



## Conservation and Water Stewardship

Climate Change and Environmental Protection Division  
Environmental Approvals Branch  
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**CLIENT FILE NO.: 2435.40**

August 1, 2013

Ian Berzins, P.Eng.  
President, CEO and COO  
San Gold Corporation  
P.O. Box 1000  
Bissett, MB R0E 0J0

Dear Mr. Berzins:

Enclosed is **revised Environment Act Licence No. 2628 RR** dated August 1, 2013 issued to the **San Gold Corporation** for the operation of the Development, being a 2500 tonne per day gold and silver mining, milling and refining operation, known as the "Bissett Gold Mine" and including the existing and expanded tailings management area located in Mineral Lease 2000/01/01, Range 13 and 14 EPM approximately one kilometre north of the Town of Bissett with release of treated effluent from the polishing pond to No Name Creek and subsequently to the Wanipigow River between June 15<sup>th</sup> and November 30<sup>th</sup> of any year in accordance with the Proposal received March 23, 2012 and subsequent information provided on August 21, 2012, September 18, 2012, March 12, 2013 and April 5, 2013.

In addition to the enclosed Licence requirements please be informed that all other applicable federal, provincial and municipal regulations and by-law must be complied with. A Notice of Alteration must be filed with the Director for approval prior to any alteration to the Development as licensed.

For further information on the administration and application of the Licence, please feel free to contact Diane Oertel, Environment Officer at 204-345-1846.

Pursuant to Section 27 of *The Environment Act*, this licensing decision may be appealed by any person who is affected by the issuance of this Licence to the Minister of Conservation and Water Stewardship within 30 days of the date of the Licence.

Yours truly,

*"originally signed by"*

Tracey Braun, M.Sc.  
Director

c: Don Labossiere, Director, Environmental Compliance and Enforcement  
Public Registries

**NOTE: Confirmation of Receipt of this Licence No. 2628 RR (by the Licensee only) is required by the Director of Environmental Approvals. Please acknowledge receipt by signing in the space provided below and faxing a copy (letter only) to the Department by August 15, 2013.**

\_\_\_\_\_  
On behalf of the San Gold Corporation

\_\_\_\_\_  
Date

Environment Act

**RESCINDED**

# LICENCE

Licence No. / Licence n° 2628 RR

Issue Date / Date de délivrance November 6, 2003

Revised : January 2004

Revised : August 1, 2013

In accordance with *The Environment Act* (C.C.S.M. c. E125)  
Conformément à la *Loi sur l'environnement* (C.P.L.M. c. E125)

Pursuant to Sections 11(1) and 14(2) / Conformément au Paragraphes 11(1) et 14(2)

THIS LICENCE IS ISSUED TO: / CETTE LICENCE EST DONNÉE À:

SAN GOLD CORPORATION  
the Licencee

for the operation of the Development, being a 2,500 tons per day gold and silver mining, milling and refining operation, known as the "Bissett Gold Mine" and including the existing and expanded tailings management area located in Mineral Lease 63, Township 24, Range 13 and 14 EPM approximately one kilometre north of the Town of Bissett with release of treated effluent from the polishing pond to No Name Creek and subsequently to the Wanipigow River between June 15<sup>th</sup> and November 30<sup>th</sup> of each year in accordance with the Proposal received March 23, 2012 and subsequent information provided on August 21, 2012, September 18, 2012, March 12, 2013 and April 3, 2013 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 and Water Stewardship to be equivalent to the SCC, or be 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;

"**affected area**" means a geographical area, excluding the property of the Development;

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

“**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 or assigned Environment Officer in writing;

“**CCME**” means the Canadian Council of Ministers of the Environment;

“**composite sample**” means as defined in the federal *Metal Mining Effluent Regulations* (MMER);

“**contaminated soil**” means soil which contains contaminant concentrations in excess of the applicable remediation criteria cited in the CCME's “Canadian Environmental Quality Guidelines” report ISBN 896-997-34-1, update 5.0, 2006, or any future amendment thereof;

“**Director**” means an employee so designated pursuant to *The Environment Act*;

“**Director of Mines**” means the Director of Mines Branch of Innovation, Energy and Mines;

“**effluent**” means mine water released from the Development into the environment;

“**EEM**” means Environmental Effects Monitoring;

“**Environmental Management System (EMS)**” means the part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy;

“**Environment Officer**” means an employee so appointed pursuant to *The Environment Act*;

“**final discharge point**” means an identifiable discharge point at the mine, beyond which the Licence holder exercises any further control over the quality of the effluent, which for the purposes of this Licence is the mine water effluent discharge weirs located on the outfall from the final polishing pond of the tailings management area into No Name Creek;

“**fugitive emissions**” means particulate matter escaping from sources within the Development into the atmosphere other than through any of the emission stacks or vents;

“**grab sample**” means a grab sample as defined in the federal *Metal Mining Effluent Regulations* (MMER);

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

**“mine”** means all of the surface and sub-surface workings, overburden, waste rock and ore stockpiles, crusher, mill, concentrator, all ancillary buildings, wastewater treatment facilities, impoundment or control facilities, tailings management areas and such other on-site infrastructure as may be located on the mine site and associated with the Development;

