Manitoba
Environment and Climate
Environmental Approvals Branch
14 Fultz Boulevard (Box 35)
Winnipeg MB R3Y 0L6
T 204 945-8321 F 204 945-5229
EABDirector@gov.mb.ca

File No.: 6073.00

March 6, 2023

Jennifer Abols
Director, Projects
Brookfield Place, 181 Bay Street, Suite 3910
Toronto Ontario M5J 2T3
Jabols@alamosgold.com

Dear Jennifer Abols:

Re: Environment Act Licence No. 3391

Please find enclosed Environment Act Licence No. 3391 in response to your proposal dated August 17, 2020, and additional information dated December 21, 2020. You wish to develop MacLellan Gold Mine approximately 8 km northeast of Lynn Lake within the administrative boundary of the Town of Lynn Lake.

Alamos Gold Inc. must follow all licence requirements and federal, provincial, and municipal regulations and by-laws. The licensee must get approval from the director per The Environment Act to alter the development.

Anyone affected by this decision may appeal, in writing, to the Minister of Environment and Climate at minec@leg.gov.mb.ca by April 5, 2023. The licence is available on the public registry at https://www.gov.mb.ca/sd/eal/registries/index.html.

If you have any questions regarding this approval, please contact Nada Suresh, Acting Provincial Manager, Environmental Compliance and Enforcement Branch at ECEPM@gov.mb.ca or 204-945-8214.

Sincerely,

Original Signed By

Siobhan Burland Ross
A/Director

Enclosure

c. Nada Suresh

THE ENVIRONMENT ACT
LOI SUR L'ENVIRONNEMENT

LICENCE

File No.: 6073.00

Licence No. / Licence n°: 3391
Issue Date / Date de délivrance : March 6, 2023

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 Section 11(1) / Conformément au Paragraphe 11(1)

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

ALAMOS GOLD INC.; "the licensee"

for the construction and operation of the development of a 7,500 tonnes per day open pit gold mine, a 8,250 tonnes per day ore milling and processing facility, 200 cubic meter per day wastewater treatment plant, tailings management area and supporting infrastructure (commonly referred to as the MacLellan Gold Mine) (Figure 1) located approximately 8 km northeast of Lynn Lake (14U 380900E 6307500N) within the administrative boundary of the Town of Lynn Lake in accordance with the proposal information filed under The Environment Act on August 17, 2020, and additional information dated December 21, 2020, and subject to the following specifications, limits, terms and conditions:

DEFINITIONS

In this licence,

"accredited laboratory" means an analytical facility accredited by the Standards Council of Canada (SCC), or accredited by another accrediting agency recognized by Manitoba Environment and Climate 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;

"ambient concentration" means the measurement of a substance contained in an air sample (corrected to a temperature of 25° C and to a pressure of 101.3 kilopascals) which has been collected from any point beyond the property line of the development;

"AP" means the maximum acid-generation 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;

"approved" means approved by the director or assigned environment officer in writing;

"CCME" means the Canadian Council of Ministers of the Environment;

"Closure Plan" means a plan indicating the actions to be taken for the closure of the development;

"composite sample" means as defined in the federal Metal and Diamond Mining Effluent Regulations (MDMER);

"contact water" means water, surface water and/or groundwater water that contacts mine workings or interacts with mine rock material and may also include dewatering associated with the development;

"contaminant" means a contaminant as defined in The Dangerous Goods Handling and Transportation Act;

"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;

"contractor" means any party entered into a contract with the licensee;

"dangerous good" means a product, substance or organism as defined in The Dangerous Goods Handling and Transportation Act, or any amendments thereto;

"day" or "daily” means any 24-hour period;

"director" means an employee so designated pursuant to The Environment Act;

"Director of Mines" means the director of the branch responsible for administration of The Mines and Minerals Act or any amendments thereto;

“Director of Wildlife” means the director of the branch responsible for the administration of The Wildlife Act or any amendments thereto;

"effluent" means mine water released from the development into the environment;

"EEM" means Environmental Effects Monitoring as defined in the federal Metal and Diamond Mining Effluent Regulations (MDMER);

"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 designated pursuant to The Environment Act;

"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 and Diamond Mining Effluent Regulations (MDMER);

"groundwater" means water below the ground surface in a zone of saturation;

"hazardous waste" means a product, substance or organism as defined in The Dangerous Goods Handling and Transportation Act, or any amendments thereto;

"industrial wastewater" means wastewater derived from an industry which manufactures, handles or processes a product and does not include wastewater from commercial and residential buildings;

"Mine Environment Neutral Drainage (MEND)" means the Mine Environment Neutral Drainage report Price, W.A. 2009. Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials, Report prepared for MEND. Report 1.20.1, p. 1-579, or future amendment thereto;

