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Project No. 60682071

Jennifer Winsor, P.Eng.
Environmental Engineer
Environmental Approval Branch
Manitoba Environment, Climate,
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1007 Century Street
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Notice of Alteration - Lalor Mine Proposed Ore Production Increase

Dear Ms. Winsor,

1. Introduction

At the request of Hudbay Minerals Inc. (Hudbay), AECOM Canada Ltd. (AECOM) has completed an environmental review of a proposed permanent increase in ore production at the Lalor Mine site (the 'Project') located near Snow Lake, Manitoba. The Lalor Mine, which has been in operation since 2017, is owned and operated by Hudbay and is licensed and operated in accordance with Environment Act License (EAL) No. 3096.

Based on the information provided by Hudbay, we describe herein the project description and our opinion on the potential for environmental impact in relation to minor ore production increase at the Lalor Mine site.

Via this letter, Hudbay is informing Manitoba Environment, Climate, and Parks (MECP) of this proposed ore production increase at the Lalor Mine and is prepared to address any questions or concerns that you may have regarding this (the "Project").

Prior to the execution of the Project, Hudbay requested advice from AECOM with respect to the anticipated environmental impact (if any) and mitigation requirements to proceed with the proposed ore production increase. AECOM has conducted a review of the Project plan and environmental assessments and regulatory submissions previously completed at other Hudbay mining development projects in the region, including previous work completed in and around the location of the Lalor Mine.

We provide the following opinion with respect to the environmental aspects that will need to be considered in the evaluation of mitigation options for this Project. This opinion is based on our understanding of the Project and the existing environmental conditions at the Lalor Mine, which has been subject to previous environmental baseline studies and site assessments conducted between 2011 and 2021. Our evaluation has also considered mitigation measures that have been incorporated into the proposed Project, as well as environmental protection practices and procedures included in Hudbay's standards of operations (such as compliance with International Organization for Standardization (ISO) certified safety and environmental management systems).

2. Need for the Project

The proposed ore production increase will allow for other Hudbay facilities including the New Britannia Mill (gold ore processing) and Stall Concentrator (copper and zinc ore processing) to have sufficient ore feed to sustain daily operations.

3. Scope of the Assessment

To assess the potential environmental effects of the proposed Project, spatial boundaries were defined as follows:

- **Project Site** – is comprised of the Lalor Mine site as well as PR 395 from the Lalor Mine access road to the intersection to PR 392 PR 392 to the Stall Concentrator and to New Britannia Mill (including Cedar Ave).
- **Local Project Area** – is comprised of an area that is 2 km beyond the Project Site, which is intended to take into account the effect of the Project (such as noise, traffic and vehicle emissions).
- **Regional Project Area** – is comprised of an area that is up to 10 km beyond the Project Site, which is intended to take into account the maximum spatial extent of any potential impacts of the Project.

4. Ore Production Increase

4.1 Description

As indicated in **Section 1** (Introduction), Hudbay is proposing to permanently increase ore production at the Lalor Mine. Currently, approximately 4,500 tonnes per day of ore is extracted from the mine and Hudbay is proposing to increase this ore production to greater than 5,000 tonnes per day; with a nominal daily maximum of 5,300 tonnes per day, which was determined based on the forecasted yearly production divided by 12-months. This is an approximate increase of 17.8 %. No additional infrastructure changes or upgrades are required to the existing systems that are in place at the site.

To accomplish the proposed increase in ore production, ore from the Lalor Mine will continue to be brought up from underground through the existing shaft or trucked to the surface via the underground ramp that connects the Lalor Mine with the surface portal located at the former Chisel North Mine.

Currently, there are approximately 420 vehicles accessing the Lalor Mine site on a daily basis and there are two (2) haul trucks per hour per day travelling to the New Britannia Mill and the Stall Concentrator. With the proposed increase in ore production, this will increase to four (4) trucks per hour per day, or a total of up to 90 trucks over a 20-hour period (up from 48 trucks per day). The additional hauling will be scheduled to occur primarily during nighttime hours to minimize interactions with pedestrians and public vehicles.

The existing provincial road system infrastructure (including PR 395, PR 392, Cedar Avenue, PR 393, and access roads to the Stall Concentrator and New Britannia Mill) will continue to be used and not require any modifications or upgrades.

There are currently 744 workers / contractors that access the Lalor Mine site daily and this number is not anticipated to change with the increase in ore production.

