

**PROVINCE OF SASKATCHEWAN  
MINISTRY OF ENVIRONMENT  
NOTICE OF MINISTERIAL DECISION  
PURSUANT TO SECTION 15  
*THE ENVIRONMENTAL ASSESSMENT ACT***

**MCLVENNA BAY OPERATING LIMITED  
MCLVENNA BAY PROJECT**

**WHEREAS:**

- A. Pursuant to subsection 8(1) of *The Environmental Assessment Act* (the Act), Mcllvenna Bay Operating Limited (MBO, the proponent), a subsidiary of Foran Mining Corporation, applied for ministerial approval to construct, operate, and decommission a base and precious metals underground mine and surface processing facility on Crown land located 65 kilometres southwest of Creighton, Saskatchewan.
- B. Pursuant to section 10 of the Act, the Minister of Environment (the Minister) gave notice of the assessment to be conducted.
- C. Pursuant to clause 9(1)(b) of the Act, an environmental impact statement, consisting of a document entitled “Mcllvenna Bay Project Environmental Impact Statement” dated May 2023 (the statement), was submitted to the Minister.
- D. Pursuant to section 11 of the Act, the Minister has reviewed the statement and has made the statement and review available for public inspection.
- E. The Minister is satisfied that all the requirements of the Act have been met, including those required of the proponent, and has concluded that the development ought to be approved subject to terms and conditions.

**NOW THEREFORE TAKE NOTICE THAT**, pursuant to clause 15(1)(a) of the Act, Ministerial Approval is hereby given to the proponent to proceed with the development subject to the following terms and conditions:

- 1. The proponent shall proceed with the development in the manner described in the statement except where alterations are required by the subsequent terms and conditions of this approval.
- 2. The proponent shall inform the Minister, in the manner described in subsection 16(1) of the Act, of any change to the development that does not conform to the terms and conditions of this approval.

3. The proponent shall follow the requirements of the laws and regulations of the Province of Saskatchewan, respecting the design, construction, operation, maintenance and decommissioning of the development.
4. Where there is discrepancy between a condition of this approval and any document submitted by the proponent, the condition of this approval shall take precedence.
5. This approval is not an environmental approval with respect to any ancillary feature of this development, for example, but not limited to power transmission lines, natural gas pipelines and water supply lines and provincial or rural municipality roads, that is the responsibility of a party other than the Proponent. If required, such features will be considered under separate application to be submitted by the responsible party.
6. This approval is not an environmental approval with respect to ore transportation route Options 2 or 3 as outlined in the statement. The proponent shall take all reasonable measures to select an ore transportation route for the project that avoids travel through residential areas of Creighton, Saskatchewan and Flin Flon, Manitoba. Should the proponent select Options 2 or 3 as outlined in the statement or another route not outlined in the statement, it would be considered a change to the approved development and would require Ministerial Approval under Section 16 of the Act.
7. Either as part of a change request as outlined above or as a condition of this Ministerial Approval, the proponent shall complete an assessment of the selected ore transportation route prior to operation or upon selection of the ore transportation route, whichever is sooner. The scope of the assessment along with a final report shall be submitted for Ministry of Environment, Environmental Assessment and Stewardship Branch (hereinafter called “the ministry”) approval. The scope of assessment shall be specific to the proposed routing and consider:
  - a. engagement with interested parties, including the ministry, Saskatchewan Health Authority, Ministry of Highways, Peter Ballantyne Cree Nation and other impacted First Nation and Métis communities, and municipal governments;
  - b. completion of assessments outlined in Section 2.5.6 of the statement;
  - c. commitments to monitoring and mitigation measures that will be taken to avoid or minimize any identified effects including developing road upgrade and maintenance cost-sharing agreements with the Ministry of Highways and relevant municipal governments, as appropriate; and
  - d. preparation of a report that will be made available to the public.
8. Prior to operation, the proponent shall prepare and submit a monitoring plan for representative vegetation communities located within the project’s expected groundwater drawdown zone for ministry approval. The plan shall include a before-after-control-impact (BACI) field monitoring program incorporating assessment of potential effects of dewatering on vegetation communities. The proponent shall

report and develop appropriate mitigation for measurable impacts to vegetation communities and habitat through the monitoring program as part of the environmental performance report for the life of the project.

