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January 25, 2022

Project #
60669758

Dear Ms. Winsor:

Subject: Update Letter for Proposed Fuel Tank Installations at Anderson TIA Reclaim Pumphouse and Snow Lake Freshwater Pumphouse

1. Introduction

Hudbay Minerals Inc. (Hudbay) operates existing and permitted freshwater pumphouses at Anderson Tailings Impoundment Area (TIA) and Snow Lake which provide freshwater (Snow Lake) and recycled water (Anderson TIA) for use in the mineral extraction process at the Stall Concentrator. These pumps operate on electrical power and are equipped with a backup diesel-powered emergency generator to accommodate limited-duration power outages. To allow for improved backup power capability in the event of an electrical failure, Hudbay is proposing to upgrade the existing diesel-powered backup system at each pumphouse (**Figure 1**) by installing higher-volume above ground diesel storage tanks situated adjacent to each of these pumphouses. Hudbay is planning to initiate site preparation and construction activities during Q1/Q2 of 2022 with the completion of the installation in Q2 of 2022.

The installation, operation, and future decommissioning of the new diesel storage tanks at Anderson TIA Reclaim Pumphouse and Snow Lake Freshwater Pumphouse, including ancillary components, are herein known as the “Project.”

The pumphouses are currently permitted to operate in accordance with the existing Anderson TIA Environment Act License No. 3263 and to allow for the installation of new diesel storage tanks, a Notice of Alteration (NoA) application may be required. This letter has been prepared to support the NoA Form, provided with this document, for consideration by Environmental Approvals Branch (EAB) in relation to the Anderson TIA Environment Act License No. 3263. This NoA contains information described in Manitoba Sustainable Developments *Information Bulletin – Alterations to Developments with Environment Act Licenses* (August 2021).

Prior to the detailed engineering of the tank installations, Hudbay requested advice from AECOM with respect to the anticipated designs and environmental mitigation requirements in order to obtain approval from the Manitoba Conservation and Climate (MCC) to proceed with the proposed tank installations and operation. AECOM has conducted a cursory review of the Project plan and environmental assessments and regulatory submissions previously completed at other Hudbay mining development projects in the region. We provide the following opinion with respect to the environmental aspects that will need to be considered in the evaluation of design and mitigation options for this Project. AECOM submits this

notification letter, which includes the findings from our evaluation, on behalf of Hudbay for your review and consideration.

Our opinion is based on our understanding of the Project and the existing environmental conditions at these locations and surrounding mining infrastructure, including the Anderson TIA and Stall Concentrator, which have been subject to previous environmental baseline studies and site assessments conducted between 2007 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 operation (such as compliance with International Organization for Standardization (ISO) certified safety and environmental management systems).

1.1 Project Location and Land Tenure

The proposed fuel tank installations will be contained within the existing footprint of the pumphouses as shown in **Figure 1** in areas previously disturbed by mine infrastructure development (pumphouses and access roads) and on land owned or leased by Hudbay.

The Anderson TIA Reclaim Pumphouse is accessed via Provincial Road (PR) 392 and then turning west along the existing Anderson TIA Reclaim Pumphouse Road. The Snow Lake Freshwater Pumphouse is accessed via PR 395 and then turning north along the existing Snow Lake Pumphouse Road.

The Anderson TIA Reclaim Pumphouse is located on Mineral Lease numbers; ML7299, ML7296, and ML5754 and the Snow Lake Freshwater Pumphouse is located on Mineral Lease ML7289 (**Figure 2**).

1.2 Funding

Funding for the proposed Project will be provided solely by Hudbay.

2. Need for the Project

The pipelines that supply the water from these pumphouses to the Stall Concentrator are not insulated or heat traced to protect them from freezing. As a result, it is important that water is continuously recycled through the pumphouses, pipeline, and Stall Concentrator to prevent freezing during the winter months. An electrical power outage of substantial duration would prevent this recycling of water and freezing could occur within the pipeline and pumping system. This freezing could rupture the pipeline and damage pumping systems.

To allow for improved capacity to provide backup power in the event of an electrical failure, Hudbay is proposing to upgrade the existing diesel-powered backup pumping system at each pumphouse by installing higher volume diesel storage tanks adjacent to the pumphouses. Additional fuel for backup pumping systems will allow for pumps to be run for a longer duration and assist in mitigating against equipment damage and process shutdowns.