4.1.1 Water Requirements

Although a minor increase in water use may be required to accommodate the proposed ore production increase, there will be no increase in freshwater inputs and water withdraw from existing permitted freshwater sources (Chisel Lake) and will remain unchanged. The additional process water will be supplied from the water that collects in the sump pits in the mine dewatering system. This sump water,

which is typically pumped to the surface for eventual treatment and discharge, will be recirculated and used underground. Potable water will continue to be delivered for on-site use in containers.

4.1.2 Wastewater and Sewage Treatment

The proposed increase in ore production may result in a minor increase in wastewater generated at the Lalor Mine site which includes discharge water from underground operations.

There are currently three (3) wastewater holding tanks at the Lalor Mine site that will be upgraded as per approved Notice of Alteration (letter dated March 2, 2022), which includes the installation of two (2) 10,000 gallon and two (2) 300 gallon wastewater holding tanks. No additional upgrades will be required to the wastewater infrastructure at the Lalor Mine site as a result of the increase in ore production.

4.1.3 Waste Rock Management

Although a minor increase in waste rock may occur as a result if increased ore production, Hudbay will continue to manage this waste rock in accordance with existing practices currently in place at the Lalor Mine site. There will be no temporary storage of waste rock at the Lalor Mine site and waste rock will remain underground to be used as backfill within the mine to the extent possible. Any waste rock brought to the surface will be treated as if it were potentially acid-generating (PAG) rock and hauled to the Chisel Open Pit for disposal.

4.1.4 Infrastructure, Power and Chemicals

No new office buildings, warehouses or accommodations will be required at the Lalor Mine due to the increase in ore production.

There may be a negligible increase in the consumption of power used at the Lalor Mine site, including the use of diesel fuel, propane, explosives and other operating supplies. No new chemicals or reagents or an increase in existing chemicals and reagents will be required as part of this proposed Project.

4.2 Evaluation of Potential Environmental Impact

AECOM has evaluated potential environmental impacts to surrounding environment that could occur due to the increase in ore production as described in **Section 4.1** (Description). Since no field investigations were completed as part of this Project, our assessment is reliant upon baseline environmental information that has been gathered from previously completed environmental studies completed by AECOM for Hudbay at the Mill site and other Hudbay facilities that overlap with the Project, including the following:

- Lalor Mine Environment Act Proposal (AECOM, 2012);
- New Britannia Notice of Alteration (AECOM, 2019);
- Environment Act Proposal Snow Lake Waste Disposal Ground (AECOM 2021);
- Lalor Mine Dry Facility Expansion, Notice of Alteration (AECOM, 2021); and
- New Britannia Notice of Alteration, Operational Updates (AECOM, 2021).

Based on our review of the proposed Project, and assuming that any potential environmental effects will only occur during operation phase of the Lalor Mine, the following environmental aspects have been assessed as experiencing **no potential negative impact** from the increased ore production at the Lalor Mine:

- Topography
- Soil
- Groundwater
- Surface Water
- Aquatic Resources
- Vegetation
- Wildlife
- Land Use
- Heritage Resources

- Indigenous People
- Aesthetics

The proposed increase in ore production will not have an impact on the local topography and soil since the Project will utilize existing infrastructure and road with no proposed alterations / upgrades during construction. Groundwater will not be impacted as there is no proposed subsurface development and no groundwater use will be required.

Potential impacts to groundwater from accidents and spill will be mitigated through spill prevention measures as outlined in **Section 4.2.3** (Accidents and Malfunctions) as well as environmental protection practices and procedures included in Hudbay's standards of operation.

No impacts to surface water quantity and aquatic resources are expected as a result of increased ore production and truck haulage. There are no additional surface water withdrawals required and will remain in accordance with EAL No. 3096. Water will also continue to be pumped from the underground mine to the surface (groundwater seepage and process water) and will go through a solids separation system underground prior to pumping to the surface. The mine discharge will be pumped to the Chisel Open Pit for subsequent treatment at the Chisel North WTP.

There will be no vegetation clearing associated with this Project, and therefore no loss of wildlife habitat. It is anticipated that local wildlife is likely already accustomed to some level of noise in the area of the Lalor Mine and along PR 395, PR 393, and PR 392. There is also very limited ideal habitat for protected wildlife species in the overall region of the Project. Although the overall vehicular traffic will slightly increase during operation, no significant increase in the risk of vehicle collisions with wildlife is expected as vehicle strikes are very rare on local roads.

There will be no change in land use resulting from this Project, and therefore there will be no impact the availability of plants, wildlife, and fish for resource harvesting in the region (if any). The Project site is not located near any First Nations communities or heritage location, and the Project does not require occupation of lands known to be currently used for traditional purposes by Indigenous peoples. There will be no ground disturbance associated with this Project and as a result there will be no impact on heritage resources.

