

Environment Act Licence Loi sur l'environnement Licence

Manitoba
Conservation
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Manitoba



Licence No./Licence n° 2492 RR
Issue Date/Date de délivrance December 1, 2000
Revised/Revisé March 14, 2001
Revised/Revisé September 22, 2004

IN ACCORDANCE WITH THE MANITOBA ENVIRONMENT ACT (C.C.S.M. c. E103)
THIS LICENCE IS ISSUED PURSUANT TO SECTIONS 11(1) AND 12(2) TO:

CROWFLIGHT MINERALS INC. and FALCONBRIDGE LIMITED "the Licencees"

for advanced exploration activities at the Development called the "Bucko Lake Project" located about 4 kilometres south-west of the Town of Wabowagan, on Mineral Lease ML-031 on Lot 3442 in Group 422 as shown on Director of Surveys Plan 19/26, with the Development being:

- the dewatering of the existing underground mine workings at Bucko Lake;
- advanced underground exploration of the body, and
- the construction and setting into operation of such surface facilities as may be required to facilitate the proposed exploration activities and to ensure compliance with this Licence and with the federal Metal Mining Effluent Regulations, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

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 international standard ISO/IEC 17025, or otherwise approved by the Director;

"**AGP**" means the maximum acid-generation potential, expressed as tonnes of CaCO₃ per 100 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;

"**composite sample**" means as defined in the federal *Metal Mining Effluent Regulations*;

"**contaminated soil**" means soil which contains contaminant concentrations in excess of the applicable remediation criteria cited in the CCME's "Recommended Canadian Soil

**** A COPY OF THIS LICENCE MUST BE KEPT ON SITE AT THE DEVELOPMENT AT ALL TIMES ****

Quality Guidelines" report ISBN 1-895-925-92-4 March 1997, and in the CCME's "Interim Canadian Environmental Quality Criteria for Contaminated Sites" report CCME EPC-CS34 September 1991, or any future amendment thereof;

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

"**effluent**" means treated or untreated mine water released into the environment;

"**final discharge point**" means the point of release from the proposed mine water settling ponds, or from any additional on-site mine water treatment facility that may be incorporated, beyond which no further control is exercised over the effluent, unless otherwise re-designated in writing by the Director;

"**grab sample**" means as defined in the federal *Metal Mining Effluent Regulations*;

"**Metal Mining Effluent Regulations**" means the *Metal Mining Effluent Regulations* (SOR/2002-222), or any future amendments thereto, promulgated under the federal *Fisheries Act*;

"**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 'B' 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 Licencees for the operation of the Development, as generally depicted in Appendix 'A' attached to this Licence;

"**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 polluted surface runoff, or any combination thereof;

"**monthly arithmetic mean**" means the arithmetic mean as determined for each specified pollutant or characteristic from the analysis of all composite and grab samples collected and reported during that month in which the release of liquid effluent occurred, with the exception that if the Licencees collect only one composite or grab sample during a single month, then the single set of analytical results shall be construed to be representative of the effluent quality for that month and hence shall be treated as the monthly arithmetic mean;

"**NP**" means the maximum neutralizing potential, expressed as tonnes of 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 83/200* respecting private sewage disposal systems and privies, or any future amendments thereto;

“**solid waste**” means solid waste as defined 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 Federation; and

“**undiluted**” means free of extraneous unpolluted source 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 this Licence or in the federal *Metal Mining Effluent Regulations*.

GENERAL TERMS AND CONDITIONS

1. Notwithstanding any of the following limits, terms and conditions specified in this Licence, the Licencees shall, upon the request of the Director:
 - (a) sample, monitor, analyze and/or investigate specific areas of concern regarding any 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 Licencees 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) have all analytical determinations undertaken by an accredited laboratory.
3. The Licencees shall report all the information requested through the provisions of this Licence in a manner and form acceptable to the Director.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting Land Use

4. The Licencees shall restrict construction and advanced exploration activities related to the Development to only those lands to which the Licencees possess:
- (a) surface rights, or complete ownership, or a signed agreement with another person or legal entity respecting the use of any land to which that person or legal entity possesses the surface rights or complete ownership when the agreement clearly identifies the party which accepts full responsibility for any environmental liabilities incurred by the activities of the Licencees; or
- (b) all applicable work permits and timber cutting permits, as may be required by law, prior to the initiation of any works or disturbance of Crown land.

Respecting Water Diversion and Use

5. The Licencees shall not commence any activities of water withdrawal or water diversion involving Bucko Lake which are subject to the Water Rights Act, unless they are licenced under the Water Rights Act.
6. The Licencees shall construct the end-of-pipe of the raw water intake line in Bucko Lake with a fitted fish screen that conforms to the "Freshwater Intake End-of-Pipe Fish Screen Guidelines" published by the Department of Fisheries and Oceans.

Respecting Sewage

7. Unless otherwise approved under *Manitoba Regulation 83/2003*, or any future amendment thereto respecting private sewage disposal systems and privies, the Licencees shall:
- (a) direct all sewage, including shower water, generated at the mine site into an on-site septic holding tank;
- (b) design, construction and use of the on-site septic holding tank, or any future alternative and approved private sewage disposal system, in compliance with *Manitoba Regulation 83/2003*; and
- (c) dispose of any sewage and septage withdrawn from the on-site septic holding tank is disposed of in accordance with *Manitoba Regulation 83/2003*.