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

"mine" means any of the surface and sub-surface workings, overburden, mine rock and ore stockpiles, 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 rock” means rock containing insufficient mineral value to the development, excepting such rock which is inadvertently present in mined ore;

"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 contaminated runoff or leachate from ore or mine rock stockpiles exposed to precipitation, or polluted mine site runoff, or any combination thereof, but excluding sewage;

"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 clauses (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 2, 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;

"non-contact water" means water which does not contact mine workings and/or interact with mine rock material;

“NP” means the maximum neutralizing potential, expressed as tonnes of $CaCO_3$ 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; 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 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;

"opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background;

"ore" means mineralized rock containing sufficient mineral value for the purposes of this development;

"ore processing facility" means the main ore processing facility structure;

"PAG" means potentially-acid generating;

"particulate matter" means any finely divided liquid or solid matter other than water droplets;

"particulate residue" means that part or portion of an atmospheric emission which is deposited onto a surface;

"PM10" means particulate matter that is 10 micrometres (µm) or less in diameter;

"PM2.5" means particulate matter that is 2.5 micrometres (µm) or less in diameter;

"point source" means any point of emission from the development where pollutants are emitted to the atmosphere by means of a stack;

"pollutant" means a pollutant as defined in The Environment Act;

"potentially acid-generating" means having the potential or uncertain ability to generate acid as indicated by a NPR of 2 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;

"process wastewater" means a liquid stream, containing or comprised of process water or any chemicals used by the development, which is designated for release into the environment;

"QA/QC" means quality assurance/quality control;

"record drawings" means engineering drawings complete with all dimensions which indicate all features of the development as it has actually been built;

"restoration" means the re-establishment of the site of the development with characteristics as close as possible to pre-development conditions;

"sewage" means human body, toilet, liquid, waterborne culinary, sink or laundry waste;

"SDS" means safety data sheet;

"solid waste" means solid waste as defined in Manitoba Regulation 37/2016, or any future amendments thereto, respecting waste disposal grounds, excluding mine rock;

"stack" means a duct, pipe, chimney, vent, opening or other structure through which pollutants are emitted to the atmosphere;

"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 runoff" means any overland flow of liquid off the developed area;

“WAD” means weak acid dissociable;

"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 37/2016, or any future amendments thereto, or a licence pursuant to The Environment Act;

"wastewater" means the spent or used water of a community or industry which contains dissolved and suspended matter;

"wastewater collection system" means the sewer and pumping system used for the collection and conveyance of domestic, commercial and industrial wastewater;

"wastewater treatment plant" means the component of this development which consists of the central facility of the wastewater treatment facilities which contains all treatment processes exclusive of the wastewater collection system; 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 and Diamond 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 and Diamond Mining Effluent Regulations, then the most stringent limit, term, or condition shall apply.

Future Sampling

1. In addition to any of the limits, terms and conditions specified in this licence, the licensee 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, treatment, handling, 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;
   c) conduct specific investigations in response to the data gathered during environmental monitoring programs; or
   d) 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 licensee 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 current 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 of, and preservation and analyses on, soil, compost, 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.

Reporting Format

3. The licensee shall submit all information required to be provided to the director or environment officer under this licence, in written and electronic format, in such form (including number of copies) and of such content as may be required by the director or environment officer, and each submission shall be clearly labeled with the licence number and file number associated with this licence.

Equipment Breakdown

4. The licensee 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 the 24-hour environmental accident reporting line at 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 licensee 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.

Safety and Security

6. The licensee 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 SDS sheets available to an environment officer upon request.

7. The licensee shall prepare, within 60 days prior to construction, and maintain an emergency response contingency plan in accordance with the Canadian Centre for Occupational Health and Safety “Emergency Response Planning Guide” or other emergency planning guidelines acceptable to the director.

8. The licensee shall implement and continually maintain in current status, an Environmental Management System (EMS) for the development which is acceptable to the director.

Fire Reporting

9. The licensee shall, in the event of a fire which continues in excess of thirty (30) minutes or requires fire suppression assistance from personnel outside of the facility (example: fire department):
   a) call the fire department; and
   b) report the fire by calling the environmental emergency reporting line (204-944-4888 or toll free 1-855-944-4888), identifying the type of materials involved and the location of the fire.

Sewage Treatment

10. The licensee shall direct all sewage generated at the development to the wastewater treatment plant or other approved wastewater treatment facilities.

Environmental Coordinator

11. The licensee shall designate an employee, within 60 days prior to construction, as the licensee's environmental coordinator, whose job description will include assisting the licensee in complying with the limits, terms and conditions in this licence and assisting senior management of the licensee to manage environmental issues at the development. The name of the environmental coordinator shall be submitted in writing to the director within 14 days of appointment and any subsequent appointment.

Future Studies

12. The licensee shall actively participate in any future watershed based management study, plan or nutrient reduction program, approved by the director, for the development area.

