

## **APPENDIX C**

### **Updated Mitigation and Monitoring Commitments**

- C-1: Summary of Mitigation Commitments**
- C-2: Site-Specific Mitigation Measures and Future Work for  
Archaeological Sites**
- C-3: Summary of Monitoring Commitments**

Côté Gold Project  
Environmental Effects Review Report  
September 2018  
EA: EA 05-09-02; EAIMS: 13022; CEAA: 80036

## **C-1: Summary of Mitigation Commitments**

**Appendix C-1: Summary of Mitigation Commitments**

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Air Quality	Construction	Fugitive dust emissions	Dust Best Management Plan (DBMP)	<p>The DBMP will ensure effective fugitive dust management to mitigate potential off-site effects of the particulate matter and trace metals present on the particulate.</p> <p>The DBMP will detail the following measures: watering frequency, visual monitoring, inspection, record keeping, responsibility, training, complaint response, and corrective actions.</p> <p>The site will have water trucks with water sprays and cannons; should weather conditions not permit watering, other Ministry of the Environment and Climate Change (MOECC) approved suppressants (such as calcium chloride) will be used.</p> <p>If further mitigation is required at specific locations (e.g., active stockpiles), dedicated water sprays will be employed.</p> <p>Travel surfaces will be maintained to minimize silt (fine material).</p>	Maintain air quality to be compliant with Ontario Regulation 419/05 standards for total suspended particulate (TSP) and metals at off-site receptors.	The mitigation measure has not changed from the EA.

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Air Quality	Construction	Exhaust from generators, trucks and mobile equipment	Engine Maintenance program	A preventive maintenance program will be employed that encompasses all pollution control equipment and diesel-fired engines.	Maintain air quality to be compliant with Ontario AAQC for NO <sub>2</sub> , SO <sub>2</sub> , CO, and particulate matter at off-site receptors.	The mitigation measure has not changed from the EA.
Air Quality	Construction, Operations, Closure	Exhaust from trucks and off-road mobile equipment	Equipment compliant with Transport Canada vehicle emission requirements	Emission reductions achieved through the use of current equipment that complies with Transport Canada's off-road engine emission criteria.	Transport Canada Off-Road Compression-Ignition Engine Emission Regulations (SOR/2005-32).	The mitigation measure has not changed from the EA.
Air Quality	Construction, Operations, Closure	Sulphur dioxide (SO <sub>2</sub> ) emissions from diesel fuel use	Use of low sulphur fuel	Low sulphur fuels will be used in off-road diesel engines; this will reduce the sulphur dioxide emissions from all sources and the resultant off-site air concentrations.	Environment Canada Sulphur in Diesel Fuel Regulation limiting fuel sulphur content for off-road engines. (SOR/2002-254)	The mitigation measure has not changed from the EA.

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Air Quality	Operations	Fugitive Dust Emissions	Dust Best Management Plan (DBMP)	<p>The DBMP will ensure effective fugitive dust management to mitigate potential off-site effects of the particulate matter and trace metals present on the particulate.</p> <p>The DBMP will detail the following measures: watering frequency, visual monitoring, inspection, record keeping, responsibility, training, complaint response, and corrective actions.</p> <p>The site will have water trucks with water sprays and cannons; should weather conditions not permit watering, other MOECC approved suppressants (such as calcium chloride) will be used.</p> <p>If further mitigation is required at specific locations (e.g., active stockpiles), dedicated water sprays will be employed.</p> <p>Travel surfaces will be maintained to minimize silt (fine material).</p>	<p>Maintain air quality to be compliant with Ontario Regulation 419/05 standards for TSP and metals at off-site receptors.</p> <p>DBMP will be part of MOECC Environmental Compliance Approval.</p>	The mitigation measure has not changed from the EA.
Air Quality	Operations	Dust from TMF	Dust Best Management Plan (DBMP)	<p>Controlling dust from the TMF is required to prevent off-site dust. As a large exposed area, control method must prevent potential for dusting to occur.</p>	<p>Maintain air quality to be compliant with Ontario Regulation 419/05 standards for TSP and metals at off-site receptors.</p>	The mitigation measure has not changed from the EA.

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Air Quality	Operations	Exhaust from generators, trucks and mobile equipment	Engine Maintenance program	A preventive maintenance program will be employed for pollution control equipment and diesel-fired engines.	Maintain air quality to be compliant with Ontario AAQC for NO <sub>2</sub> , SO <sub>2</sub> , CO, and particulate matter at off-site receptors.	The mitigation measure has not changed from the EA.
Air Quality	Operations	Exhaust from trucks and off-road mobile equipment.	Equipment compliant with Transport Canada vehicle emission requirements	Emission reductions achieved through the use of current equipment that complies with Transport Canada's off-road engine emission criteria.	Transport Canada Off-Road Compression-Ignition Engine Emission Regulations (SOR/2005-32).	The mitigation measure has not changed from the EA.
Air Quality	Operations	SO <sub>2</sub> emissions from diesel fuel use	Use of low sulphur fuel	Low sulphur fuels will be used in off-road diesel engines; this will reduce the sulphur dioxide emissions from all sources and the resultant off-site air concentrations.	<i>Environment Canada Sulphur in Diesel Fuel Regulation limiting fuel sulphur content for off-road engines (SOR/2002-254).</i>	The mitigation measure has not changed from the EA.
Air Quality	Operations	Particulate emissions from drilling operations	Control measures provided by equipment supplier	Mitigation measures are required to prevent off-site effects of TSP and metals, through the use of equipment with dust control.	Compliance with Ontario Regulation 419/05 standards for TSP and metals at off-site receptors.	The mitigation measure has not changed from the EA.