**“mine site”** means the entire operational, disturbed or impacted surface area of land and water located within the boundaries of those surface rights acquired and held by the Licensee for the construction and operation of the Development;

**“mine water”** means water pumped to the surface from underground mine workings or from an open pit, or fluids used to transport tailings, or contaminated runoff or leachate from ore or waste rock stockpiles exposed to precipitation, or polluted mine site runoff or seepage or runoff losses from tailings deposits stored on the surface of land, or any combination thereof, but excluding sewage;

**“MSDS”** means Material Safety Data Sheets;

**“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;

**“noise nuisance”** means an unwanted sound in an affected area, which is annoying, troublesome, or disagreeable to a person:

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to members of the public;

if the unwanted sound

- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director and within a 90-day period, from 5 different persons falling within clause a), b), or c), who do not live in the same household; or
- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b) or c) and the Director is of the opinion that if the unwanted sound had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90-day period, from 5 different persons who do not live in the same household;

**“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 1,000 tonnes of 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;

“**odour nuisance**” means a continuous or repeated odour, smell or aroma, in an affected area, which is offensive, obnoxious, troublesome, annoying, unpleasant or disagreeable to a person:

- a) residing in an affected area;
- b) working in an affected area; or
- c) present at a location in an affected area which is normally open to members of the public;

if the odour, smell or aroma

- d) is the subject of at least 5 written complaints, received by the Director in a form satisfactory to the Director and within a 90-day period, from 5 different persons falling within clauses a), b) or c), who do not live in the same household;
- e) is the subject of at least one written complaint, received by the Director in a form satisfactory to the Director, from a person falling within clauses a), b) or c) and the Director is of the opinion that if the odour, smell or aroma had occurred in a more densely populated area there would have been at least 5 written complaints received within a 90-day period, from 5 different persons who do not live in the same household;

“**ore**” means mineralized rock containing sufficient mineral value for the purposes of this Development;

“**particulate matter**” means any finely divided liquid or solid matter other than water droplets;

“**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;

“**polishing pond**” means a pond of the tailings management area which receives the partially treated tailings from either the original main tailings pond or the newly constructed tailings pond;

“**pollutant**” means pollutant as defined in *The Environment Act*;

“**primary pond**” means the first in a series of ponds of the tailings management area which is the pond that receives the tailings directly from the mill;

“**record drawings**” means engineering drawings complete with all dimensions which indicate all features of the Development as it has actually been built;

“**septage**” means the sludge produced in individual on-site sewage disposal systems such as septic tanks;

“**sewage**” means household and commercial wastewater that contains human waste;

“**solid waste**” means solid waste as defined in *Manitoba Regulation 150/91*, or any future amendments thereto, respecting waste disposal grounds, excluding waste rock;

“**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;

“**surface sample**” means a grab sample of mine water from within one metre of the surface;

“**tailings**” means those granular solids which are discarded as waste material in the process of milling and concentrating commercial minerals present in the milled ore;

“**tailings management area**” means the tailings and mine water management area, including all ponds used to contain mine water and tailings as shown in Appendix A of this licence;

“**TMA**” means the Tailings Management Area;

“**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(s), and not having water added for the purpose of meeting any effluent quality limits specified in this Licence or in the MMR;

“**waste disposal ground**” means an area of land designated by a person, municipality, provincial government agency, or crown corporation for the disposal of waste and approved for use in accordance with *Manitoba Regulation 150/91* or any future amendments thereto, or a Licence issued pursuant to *The Environment Act*;

“**waste rock**” means rock containing insufficient mineral value to the Development, excepting such rock which is inadvertently present in mined ore; and

“**WHMIS**” means Workplace Hazardous Materials Information System.

### GENERAL TERMS AND CONDITIONS

**Note:** Notwithstanding this Environment Act Licence, this Development is also subject to the federal *Metal Mining Effluent Regulations*. If any specification, limit, term or condition prescribed in this Licence or in any subsequent revision thereto, results in a contradiction of one or more requirements of the federal *Metal Mining Effluent Regulations*, then the most stringent limit, term, or condition shall apply.

This Section of the Licence contains requirements intended to provide guidance to the Licencee in implementing practices to ensure that the environment is maintained in such a

manner as to sustain a high quality of life, including social and economic development, recreation and leisure for present and future Manitobans.