Respecting Complaint Handling

13. The licensee shall:
   a) prior to operation of the development, prepare and maintain a complaint handling process acceptable to the director;
   b) manage all complaints in accordance with the complaint handling process; and
   c) maintain complaint records at the development and make available for review upon request by an environment officer.

Environmental Advisory Committee

14. The licensee shall maintain an Environmental Advisory Committee (EAC) in accordance with terms of reference established with local Indigenous Nations engaged on the project. The terms of reference must include reviewing environmental management and monitoring plans and sharing annual reports. At minimum, one meeting per year shall be open to the public and a summary of the meeting shall be submitted to the director.

Compliance

15. The licensee shall adhere to the commitments made in the proposal and in additional information submitted during the environmental assessment review and approved pursuant to this licence during construction and operation of the development.

16. The licensee shall submit a notice of alteration and obtain director's approval for proposed changes to the development as licensed prior to implementing any changes.

SPECIFICATIONS, LIMITS, TERMS AND CONDITIONS

Respecting the Environmental Management and Monitoring Plans

17. The licensee shall prepare, implement and continuously maintain in current status, the following plans for the development in a manner acceptable to the director:
    a) Soil Management and Rehabilitation Plan;
    b) Noise and Vibration Monitoring Plan;
    c) Greenhouse Gas Management Plan;
    d) Emergency Response and Spill Prevention and Contingency Plan;
    e) Waste Management Plan;
    f) Explosives Management Plan;
    g) Heritage and Cultural Resources Protection Plan;
    h) Vegetation and Weed Management Plan;
    i) Environmental Effects Monitoring Plan;
    j) Air Quality Management and Monitoring Plan;
    k) Mine Rehabilitation Plan;
    l) Erosion and Sediment Control Plan; and
    m) Acid Rock Drainage and Metal Leaching Management and Monitoring Plan.

18. The licensee shall, prior to construction of the development:
    a) prepare and submit to the Director of Wildlife for approval, a Wildlife Monitoring and Management Plan and implement the plan in accordance with the Director of Wildlife's approval;
    b) submit to the Director of the Environmental Approvals Branch for approval a report summarizing the activities taken and proposed to be taken regarding clause 35 of this licence.

19. The licensee shall, prior to operation of the development:
    a) prepare and submit to the director for approval, the following comprehensive environmental management plans:
        i) Surface Water Monitoring and Management Plan;
        ii) Fish Habitat Offsetting Plan;
        iii) Fish Salvage Plan;
        iv) Aquatic Effects Monitoring Program;
        v) the Groundwater Management and Monitoring Plan;

b) implement the environmental management plans in accordance with the Director of the Environmental Approvals Branch's approval; and
c) prepare air pollution control device manuals in accordance with clause 52 of this licence.

Respecting Caribou Monitoring

20. The licensee shall, in addition to the Wildlife Monitoring and Management Plan specified in clause 18 of this licence
    a) prior to construction of the development, enter into a collaborative collaring project and associated contribution agreement with Manitoba Natural Resources and Northern Development for the purpose of developing a monitoring, assessment and mitigation plan for caribou, for approval by the Director of Wildlife; and
    b) within five years of the date of this licence, in collaboration with the Environmental Advisory Committee, assess the data collected per clause 20 a) of this licence incorporating Traditional Knowledge. If required, prepare an action plan for caribou habitat management and submit it to the Director of Wildlife for approval.

Respecting Construction

21. The licensee shall notify the designated environment officer not less than two weeks prior to beginning of construction activities at the development. The notification shall include the intended starting date of construction and the name of the contractor responsible for the construction.

22. The licensee shall restrict construction and operational activities to only such lands to which the licensee possesses the mineral rights, surface rights or complete ownership, or which the licensee 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 licensee.

23. The licensee shall dispose of non-reusable construction debris and solid waste from the development at a waste disposal ground operating under the authority of a permit issued pursuant to Manitoba Regulation 37/2016 respecting Waste Management, or any future amendment thereof, or a licence issued pursuant to The Environment Act.

24. The licensee shall, during construction of the development, operate, maintain and store all materials and equipment in a manner that prevents any deleterious substances (fuel, oil, grease, hydraulic fluids, coolant, paint, uncured concrete and concrete wash water, etc.) from entering watercourses, and have an emergency spill kit for in-water use available on site during construction.

25. The licensee shall not locate any petroleum storage tank within 100 metres of the shoreline of any waterway or water body.

26. The licensee shall, with respect to on-site earthen construction works, construct and maintain silt fences or other suitable erosion and sediment controls in the drainage routes transporting surface runoff off the property of the development until vegetation has been re-established on the disturbed areas.

27. The licensee shall, during construction and maintenance of the development, prevent the introduction and spread of foreign aquatic and terrestrial biota by cleaning equipment prior to its delivery to the site of the development in accordance with the requirements of Regulation 173/2015 respecting Aquatic Invasive Species, or any future amendment thereof.