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Air Quality	Operations	Particulate emissions and NO <sub>x</sub> from open pit blasting	Blasting to occur mid-day based on favourable climatic conditions Follow manufacturer's recommended guidelines regarding water infiltration and time of explosives usage	Blasting will occur when meteorological conditions are such that off-site TSP, metals and NO <sub>x</sub> levels are compliant with regulations. NO <sub>x</sub> emissions may increase if emulsion is left in boreholes for extended period of time due to infiltration of water.	Compliance with Ontario Regulation 419/05 air quality standards for NO <sub>x</sub> , TSP, and metals at off-site receptors.	The mitigation measure has not changed from the EA.
Air Quality	Operations	Hydrogen cyanide (HCN) emissions from tailings	Cyanide destruction at the ore processing plant	HCN emissions from TMF are expected to be minimal, as sulphur dioxide will be used to destroy cyanide at the Ore Processing Plant before tailings are released to the TMF.	Compliance with Ontario Regulation 419/05 air quality standard for HCN at off-site receptors.	The mitigation measure has not changed from the EA.
Air Quality	Operations	Material handling at the ore processing plant	Dust collection systems	Mitigation measures to control dust emissions from crushing (primary and secondary) and reclaim from feed stockpiles are required to prevent off-site effects of TSP and metals. Crushing and reclaim from stockpiles for crushed materials will be controlled with applicable dust control systems. A maintenance plan will ensure that dust control systems are functioning properly.	Compliance with Ontario Regulation 419/05 air quality standards for TSP at off-site receptors.	The mitigation measure has not changed from the EA.

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Air Quality	Operations	Particulate emissions from lime silo	Dust collection systems	Mitigation measures are required to control dust during lime delivery to the silos to prevent off-site effects of TSP. Lime silo vents are to be controlled by dust control systems. A maintenance plan will ensure dust control systems are functioning properly.	Compliance with Ontario Regulation 419/05 air quality standards for TSP at off-site receptors.	The mitigation measure has not changed from the EA.
Air Quality	Operations	Emissions from lime slaker	Dust collection systems	Mitigation measures are required to control emissions from the lime slaker to prevent off-site effects of TSP. Emissions from the lime slaker are to be controlled. A maintenance plan will ensure dust control systems are functioning properly.	Compliance with Ontario Regulation 419/05 air quality standard for TSP at off-site receptors.	The mitigation measure has not changed from the EA.
Air Quality	Operations	Particulate from dry material handling in ore processing plant (flocculants, copper sulphate)	Dust collection systems	Mitigation measures are required to control emissions from handling and mixing of dry chemicals. Mixing and handling areas are to be controlled. A maintenance plan will ensure dust control systems are functioning properly.	Compliance with Ontario Regulation 419/05 air quality standard for TSP at off-site receptors.	The mitigation measure has not changed from the EA.
Air Quality	Operations	Emissions from induction furnace	Dust collection systems	Emissions from the furnace are to be controlled. A maintenance plan will ensure dust control systems are functioning properly.	Compliance with Ontario Regulation 419/05 air quality standard for TSP at off-site receptors.	The mitigation measure has not changed from the EA.



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Air Quality	Operations	SO <sub>2</sub> emissions from cyanide destruction	Closed loop delivery	To control emissions during delivery, SO <sub>2</sub> is to be delivered to the site as a pressurized liquid. Delivery system to include a gas capture system.	Compliance with Ontario Regulation 419/05 air quality standard for SO <sub>2</sub> at off-site receptors.	The mitigation measure has not changed from the EA.
Air Quality	Operations	Emissions from on-site emergency generators	Develop a testing schedule to minimize air quality effects	Mitigation measures are required to control NO <sub>x</sub> and TSP emissions from the generators. Testing will be conducted as per established industry protocols.	Maintain air quality to be compliant with Ontario Regulation 419/05 air quality standards for TSP and NO <sub>x</sub> at off-site receptors. Testing schedule will be part of MOECC ECA.	The mitigation measure has not changed from the EA.
Air Quality	Closure	Exhaust from generators, trucks and mobile equipment	Engine Maintenance program	A preventive maintenance program will be employed that encompasses all pollution control equipment and diesel-fired engines.	Maintain air quality to be compliant with Ontario AAQC for NO <sub>2</sub> , SO <sub>2</sub> , CO, and particulate matter at off-site receptors.	The mitigation measure has not changed from the EA.
Air Quality	Closure	Exhaust from trucks and off-road mobile equipment.	Equipment compliant with Transport Canada vehicle emission requirements	Emission reductions achieved through the use of current equipment that complies with Transport Canada's off-road engine emission criteria.	Transport Canada Off-Road Compression-Ignition Engine Emission Regulations (SOR/2005-32).	The mitigation measure has not changed from the EA.

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Air Quality	Closure	Fugitive Dust Emissions	Dust Best Management Plan (DBMP)	<p>The DBMP will ensure effective fugitive dust management to mitigate potential off-site effects of the particulate matter and trace metals present on the particulate.</p> <p>The DBMP will detail the following measures: watering frequency, visual monitoring, inspection, record keeping, responsibility, training, complaint response, and corrective actions.</p> <p>The site will have water trucks with water sprays and cannons; should weather conditions not permit watering, other MOECC approved suppressants (such as calcium chloride) will be used.</p> <p>Travel surfaces will be maintained to minimize silt (fine material).</p>	Maintain air quality at property line to be compliant with Ontario Regulation 419/05 standards for TSP and metals at off-site receptors.	The mitigation measure has not changed from the EA.
Noise and Vibration	Construction	Construction blasting noise at the receptors.	Charge size of construction blasting outside of the open pit boundary will be such that the objectives of NPC-119 will be achieved.	Minimum separation distance of 1.25 km between blast location and nearest receptor to be maintained. If blast size exceeds 250 kg per delay and/or if the minimum separation is less than 1.25 km, IAMGOLD will prepare a blast noise study to achieve objectives of NPC-119.	NPC-119 noise limit of 120 dBL.	The mitigation measure has not changed from the EA.