1. In addition to any of the limits, terms and conditions specified in this Licence, the Licencee shall, upon the request of the Director:
  - a) sample, monitor, analyze or investigate specific areas of concern regarding any segment, component or aspect of pollutant storage, containment, treatment, handling, disposal or emission systems, for such pollutants, ambient quality, aquatic toxicity, leachate characteristics and discharge or emission rates, and for such duration and at such frequencies as may be specified;
  - b) determine the environmental impact associated with the release of any pollutant 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 on liquid samples in accordance with the methods prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater or in accordance with equivalent preservation and analytical methodologies approved by the Director;
  - b) carry out all sampling, preservation and analyses on, soil and air samples in accordance with methodologies approved by the Director;
  - c) have all analytical determinations undertaken by an accredited laboratory; and
  - d) report the results to the Director, in writing and in an electronic format acceptable to the Director, within 60 days of the samples being taken.
3. The Licencee shall submit all information required to be provided to the Director under this Licence, in writing, in such form (including number of copies) and of such content as may be specified by the Director, and each submission shall be clearly labeled with the Licence Number and Client File Number associated with this Licence.
4. The Licencee shall, in the case of physical or mechanical equipment breakdown or process upset where such breakdown or process upset results or may result in the release of a pollutant in an amount or concentration, or at a level or rate of release, that causes or may cause a significant adverse effect, immediately report the event by calling 204-944-4888 (toll-free 1-855-944-4888). The report shall indicate the nature of the event, the time and estimated duration of the event and the reason for the event.
5. The Licencee shall, following the reporting of an event pursuant to Clause 4,
  - a) identify the repairs required to the mechanical equipment;
  - b) undertake all repairs to minimize unauthorized discharges of a pollutant;
  - c) complete the repairs in accordance with any written instructions of the Director; and

- d) submit a report to the Director about the causes of breakdown and measures taken, within one week of the repairs being done.
6. The Licencee shall actively participate in any future watershed and/or aquifer based management study, plan and/or nutrient reduction program, approved by the Director.
7. The Licencee shall comply with the provisions of *Manitoba Regulation 83/2003* respecting *Onsite Wastewater Management Systems Regulation* and its amendment or any future amendment thereto.
8. The Licencee shall obtain all necessary federal, provincial and/or municipal licences, authorizations, permits and/or approvals for construction of relevant components of the Development prior to commencement of any construction.
9. The Licencee shall implement and continually maintain in current status, an Environmental Management System (EMS) for the Development, as approved by the Director.
10. The Licencee shall continually maintain an up-to-date inventory of any process and cleaning chemicals used and/or stored on site that would be captured by any applicable federal/provincial WHMIS regulations and protocols, and make this information and applicable MSDS sheets available to any Environment Officer upon request.
11. The Licencee shall:
  - a) continually maintain in current status, an Emergency Response Plan for the Development, prepared in a manner consistent with the "*Industrial Emergency Response Planning Guide (MI 12, September 1996)*", and the requirements of the federal *Metal Mining Effluent Regulations*, that is satisfactory to the Director; and
  - b) continually maintain, in current status, contingency plans for matters such as spills, ruptures or any unexpected seepage losses from the tailings management area or any component thereof and details on the locations and containment provisions for any existing and/or proposed chemical and fuel storage areas, and on how and where the tailings line would be drained under pipeline freezing, pipeline rupture or pump shutdown events.
12. The Licencee shall install and maintain spill recovery equipment at the Development at all times.
13. The Licencee shall:
  - a) prepare updated "record drawings" for the Development and shall label the drawings "Record Drawings"; and
  - b) provide to the Director, not later than six months after construction of the Development is completed, two electronic copies of the "record drawings" of the Development.

**SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS**

14. The Licencee shall restrict construction and operational activities to only such lands to which the Licencee possesses the mineral rights, surface rights or complete ownership, or which the Licencee has leased from another owner, wherein the leasing agreement clearly identifies the party which accepts full responsibility for any environmental liabilities incurred by the activities of the Licencee.
15. The Licencee shall carry out all activities related to this Development in accordance with any applicable work permits and/or timber cutting permits as may be required by Manitoba Conservation and Water Stewardship.
16. The Licencee shall, with respect to the tailings management area:
  - a) not commence any expansion involving new or raised impoundment dykes until the submission of a set of the construction drawings for the new or raised impoundment dykes, together with the engineering rationale for the proposed crest elevations and proposed future maximum crest elevations is approved by the Director;
  - b) construct the existing and any new or raised impoundment dykes with a minimum one metre wide vertical clay core keyed into underlying impervious soils or bedrock, with the constructed clay core, the new or raised vertical impoundment features and the base of the tailings management area having a hydraulic conductivity of at least  $1 \times 10^{-7}$  centimetres per second or less; and
  - c) maintain a minimum 0.5 metre freeboard in the main ponds and polishing ponds at all times.
17. The Licencee shall arrange with the designated Environment Officer a mutually acceptable time and date for any required soil sampling of the tailings management area between the 15<sup>th</sup> day of July and the 15<sup>th</sup> day of October of any year, unless otherwise approved by the Environment Officer.
18. The Licencee shall take and test samples, in accordance with Appendix F of this Licence, from the lining of the tailings management area; the number and location of samples and test methods to be specified by the designated Environment Officer.
19. The Licencee shall, not less than two weeks before the expanded tailings management area is placed in operation, submit for the approval of the Environment Officer the results of the tests carried out pursuant to Clause 18 of this Licence.
20. The Licencee shall direct all mine water and tailings generated by the Development into the tailings management area.
21. The Licencee shall reclaim as much clarified water from the tailings management area as possible to supply the process water demands of the mill.