28. The licensee shall not remove, destroy or disturb species unless otherwise authorized pursuant to Manitoba Regulation 25/98, respecting Threatened, Endangered and Extirpated Species, or any future amendment thereof, and pursuant to the federal Species at Risk Act.

29. The licensee shall not undertake construction or maintenance activities in connection with the development in fish bearing waters or potentially fish bearing waters between April 15 and June 30 of any year or during periods of high stream flow, unless otherwise authorized by the director.

Approvals and Permits

30. The licensee shall obtain all necessary federal, provincial and/or municipal licences, authorizations, permits and/or approvals for construction and operation of the development.

Respecting the General Operation of the Development

31. The licensee shall implement a high standard of equipment maintenance and good housekeeping and operational practices with respect to the development, at all times.

32. The licensee shall reclaim and recycle as much spent water and process water as practicable to supply the process water demands of the milling and processing facility.

Respecting Heritage and Cultural Resources

33. The licensee shall comply with the requirements of The Heritage Resources Act and a heritage resource protection plan will be developed for lifetime of the project to guide on-site operations and, if heritage resources are encountered during the construction of the development, suspend construction and immediately notify the Historic Resources Branch.

34. The licensee shall notify local Indigenous Nations engaged on the project should heritage or cultural resources be uncovered within the project area of the development.

35. The licensee shall, in an effort to eliminate or mitigate potential impacts to heritage or cultural resources, provide training and guidance, acceptable to the Director of the Historic Resources Branch, on recognizing cultural and/or sensitive sites to all employees and contractors working at the development.

Respecting Chemical Storage and Spill Containment

36. The licensee shall provide containment for all vessels containing chemicals in each area of the development where the chemicals are stored, loaded, transferred, used or otherwise handled, in compliance with the National Fire Code of Canada (2020), or any future amendment thereof, such that any product leakage or spillage and any contaminated liquid generated is contained within the development and contamination of groundwater and surface water is prevented.

37. The licensee shall install and maintain spill recovery equipment at the development at all times.

Respecting Solid Wastes

38. The licensee shall not undertake any on-site burning of solid waste, unless otherwise authorized by an environment officer.

39. The licensee shall dispose of solid waste from the development at a waste disposal ground operating under the authority of a permit issued pursuant to Manitoba's Waste Management Regulation, or any future amendment thereof, or a licence issued pursuant to The Environment Act.

Respecting Dangerous Goods or Hazardous Waste

40. The licensee shall not release dangerous goods or hazardous wastes into the wastewater collection system.

41. The licensee shall comply with all the applicable requirements of:
    a) Manitoba's Storage and Handling of Petroleum Products and Allied Products Regulation or any future amendment thereof;
    b) The 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
    c) the Office of the Fire Commissioner – Province of Manitoba.

42. The licensee 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.

Respecting Mine Rock

43. The licensee shall treat all mine rock at the development as potentially acid-generating rock unless and until it is proven to be non-acid generating through analytical testing or as otherwise approved by the director.

44. The licensee shall:
    a) not use, nor release to any person, any contaminated soil, or potentially acid-generating rock/materials, as a construction material, unless the material is placed where it will not be subject to oxidation; and

b) undertake such remedial work as may be specified by the director should any of the construction materials used by the licensee in the course of constructing or altering this development be determined to be contaminated soil or acid generating rock/material.

Respecting Operation of the Wastewater Treatment Plant

45. The licensee shall obtain and maintain classification of the wastewater treatment plant pursuant to the Water and Wastewater Facility Operators Regulation or any future amendment thereof and maintain compliance with all requirements of the regulation including, but not limited to, the preparation and maintenance of a table of organization, emergency response plan and standard operating procedures.

46. The licensee shall carry out the operation of the wastewater treatment plant with individuals properly certified to do so pursuant to the Water and Wastewater Facility Operators Regulation or any future amendment thereof. In the event that the wastewater treatment plant is reclassified pursuant to the regulation, the licensee shall provide a development plan to the director to have certified operator(s) upgrade their certification.

47. The licensee shall operate and maintain the wastewater treatment plant in such a manner that:
    a) the organic loading on the wastewater treatment plant, as indicated by the five-day biochemical oxygen demand, is not in excess of 2.5 kilograms per day; and
    b) the hydraulic loading on the wastewater treatment plant is not in excess of 200 cubic metres for any 24-hour period.