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Noise and Vibration	Construction	Construction blasting vibration at the receptors.	Charge size of construction blasting outside of the open pit boundary will be such that the objectives of NPC-119 will be achieved.	Minimum separation distance of 1.25 km between blast location and nearest receptor to be maintained. If blast size exceeds 250 kg per delay and/or if the minimum separation is less than 1.25 km, IAMGOLD will prepare a blast noise study to achieve objectives of NPC-119.	NPC-119 vibration (PPV) limit of 10 mm/s.	The mitigation measure has not changed from the EA.
Noise and Vibration	Construction	Construction noise.	1 km setback distances to be kept at the Project site between the construction location and the receptors.	1 km setback distances to be maintained between the construction location and the receptors. If construction occurs closer to the receptors (e.g., waterways, road realignments), IAMGOLD to prepare a construction noise study for the particular activity.	N/A	The mitigation measure has not changed from the EA.
Noise and Vibration	Construction	Construction Equipment Noise Limits	Construction equipment not to exceed noise levels specified in NPC-115 and NPC-118	Ensure equipment used for construction meet the guideline limits.	Achieve objectives of NPC-115 and NPC-118 construction equipment noise limits.	The mitigation measure has not changed from the EA.
Noise and Vibration	Construction, Operations	Operational blasting noise at the receptors.	Blasting charge size in the open pit is planned to be in compliance with NPC-119.	Blasting charge sizes used in the open pit will be 536 kg per delay or smaller. If it exceeds 536 kg per delay, IAMGOLD will prepare a blast noise study to show compliance with NPC-119.	Compliance with NPC-119 noise limit of 120 dBL.	The mitigation measure has not changed from the EA.
Noise and Vibration	Construction, Operations	Operational blasting vibration at the receptors.	Blasting charge size in the open pit is planned to be in compliance with NPC-119.	Blasting charge sizes used in the open pit will be 536 kg per delay or smaller. If it exceeds 536 kg per delay, IAMGOLD will prepare a blast vibration study to show compliance with NPC-119.	Compliance with NPC-119 vibration (PPV) limit of 10 mm/s.	The mitigation measure has not changed from the EA.

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Noise and Vibration	Operations	Operational noise at the receptors.	<p>Site equipment will be operated to meet NPC-300 operational noise limits.</p> <p>Alternatively, to meet NPC-300 night-time criteria, sensitive receptors may be purchased.</p>	<p>Some equipment (air track drill, track dozer) may be limited to daytime operation.</p> <p>Haul truck traffic limitations for night time operations may be applied.</p> <p>Some equipment (air track drill, track dozer) may be limited to daytime operation.</p> <p>Haul truck traffic limitations for night time operations may be applied.</p>	Compliance with NPC-300 for operational noise limit of 45 dBA during daytime and 40 dBA during night-time.	<p>Mitigation measure no longer applicable.</p> <p>Nighttime operation restriction is no longer required as the predicted sound levels meet the nighttime criteria limit. The change in site layout and reduced production rate helped to lower noise impact at the receptors.</p> <p>Purchase of noise sensitive receptors may not be required as the project noise impact at the receptors are predicted to be within the limits.</p>

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Hydrogeology	Design	Inflows to open pit	Perimeter dam construction	Construction of perimeter dams in low lying areas along Clam Lake and the outflow of Chester Lake to minimize inflows to the open pit.	Lakes and Rivers Improvement Act	The mitigation measure has not changed from the EA.
Hydrogeology	Design	Inflows to open pit	Surface water realignments	Surface water realignments to minimize risks associated with surface water features in close proximity to an open pit.	Lakes and Rivers Improvement Act	The mitigation measure has not changed from the EA.
Hydrogeology	Design	Mine rock management	Engineered facilities to manage mine rock	Construction of engineered facilities to store mine rock (MRA), low-grade ore (low-grade stockpile) and tailings (TMF).	n/a	The mitigation measure has not changed from the EA.
Hydrogeology	Design	Mine rock seepage	Engineered facilities to manage seepage	Construction of engineered water management systems to collect runoff and seepage from the MRA, lowgrade stockpile, TMF, and polishing pond.	Ontario Water Resources Act Environmental Compliance Approval, Metal Mining Effluent Regulations	The mitigation measure has not changed from the EA.
Hydrology and Climate	Design	Mine rock seepage	Engineered facilities to manage runoff	Engineered water management systems will be constructed to collect runoff and seepage from the MRA, ore stockpiles, TMF, and Overburden Stockpile during the Operations Phase and the Post-closure Stage I Phase.	Ontario Water Resources Act Environmental Compliance Approval, Metal Mining Effluent Regulations	The mitigation measure has not changed from the EA.

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Hydrology and Climate	Design	Watercourse realignment	Engineered facilities to manage surface water flows	Engineered realignment channels will be constructed to convey the range of flows that can be reasonably expected over the projected life of mine or life of realignment feature as applicable.	Ontario Water Resources Act Environmental Compliance Approval, Metal Mining Effluent Regulations	The mitigation measure has not changed from the EA.
Hydrology and Climate	Design	Erosion and sediment control	Erosion and sediment control measures	Erosion and sediment control measures will be constructed to promote settling of sediments and mitigate the migration of suspended solids into nearby surface water features.	Ontario Water Resources Act Environmental Compliance Approval, Metal Mining Effluent Regulations	The mitigation measure has not changed from the EA.
Hydrology and Climate	Construction, Operations, Closure, Post-closure	Realignment of surface water flows.	Realignment channels and dams.	Realignment channels and dams will be designed to convey the range of flows and water levels reasonably expected over the Project life.  Realignment dams will be constructed to allow excavation of the open pit and construction of the TMF.	<i>Lakes and Rivers Improvement Act, (LRIA), Fisheries Act, Navigation Protection Act</i>	The mitigation measure has not changed from the EA.
Hydrology and Climate	Operations, Closure, Post-closure	Realignment of surface water flows.	Realignment channels and dams.	Realignment channels and dams will be designed to convey the range of flows and water levels reasonably expected over the Project life.  Realignment dams will be constructed to allow excavation of the open pit and construction of the TMF.	<i>Lakes and Rivers Improvement Act, (LRIA), Fisheries Act, Navigation Protection Act</i>	The mitigation measure has not changed from the EA.

