**

15. The Licencee shall collect weekly grab samples of undiluted mine water from the collection tank of the surface pump house, located near the portal of the decline ramp, and analyze them for the following substances:

- (a) pH;
- (b) total arsenic;
- (c) total copper;
- (d) total lead;
- (e) total nickel;
- (f) total zinc; and
- (g) total suspended solids.

16. The Licencee shall, in each month, determine both the total volume of undiluted mine water and the total volume of any added freshwater being directed from the Development to the Chisel Lake Mine, using flow rate measurement equipment and/or estimation techniques satisfactory to the Director.

17. The Licencee shall submit to the Director the analyses and flow rate data determined in accordance with Clauses 15 and 16 of this Licence no later than 30 days following the end of the month in which the samples were taken.

18. The Licencee shall:

- (a) in the summer of 1995 repeat the Photo Lake Drainage Limnology Survey as carried out in 1994 and as reported in the Environmental Impact Assessment dated March, 1995 but restricted to only those drainage basins actually affected by the Development, and report the results of the 1995 survey to the Director by June 30th of the following year; and
- (b) undertake future limnology surveys on the Photo Lake drainage basin to coincide with the limnology studies required to be carried out on the Chisel Lake (Morgan/Woosey Lakes) as per Environment Act Licence No. 1501 RR, until the Director is satisfied that no further studies on the Photo Lake drainage basin need to be undertaken.

19. The Licencee shall, in each week during which waste rock is mined and brought to surface, compile a representative bulked sample of the mined waste rock, and analyze each bulked sample by acid-base accounting as to their total sulfur content, their total acid potential, their



neutralization potential, their net neutralization potential and their neutralizing potential ratio, as carried out and interpreted by qualified individuals.

20. The Licencee shall by January 31st of each year, submit a report to the Director on the achievements made over the preceding 12 months regarding the recycling program initiated pursuant to Clause 12 of this Licence.
21. The Licencee shall continually maintain the Emergency Response Plan submitted to and approved by the Director under Environment Act Licence No, 1919 S1, in a current status, and shall submit any future revisions to the approved Emergency Response Plan to the Director.

#### **Respecting Decommissioning and Restoration**

22. The Licencee shall:
  - (a) provide the Director with:
    - (i) written notice three months in advance of any imminent permanent closure of this Development; or
    - (ii) provide the Director with an immediate notice of any sudden decision to temporarily close this Development whereby the Development would be placed in a mothballed state for re-opening in the foreseeable future;
  - (b) comply with Manitoba Regulation 67/99, or any future amendment thereto, issued under The Mines and Minerals Act, respecting closure plans for mining developments, particularly in regards to addressing environmental issues including, but not necessarily limited to:
    - (i) the decommissioning of the underground workings and surface infrastructure associated with the Development;
    - (ii) the decommissioning of access roads and stream crossings used to access the mine site;
    - (iii) the containment, control or treatment of pollutants originating from the mine site of the Development;
    - (iv) the rehabilitation of the mine site area disturbed by the Development;
    - (v) the restoration or replacement of fish habitats disturbed, adversely affected or lost as a result of the Development; and
    - (vi) the strategy, scope, frequency and duration of post-closure environmental monitoring activities at the mine site; where applicable; and
  - (c) in the course of progressive rehabilitation, as well as upon the permanent or temporary closure of this Development, implement the environmentally related aspects of the Closure Plan approved pursuant to Manitoba Regulation 67/99, or any future amendment thereto, to the satisfaction of the Director.

### REVIEW OR REVOCATION

- A. This Licence replaces Environment Act Licence No. 1919 S2 R which is hereby rescinded.
- B. If, in the opinion of the Director, the Licencee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this Licence, the Director may, temporarily or permanently, revoke this Licence.
- C. If, in the opinion of the Director, new evidence warrants a change in the specifications, limits, terms or conditions of this Licence, the Director may require the filing of a new proposal pursuant to Section 11 of The Environment Act.



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Larry Strachan, P. Eng.  
Director  
Environment Act

File: 3841.0



APPENDIX 'A'  
(Photo L. Mine Site)