48. The licensee shall not discharge effluent from the wastewater treatment plant, where:
    a) the organic content of the effluent, as indicated by the five-day carbonaceous biochemical oxygen demand (CBOD5), is in excess of 25 milligrams per litre;
    b) the total suspended solids content of the effluent, as indicated by the non-filterable residue, is in excess of 25 milligrams per litre;
    c) the fecal coliform or E. coli content of the effluent, as indicated by the MPN index, is in excess of 200 per 100 millilitres of sample, as determined by the monthly geometric mean of 3 grab samples collected at equal time intervals once each week;
    d) the total phosphorus content of the effluent is in excess of 1.0 milligram per litre, as determined by the thirty-day rolling average; and
    e) concentration of unionized ammonia is in excess of 1.25 mg/L, expressed as nitrogen (N), at 15°C ± 1°C.

49. The licensee shall dispose of waste solids and sludge from the wastewater treatment plant at an approved waste management facility or at another wastewater treatment facility approved by the director for this material.

50. The licensee shall, if chlorine is used as a disinfecting agent:
    a) notify the environment officer in advance;
    b) dechlorinate effluent prior to discharge if concentrations exceed those specified in clause 50 (d);
    c) obtain grab samples prior to and daily during the discharge period and have them analyzed for total residual chlorine; and
    d) not discharge effluent where the concentration of the total residual chlorine is in excess of 0.02 milligrams per litre.

Respecting Air Pollution Control Devices

51. The licensee shall direct all air streams, which contain a pollutant(s) of concern to the director, to a pollution control device which has been designed for and demonstrated to be capable of reducing, altering, eliminating or otherwise treating the pollutant(s).

52. The licensee shall prepare, prior to commissioning of the facility for operation, and maintain the following manuals which shall be kept at the development and available for review upon request by an environment officer:
    a) a standard operating procedural manual and a maintenance schedule for each air emission pollution control device based on the manufacturer's specifications and recommendations;
    b) an updated standard operating procedural manual and a maintenance procedure for each air emission pollution control device within 120 days of the addition, elimination or change regarding any air emission control device; and
    c) a copy of the manufacturer operational and maintenance manual.

53. The licensee shall not operate any process directing an emission to an air pollution control device at the development unless:
    a) the operating and maintenance measures and status of the device are in full compliance with the procedures and timetables as per clause 52;
    b) all emissions from the process are directed to the fully operational air pollution control device;
    c) all discharges of treated emissions from the air pollution control devices are immediately directed to a stack; and
    d) the emissions do not contain concentrations of pollutants which:
        i) are in violation of any other applicable legal instrument including an act, regulation or by-law; or
        ii) otherwise create a significant negative environmental or health impact in the affected area.

54. The licensee shall maintain a log of the most recent 24 month period to record any downtime of an air pollution control device due to either the breakdown or maintenance of that air pollution control device. The log shall be kept at the development and shall be available upon request for inspection by an environment officer. The log shall record, at minimum, the following information:
    a) identification of the air pollution control device and the process(es) it serves;
    b) time/date of log entry;
    c) nature of event;
    d) time and duration of event;
    e) action taken;
    f) the accumulated downtime of this air pollution control device for the events for each calendar year; and
    g) approval of the environmental coordinator.

55. The licensee shall handle, store and dispose of all pollutants collected by the air pollution control equipment in a manner suitable to their characterization as type of waste or dangerous good.

Respecting Air Emissions

56. The licensee shall, following commissioning, not emit particulate matter from the development such that:
    a) particulate matter:
        i) exceeds 0.23 grams per dry standard cubic metre calculated at 25 degrees Celsius and 760 millimetres of mercury, corrected to 12 percent carbon dioxide for processes involving combustion, from any point source of the development;
        ii) exhibits a visible plume with an opacity of greater than five percent at any point beyond the property line of the development; or
        iii) results in the deposition of visible particulate residue at any time beyond the property line of the development; or
    b) opacity from any point source of the development equals or exceeds:
        i) 20 percent as the average of any 24 consecutive opacity observations taken at 15 second intervals;
        ii) 20 percent for more than 16 individual opacity observations within any 1 hour period; or
        iii) 40 percent for any individual opacity observation.

57. The licensee 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.

58. The licensee 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 specify to eliminate or mitigate a noise nuisance.

Respecting Air Emissions – Monitoring, Source Sampling, Analysis, Reporting

59. The licensee shall, upon written request by the director, provide and maintain a stack or stacks including all necessary sampling facilities for the sampling of air emissions at the development. The stack or stacks shall be provided:
    a) at a location(s) and within a time frame satisfactory to the director; and
    b) to the specifications and in accordance with the most recent version of Manitoba Environment and Climate Guideline, Guideline for Stack Sampling Facilities, unless otherwise approved by the director.

60. The licensee, upon a written request from the director, shall submit a detailed plan for any area of the development which is acceptable to and approved by the director, for the sampling and analysis of potential air pollutants, released as stationary point and fugitive emissions, including any compounds determined by the director. The plan shall identify the rationale for the sampling, the ways and means by which the sampling program will be implemented including any special measures or methods which would be necessitated by influencing factors such as unfavourable weather conditions, the need for large or additional sample volumes, the need for multiple sampling runs, the methods used for the sampling and the analysis for each compound, the detection level to be attained, a comprehensive QA/QC program, and other items as may be identified by the director.