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Water Quality	Construction, Operations, Closure	Acid rock drainage from onsite roads	Use of non-acid generating materials for road construction purposes.	IAMGOLD will sample mine rock to ensure only non-acid generating materials are used for construction purposes.	n/a	The mitigation measure has not changed from the EA.
Water Quality	Construction, Operations, Closure, Post-closure	Discharge of total suspended solids due to soil erosion and transport of sediments from disturbed areas, and potential increases in total suspended solids concentrations within surface water receivers.	Best Management Practices (BMPs) and engineering designs to limit soil erosion and mobilization / transport of sediments from disturbed areas.	During Construction, Operations and Closure phases, BMPs for erosion and sediment control include: design of physically stable mine rock and tailings storage facilities, the use of earthwork methods to minimize slope length and grade, ditching, sediment ponds / traps, channel and slope armouring, use of natural vegetation buffers, vegetation of disturbed soil, and runoff controls (i.e., sediment fencing and small check dams). During Post-closure, erosion and sediment control would be focused on monitoring the success of closure activities.	Total suspended solids discharge limits: Metal Mining Effluent Regulations (MMER), and Ontario Regulation 560/94, Effluent Monitoring and Effluent Limits – Metal Mining Sector. Total suspended solids (and turbidity) water quality guidelines: Canadian Water Quality Guidelines for the Protection of Aquatic Life and Provincial Water Quality Objectives.	The mitigation measure has not changed from the EA.

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Water Quality	Operations	Potential influence of process water and seepage / runoff from TMF on receiving environment water quality.	Treatment of process water; construction and operation of engineered water management systems to collect runoff and seepage from the TMF; reclaim water returned (or recycled) to the process plant; use of liners on starter tailings dams to limit seepage losses during the early years of operations.	<p>Process water will be treated at the ore processing plant for cyanide, cyanide destruction constituents, as required, prior to discharge into the TMF.</p> <p>Seepage and runoff will be collected at collection ponds around the perimeter of the TMF and pumped to the TMF reclaim pond.</p> <p>Water in the reclaim pond will be recycled back to the ore processing plant, with no water from the reclaim pond being discharged to the environment through the polishing pond under normal flow conditions.</p>	<p>Effluent discharge requirements under: Metal Mining Effluent Regulations (MMER), and Ontario Regulation 560/94, Effluent Monitoring and Effluent Limits – Metal Mining Sector.</p> <p>Water quality guidelines: Canadian Water Quality Guidelines for the Protection of Aquatic Life and Provincial Water Quality Objectives.</p>	The mitigation measure has not changed from the EA.
Water Quality	Operations	Potential influence of explosives residuals in mine rock, low-grade ore and open pit on receiving environment water quality (i.e., ammonia and nitrate).	BMPs for explosives use.	Implementation of BMPs during blasting to reduce the blast waste rate and mass of residual explosives present in the open pit, mine rock, low-grade ore and dam construction material.	Water quality guidelines: Canadian Water Quality Guidelines for the Protection of Aquatic Life and Provincial Water Quality Objectives.	The mitigation measure has not changed from the EA.



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Water Quality	Operations	Potential influence of sewage on receiving environment water quality.	Treatment of sewage.	Sewage will be treated to a quality that meets federal and provincial legislative requirements before discharge to the environment.	Effluent discharge requirements under: Wastewater Systems Effluent Regulations, and Ontario <i>Water Resources Act</i> (Section 53)	The mitigation measure has not changed from the EA.
Water Quality	Operations, Closure	Potential influence of seepage / runoff from MRA, low-grade stockpile and open pit on receiving environment water quality.	Construction and operation of engineered water management systems to collect runoff and seepage; monitoring and treatment of effluent, as required.	Open pit inflow and runoff will be collected in the open pit sump. Seepage and runoff from the MRA and from the low-grade stockpile will be collected in ponds. During the Operations phase, water collected by these facilities will be pumped to the polishing pond. The excess water in the polishing pond, which will be monitored for water quality, is discharged to the environment.	Effluent discharge requirements under: Metal Mining Effluent Regulations (MMER), and Ontario Regulation 560/94, Effluent Monitoring and Effluent Limits – Metal Mining Sector.  Water quality guidelines: Canadian Water Quality Guidelines for the Protection of Aquatic Life and Provincial Water Quality Objectives.	The mitigation measure has not changed from the EA.
Water Quality	Operations, Closure, Post-closure	Potential impact of landfill leachate from solid domestic and industrial waste on groundwater quality.	Management of solid domestic and industrial waste in a permitted landfill, including the use of BMPs; monitoring of groundwater quality; remedial action, as required.	Solid domestic and industrial waste will be placed into a landfill that will be operated in accordance with federal and provincial legislative requirements, and BMPs, including mitigation, monitoring, remedial action, and closure plans, will be integrated into the operation and closure of the landfill.	Ontario Regulation 232/98	The mitigation measure has not changed from the EA.