9. The proponent shall submit a revised woodland caribou mitigation and monitoring plan that utilizes site-specific information to evaluate effects to woodland caribou and includes a plan for habitat offsetting. The plan shall be submitted and approved by the ministry prior to operating the project.
10. Prior to initiating any site preparation and/or construction activities as described in the statement, the proponent shall develop a vegetation management and monitoring plan for construction and operation for ministry approval. The plan shall include mitigation and monitoring measures for provincially tracked plant populations in the surface lease area, measures to prevent the introduction and spread of weed and invasive species, and plans for monitoring and managing invasive and weed species populations in the surface lease area.
11. Prior to submission of an application for approval to operate the dry stack tailings storage facility or within two years of this Ministerial Approval, whichever is sooner, the proponent shall submit a report for ministry approval that provides the results of geochemical testing of the individual components of the cemented tailings paste backfill (including filtered sulphur and de-sulphurized tailings, binders, and cement tailings paste). The report shall include an updated hydrogeological model based on the completed geochemical testing.
12. Prior to submission of an application for an approval to construct the permanent mine water treatment plant or within two years of this Ministerial Approval, whichever is sooner, the proponent shall:
  - a. submit a report for ministry approval to validate the assumptions in the statement concerning the potential for acid generation of the waste rock. The report shall contain the results of completed static and kinetic testing of waste rock as well as an updated waste rock mass balance;
  - b. conduct a country foods study and submit an initial report as committed to in the statement for ministry approval. Parties outlined in the statement as well as the ministry and Saskatchewan Health Authority shall be engaged on the design and results of the study;
  - c. update the human health and ecological risk assessment for ministry review and approval. Parties outlined in the statement as well as the ministry and Saskatchewan Health Authority shall be engaged prior to updating the risk assessment as well as provided draft results for comment. The updated risk assessment shall include:
    - i. the constituents of potential concern based on the applicable and available results of the advanced exploration program, static and kinetic testing of cemented tailings paste backfill and its components, and static and kinetic testing of waste rock; and
    - ii. the initial country foods study report.

13. Treated water released from the project during all project phases shall not exceed the *Saskatchewan Environmental Quality Guidelines* without a risk assessment satisfactory to the Minister.
  
14. The proponent shall complete the Best Available Technology Economically Achievable (BATEA) study prior to the application of an approval to construct for the permanent mine water treatment plant or within two years of this Ministerial Approval, whichever is sooner. The report shall be completed in consultation with Peter Ballantyne Cree Nation and the proponent shall reasonably consider comments received from Peter Ballantyne Cree Nation prior to finalizing the report. The report shall be submitted to the ministry and made available to the public. The report must include, at a minimum, the following:
  - a. a description of study design basis and list of contaminants targeted for treatment;
  - b. a description of technologies considered and criteria selection;
  - c. a description and comparison of feasibility, reliability, and cost effectiveness of options considered;
  - d. a description of how results from studies conducted to address condition 12 of this approval have been considered;
  - e. a description of rationale for selected BATEA;
  - f. a description of estimated treated water quality; and,
  - g. a description of next steps towards design and implementation.
  
15. Prior to operation, the proponent shall conduct a quantitative assessment of potential noise effects on workers staying in the permanent camp. The results of the assessment along with a plan for mitigation, monitoring and reporting of any identified effects shall be submitted to the ministry for approval.
  
16. The development must commence within five years of the issuance date of this approval. If it has not commenced within five years of the issuance date of this approval, the Minister shall give the proponent 30 days to rectify the breach or to make representations as to why an extension of the five-year time period is warranted. If the breach is not rectified and an extension of time is not granted by the Minister, this approval expires.
  
17. This Ministerial Approval takes effect on the date of signing.

Dated at Regina, Saskatchewan this 24 day of July, 2023

ISSUED BY: original signed by  
 Dana Skoropad  
 Minister of Environment

**REASONS FOR DECISION  
MINISTERIAL APPROVAL  
PURSUANT TO SECTION 15  
*THE ENVIRONMENTAL ASSESSMENT ACT***

**MCILVENNA BAY OPERATING LIMITED  
MCILVENNA BAY PROJECT**

## **Introduction**

In February 2022, McIlvenna Bay Operating Limited (MBO, the proponent), a subsidiary of Foran Mining Corporation, submitted an application for the McIlvenna Bay Project (the project). MBO self-declared the project a “development” under *The Environmental Assessment Act* (the Act) and requested a ministerial decision under section 15 of the Act. Prior to receiving a decision, the project is required to undergo an environmental impact assessment (assessment). The assessment provides information needed by the Minister of Environment (the Minister) to determine if adequate environmental safeguards are in place for the proposed project to proceed and, if so, under what conditions.