22. The Licencee shall not release any effluent from the tailings management area into the environment:
- other than through the final discharge point of the tailings management area, as identified through the provisions of the federal *Metal Mining Effluent Regulations*;
  - at a rate in excess of 0.20 cubic metres per second;
  - if the quality or toxicity of the effluent is in non-compliance with the federal *Metal Mining Effluent Regulations* under *The Fisheries Act*;
  - if the effluent quality is resulting in, or is likely to directly or cumulatively result in, a downstream degradation of the water quality immediately beyond a maximum 10% mixing zone (by volume) within No Name Creek and/or the Winnipegow River, relative to the *Manitoba Water Quality Standards, Objectives and Guidelines Regulation* under *The Water Protection Act* and/or nutrient control strategies and regulations developed by the Manitoba Department of Conservation and Water Stewardship;
  - between the 1st day of December of any year and the 14th day of June of the following year; or
  - when such a discharge would cause or contribute to flooding in or along the effluent drainage route.
23. The Licencee shall take such corrective measures as, within such a time frame as is satisfactory to the Director, to mitigate any seepage losses from the tailings management area, where such seepage losses and their quality are determined by the Director to be unacceptable.
24. The Licencee shall remove all non-recyclable solid waste resulting from demolition, upgrading and general operational activities at the mine site from the mine site as soon as practical, and deposit such solid waste into a waste disposal ground operating under the authority of:
- a permit issued pursuant to the *Manitoba Waste Disposal Grounds Regulation 150/99*, or any future amendment thereto; or
  - an environmental licence issued pursuant to *The Environment Act*.
25. The Licencee shall not locate any petroleum storage tank within 100 metres of the shoreline of any waterway or water body.
26. The Licencee shall not release dangerous goods or hazardous wastes into the sewage collection system.
27. The Licencee shall not deposit bulky metallic wastes, used tires, used oil or other fluid lubricants, hydraulic fluids, and any other class of recyclable waste substances as may be specified by the Director, into the environment except to:
- a facility or infrastructure which accepts such materials for recycling; or
  - a waste disposal ground 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.

28. The Licencee shall with respect to on-site earthen construction works, construct and maintain silt fences in the drainage routes transporting surface runoff off the property of the Development until vegetation has been re-established on the disturbed areas.
29. The Licencee shall comply with all the applicable requirements of:
- a) 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; and
  - b) *Manitoba Storage and Handling of Petroleum Products and Allied Products Regulation 188/2001*, or any future amendments thereto.
30. The Licencee shall collect, transport and store used oil or hydraulic fluids removed from on-site machinery in secure, properly labeled, non-leaking containers and shall regularly send them to a recycling or disposal facility approved to accept hazardous wastes.
31. The Licencee shall not cause or permit an odour nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate an odour nuisance.
32. The Licencee shall not cause or permit a noise nuisance to be created as a result of the construction, operation or alteration of the Development, and shall take such steps as the Director may require to eliminate or mitigate a noise nuisance.
33. The Licencee shall limit fugitive emissions from any source within the mine site such that:
- a) distinct plume forming fugitive emissions do not exceed an opacity of 5%; and
  - b) non plume forming fugitive emissions are not visible at any time;
- when measured or viewed from the atmosphere at any point beyond the mine site in an area zoned commercial or residential.
34. The Licencee shall ensure that at any downwind point of impingement of air emissions off the property of the Development, ground level concentrations of suspended particulate matter (SPM) are not in excess of the corresponding limits for any of the listed measurement criteria:
- | <u>Air Pollutant</u> | <u>Measurement Criteria</u> | <u>Limits</u>              |
|----------------------|-----------------------------|----------------------------|
| SPM                  | 24-hour average             | 120 micrograms/cubic metre |
| SPM                  | annual geometric mean       | 70 micrograms/cubic metres |
- as determined from any ambient air sample or samples collected and analyzed in accordance with procedures and methods satisfactory to the Director, and corrected to a reference temperature of 25 degrees Celsius and a reference pressure of 101.3 kilopascals (760 millimetres of mercury).
35. The Licencee shall, unless otherwise specified by the Director, dispose of all waste rock hoisted to surface at this Development by:

- a) using, or releasing for use, non acid-generating waste rock as a construction material; or
  - b) stockpiling all new waste rock in the area designated as “Waste Rock Stockpile Area”, as shown in Appendix B of this Licence.
36. The Licencee shall operate the Waste Rock Stockpile Area, as shown in Appendix B of this Licence, such that:
- a) the impervious liner is maintained at all times;
  - b) all of the surface runoff is collected in a lined down-gradient runoff collection ditch;
  - c) all runoff from the collection ditch is sent to a collection pump and pump-out, as necessary, to the mill for transfer to the tailings management area; and
  - d) the height of any waste rock stockpile be no higher than the local geodetic elevation of 265 metres above sea level.
37. The Licencee shall:
- a) not use, nor release to any person, any contaminated soil, or potentially acid-generating rock/materials, as a construction material; and
  - b) undertake such remedial work as may be specified by the Director should any of the construction materials used by the Licencee in the course of constructing or altering this Development be determined to be contaminated soil or acid generating rock/material.
38. The Licencee shall restrict the surface stockpiling of ore to:
- a) the surface of the pad of the area designated as “Ore Rock Stockpile Area”, as shown in Appendix B of this Licence;
  - b) a maximum stockpile of no more than 9,072 tonnes (10,000 tons) at any time, unless otherwise specified in writing by the Director; and
  - c) non acid-generating waste rock.