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Water Quality	Operations, Closure, Post-closure	Acid rock drainage from the MRA potentially affecting effluent quality	Inclusion of PAG rock within the bulk of the MRA.	The inclusion of any PAG materials with the bulk of the waste will likely be an appropriate management method and segregation of any PAG materials does not appear to be necessary.	n/a	The mitigation measure has not changed from the EA.
Water Quality	Post-closure (stage II)	Potential influence of seepage / runoff from MRA and Côte Pit Lake on receiving environment water quality.	Monitoring and, if determined to be required, water collection and treatment.	Seepage and runoff from the MRA and water in the open pit will be monitored prior to Post-closure phase (Stage II). If the monitoring determines that the water quality is not suitable for discharge to the environment, then collection and treatment measures will be implemented accordingly.	Water quality guidelines: Canadian Water Quality Guidelines for the Protection of Aquatic Life and Provincial Water Quality Objectives.	The mitigation measure has not changed from the EA.
Terrestrial Biology	Construction	Adverse effects to wetlands.	Where practical, avoid placement structures in waterbodies along the transmission line ROW, and to the extent practicable, in low-lying areas (difficult for some portions of the existing Shining Tree ROW).	Where practical, avoid placement structures in waterbodies along the transmission line ROW, and to the extent practicable, in low-lying areas	n/a	The mitigation measure has not changed from the EA.

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Terrestrial Biology	Construction	Adverse effects to ungulates (Moose) and furbearers (Wolves, Bears, Marten) due to the loss of habitat or noise disturbance.	<p>Develop a compact Project site to reduce overall habitat loss and to limit the potential adverse effects related to interference with wildlife movement.</p> <p>Utilize existing infrastructure for access and minimize construction of new roads and other corridors wherever alternatives exist.</p> <p>Construction crews will be advised to not interfere or harass wildlife.</p> <p>No hunting by Project personnel permitted while working or residing on site.</p> <p>Enforce speed limits along Project roads to reduce the potential for collisions with wildlife. Signs warning drivers of the possibility of wildlife encounters will be posted in areas of high wildlife activity.</p> <p>Include wildlife awareness information in regular safety and environmental inductions.</p> <p>Project personnel will be made aware of seasonal changes in local large mammal behaviour or presence.</p>	<p>Minimize the width of the transmission line ROW to the proposed 50 m.</p> <p>Utilize existing infrastructure for access and minimize construction of new roads where practical.</p> <p>No hunting by Project personnel will be permitted while working or residing on-site.</p> <p>Enforce speed limits along Project roads.</p> <p>Include wildlife awareness information in regular safety and environmental inductions.</p>	n/a	The mitigation measure has not changed from the EA.

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Terrestrial Biology	Construction	Adverse effects to bats due to loss of habitat or noise disturbance.	Develop a compact site to reduce overall habitat loss and to limit potential adverse effects related to sound emissions, to the extent practicable. Enforce speed limits along Project roads and reduce vehicular traffic associated with construction.	Minimize the width of the transmission line ROW to the proposed 50 m. Enforce speed limits along Project roads and reduce vehicular traffic associated with construction.	n/a	The mitigation measure has not changed from the EA.
Terrestrial Biology	Construction	Adverse effects to migratory birds and avian SAR due to loss of habitat or noise disturbance.	Minimize the Project footprint to the extent practicable. Construction and clearing within the transmission line ROW outside migratory bird breeding season (April 15 to August 31). Maintain existing vegetation ground cover along the transmission line ROW to the extent practicable. Install conductor wires at a sufficient distance apart to prevent the accidental electrocution (contact of wingtips with wire) of large avian species. Utilize existing infrastructure for access and minimize construction of new roads and other corridors where possible. Advise Project personnel not to interfere or harass wildlife. Include Common Nighthawk and Bank Swallow identification as	Minimize the width of the transmission line ROW to the proposed 50 m. Construct in winter, where frozen surfaces are required to minimize surface erosion. Retain existing low-lying vegetation ground cover along the transmission line ROW thereby minimizing vegetation clearing. Utilize existing infrastructure for access and minimize construction of new roads. No hunting by Project personnel will be permitted while working or residing on-site. Enforce speed limits along Project roads. Include wildlife awareness information in regular safety and environmental inductions.	Canadian Migratory Birds Convention Act Canadian Species at Risk Act Ontario Endangered Species Act	Mitigation measure updated. Migratory Bird Nesting Season dates have been changed to April 15 to August 31 to reflect updated government standards and protocols. All other components of this mitigation measure have not changed notably from the EA. As the Project no longer involves construction of a new dedicated transmission line

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(Cont.) Terrestrial Biology	(Cont.) Construction	(Cont.) Adverse effects to migratory birds and avian SAR due to loss of habitat or noise disturbance.	part of site induction to improve success of wildlife reporting programs. Contact the MNRF and Environment Canada within 24 hours if Common Nighthawk or Bank Swallow are recorded nesting on site. No hunting by Project personnel permitted while working or residing on-site. Educate Project personnel on how to handle food and food wastes in a responsible manner and create and enforce policies to ensure no feeding of wildlife.	(Cont.) Minimize the width of the transmission line ROW to the proposed 50 m. Construct in winter, where frozen surfaces are required to minimize surface erosion. Retain existing low-lying vegetation ground cover along the transmission line ROW thereby minimizing vegetation clearing. Utilize existing infrastructure for access and minimize construction of new roads. No hunting by Project personnel will be permitted while working or residing on-site. Enforce speed limits along Project roads. Include wildlife awareness information in regular safety and environmental inductions.	(Cont.) Canadian Migratory Birds Convention Act Canadian Species at Risk Act Ontario Endangered Species Act	the wording has been changed to reflect the same measure applies to any construction and clearing within the existing ROW.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Terrestrial Biology	Construction	Adverse effects to raptors due to loss of habitat or noise disturbance.	<p>Develop a compact site to prevent encroachment of Project activities on raptor nesting sites and adjacent habitat.</p> <p>Minimize the level of potentially disturbing activities near any known or subsequently discovered active raptor nest sites during the raptor breeding season (April 15 – August 31) until nests are vacated.</p> <p>Dispose of food wastes generated on site in an appropriate manner that limits the attraction of wildlife, including Common Ravens, Turkey Vultures and Bald Eagles.</p> <p>Remove carcasses of road-killed animals or any other carcasses found onsite in a timely manner to limit the attraction of wildlife, such as Common Ravens and Turkey Vultures.</p>	<p>Minimize the width of the transmission line ROW to the proposed 50 m.</p> <p>Dispose of food wastes generated on site in an appropriate manner.</p> <p>Remove carcasses of road-killed animals or any other carcasses found onsite in a timely manner.</p> <p>(Cont.)</p> <p>Minimize the width of the transmission line ROW to the proposed 50 m.</p> <p>Dispose of food wastes generated on site in an appropriate manner.</p> <p>Remove carcasses of road-killed animals or any other carcasses found onsite in a timely manner.</p>	n/a	<p>Mitigation measure updated.</p> <p>Raptor Nesting Season dates have been changed to April 15 to August 31 to reflect updated government standards and protocols.</p> <p>All other components of the mitigation measure have remained the same as presented in the EA.</p>