MBO is proposing to construct, operate, and decommission a base and precious metals underground mine and surface processing facility located 65 kilometres southwest of Creighton, Saskatchewan. Project components will be contained within a Crown land mine surface lease located on the south shore of Winn and McIlvenna Bays of Hanson Lake and will be accessed from an existing road off Highway 106. The underground mine will be accessed from an existing decline and a future vertical production shaft. Once all necessary design criteria have been met, existing infrastructure including the ore and waste rock storage pad and containment pond infrastructure will be reutilized for the project. New surface infrastructure, including a primary crushing plant, surface mineral processing plant, paste backfill plant, dry stack tailings storage facility (tailings facility), permanent mine water treatment plant and water management ponds, and other supporting infrastructure such as a camp, will be constructed. Treated water will be transported by pipeline for release through a diffuser placed in Winn Bay.

## **Application of *The Environmental Assessment Act***

Under subsection 8(1) of the Act, a person shall not proceed with a “development” until ministerial approval has been received. The Act further sets out process requirements for the undertaking of the assessment.

In February 2022, MBO submitted a draft terms of reference, self-declared the project to be a development and requested approval under section 15 of the Act. Pursuant to section 10 of the Act, public notice of the assessment was shared in local newspapers and on social media channels in April 2022.

A draft environmental impact statement (statement) was received on November 10, 2022. Technical review of this document identified environmental and technical issues that required revisions and additional clarification before the assessment process could proceed. In May 2023, MBO submitted a revised statement for review; however, deficiencies remained in the statement and the ministry requested further information. On June 1, 2023, MBO submitted a final statement, and the statement was determined to contain adequate information to proceed with public review. Comments received during the technical and public review of the statement allow for an informed decision regarding the technical merits and potential environmental impacts of the project.

Ministerial decision options under subsection 15(1) of the Act are:

- (a) Give approval to proceed with the development and impose any terms and conditions considered necessary or advisable; or
- (b) Refuse to approve the development.

The ministry conducted a detailed analysis of all information presented in the statement. I have carefully considered this analysis and information in the course of reaching my decision on the project.

### **Duty to Consult**

The project triggered consultation with First Nation and Métis communities due to potential impacts to Crown lands and the resources required to hunt, fish and trap for food and carry out traditional uses. Potentially impacted First Nation and Métis communities were identified and notified by the ministry that an assessment was required for the project. Consistent with Saskatchewan's *First Nation and Métis Consultation Policy Framework* (framework), MBO was assigned procedural aspects of consultation. From April 2022 to May 2023, MBO worked to consult with communities to gather information on the potential for adverse impacts to Treaty and Aboriginal rights and traditional use of lands and resources (Rights). The review period for the statement provided an additional opportunity for First Nation and Métis communities to review the consultation record provided in the statement and identify any concerns.

Information sharing was conducted through meetings, emails, phone calls, and letters. Peter Ballantyne and Cumberland House Cree Nations completed traditional land use studies and participated in the review of the project's terms of reference and statement. MBO attempted to meet with Sandy Bay Métis Local 90; however, no meetings were held with community leadership and no impacts to Rights were identified. MBO met with and offered capacity to Opaskwayak Cree Nation and Métis Nation Saskatchewan (MNS) Eastern Region I (ERI) (as delegated to by Cumberland House Métis Local 42) for their participation in the consultation

process; however, no agreements were reached and no information on impacts to Rights was identified. The ministry did not receive responses regarding impacts to Rights from these communities.