The environmental aspects assessed to have the potential for increase (or decrease) in the impact are as follows:

4.2.1 Air Quality

4.2.1.1 Dust

The potential for dust generation associated with the proposed Project will be limited to the operational phase with the additional haul truck movements with the increase in ore production. Currently there are approximately two (2) trucks per hour transporting ore to the New Britannia Mill and Stall Concentrator. The proposed increase in ore production will result in an increase to four (4) trucks per hour per day, or a total of up to 90 trucks over a 20-hour period transporting ore.

Dust and particulate matter have the potential to adversely affect air quality with consequent effects on human health (e.g. respiratory concerns and safety concerns related to impaired visibility on roads), vegetation (decreased growth due to deposition), and soil quality (deposition of contaminants). It is expected that dust generation will primarily occur during the summer and fall, and the primary source of dust will be the hauling of ore from underground and transporting it by gravel roads to the New Britannia Mill and Stall Concentrator.

Based on our assessment, the effect of dust from the increased ore production is expected to be Negligible when taking into account the following:

- Dust suppression activities, such as the use of approved dust control agents will be undertaken on-site and access roads, as required.
- At all times, vehicles will be required to adhere to Hudbay's speed limits on main roads and access roads.

Conclusion: Impacts from dust poses a Negligible risk to the environment and human health with the implementation of the above mitigation measures.

4.2.1.2 Emissions (excluding dust)

Primary sources of emissions, including greenhouse gases, during operation will be limited to vehicle / ore haul truck traffic at the Project Site and Local Project Area. Up to 90 ore haul trucks will be travelling each day from the Lalor Mine to the New Britannia Mill and Stall Concentrator along existing access roads, PR 395, PR 393 and PR 392. Overall, the exhaust emissions resulting from the increase in ore production will be Negligible in relation to the air quality of the Local Project Area.

To mitigate potential air quality effects during operation, the following mitigation measures will be undertaken:

- Haul trucks will be well maintained.
- Truck idling will be kept to a minimum.
- All trucks used for the Project will comply with Environment Canada's On-Road Vehicle and Engine Emissions Regulations as required.

Conclusion: Impacts from emissions poses a Negligible risk to the environment and human health with the implementation of the above mitigation measures, therefore there will be a Negligible risk of environmental impact.

4.2.1.3 Noise

An increase in noise levels at the Project Site and within the Local Project Area along the truck haul route could potentially affect people and wildlife in the surrounding area. Typical sources of noise during operation include vehicle and ore haul truck movement. This will remain consistent to the current daily operations /activities at the Lalor Mine site. It is also anticipated that local wildlife is likely already accustomed to some level of noise based on the existing operations.

To further mitigate the generation of nuisance noise, the following mitigation measures will be applied during operation:

- Vehicles and equipment will be well maintained.
- Vehicles will be equipped with alternative back-up alarms.
- Vehicle revving and idling will be kept to a minimum.

Conclusion: Impacts from noise poses a Negligible risk to the environment and human health with the implementation of the mitigation measures identified above, therefore there will be a Negligible risk of environmental impact.

4.2.2 Traffic

During the operation phase, the on-site haul truck movement at the Project Site is anticipated to increase slightly as more ore is transported from underground to the surface. Additional trucks are not needed therefore the existing trucks will be making additional trips.

Truck haul traffic is anticipated to increase slightly from current volumes during operation. There are currently two (2) haul trucks per hour per day travelling to the New Britannia Mill and the Stall

Concentrator. This will increase to four (4) trucks per hour per day, or a total of up to 90 trucks over a 20-hour period (up from 48 trucks per day). The additional hauling will be scheduled to occur primarily during nighttime hours to minimize interactions with pedestrians and public vehicles. Haul trucks will continue to use Hudbay existing site access roads, PR 395, PR 392, and PR 393.

A traffic impact evaluation was completed by AECOM for the proposed operational changes at the New Britannia Mill (December 2021) which included the proposed increase in the number of ore trucks travelling to and from the New Britannia Mill and Stall Concentrator. Based on the results of the traffic impact evaluation, the following conclusions and recommendation are also relevant to this Project:

- The highest 95th percentile queue length during the peak hour was found to be four (4) vehicles in the westbound lane at the intersection of PR 392 and PR 393.
- All intersections along PR 395 and PR 392 in the study area have adequate reserve capacity at full buildout to handle the additional proposed truck haul traffic.
- It is recommended that the existing intersection geometry at PR 392 and PR 393 be confirmed by Hudbay to ensure that it is able to accommodate the proposed Super B semi-trailer turning movements.