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Terrestrial Biology	Construction, Operations, Closure	Direct vegetation (and wildlife habitat) loss, alteration, and fragmentation from the physical footprint of the Project.	<p>Limit the area of Project footprint and limit disturbance from employees and mining activities. No vegetation removal is to occur during sensitive wildlife breeding seasons such as the migratory bird nesting season (April 15 to August 31). Construct the transmission line to minimize the potential for ground disturbance and soil erosion during construction and to reduce the necessity for creation of additional permanent access roads.</p> <p>Retain existing low-lying vegetation along the transmission line ROW thereby minimizing vegetation clearing and allowing for the maintenance of root masses and ground vegetation that will reduce the potential for erosion and encourage continued vegetation growth through operations and beyond closure. Where practical, use existing roads and trails. Where practical, rehabilitate habitat for plants and wildlife.</p>	<p>Existing access roads and infrastructure used to the extent practical in transmission line construction.</p> <p>Vegetation clearing to take place outside of the migratory bird nesting season (April 15 to August 31). If under unforeseen circumstances minor vegetation removal is necessary between April 15 and August 31, non-intrusive surveys such as point counts for singing male birds will be completed by qualified individuals. If singing males are recorded then it will be assumed that a nesting female is nearby and proper provincial and federal species-specific nest buffers will be established around the singing male; no vegetation removal will occur within these buffers between April 15 and August 31. A mitigation / management plan will be developed in consultation with Environment Canada and the Ministry of Natural Resources to address potential impacts to breeding birds. Retain existing low ground cover along transmission line ROW thereby minimizing vegetation</p>	Canadian Migratory Birds Convention Act	<p>Mitigation measure updated.</p> <p>The mitigation measure no longer needs to include the construction of the 230 kV transmission line. The Project no longer requires a dedicated 230 kV transmission line; therefore, the Project will tie into an existing 115 kV transmission line at the Shining Tree location.</p> <p>.Migratory Bird Nesting Season dates have been changed to April 15 to August 31 to reflect updated government standards and protocols. All other components of the mitigation measure have remained the same as presented in the EA.</p>

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
(Cont.) Terrestrial Biology	(Cont.) Construction, Operations, Closure	(Cont.) Direct vegetation (and wildlife habitat) loss, alteration, and fragmentation from the physical footprint of the Project.	(Cont.)	clearing. Maintain vegetated buffers adjacent to creek and river transmission line crossings.	(Cont.) Canadian Migratory Birds Convention Act	(Cont.)



Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Terrestrial Biology	Construction, Operations, Closure	Direct vegetation (and wildlife habitat) loss, alteration, and fragmentation from the physical footprint of the Project.	<p>Limit the area of Project footprint and limit disturbance from employees and mining activities. No vegetation removal is to occur during sensitive wildlife breeding seasons such as the migratory bird nesting season (April 15 to August 31).</p> <p>Construct the transmission line to minimize the potential for ground disturbance and soil erosion during construction and to reduce the necessity for creation of additional permanent access roads.</p> <p>Retain existing low-lying vegetation along the transmission line ROW thereby minimizing vegetation clearing and allowing for the maintenance of root masses and ground vegetation that will reduce the potential for erosion and encourage continued vegetation growth through operations and beyond closure.</p> <p>Where practical, use existing roads and trails.</p> <p>Where practical, rehabilitate habitat for plants and wildlife.</p>	<p>Apply and enforce speed limits along all Project access roads and always give the right-of-way to wildlife.</p> <p>Vehicle use will be restricted to designated areas and use of off-road vehicles for recreational purposes will be prohibited for workers.</p> <p>Progressive revegetation will be implemented where practical to reduce the amount of disturbed habitat during the Project lifecycle and will include active seeding to promote vegetation growth, stabilize the substrate, reduce potential erosion and enhance natural recovery of vegetation communities.</p>	Canadian Migratory Birds Convention Act	<p>Mitigation measure updated.</p> <p>The mitigation measure no longer needs to include the construction of the 230 kV transmission line. The Project no longer requires a dedicated 230 kV transmission line; therefore, the Project will tie into an existing 115 kV transmission line at the Shining Tree location. Migratory Bird Nesting Season dates have been changed to April 15 to August 31 to reflect updated government standards and protocols. All other components of the mitigation measure have remained the same as presented in the EA.</p>