Legend

Pumphouses

- Anderson TIA Reclaim Pumphouse (Approximate)
- Snow Lake Freshwater Pumphouse (Approximate)

Hudbay Mines

- Closed Hudbay Mine
- Operating Hudbay Mine

Roads

- Provincial Road

N
W E
S

1:25,000
NAD 1983 UTM Zone 14N

250 125 0 250 500 750
m

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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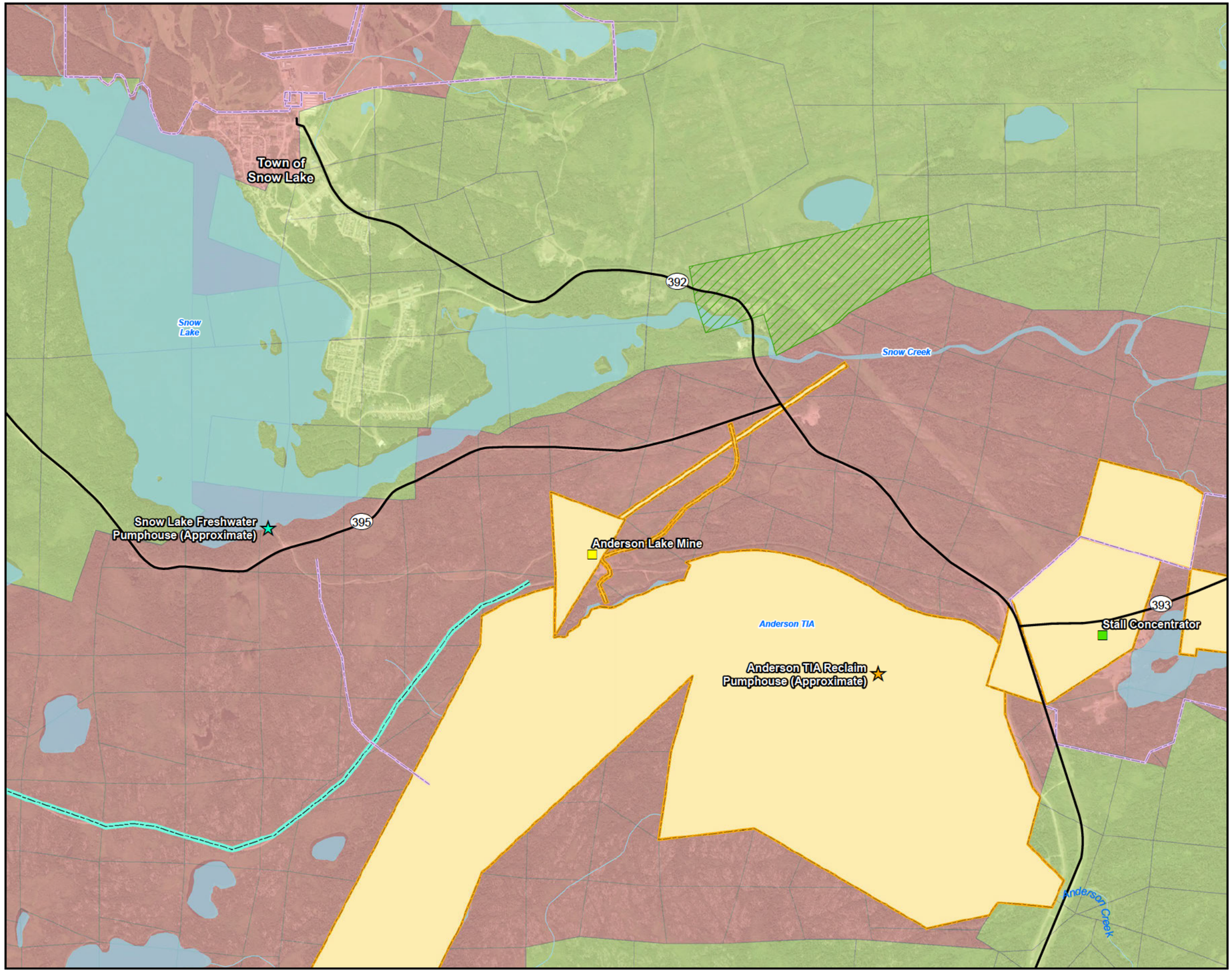
Figure: 1