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

39. The Licencee shall, once a month under open water conditions and following a precipitation event:
- a) collect a representative grab sample of run-off water from the down gradient collection ditch of the waste rock stockpile area; and
  - b) analyze the samples for those parameters listing in Appendix C of this Licence.
40. The Licencee shall in each year during which new waste rock or new ore is being deposited onto the respective surface waste rock stockpile area or ore rock stockpile area:
- a) collect a representative bulk sample of each of the new waste rock and the new ore once every 3 months;
  - b) annually have each bulk sample (collected over the preceding 12 months) subjected to acid-base accounting tests, carried out by qualified individuals, for the determination of the neutralization potential, acid generation potential, neutralization potential ration, and percent sulphur content of each bulk sample; and

- c) report the data determined pursuant to sub-clause 40(b) of this Licence to the Director, in writing and in an electronic format acceptable to the Director, as soon as the analytical data becomes available.
41. The Licencee shall, once every month-end during each operating year, record the elevation of the mine water level in each pond of the tailings management area relative to the lowest crest elevation of the perimeter dyke system.
42. The Licencee shall notify the assigned Environment Officer should the freeboard of any pond become less than 0.5 metres.
43. The Licencee shall during each month of each operating year determine by measurement, or by a method of estimation satisfactory to the Director, the quantity of water being reclaimed from the tailings management area for the mill, and the percentage value of this quantity relative to the mill's process water requirements for that month's production rate.
44. The Licencee shall, once every three months during each operating year, collect a surface sample of mine water from each main tailings pond and analyze the sample for those parameters listed in Appendix D attached to this Licence.
45. The Licencee shall, once every two months in each operating year, and between the time that the polishing ponds have been filled with mine water from the tailings ponds and the time that effluent release from the polishing ponds is commenced, collect a surface sample of mine water from the polishing ponds and analyze the sample for those parameters listed in Appendix D of this Licence.
46. The Licencee shall, unless otherwise specified by the Director:
- annually monitor each accessible groundwater monitoring well designated as 96-01, 96-02, 96-03, 96-05, 96-06, 13-01, 13-02, 13-03, 13-04, 13-05 and 13-06 and shown in Appendix A of this Licence, for potentiometric elevation, field pH, conductivity and temperature;
  - annually collect a groundwater sample from each of the accessible groundwater monitoring wells and analyze the samples for those parameters listed in Appendix D of this Licence; and
  - establish and monitor as per sub-clauses 46(a) and 46(b) of this Licence, any additional new groundwater monitoring wells at such locations as may be requested by the Director.
47. The Licencee shall submit to the Director, in writing and in an electronic format acceptable to the Director, the analytical data and information determined in accordance with Clauses 39, 41, 43, 44, 45 and 46 of this Licence, no later than 30 days following the end of the month in which the samples were taken.

48. The Licencee shall notify the assigned Environment Officer a minimum of one week prior to the initiation of each effluent discharge campaign.
49. The Licencee shall, prior to the initiation of any effluent discharge campaign, collect at least three samples, one each from the surface, middle and bottom of the water column at the deepest location in the polishing pond, analyze each sample for those parameters listed in Appendix D of this Licence, and test each sample for acute lethality to rainbow trout and *Daphnia magna* by means of tests carried out in a manner consistent with the procedures identified in the federal *Metal Mining Effluent Regulations*.
50. The Licencee shall monitor the effluent quality and measure the rate of discharge at the final discharge point of the tailings management area over the course of each discharge campaign such that:
  - a) within 24 hours of the commencement of discharge, the first grab or composite effluent sample is collected;
  - b) an additional grab or composite effluent sample is collected at the final discharge every seven days for the duration of the discharge;
  - c) each collected effluent sample is analyzed for those parameters listed in Appendix D of this Licence and tested for acute lethality to rainbow trout and to *Daphnia magna* by means of tests carried out in accordance with the requirements of the federal *Metal Mining Effluent Regulations*; and
  - d) the maximum rate of effluent discharge (cubic metres per second), the daily volume of effluent discharged on each day on which an effluent sample was collected, and the total volume of effluent discharged over the duration of the each discharge campaign, are measured and recorded.
51. The Licencee shall collect a sample of stream water at each of the receiving water monitoring stations designated as NNC-VR, NNC-GR, WR-US and WR-DS, as shown in Appendix E of this Licence, and have each sample analyzed for those parameters listed in Appendix D of this Licence:
  - a) prior to but within seven days of the initiation of any polishing pond discharge;
  - b) at weekly intervals for the duration of the discharge;
  - c) at weekly intervals until the pre-discharge baseline condition is re-established to the satisfaction of the Director; and
  - d) at monitoring station NNC-GR only when it is not the fall hunting season.
52. The Licencee shall, within 30 days of the completion of each discharge campaign, collect sediment samples from the receiving stream at the stations designated as NNC-DP, NNC-VR and NNC-GR as shown in Appendix E of this Licence (samples at location NNC-GR shall only be taken when it is not the fall hunting season) and have the samples analyzed for the following parameters:
  - a) total metals;
  - b) total organic carbon;
  - c) moisture content; and
  - d) pH.