Respecting Mine Water Handling

8. The Licencees shall maximize the recycling of mine water and minimize the influx of underground seepage waters, wherever practical, so as to minimize the use of fresh make-up water and to minimize the release of any effluent into the environment.
9. The Licencees shall:
 - (a) direct all underground mine water that is pumped to surface, into the proposed surface minewater settling ponds for such recycling or treatment as may be required, prior to being released as effluent into the environment;
 - (b) construct the base of the settling ponds facility into an underlying layer of clay and line the inside of each interior surface of the exterior perimeter berm with an impermeable high density polyethylene liner, not less than 1.5 millimetres thick, heat welded at the seams, and properly keyed into the clay base and the perimeter of each berm;
 - (c) test the integrity of all seams by the air lance or ultrasonic pulse echo test methods, in accordance with ASTM Standard D-4437, and prepare and submit a testing report to the Director one week before the HDPE liner is covered with sand and the interior berm(s); and
 - (d) have the constructed synthetic liner, liner anchorage, and base clay material inspected and approved by an Environment Officer before the liner is covered with sand.
10. The Licencees shall not discharge any effluent from the Development into the environment except through the final discharge point.

Respecting Effluent Releases

11. The Licencees shall notify the holder of the Wild Rice Production Licence on Bucko Lake of the schedule to commence effluent releases to Bucko Lake from the final discharge point, and implement such mitigation measures as deemed necessary so as not to adversely affect any rights granted to any person through the Wild Rice Production Licence.
12. The Licencees shall, during the mine de-watering phase, not release any effluent from the final discharge point if the concentration of total iron in any composite or grab sample of the effluent is greater than 2.0 milligrams per litre.
13. The Licencees shall not discharge any effluent from the final discharge point if the quality (concentration, pH or toxicity) of the effluent is in non-compliance with the federal *Metal Mining Effluent Regulations*.
14. The Licencees 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.
15. The Licencees shall dispose of any sludges resulting from the clean-out of underground mine water sumps, or from the clean-out of the surface settling ponds, or any from the chemical treatment of any minewater, into:
 - (a) a secure depository in the Development's underground mine workings; or

- (b) a waste disposal ground permitted under *Manitoba Regulation 150/91*, subject to being appropriately dewatered at the site of the Development to meet the criteria of solid waste as defined in the said regulation and being accepted, in writing, by the operator of the waste disposal ground.

16. The Licencees shall not deposit any 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

17. The Licencees 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.

18. The Licencees shall make reasonable efforts to initiate and maintain a recycling program for those substances identified in, or through the provisions of, Clause 17 of this Licence.

Respecting Dangerous Goods or Hazardous Wastes

19. The Licencees shall not establish any petroleum fuel storage facility closer than 100 metres from the high water mark of the nearest shoreline of Bucko Lake.
20. The Licencees shall comply with all the applicable requirements of:
- (a) *Manitoba Regulation 188/2001* or any future amendment thereto, respecting the storage and handling of petroleum products and allied 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.

21. The Licencees shall ensure that used oil and hydraulic fluids removed from on-site machinery and vehicles are collected, transported and stored in secure, properly labeled and non-leaking containers until recycled; and if the containers are temporarily stored on site, that the storage area is constructed with a base and containment dikes fully lined on the interior with an impermeable liner or is otherwise constructed with equivalent containment provisions satisfactory to the Director.

Respecting Monitoring, Record Keeping and Reporting

22. The Licencees shall:
- (a) install, operate, maintain and annually calibrate a continuous recording effluent flow meter, at the final discharge point, rated to be accurate to within $\pm 5\%$;

- (b) measure and record the daily volume (cubic metres) of effluent released on any day on which the effluent is monitored pursuant to Clause 23 of this Licence; and
 - (c) measure and record the total monthly volume (cubic metres) of effluent released each month through the final discharge point.
23. The Licencees shall, in accordance with the terms specified in Schedule 1 attached to this Licence, collect undiluted composite samples, or representative undiluted grab samples, of effluent released from the final discharge point, and analyze each sample for the concentration or characteristic of each parameter listed identified in Schedule 1, unless otherwise specified in writing by the Director.
24. The Licencees shall submit monthly reports on the analyses and determinations recorded pursuant to Clauses 22, and 23 of this Licence, to the Director, in writing and in an electronic format acceptable to the Director, no later than 30 days after the end of the month during which the information or samples were collected.

Joint and Several Responsibility

25. The Licencees shall be jointly and severally responsible for compliance with this Licence.

REVIEW AND REVOCATION

- A. This Licence replaces Environment Act Licence No. 2492 R which was revoked for the reason that no construction had commenced on the licenced Development within three years of the date that the Licence was issued.
- B. If, in the opinion of the Director, the Licencees have exceeded or are exceeding or have or are 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 the Licencees have not commenced the proposed advanced exploration within three years of the date of this Licence, the Licence is revoked.
- D. 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.



Larry Strachan, P. Eng.
Director
Environment Act

SCHEDULE 1
 (Effluent Monitoring Schedule)

| PARAMETER | SAMPLING FREQUENCY | | |
|------------------------|--------------------|---------|-----------|
| | Weekly | Monthly | Quarterly |
| pH | X | | |
| Total Arsenic | X | | |
| Total Copper | X | | |
| Total Lead | X | | |
| Total Nickel | X | | |
| Total Zinc | X | | |
| Total Iron | X | | |
| Total Suspended Solids | X | | |
| Radium 226 | X (see Note 1) | | |

"weekly" means once every seven days on an operating day.

Note 1: This monitoring frequency may be reduced as per the Federal Metal Mining Effluent Regulations.

Note 2: This Schedule may be revised from time to time by the Director

RESCINDED