Peter Ballantyne Cree Nation (PBCN) submitted a letter during the review period indicating their satisfaction with the consultation completed for the project. Primary outstanding concerns identified by PBCN related to selection of water treatment, water quality benchmark selection, and roadway infrastructure and safety. Accommodation measures that will be implemented by MBO include the development of an access management plan, completion of country foods and vulnerable persons studies, provision of funding for community monitoring, capacity for PBCN's participation in the review of environmental and socio-economic management plans, and sharing of project information over the life of the project. Conditions of this approval will also require MBO to complete a Best Available Technology Economically Achievable (BATEA) study for PBCN's review and input and meeting Saskatchewan Environmental Quality Guidelines for discharge water quality.

The ministry did not receive a response from Cumberland House Cree Nation (CHCN) during the review period; however, key issues identified by CHCN in the statement's consultation report include potential effects on water and water quality, fish and aquatic habitat, woodland caribou, harvested species, and wetland and alvar habitat. MBO has committed to continuing to engage CHCN on the woodland caribou mitigation and monitoring plan, access management plan and country foods study, and will share project information with CHCN over the life of the project. The mitigations outlined below will also reduce impacts to Rights.

The ministry considered the incremental contribution of the project to cumulative impacts on Rights from the taking up of Crown lands. Medium to long-term losses of Crown lands were assessed within 100 kilometres of the project using available information on existing Crown land leases, active forestry operations, public roadways, and reasonably foreseeable projects (including the Strong Pine Hanson Lake Silica Sand Project and the proposed SaskPower Pelican Narrows to Foran transmission line). Within this boundary, approximately 1.1 per cent of land is not currently available for the exercise of Rights and addition of the project lease would represent a minor contribution (0.03 per cent). The ministry recognizes that Crown work authorizations are not included in this estimate; however, regulatory permitting requirements are expected to avoid or result in short-term limitations to right of access. No significant cumulative effects on Rights are expected to result from the project.

Based on the information provided by First Nations and Métis communities and the conditions outlined in the Ministerial Approval, I am satisfied that the Government of Saskatchewan has fulfilled its duty to consult and accommodate. Any information received by communities after this decision will be considered by downstream

permitting agencies.

## **Engagement and Public Review**

MBO conducted meetings with the City of Flin Flon, Town of Creighton, and Northern Villages of Denare Beach, Cumberland House, Pelican Narrows, and Sandy Bay between March 2022 and April 2023. Community information sessions were held in April 2022 (Flin Flon) and January 2023 (Creighton). MBO also engaged with local health service providers and commercial land users. Key concerns identified included increased traffic and roadway safety along Highway 106 and through Creighton and Flin Flon, and potential impacts to housing, health services, water, and caribou as well as potential economic and employment opportunities.

Comments received from the public during the review period were considered in this decision. Key themes identified in the comments included concerns regarding potential changes to water quality, peatlands, greenhouse gas (GHG) emissions, woodland caribou, wildlife and wildlife habitat, socio-economic effects including roadway safety, impacts to traditional land use and human health, and the need to obtain free, prior and informed consent from Indigenous communities. A petition against the project, containing approximately 450 signatures, was also submitted. A letter was received from the Métis Nation - Saskatchewan expressing concerns about potential project impacts on the Rights of Métis citizens in the area. A letter of support representing the municipalities of Creighton, Flin Flon, and Denare Beach was also received.

## **Reasons for Decision**

I am satisfied that MBO has met all the requirements of the Act, thereby requiring a decision to be made pursuant to section 15 of the Act. Having made my decision to issue a Ministerial Approval, the Act requires me, pursuant to subsection 15(2), to state the reasons for the decision.

The statement submitted by MBO describes the project and the potential adverse impacts on the environment. Potential impacts considered and discussed in the statement included impacts to the terrestrial, aquatic, atmospheric and acoustic, heritage and socio-economic environments.

### *Terrestrial Environment*

Approximately 63 per cent of the 249 hectare (ha) project development area (development area) is disturbed and the remainder of habitat will be cleared during construction. Additional habitat within the 970 ha surface lease area (lease area) may be cleared over the life of the project and groundwater drawdown during operation has the potential to impact wetland hydrology and vegetation. Within the

drawdown zone, there is an estimated 69 ha of tamarack treed fen, 68 ha of ribbed fen, 50 ha of black spruce tamarack swamp, and 281 ha of black spruce bog. Field surveys for species of conservation concern (SOCC) identified the presence of provincially tracked plant and wildlife species in the lease and study areas, including wildlife species listed under the federal *Species at Risk Act* such as woodland caribou. Release of treated water or air emissions from the project are not expected to result in negative effects to soil, vegetation, or wildlife.