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Terrestrial Biology	Construction, Operations, Closure	Introduction of invasive plant species can change vegetation ecosystem composition.	Limit / prevent the transfer of invasive plant species from equipment and imported soil used for rehabilitation.	Create topsoil and overburden stockpiles for use in future rehabilitation activities. Clean construction equipment and vehicles on a regular basis. Use locally-sourced native species to revegetate disturbed and exposed areas and encourage natural revegetation.	n/a	The mitigation measure has not changed from the EA.
Terrestrial Biology	Construction, Operations, Closure	Project preparation, construction, operation and closure activities can increase the risk of nest destruction and mortality of migratory birds (incidental take).	Limit risk of nest destruction and mortality of migratory birds.	Typically, clearing of vegetation will take place outside of the migratory bird nesting season (April 15 to August 31). If under unforeseen circumstances minor vegetation removal is necessary between April 15 and August 31, non-intrusive surveys such as point counts for singing male birds will be completed by qualified individuals. If singing males are recorded, then it will be assumed that a nesting female is nearby and proper provincial and federal species-specific nest buffers will be established around the singing male; no vegetation removal will occur within these buffers between April 15 and August 31.	Canadian Migratory Birds Convention Act	Mitigation measure updated.  Migratory Bird Nesting Season dates have been changed to April 15 to August 31 to reflect updated government standards and protocols. All other components of the mitigation measure have remained the same as presented in the EA.

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
(Cont). Terrestrial Biology	(Cont). Construction, Operations, Closure	(Cont). Project preparation, construction, operation and closure activities can increase the risk of nest destruction and mortality of migratory birds (incidental take).	(Cont.) Limit risk of nest destruction and mortality of migratory birds.	A mitigation/ management plan will be developed in consultation with Environment Canada and the MNRF to address potential impacts to breeding birds. Minimize disturbance to active nest sites.	(Cont.) Canadian Migratory Birds Convention Act	(Cont.)
Terrestrial Biology	Construction, Operations, Closure	Wildlife-vehicle collisions and physical hazards on the Project site may cause injury / mortality to individual animals.	Reduce risk of mortality to wildlife	Enforce speed limits on Project roads. The presence of wildlife will be monitored and communicated to Project site personnel. All Project personnel will be provided with environmental	Canadian Species at Risk Act Ontario Endangered Species Act	The mitigation measure has not changed from the EA.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
(Cont.) Terrestrial Biology	(Cont.) Construction, Operations, Closure	(Cont.) Wildlife-vehicle collisions and physical hazards on the Project site may cause injury / mortality to individual animals.	(Cont.) Reduce risk of mortality to wildlife	<p>awareness training.</p> <p>Vehicles will yield right-of-way to wildlife.</p> <p>Vehicle use will be restricted to designated areas and use of off-road vehicles for recreational purposes will be prohibited for workers. The Mine rock Areas, TMF polishing pond and low-grade ore stock pile will be regularly monitored for wildlife activity and hazards.</p> <p>If a SAR is identified within the Project area during construction, and construction activities will harm or harass the observed individual(s), work within the vicinity of the observed occurrence will be modified to minimize disturbance until the individual(s) leave the area. Information regarding the observation of SAR (species, number of individuals, location) should be reported to the MNRF within 48 hours.</p> <p>Temporary suspension of surface blasting if Moose, Black Bear, wolf and other wildlife are observed within the danger zone identified by the blast supervisor.</p>	(Cont.) Canadian Species at Risk Act Ontario Endangered Species Act	(Cont.) The mitigation measure has not changed from the EA.

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Terrestrial Biology	Construction, Operations, Closure	Attractants (e.g., food waste, oil products) may increase carnivore-human encounters and result in the loss (destruction or relocation) of individual animals. Attractants may also increase predator numbers and thereby increase predation risk on prey species.	Reduce the risk of mortality to wildlife.	Education and reinforcement of proper waste management practices will be provided to all Project personnel. Prohibit littering. Prohibit feeding of wildlife. Dispose of waste in accordance to a Waste Management Plan which will limit the presence of food attractants. All Project personnel will be provided with environmental awareness training. Presence of wildlife will be monitored and communicated to Project site personnel.	n/a	The mitigation measure has not changed from the EA.

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Terrestrial Biology	Construction, Operations, Closure, Post-closure	Construction and operation of the transmission line can result in bird and bat strikes and increase mortality of migratory and non-migratory bird and bat species.	Reduce the risk of mortality to birds and bats.	Use bird/bat deterrents / deflectors on transmission lines in high use areas (e.g., waterfowl movement corridors).	Ontario Endangered Species Act	Mitigation measure updated. The Project no longer requires a dedicated 230 kV transmission line; however, the mitigation measure still applies to any construction enabling the tie in to the 115 kV transmission line at the Shining Tree location and from the Shining Tree substation to the Project site.

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Terrestrial Biology	Operations	Adverse effects to vegetation communities due to activities associated with the maintenance of the transmission line wires and poles (dust production by service vehicles) and the need for periodic clearing of tall woody vegetation to ensure adequate clearance below the conductors.	<p>The generation of dust by transmission line service vehicles is expected to be limited and can be minimized by having these vehicles drive slowly along the transmission line ROW.</p> <p>Ensure that ongoing clearing is constrained to the necessary area of clearance (the ROW).</p> <p>Use mechanical brushing.</p>	Minimize the speed of service vehicles along the transmission line ROW.	n/a	The mitigation measure has not changed from the EA.

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Terrestrial Biology	Operations	Adverse effects to ungulates (Moose) and furbearers (Wolves, Bears, Marten) due to activities associated with maintenance of the transmission line wires and poles.	<p>Include wildlife awareness information in regular safety and environmental inductions.</p> <p>Project personnel will be advised not to interfere or harass or feed wildlife.</p> <p>Project personnel will be made aware of seasonal changes in local large mammal behaviour or presence.</p> <p>Project personnel will be required to handle food and food wastes in a responsible manner.</p> <p>No hunting by Project personnel will be permitted while working or residing on-site.</p> <p>Enforce speed limits along Project roads to reduce the potential for collisions with wildlife.</p> <p>Signs warning drivers of the possibility of wildlife encounters will be posted in areas of high wildlife activity.</p>	Include wildlife awareness information in regular safety and environmental inductions.	n/a	The mitigation measure has not changed from the EA.