LOCATION OF PUMPHOUSES

FUEL TANK INSTALLATIONS
ANDERSON TIA RECLAIM PUMPHOUSE & SNOW LAKE FRESHWATER PUMPHOUSE
HUDBAY MINERALS INC.
Project No.: 60669758 Date: 2021-12-17



Legend

- Provincial Road
- Watercourse
- Waterbody

Pumphouses

- Anderson TIA Reclaim Pumphouse (Approximate)
- Snow Lake Freshwater Pumphouse (Approximate)

Hudbay Mines

- Closed Hudbay Mine
- Operating Hudbay Mine

Property Ownership

- General Permits
- Mineral Claim owned by Mr. Peter C. Dunlop (MB5892)
- Overlying Mineral Leases
- Hudbay Mineral Leases
- Hudbay Mineral Claims
- Fee Simple Ownership

N
W E
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1:25,000
NAD 1983 UTM Zone 14N

250 125 0 250 500 750
m

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, MLI

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Figure: 2

PROPERTY OWNERSHIP

FUEL TANK INSTALLATIONS
ANDERSON TIA RECLAIM PUMPHOUSE & SNOW LAKE FRESHWATER PUMPHOUSE
HUDBAY MINERALS INC.
Project No.: 60669758 Date: 2021-12-17

3. Project Information

The proposed installation of the new above ground diesel storage tanks at Anderson TIA Reclaim Pumphouse and Snow Lake Freshwater Pumphouse will take place on previously disturbed property owned by Hudbay.

The new above ground diesel storage tank at Anderson TIA Reclaim Pumphouse will be located on the east side of the existing e-house seacan, as illustrated in **Photograph 1** below, with approximately 12.5 m of surficial fuel lines connecting the diesel tank and the pumphouse generator.

Photograph 1 – Aerial view of Anderson TIA Reclaim Pumphouse

This tank (Model# MAGCT-1000, manufactured by Magnum Fabricating Ltd.) will have volume capacity of 4,255 L and will be equipped with dual containment. The tank will be installed on top of a concrete containment (sized to a minimum 110% of the maximum volume of the storage tank) and will also be equipped with impact protection (Jersey barrier or bollards) to prevent accidental impact from service vehicles.

Based on the current water elevation at Anderson TIA, the new diesel storage tank will be situated approximately 6 m from the shoreline of Anderson TIA.

There is no in-water works or any clearing of vegetation planned for the installation of this tank. Some minor earthworks (excavation, levelling) will be required to construct the concrete tank pad.

The new above ground diesel storage tank at the Snow Lake Freshwater Pumphouse will be located on the east side of the e-house seacan, as illustrated in **Photograph 2** below, with approximately 4 m of surficial fuel lines connecting the diesel tank and the pumphouse generator. Based on current water levels within Snow Lake, the diesel tank will be approximately 20 m from the shoreline of Snow Lake.

Photograph 2 – View of the Snow Lake Freshwater Pumphouse.

This tank (Model# MAGCT-1000, manufactured by Magnum Fabricating Ltd.) will have volume capacity of 4,255 L and will be equipped with dual containment. The tank will be installed on top of a concrete containment (sized to a minimum 110% of the maximum volume of the storage tank) and will also be equipped with impact protection (Jersey barrier or bollards) to prevent accidental impact from service vehicles.

There is no in-water works or any clearing of vegetation planned for the installation of this tank. Some minor earthworks (excavation, levelling) will be required to construct the concrete tank pad.

4. Evaluation of Potential Environmental Impacts

AECOM has evaluated potential environmental impacts to the surrounding environment that could occur from the construction and operation of the above ground diesel storage tanks at both Anderson TIA and Snow Lake. This evaluation has considered that this Project consists not of a new development, but rather the implementation of improvements o allow for sufficient backup power in the event of an electrical failure and to prevent the water lines from freezing during the winter months.