53. The Licencee shall, once every three years, collect sediment samples from the receiving stream at the stations designated as WR-US and WR-DS as shown in Appendix E of this Licence and have the samples analyzed for the following parameters;
- total metals;
  - total organic carbon;
  - moisture content; and
  - pH.
54. The Licencee shall obtain the samples required to be collected in Clauses 52 and 53 of this Licence such that:
- the samples are taken by coring;
  - the top 5 centimetres of each core are submitted for analysis; and
  - a minimum of 5 individual core samples are taken at each location on each sampling event.
55. The Licencee shall:
- during each discharge campaign, submit to the Director, in writing and in electronic format satisfactory to the Director, the analytical data and information determined in accordance with Clauses 49, 50 and 51 of this Licence once every two weeks as the data becomes available;
  - within two months of the termination of each effluent discharge campaign, submit to the Director, in writing and in electronic format satisfactory to the Director, and to the Hollow Water First Nation, an environmental monitoring report which summarizes the monitoring data collected during the discharge campaign in accordance with Clauses 50, 51, 52 and 53 of this Licence and describes the environmental impact of the effluent on the receiving waterways relative to non-impacted or pre-impacted baseline data respecting the receiving water and sediment;
  - submit to the Director a copy of each quarterly and annual effluent monitoring report, submitted by the Licencee to Environment Canada in accordance with the federal *Metal Mining Effluent Regulations*, at the same time as each such report is submitted to the federal authorization officer; and
  - notwithstanding sub-clause a) and b) above, if the results of effluent analysis during the discharge campaign exceed the discharge criteria specified in this Licence, report the results to the Director within 48 hours of receipt of the results.
56. The Licencee shall:
- carry out the environmental effects monitoring program, as required by the federal *Metal Mining Effluent Regulations*, in consultation with the Water Science and Management Branch of Manitoba Conservation and Water Stewardship, and incorporate such additional monitoring requirements as may be requested in writing by the Director; and
  - submit to the Director a copy of each environmental effects monitoring report, submitted by the Licencee to Environment Canada in accordance with the federal *Metal Mining Effluent Regulations*, at the same time as each such report is submitted to the federal authorization officer.

57. 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 thereof 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;
    - 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 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 AND REVOCATION

- A. Environment Act Licence No. 2628 R is 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 the Licencee has not commenced construction of the tailings management area expansion at the Development within three years of the date of this Licence, the Licence will be reviewed and revised.

- D. 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*.

*original signed by*

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**Tracey Braun, B.Sc.**  
**Director**  
**Environment Act**

**File: 2435.40**

**RESCINDED**

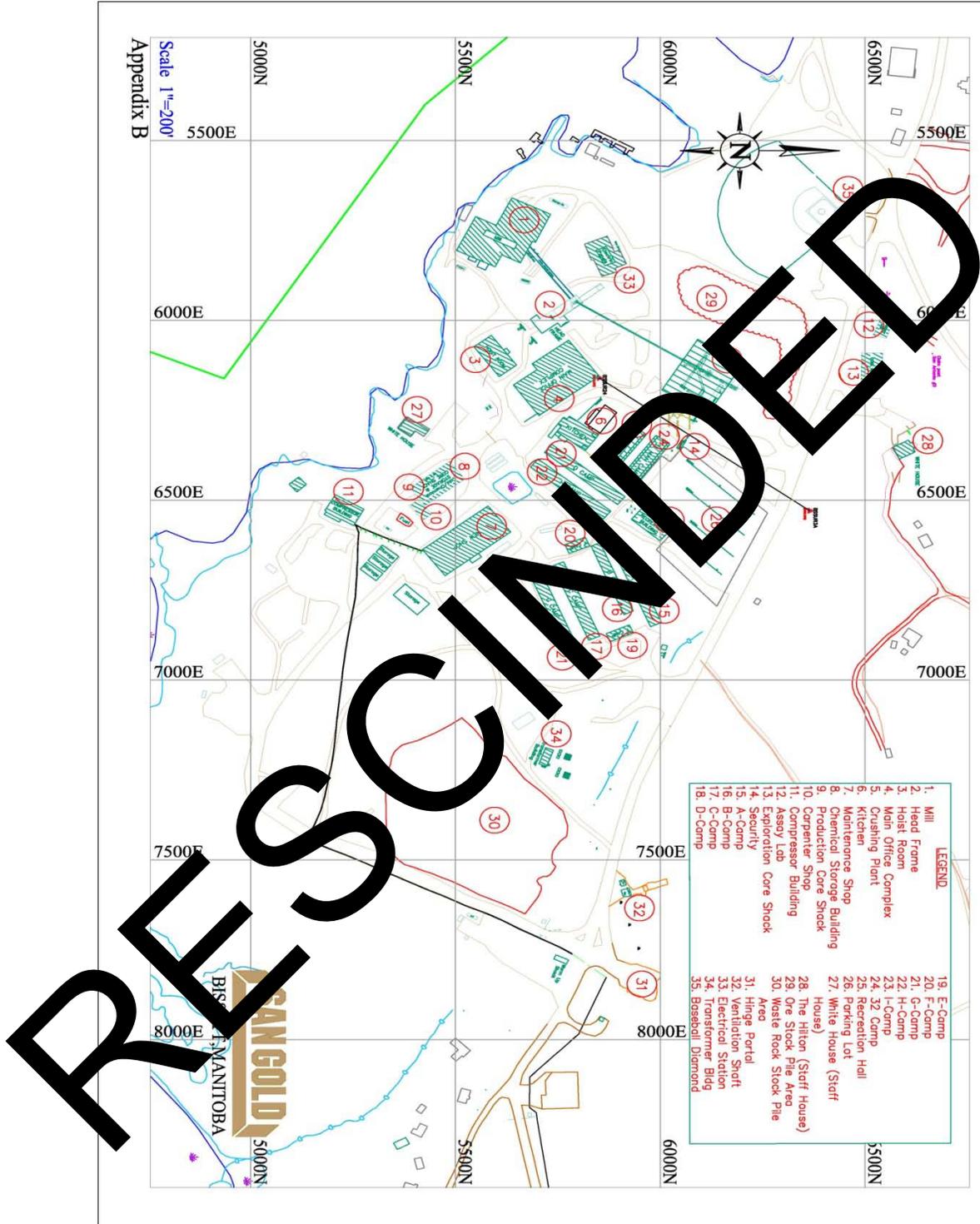
**Appendix A of Environment Act Licence No. 2628RR**