Reuse of previously disturbed areas and infrastructure will limit additional effects to the terrestrial environment. Mitigation measures that will be utilized to address impacts to the terrestrial environment include salvage and stockpiling of topsoil, progressive reclamation during project operation, grouting/sealing underground workings to limit groundwater inflow, completion of pre-construction wildlife surveys during sensitive timing windows, and implementing wildlife and caribou management and monitoring plans. MBO will also conduct monitoring of soil and vegetation chemistry.

As conditions of this approval, MBO will be required to submit a revised caribou mitigation and monitoring plan prior to operation that uses site-specific information to evaluate potential effects to caribou and includes a plan for habitat offsetting. MBO will also be required to develop mitigation, management, and monitoring plans for wetlands, plant SOCC, and weed/invasive species mitigation and monitoring.

#### *Water and Aquatic Environment*

The project will utilize groundwater collected from the underground workings for process water. Dewatering of underground workings during operation could result in a water table drawdown of 50 m within the immediate vicinity of the underground mine, up to 10 m within 800 m, and up to 1 m within 2 km. Once the project is decommissioned and no longer being dewatered, groundwater levels are predicted to return to within 1 m of baseline conditions. No changes to surface water volumes are expected from this dewatering.

Groundwater in contact with the cemented paste tailings in the underground workings is predicted to have arsenic and lead in concentrations that would exceed guidelines for drinking water and elevated concentrations of selenium, copper, and zinc. Mean travel time of this groundwater to reach surface water features was estimated at 2600 years. Seepage from the tailings facility and containment ponds were predicted to have concentrations of selenium, chloride, iron, and nitrate above drinking water quality guidelines. Predicted travel time to surface water features was 476 years for the tailings facility and greater than 6000 years for the containment ponds. Construction of surface components above the water table, installation of liners and contact water collection ditches, and cementing of paste backfill will limit the potential for impacts to groundwater quality.

The project will release treated site water through a diffuser into Winn Bay. Effluent would be required to meet the federal *Metal and Diamond Mining Effluent Regulations* and provincial *Mineral Industry Environmental Protection Regulations*. The human health and ecological risk assessment (risk assessment) completed based on selected site scenarios predicted that contaminants of potential concern (COPC) concentrations would increase in water and sediment but would remain below *Saskatchewan Environmental Quality Guidelines* in Winn Bay except potential exceedances of un-ionized ammonia in the later years of operation. Negligible effects to aquatic biota, including fish, are expected to occur from release of treated water from the project. No guideline exceedances of selenium in fish are expected to occur from the project and loss of fish habitat from installation of the pipeline and diffuser will be minimal relative to overall fish habitat availability.

MBO would be required to develop an approved monitoring program during downstream permitting as well as complete environmental effects monitoring under the federal *Fisheries Act*. MBO will also be required to conduct the geochemical testing of the cemented paste backfill, static and kinetic testing of waste rock, complete the country foods study and update the risk assessment to ensure the project is designed and mitigations are in place for the protection of human health and the environment.

#### *Atmospheric and Acoustic Environment*

Air emissions from the project were modelled in accordance with the *Saskatchewan Air Quality Modelling Guideline*. Infrequent (construction) to intermittent and repeated (operation) exceedances of 24-hour total suspended particulate and particulate matter less than 10 microns (PM<sub>10</sub>) were predicted along the lease area boundary and local study area. Infrequent exceedances of the one-hour sulfur dioxide (SO<sub>2</sub>) and nitrous oxide (NO<sub>x</sub>) standards were also predicted during operations. Predicted concentrations of these parameters in identified priority areas would be below health-based guidelines. Mitigation measures will include use of dust collection and suppression systems, progressive cover and revegetation of the tailings facility, and use of battery electric vehicles. The project will be required to conduct air monitoring in accordance with an approved environmental protection plan under the Industrial Source (Air Quality) chapter of the Saskatchewan Environmental Code.