61. The licensee shall perform all stack sampling in accordance with the most recent version of Manitoba Environment and Climate Report No. 96-07, Interim Stack Sampling Performance Protocol, unless otherwise approved by the director.

62. The licensee shall arrange the scheduling of the sampling program submitted pursuant to clause 60 of this licence such that a representative of Manitoba Environment and Climate could be available to monitor and audit the implementation of the sampling program.

63. The licensee shall complete the sampling of emissions according to the approved plan submitted pursuant to clause 60 of this licence, within a timeframe to be determined by the director.

64. The licensee shall submit a report, for the approval of the director, of the completed sampling and analysis plan approved pursuant to clause 60 of this licence, within 90 days of the receipt of the analytical results of that sampling plan. The report shall contain at minimum:
    a) the raw data collected;
    b) calculation of emission rates for all parameters;
    c) a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis; and
    d) a discussion of the significance of the data gathered with specific attention to:
        i) the need for risk assessment of the impact of emissions;
        ii) the need for the establishment of ambient air monitoring stations;
        iii) the need for dispersion modeling of emissions;
        iv) results and conclusions of the QA/QC program; and
        v) other issues as may be determined by the director.

Respecting Tailings Management Area

65. The licensee shall not release any effluent into the environment from the MacLellan Tailings Management Area except through final discharge points identified in accordance with the Metal and Diamond Mining Effluent Regulations.

66. The licensee shall:
    a) design containment structures for the MacLellan Tailings Management Area in accordance with the Canadian Dam Association Dam Safety Guidelines (CDA 2013, 2014) or any future amendment thereto;
    b) inspect and maintain the condition of all the embankments used to contain any waste solids and mine water within the MacLellan Tailings Management Area to the satisfaction of the director; and
    c) investigate and correct any condition of deteriorated structural integrity or excessive seepage losses associated with the embankments in such a manner and within such a time frame as is satisfactory to the director.

67. The licensee shall not discharge any effluent from the final discharge points if:
    a) the quality of effluent as sampled at the final discharge point of the tailings management area exceeds the limits of Schedule 4, Table 1 of the Metal and Diamond Mining Effluent Regulations, or any amendment thereto, specifically:

Item	Deleterious Substance	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration in a Composite Sample	Maximum Authorized Concentration in a Grab Sample
1	Arsenic	0.10 mg/L	0.15 mg/L	0.20 mg/L
2	Copper	0.10 mg/L	0.15 mg/L	0.20 mg/L
3	Cyanide	0.50 mg/L	0.75 mg/L	1.00 mg/L
4	Lead	0.08 mg/L	0.12 mg/L	0.16 mg/L
5	Nickel	0.25 mg/L	0.38 mg/L	0.50 mg/L
6	Zinc	0.40 mg/L	0.60 mg/L	0.80 mg/L
7	Suspended Solids	15.00 mg/L	22.50 mg/L	30.00 mg/L
8	Radium 226	0.37 Bq/L	0.74 Bq/L	1.11 Bq/L
9	Un-ionized ammonia	0.50 mg/L expressed as nitrogen (N)	Not applicable	1.00 mg/L expressed as nitrogen (N)

and

b) if the quality of the undiluted effluent is such that it is acutely lethal to fish, as determined by clause 14 of the Metal and Diamond Mining Effluent Regulations.

Respecting the Site Water Management Pond

68. The licensee shall maintain a containment liner within the site water management pond at all times.

69. The licensee shall direct all collected contact water, including seepage and runoff from stockpiles, to the water management pond.

70. The licensee shall not release any effluent from the water management pond into the environment:
    a) other than through the final discharge point of the water management pond;
    b) if the effluent is acutely lethal, as defined in the MDMER;
    c) if the quality of the effluent is in non-compliance with the water quality criteria set out in Schedule 4 of the MDMER;
    d) where the quality of the effluent is having an adverse impact on or is likely to result in, a downstream degradation of the water quality, relative to the Manitoba Water Quality Standards, Objectives, and Guidelines, unless otherwise authorized; and
    e) when such a discharge would cause or contribute to flooding in or along the effluent drainage route.

71. The licensee shall take such corrective action and within such a time frame as is satisfactory to the director, to mitigate any seepage losses from the site water management pond, where such seepage losses and their quality are determined by the director to be unacceptable.

MONITORING AND REPORTING

Respecting Air Quality Monitoring

72. The licensee shall submit, upon the written request and for the approval of the director, a program for:
    a) the sampling, analysis and reporting of levels of pollutants, as determined by the director, at a selected location(s) beyond the property boundaries of the development; and
    b) the location, installation and operation of a meteorological monitoring station.