Appendix: A

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

**Appendix B of Environment Act Licence No. 2628RR**



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

**Appendix C of Environment Act Licence No. 2628RR**

**Waste Rock Runoff Analytical Parameters**

<b>Inorganic Parameters</b>	<b>Metals</b>
pH	Total Arsenic
Conductivity	Total Cadmium
Total Dissolved Solids	Total Chromium
Total Suspended Solids	Total Copper
Turbidity	Total Lead
Colour	Total Mercury
Hardness	Total Nickel
Sodium	Total Iron
Dissolved Chloride	Total Selenium
Dissolved Magnesium	Total Silver
Dissolved Calcium	Total Zinc
Dissolved Potassium	
Bicarbonate	
Dissolved Sulphate	
Dissolved Fluoride	
Nitrate + Nitrite (as N)	
Total Phosphorus (as P)	

**These parameters are subject to change by the Director**

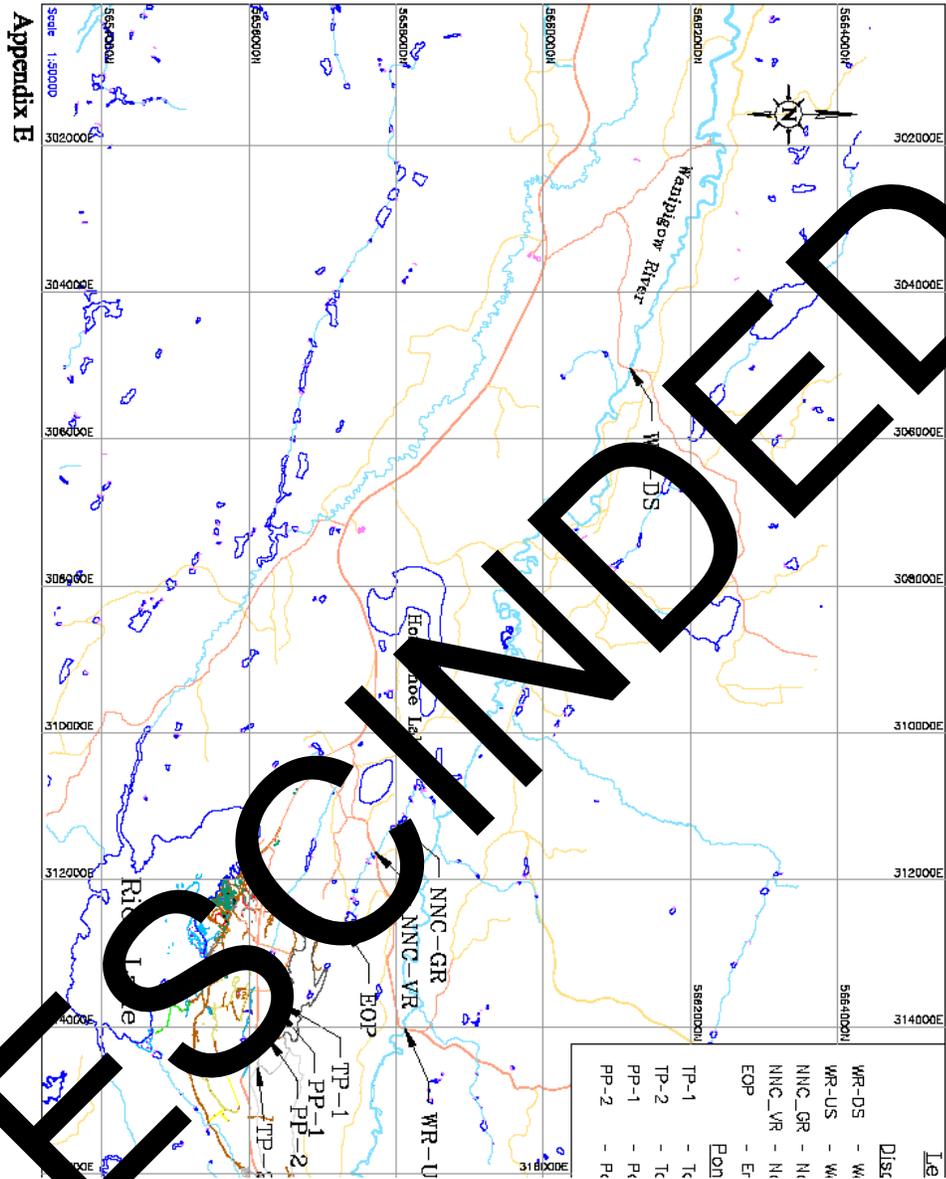
**Appendix D of Environment Act Licence No. 2628RR**