Although haul truck traffic will increase slightly during operation both at the Project Site and Local Project Area, the effect of traffic on both the Lalor Mine site, the Town of Snow Lake, and the adjacent highway network is considered to be Negligible and no additional mitigation measures are required.

4.2.3 Accidents and Malfunctions

To prevent accidents and malfunctions, all phases of the Project will be conducted in accordance with applicable regulatory requirements. In addition to standard safety controls and procedures (alarm systems, training, and operating procedures), the following sections provide additional details on precautionary measures that will be implemented by Hudbay to further minimize the potential for accidents and malfunctions to occur.

4.2.3.1 Transportation Accidents

An increase in traffic has the potential to increase the likelihood for transportation accidents.

Transportation accidents can result in the release of pollutants in the environment (diesel, oils, etc.) or materials that the vehicles are transporting (cement, etc.). Such accidental releases to the environment could potentially result in secondary effects on other environmental components (groundwater contamination through seepage, decline in surface water quality through runoff) or tertiary effects on vegetation (decline of growth potential due to soil contamination), wildlife, aquatic resources and human health.

Potential socio-economic effects may occur if road shutdowns are required in the event of a large accident (traffic interruptions could disrupt business and activity if people are not able to commute to work).

As discussed in **Section 4.2.2**, the increase in traffic associated with the Project on public and private roads (e.g., PR 395, PR 392, and PR 393) during operation is considered Negligible. Hudbay will continue with the following measures to reduce the risk of transportation accidents:

- Vehicle speed limits will continue to be imposed (e.g., 20 km/hr at Hudbay sites) for both Hudbay and contractor vehicles.
- Contractors retained to drive and operate vehicles will abide by passing restrictions on the Snow Creek Bridge. If public vehicles are approaching the bridge at the same time as an ore truck, the ore truck will yield.
- Contractors retained to drive and operate vehicles will have a valid Manitoba Driver’s License with a copy provided to Hudbay.

- Speed limits on access roads, local roads and Provincial highways will continue to be implemented. Signage and speed limits on PR 395, PR 392, and PR 393 are regulated by the Province of Manitoba.
- Hudbay will limit trucking hours during shift changes at the Lalor Mine site, New Britannia Mill and Stall Concentrator to avoid times at which there are heavy amounts of public traffic (i.e., employees traveling to or from Lalor Mine).
- A steel bridge has been installed at the New Britannia Mill tailings pipeline water crossing at Snow Creek, and this bridge is available for use in the event of an emergency, such as the Snow Creek Bridge on PR 392 being inaccessible and ingress to or egress from the Town of Snow Lake is required.

The above-noted mitigation measures are assessed to mitigate the potential risk for transportation accidents.

4.2.3.2 Spill and Leaks

Impacts to the environmental can be caused by spills of fuel and chemicals such as diesel fuel, lubricants, oils and hydraulic fluids. An accidental release of hazardous materials and/or equipment fluids could occur from improper storage and handling procedures or equipment and vehicle maintenance. Accidental releases have the potential to affect air, surface water, groundwater, and soils, with consequential effects on vegetation, aquatic resources, and possible human health and safety.

The following standard procedures will be employed to prevent spills from occurring during operation activities:

- When servicing requires drainage or pumping of lubricating oils or other fuels from equipment, a groundsheet of suitable material and size will be spread on the ground to catch all fluid in the event of a leak or spill. An adequate supply of suitable absorbent material and any other supplies and equipment necessary to immediately clean up spills will also be available.
- Storage and disposal of liquid wastes and filters from equipment maintenance, and any residual material from spill clean-up will be contained in an environmentally safe manner and in accordance with any existing regulations.
- Waste oils, fuels, and hazardous wastes (if any) will be handled in a safe manner. Staff will be required to transport, store, and handle all such substances as recommended by the suppliers and/or manufacturers and in compliance with applicable Federal, Provincial, and Municipal regulations. The Province will be notified immediately if a reportable spill occurs.
- Oils or other hazardous materials will be stored only in designated areas.
- Storage sites will be inspected periodically for compliance.
- Personnel on-site will be trained in how to deal with spills, including knowledge of how to properly deploy site spill kit materials.
- Service and repairs of equipment shall only be performed by trained personnel.
- Vehicles and equipment will be maintained to minimize leaks. Regular inspections of hydraulic fuel systems on machinery will be completed on a routine basis; when detected, leaks will be repaired immediately.

With the implementation of the above mitigation measures as necessary and assuming the implementation of safe work practices, the risk of spills is considered appropriately mitigated.