Based on our review of the proposed installation of larger diesel tanks, the following environmental aspects have been assessed as experiencing **no potential negative impact** from these upgrades:

- Topography
- Groundwater
- Vegetation
- Wildlife
- Land Use
- Heritage Resources
- Aesthetics
- Indigenous People
- Traffic

Construction of the new storage tanks will not affect the local topography. The tanks will be installed on property that is currently occupied by existing mining operations, and access to the sites is available via existing access roads.

Construction and operation of the new storage tanks will not affect the local groundwater. There is no subsurface development associated with this Project, and impact to groundwater from accidents and spills will be mitigated through the use containment (double-walled tank and concrete pad) and other spill protection measures.

There will be no vegetation clearing associated with this Project, and no loss of wildlife habitat. It is anticipated that local wildlife is likely already accustomed to some level of noise at both locations based on the existing mining activity in the area, and there is very limited ideal habitat for protected wildlife species in the overall region of the Project. No increase in the risk of vehicle collisions with wildlife has been identified with the construction and operation of the Project.

The Project will not adversely impact the availability of plants, wildlife, and fish for resource harvesting in the region (if any) and, as a result, no change in land use is anticipated. 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 are no recorded heritage resources at either location and the potential for any to be found is extremely remote due to prior disturbance already occurring at each site. There will be no further disturbance beyond the Project site during construction and operation.

Project components will be installed in areas that have been previously disturbed by existing mining infrastructure, and therefore no adverse change in the existing aesthetics is expected. The Project site will be subject to regular inspections, and any loose waste or refuse observed during these inspections will be immediately removed from the site.

Although vehicular traffic will increase slightly during installation of the new storage tanks, the effect of traffic on the Town of Snow Lake and Hudbay operations in the region are assessed to be negligible. As mentioned above, no increase in the risk of vehicle collisions with wildlife has been identified with the construction and operation of the Project

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

4.1 Soil

4.1.1 Erosion

The locations of the proposed diesel storage tanks are in areas previously disturbed and levelled and are covered with gravel/sand that has been brought into the sites previously to accommodate the development of existing mine infrastructure.

To mitigate against the potential for soil erosion, a Sediment and Erosion Control Plan will be developed prior to construction and all construction activities will be limited during periods of severe precipitation and surface runoff.

Erosion of soil has the potential to impact waterways due to runoff and sedimentation. To determine if a Department of Fisheries and Oceans (DFO) Request for Review would be required for this Project, the

DFO 'Request a Review of your Project Near Water' guidance document was reviewed and applied to the Project. As per this DFO guidance document, if a Project can follow the 'measures to protect fish and fish habitat' then a Request for Review is not required.

Based on the information provided in **Section 3**, and with the development and implementation of a Sediment and Erosion Control Plan, environmental impacts to soil resulting from erosion is expected to be negligible.

Conclusion: Provided controls for erosion mitigation are in place, there will be a negligible risk of environmental impact associated with erosion.

4.1.2 Air

4.1.2.1 Dust

The potential for dust generation associated with the Project will be limited to the construction phase and sources of dust will include activities such as vehicle / equipment movement and grading. 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.

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

- Disturbed/exposed areas will be kept to a minimum. Vegetated buffers will be maintained to minimize the transport of dust generated on the Project site.
- At all times, vehicles will be required to adhere to Hudbay's speed limits on main roads and access roads.
- If required, dust suppression activities, such as use of an approved dust control agent, will be applied during construction.
- Re-vegetation will occur as part of site closure activities and will provide long term mitigation of dust effects upon the completion of closure activities.

Conclusion: Impacts from dust 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.

4.1.2.2 Emissions

Primary sources of emissions, including greenhouse gases, during construction will be limited primarily to vehicle / equipment traffic and are expected to be negligible.

Conclusion: There is a negligible environmental impact from emissions associated with this Project, and no additional mitigation measures need to be considered.

4.1.2.3 Noise

Typical sources of noise during construction include graders and equipment / vehicle movement. Both the Anderson TIA Reclaim Pumphouse and Snow Lake Freshwater Pumphouse are not located near residential areas and are relatively isolated from other Hudbay active developments. Due to the short-term and intermittent nature of the noise generated from heavy equipment it is anticipated that noise impacts during the Project will be negligible.