**Groundwater, Mine Water and Effluent Analytical Parameters**

pH
Conductivity
Hardness
Alkalinity
Dissolved Calcium
Dissolved Magnesium
Sodium
Dissolved Potassium
Dissolved Sulphate
Dissolved Chloride
Bicarbonate
Total Suspended Solids
Total Phosphorus
Total Nitrate Nitrogen
Total Ammonia (as N)
Total and Free Chlorine
Total Free and Weak Acid Dissociation (WAD) Cyanide

**These parameters are subject to change by the Director**

**Appendix E of Environment Act Licence No. 2628RR**



## Appendix F of Environment Act Licence No. 2628RR

### Soil Sampling:

1. The Licencee shall provide a drilling rig, acceptable to the designated Environment Officer, to extract soil samples from the liner which is not placed or found at the surface of the lagoon structure. This includes all wastewater treatment lagoons constructed with clay cutoffs at the interior base of the dyke or with a clay cutoff in the centre of the dyke. The drill rig shall have the capacity to drill to the maximum depth of the clay cutoff plus an additional 2 metres. The drill rig shall be equipped with both standard and hollow stem augers. The minimum hole diameter shall be 5 inches.
2. For lagoon liners placed or found at the surface of the lagoon structure the Licencee shall provide a machine, acceptable to the designated Environment Officer, capable of pressing a sampling tube into the liner in a straight line motion along the central axis line of the sample tube and without sideways movement.
3. Soil samples shall be collected and shipped in accordance with ASTM Standard D 1587 (Standard Practice for Thin-Walled Tube Sampling of Soils), D 4220 (Standard Practice for Preserving and Transporting Soil Samples) and D 5550 (Standard Practice for Ring-Lines Barrel Sampling of Soils). Thin-walled tubes shall meet the stated requirements including length, inside clearance ratio and corrosion protection. An adequate venting area shall be provided through the sampling head.
4. At the time of sample collection, the designated Environment Officer shall advise the Licencee as to the soil testing method that must be used on each sample. The oedometer method may be used for a sample where the Environment Officer determines that the soil sample is taken from undisturbed clay soil which has not been remoulded and which is homogeneous and unweathered. The triaxial test shall be used for all samples taken from disturbed and remoulded soils or from non homogenous and weathered soils.
5. The Licencee shall provide a report on the collection of soil samples to the designated Environment Officer and to the laboratory technician which includes but is not limited to: a plot plan indicating sample location, depth or elevation of sample, length of advance of the sample tube, length of soil sample contained in the tube after its advancement, the soil test method specified by the Environment Officer for each soil sample and all necessary instructions from the site engineer to the laboratory technician.
6. All drill and sample holes shall be sealed with bentonite pellets after the field drilling and sampling has been completed.

### Soil Testing Methods:

1. Triaxial Test Method

- a) The soil samples shall be tested for hydraulic conductivity using ASTM D 5084 (Standard Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter).
- b) Soil specimens shall have a minimum diameter of 70 mm (2.75 inches) and a minimum height of 70 mm (2.75 inches). The soil specimens shall be selected from a section of the soil sample which contains the most porous material based on a visual inspection. The hydraulic gradient shall not exceed 30 during sample preparation and testing. Swelling of the soil specimen should be controlled to adjust for: the amount of compaction measured during sample collection and extraction from the tube and the depth or elevation of the sample. The effective stress used during saturation or consolidation of the sample shall not exceed 40 kPa (5.7 psi) or the specific stress level, that is expected in the field location where the sample was taken, whichever is greater.
- c) The complete laboratory report, as outlined in ASTM D 5084, shall be supplied for each soil sample collected in the field.

2. Oedometer Test Method

- a) The soil samples shall be tested for hydraulic conductivity using ASTM D 2435 (Standard Test Method for One-Dimensional Consolidation Properties of Soils).
- b) Soil specimens shall have a minimum diameter of 50 mm (2 inches) and a minimum height of 20 mm (0.8 inches). The soil specimens shall be selected from a section of the soil sample which contains the most porous material based on a visual inspection. The soil specimen shall be taken from an undisturbed soil sample. The soil specimen shall be completely saturated.
- c) The complete laboratory report, as outlined in ASTM D 2435, shall be supplied for each soil sample collected in the field.