73. The licensee shall:
    a) implement the program approved pursuant to clause 72 of this licence within a timeframe stipulated by the director; and
    b) submit a report within 60 days of the receipt of the analytical results of the sampling program pursuant to clause 72 of this licence for the approval of the director containing at minimum:
        a) the raw data collected;
        b) a discussion of the sampling and analytical portions of the program including any anomalies of sampling and analysis; and
        c) a discussion of the significance of the data gathered with specific attention to:
            i) the need for risk assessment of the impact of emissions;
            ii) the need for the establishment of ambient air monitoring stations;
            iii) results and conclusions of the QA/QC program; and
            iv) other issues as may be determined by the director.

Respecting Wastewater Treatment Plant Sampling

74. The licensee shall:
    a) take one flow proportional composite sample of effluent from the effluent monitoring station during the discharge period once each month;
    b) take three grab samples of the effluent from the effluent monitoring station during the discharge period at equal time intervals once each week;
    c) have the flow proportional composite effluent sample analyzed for:
        i) carbonaceous biochemical oxygen demand (CBOD5);
        ii) total suspended solids;
        iii) ammonia;
        iv) total phosphorus;
        v) pH; and
        vi) temperature;
    d) have the grab samples analyzed for fecal coliform content or E.coli; and:

e) determine and record the monthly geometric mean for the fecal coliform or E. coli counts based on all the data collected during each month, from a minimum of twelve (12) grab samples.

75. The licensee shall, during the first year of operation of the wastewater treatment plant, following the issuance of this licence, that a discharge must occur, obtain and analyze grab samples of the effluent during each effluent discharge campaign and report the results of the analysis in accordance with Schedule A of this licence.

Respecting Effluent Quality Monitoring

76. The licensee shall conduct effluent monitoring in accordance with Schedule 3 and 5 of the MDMER.

Respecting Acid Rock Drainage Monitoring

77. The licensee shall, upon commencement of operation:
    a) conduct site specific testing and investigations for prediction of acid rock drainage chemistry in accordance with the Mine Environment Neutral Drainage (MEND) report or other methods approved by the director;
    b) assess the results of the investigations with respect to the NPR at the mine site; and
    c) submit testing and investigation results and conclusions to the director within three months of commencement of operation, for approval.

Respecting Annual Monitoring

78. The licensee shall during each year maintain the following records:
    a) the total volume (expressed as cubic metres) of wastewater pumped to the Tailings Management Area;
    b) the wastewater sample dates from the wastewater treatment plant;
    c) the original copies of laboratory analytical results of the sampled wastewater from the wastewater treatment plant and site water management pond;
    d) the monthly average and peak milling production rates (expressed as tonnes/day) at the development;
    e) the total volume (expressed as cubic metres) of process water recycled within the development;
    f) the total volume of ore (expressed as tonnes/day) mined from the development;
    g) the total volumes of mine rock (expressed as tonnes) stored on site at the development;
    h) the updated organization charts identifying all certified wastewater treatment plant operators, including backup operators;
    i) equipment maintenance and repairs; and
    j) other reporting as requested by the director.

79. The licensee shall submit an annual report to the environment officer by February 28 of the following year including all records required by clause 78 of this licence.

Respecting Mine Closure Reporting:

80. The Licensee shall:
    a) provide the director with:
        i) written notice six 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; 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 of Mines.

Respecting Record Drawings

81. The Licensee shall:
    a) prepare "record drawings" for the wastewater treatment plant and processing facility and shall label the drawings "Record Drawings";
    b) prepare an updated development site plan upon completion of construction; and
    c) provide to the director, within one year following completion of construction of development, one electronic copy of the "record drawings" and site plan.