The potential impact of noise on wildlife is assessed to be negligible as the Project sites are either along an active ore haul route (Snow Lake Freshwater Pumphouse) and near an active tailings management area (Anderson TIA Reclaim Pumphouse) which is subject to regular traffic flow, it is anticipated that the local wildlife is likely already accustomed to some level of noise based on the existing Hudbay activity in the general area.

Conclusion: There is a negligible environmental impact from noise associated with this Project, and no additional mitigation measures need to be considered.

4.1.3 Surface Water Quality & Aquatic Resources

Residual effects from equipment / vehicle movement and from grading during construction have the potential to increase surface water runoff within the Project sites which in turn could potentially have residual effects of aquatic resources.

As indicated in **Section 3**, both Project sites are in close proximity to a waterbody; approximately 6 m from the shoreline of Anderson TIA and approximately 20 m from the shoreline of Snow Lake. There will be no in-water work required as part of this proposed Project.

To prevent potential effects due to surface water runoff and residual effects on aquatic resources, the mitigation measures described in **Section 4.1.1** (Soil) will be implemented.

A key revision to the *Fisheries Act* that came into force on August 28, 2019 includes a return to the protection of all fish and fish habitat, rather than only those related to a commercial, recreational or Aboriginal fishery. Rather than a prohibition of 'serious harm to fish', the revised *Fisheries Act* returns the prohibition to the 'death of fish' other than by fishing and the 'harmful alternation, disruption or destruction of fish habitat'. A comparison of the old vs. new *Fisheries Act* is provided in the Fisheries and Oceans Canada (DFO) website 'Introducing Canada's modernized Fisheries Act'.

To determine if a Department of Fisheries and Oceans (DFO) Request for Review would be required for this Project, the DFO 'Request a Review of your Project Near Water' guidance document was reviewed and applied to the Project. As per this DFO guidance document, if a Project can follow the 'measures to protect fish and fish habitat' then a Request for Review is not required.

Based on the information provided in **Section 3**, and with the installation of spill containment systems including double-walled tanks, concrete pad, impact protection, and a the development and implementation of a Sediment Erosion Control Plan prior to construction, the proposed Project will be able to comply with the following measures as outlined by the DFO 'measures to protect fish and fish habitat':

- Prevent the death of fish;
- Maintain riparian vegetation;
- Carry out works, undertakings and activities on land;
- Maintain fish passage;
- Ensure proper sediment control; and
- Prevent entry of deleterious substances in water.

Conclusion: With the proposed spill prevention, spill containment, and erosion control measures in place, there will be a negligible risk of environmental impact associated with surface water quality and aquatic resources.

4.1.4 Accidents and Malfunctions

The following sections provide additional details on precautionary measures that will be implemented by Hudbay to minimize the potential for accidents and malfunctions during construction and operation of the Project.

4.1.4.1 Spills

Environmental effects may occur during construction due to fuel spills from 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 vehicle maintenance. Accidental spills of diesel fuel may also occur during the operation of the tanks, most notably during filling of the tanks.

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 construction activities:

- When servicing construction vehicles 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.
- Contractors tasked with filling the tanks will be trained on how to deal with fuel spills, including knowledge of how to properly deploy site spill kit materials.
- Spill kits will be placed at or in close proximity to the diesel tanks.

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.

4.1.4.2 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. Summary

To allow for improved capacity to provide backup power in the event of an electrical failure, Hudbay is proposing to upgrade the existing diesel-powered backup pumping system at Anderson TIA Reclaim Pumphouse and Snow Lake Freshwater Pumphouse by installing higher volume diesel storage tanks adjacent to the pumphouses. Additional fuel for backup pumping systems will allow for pumps to be run for a longer duration and assist in mitigating against equipment damage and process shutdowns.

Our environmental review has determined that, with the implementation of the standard operating and mitigation measures described in this letter, the residual environmental impacts associated with construction and operation of the new diesel storage tanks will be negligible in magnitude, and therefore not likely to cause significant adverse environmental effects.

It is recommended that Hudbay update the Closure Plan for Anderson TIA and Stall Concentrator to provide accommodations for the decommissioning of the expanded tanks and associate components described in this letter.

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.

Sincerely,

AECOM Canada Ltd.

Prepared by

[redacted]

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Approved by

[redacted]

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