The project will generate GHG emissions during all project phases. A third-party liquid natural gas (LNG) facility will supply power to the project until a new powerline is installed and will generate 6000 to 58,000 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e). Use of propane, backup power diesel generators, gasoline, and transportation on site would also generate approximately 8000 tonnes of CO<sub>2</sub>e per year. Facilities that emit greater than 10,000 tonnes per year of CO<sub>2</sub>e must comply with federal and provincial GHG reporting requirements and provincial GHG

regulations. In accordance with these requirements, a facility must register and submit annual emissions reports once commercial production begins and emissions exceed 10,000 tonnes CO<sub>2</sub>e per year. Provincial regulations subject facilities operating in mining sectors to a fifteen per cent emissions intensity reduction by 2030. Several compliance options are available including payment into a technology fund.

Project noise was assessed using the *Alberta Utility Commission's Rule 012: Noise Control Guideline* at the nearest receptors and were predicted to remain within the applicable permissible sound levels (PSL). Predicted noise level at a 1.5 km distance could exceed the PSL for nighttime during operation by 5.1 dBA which is a doubling of sound at this location. Prior to operation, MBO will be required to complete an assessment of noise effects on workers within the permanent camp as well as develop a plan for mitigation and reporting.

#### *Heritage and Socio-Economic Environment*

One heritage resource, a quartz biface, was identified on the western shore of McIlvenna Bay. A review by the Heritage Conservation Branch indicated that no further work was required. No known archaeological sites are in direct conflict with the project. MBO will develop a chance finds procedure to ensure that any new resources identified are mitigated appropriately.

The lease will reduce land available for traditional land and resource use. The mitigations described above will mitigate effects to traditional use, including the development of an access management plan. MBO will also be required to negotiate a mine surface lease agreement which will outline requirements related to environmental protection, socio-economics, and public reporting. MBO will be required to provide compensation for any lost commercial income.

The project is expected to generate 800 short-term temporary employment opportunities during construction and up to 470 permanent opportunities during operation. Benefits to the region will include employment, training, and contractor opportunities, as well as economic benefits to local businesses through expenditures on goods and services. MBO will reduce adverse effects to socio-economic conditions through completing a vulnerable persons study and implementing the results into MBO's management plans, providing opportunity for PBCN to comment on MBO's socio-economic plans, accommodation of workers on site to minimize worker and community interactions, and implementation of cultural supports on site.

An increased demand for existing infrastructure and services in the regional area is anticipated, including roadways. MBO will be required to undertake a detailed assessment of the selected ore transportation route and develop appropriate mitigation and monitoring in consultation with the ministry, Saskatchewan Health

Authority, Ministry of Highways, municipal governments, and communities including Peter Ballantyne Cree Nation.

### *Decommissioning, Reclamation and Closure Plan*

Decommissioning and reclamation will occur following the expected 34-year life of the project. The objectives of decommissioning and reclamation will be to restore the site for unrestricted land use similar to pre-disturbance conditions. Decommissioning activities would include the removal of materials and infrastructure, capping and sealing of all shafts, raises, portals and other openings, capping the waste rock stockpile, lining and covering the tailings facility, drainage and grading of ponds, removal of pipelines, and grading the site to restore natural drainage. Stockpiled topsoil would be used on disturbed areas and revegetated with native species. The waste rock pile and tailings facility would remain as permanent landforms. Monitoring and inspections would continue after decommissioning to ensure site closure was successful.

### **Conclusion**

The ministry and technical reviewers are satisfied the overall environmental impacts of the project are well understood and the mitigation and environmental protection measures outlined in the statement are implemented, and terms and conditions are imposed as presented in my approval, adverse effects can be minimized, and benefits enhanced.

This conclusion is based on the proponent's adherence to the commitments as documented in the statement, on my ability as the Minister of Environment to impose specific conditions at this time, and on the knowledge that additional environmental protection requirements can be imposed through terms and conditions forming parts of permits and licences required by provincial legislation.

The Ministerial Approval for the development includes terms and conditions designed to promote the elimination and control of adverse environmental effects associated with the development. Included are requirements that MBO:

- (a) Proceed with the development in accordance with the statement;
- (b) Provide notification of any change; and
- (c) Follow the requirements of other applicable laws and regulations.

These conditions, plus the measures proposed in the statement, and the regulatory framework applicable to the project, now and in the future, are adequate to address all issues related to the project.

Dated at Regina, Saskatchewan this 24 day of July, 2023

ISSUED BY: *original signed by*  
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Dana Skoropad  
Minister of Environment