REVIEW AND REVOCATION

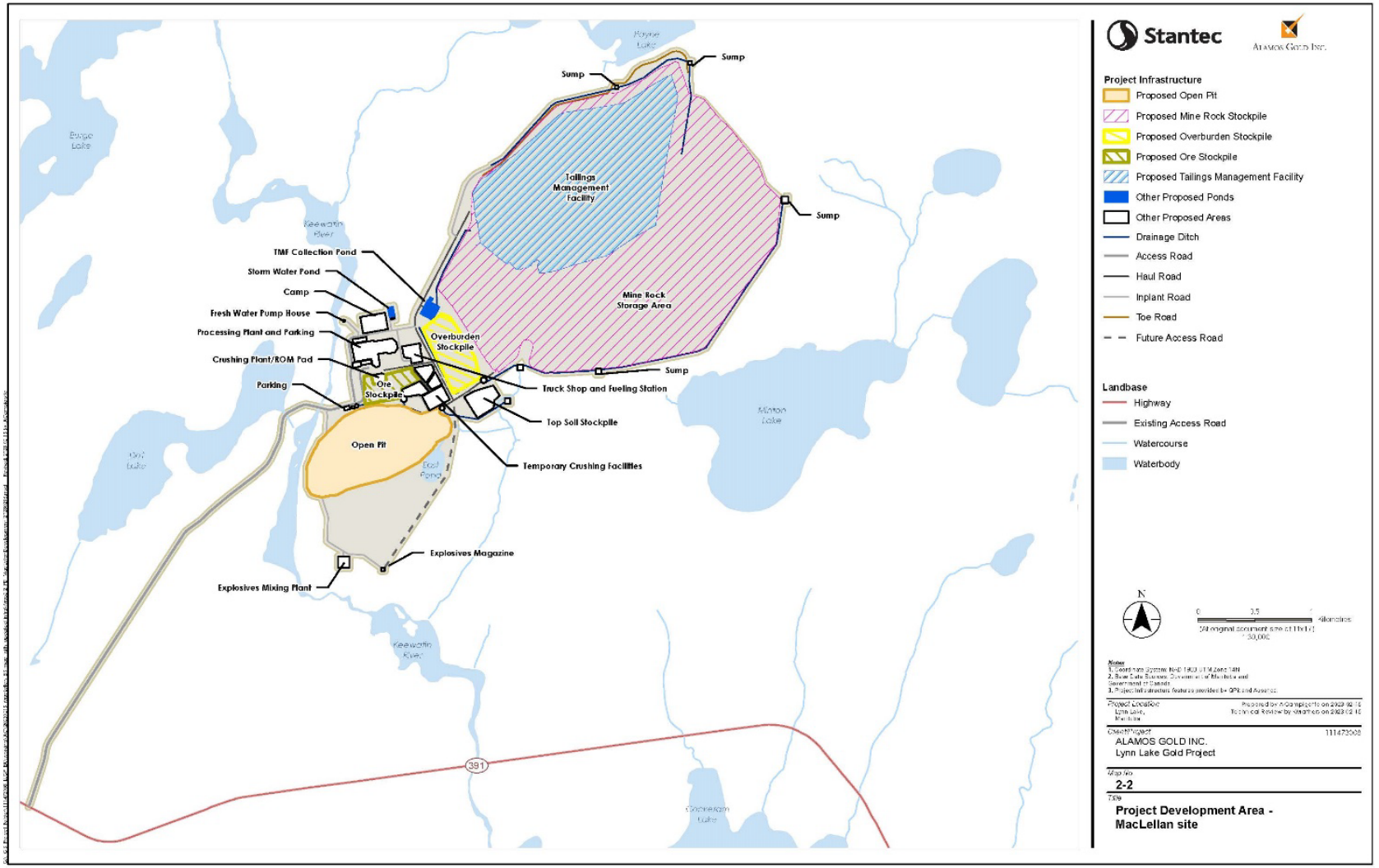
A. If, in the opinion of the director, the licensee has exceeded or is exceeding or has or is failing to meet the specifications, limits, terms, or conditions set out in this licence, the director may, temporarily or permanently, revoke this licence.

B. 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 or request the filing of a notice of alteration.

Original Signed By

Siobhan Burland Ross
Director
The Environment Act

FIGURE 1: MACLELLAN MINE AND PROCESSING FACILITY SITE MAP



SCHEDULE A TO ENVIRONMENT ACT LICENCE NO. 3391

Initial Characterization of Wastewater Pursuant to Clause No. 75

Facility Size: Very small (less than 500 m^3/day)
Facility Type: Wastewater treatment plant - continuous discharge

Effluent Sampling:

During the first year of operation:

1. a grab sample shall be collected on a monthly basis; and
2. a grab sample shall be collected on a daily basis, if chlorine is used.

Effluent Analysis:

1. Have the monthly sample analyzed for:
   a) the organic content as indicated by the five-day biochemical oxygen demand and expressed as milligrams per litre;
   b) the organic content as indicated by the five-day carbonaceous biochemical oxygen demand and expressed as milligrams per litre;
   c) the total suspended solids content expressed as milligrams per litre;
   d) the *Escherichia coli* (*E. Coli*) content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
   e) the fecal coliform content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
   f) the total coliform content as indicated by the MPN index and expressed as MPN per 100 millilitres per sample;
   g) total ammonia nitrogen expressed as milligrams per litre;
   h) nitrate-nitrite nitrogen expressed as milligrams per litre;
   i) total Kjeldahl nitrogen (TKN) expressed as milligrams per litre;
   j) dissolved phosphorus expressed as milligrams per litre;
   k) total phosphorus expressed as milligrams per litre;
   l) temperature; and
   m) pH.
2. Have the daily sample analyzed for total residual chlorine (TRC), if required.

Effluent Reporting:

1. Report the results to the director, in writing or in an electronic format acceptable to the director within 60 days of the sampling date. The report shall include the sampling date, sample temperature, the dates of the effluent discharge, and copies of the laboratory analytical results of the sampled effluent.