4.2.3.3 Fire and Explosion

The presence of mechanical equipment, fuels, and other hazardous materials creates a potential for fires and explosions. Such incidents can harm on-site personnel, cause equipment damage, and lead to a release of contaminants, resulting in consequent effects to other environmental components (air, surface water, groundwater, flora, fauna, aquatic resources, and aesthetics).

All precautions necessary will be taken to prevent fire hazards throughout; including but not limited to:

- All flammable waste will be removed on a regular basis and disposed of at an appropriate disposal site.
- Appropriate fire extinguisher(s) will be available on site. Such equipment will comply with and be maintained to the manufacturers' standards.
- Storage and use of hazardous materials, including flammable waste, will follow regulatory requirements.
- All on-site fire prevention/response equipment will be checked on a routine basis, in accordance with local fire safety regulations, to ensure the equipment is always in proper working order.
- Greasy or oily rags or materials subject to spontaneous combustion are deposited and stored in appropriate receptacles. This material will be removed from the site on a regular basis and be disposed of at an appropriate waste disposal facility.
- Smoking will be restricted to designated areas.

With the measures outlined above, and assuming implementation of typical safe work practices, the risk of fires and explosions is assessed to be appropriately mitigated.

5. Conclusion and Recommendations

In summary, our review of the proposed Project and environmental assessment has determined that although the proposed increase in ore production at the Lalor Mine site will require a Minor Notice of Alteration, there will be no adverse residual environmental effects from the proposed Project. The impact on air quality, noise and traffic are assessed to be Negligible in magnitude and can be mitigated with the measures incorporated into the Project and recommended herein.

Based on the findings of the traffic impact evaluation completed in December 2021 for the proposed operations changes at the New Britannia Mill as described in Section 4.2.2 (Traffic), it is recommended that the existing intersection geometry at PR 392 and PR 393 be confirmed by Hudbay to ensure that it can accommodate the proposed turning movements of the ore haul trucks.

Should you have any questions regarding the Project or content in this letter, please do not hesitate to contact Cliff Samoiloff at 204-928-7427.

Yours sincerely,

Prepared by

[redacted]

Kristiina Cusitar, BA., C.E.T., EP(SAR)
Environmental Planner

Approved by

[redacted]

Cliff Samoiloff, B.Sc., EP(CEA)
Project Manager, Senior Scientist

Notice of Alteration Form

Manitoba
Conservation and Climate

File No. :	Environment Act Licence No. : 3096

Legal name of the Licencee: Hudbay Minerals Inc.

Name of the development: Lalor Mine Proposed Ore Production Increase

Category and Type of development per Classes of Development Regulation:

Mining — Mines, other than pits and quarries

Licencee Contact Person: Jay Cooper, Director of Health, Safety and Environment

Mailing address of the Licencee:

City: Flin Flon Province: Manitoba Postal Code: R8A 1N9

Phone Number: (204) 687-2667 Fax: (204) 687-2173 Email: jay.cooper@hudbayminerals.com

Name of proponent contact person for purposes of the environmental assessment (e.g. consultant):
Kristiina Cusitar, AECOM Canada Ltd.

Phone: (204) 477-5381 Fax: (204) 284-2040	Mailing address: 99 Commerce Drive Winnipeg, Manitoba R3P 0Y7

Email address: kristiina.cusitar@aecom.com

Short Description of Alteration *(max 90 characters):*

Proposed increase in ore production at the Lalor Mine site.

Alteration fee attached: Yes: ☐ No: ☑

If No, please explain: Payment to follow via credit card.

Date: 22-07-25

Signature: [redacted]

Printed name: JAY COOPER

A complete Notice of Alteration **(NoA)** consists of the following components:

- ☑ **Cover letter**
- ☑ **Notice of Alteration Form**
- ☑ **1 hard copy and 1 electronic copy of the NoA detailed report** (see "Information Bulletin - Alteration to Developments with Environment Act Licences")
- ☐ **$500 Application fee, if applicable** (Cheque, payable to the Minister of Finance)

Submit the complete NoA to:
Director, Environmental Approvals Branch
Manitoba Conservation and Climate
1007 Century Street
Winnipeg, Manitoba R3H 0W4
EABDirector@gov.mb.ca

For more information:
Phone: (204) 945-8321 Fax: (204) 945-5229
https://www.gov.mb.ca/sd/permits_licenses_approvals/eal/licence/index.html

Note: Per Section 14(3) of the Environment Act, Major Notices of Alteration must be filed through submission of an Environment Act Proposal Form (see "Information Bulletin – Environment Act Proposal Report Guidelines")