<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Terrestrial Biology	Operations	Adverse effects to migratory birds, raptors and avian SAR due to activities associated with maintenance of the transmission line wires and poles.	Minimize the speed of service vehicles along the transmission line ROW to minimize dust production and thereby limit the zone of influence. Use marker balls and bird diverters on the transmission line wires to reduce the likelihood of bird collisions with power lines in high-risk location such as near wetlands.	Minimize the speed of service vehicles along Project roads and along the transmission line ROW. Use marker balls and bird diverters on wires in high-risk areas.	Canadian Migratory Birds Convention Act Canadian Species at Risk Act Ontario Endangered Species Act	The mitigation measure has not changed from the EA.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Terrestrial Biology	Post-closure	Adverse effects to vegetation communities due to activities associated with the removal of the transmission line wires and poles.	<p>Time removal of transmission line infrastructure to minimize the potential for ground disturbance and soil erosion by equipment and vehicles and to reduce the necessity for creation of additional permanent access roads.</p> <p>Retain existing low-lying vegetation ground cover thereby minimizing vegetation clearing and allowing for the maintenance of root masses and ground vegetation that will reduce the potential for erosion and encourage continued vegetation growth beyond closure.</p> <p>Minimize the speed of service vehicles along Project roads and along the transmission line ROW to lessen dust production and thereby limit the zone of influence.</p> <p>Encourage natural revegetation and recolonization of the ROW as part of the reclamation process.</p>	<p>Remove transmission line infrastructure in the winter and minimize disturbance to vegetation during closure activities.</p> <p>Minimize the speed of service vehicles along Project roads and along the transmission line ROW to lessen dust production.</p>	n/a	The mitigation measure has not changed from the EA.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Terrestrial Biology	Post-closure	Adverse effects to ungulates (Moose) and furbearers (Wolves, Bears, Marten) due to activities associated with the removal of the transmission line wires and poles.	<p>Utilize existing infrastructure for access and minimize construction of new roads and other corridors where other alternatives exist.</p> <p>Include wildlife awareness information in regular safety and environmental inductions.</p> <p>Project personnel will be advised not to interfere or harass or feed wildlife.</p> <p>Project personnel will be made aware of seasonal changes in local large mammal behaviour or presence.</p> <p>Project personnel will be required to handle food and food wastes in a responsible manner.</p> <p>No hunting by Project personnel will be permitted while working or residing on-site.</p> <p>Enforce speed limits along proposed access roads to reduce the potential for collisions with wildlife.</p> <p>Signs warning drivers of the possibility of wildlife encounters will be posted in areas of high wildlife activity.</p>	<p>Utilize existing infrastructure for access and minimize construction of new roads.</p> <p>Include wildlife awareness information in regular safety and environmental inductions.</p>	n/a	The mitigation measure has not changed from the EA.

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Terrestrial Biology	Post-closure	Adverse effects to bats due to activities associated with the removal of the transmission line wires and poles.	Utilize existing infrastructure for access and minimize construction of new roads and other corridors where alternatives exist. Project personnel will be advised not to interfere or harass wildlife.	n/a	Ontario Endangered Species Act	The mitigation measure has not changed from the EA.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Terrestrial Biology	Post-closure	Adverse effects to migratory birds, raptors and avian SAR due to activities associated with the removal of the transmission line wires and poles.	<p>Utilize existing infrastructure for access and minimize construction of new roads and other corridors where alternatives exist.</p> <p>Include wildlife awareness information in regular safety and environmental inductions.</p> <p>Project personnel will be advised not to interfere or harass or feed wildlife.</p> <p>Project personnel will be made aware of seasonal changes in local large mammal behaviour or presence.</p> <p>Project personnel will be required to handle food and food wastes in a responsible manner.</p> <p>No hunting by Project personnel will be permitted while working or residing on-site.</p> <p>Enforce speed limits along Project roads to reduce the potential for collisions with wildlife.</p> <p>Signs warning drivers of the possibility of wildlife encounters will be posted in areas of high wildlife activity.</p>	<p>Utilize existing infrastructure for access.</p> <p>Include wildlife awareness information in regular safety and environmental inductions.</p>	<p>Canadian Migratory Birds Convention Act</p> <p>Canadian Species at Risk Act</p> <p>Ontario Endangered Species Act</p>	<p>The mitigation measure has not changed from the EA.</p>

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Aquatic Biology	Construction	During construction water quality may be impaired due to elevated TSS in runoff which can affect aquatic species. IAMGOLD will implement best management practices to control runoff and minimize TSS effects. Some concentrations above background may occur temporarily.	The use of erosion control measures and timing of construction to avoid spawning and egg incubation periods will reduce the potential for effect to fish and aquatic life.	Construction in water bodies will be undertaken within the in-water construction windows to minimize effects to fish spawning. Erosion control fencing and sedimentation catchments will be installed downstream of active construction areas.	As required under a consolidated works permit under the <i>Lakes and Rivers Improvement Act</i> issued by the Ministry of Natural Resources and Forestry and under the <i>Fisheries Act</i> Section 35. TSS must not exceed 5 mg/L (long-term) or 25 mg/L TSS (short-term; CCME 2013)	The mitigation measure has not changed from the EA.
Aquatic Biology	Construction	Construction of the watercourse realignments will result in flooding of some terrestrial vegetation which could cause methyl mercury production and potentially affect recreational use of sport fish through consumption limits.	Removal of terrestrial vegetation and organic soils prior to flooding will reduce the potential for methyl mercury production through decaying of terrestrial vegetation.	Terrestrial vegetation and organic soils will be removed prior to flooding.	Health Canada consumptions restriction guideline (0.61 mg/kg Hg)- Health Canada 2004	The mitigation measure has not changed from the EA.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Aquatic Biology	Construction	Fish will be relocated from habitats that will be lost during the construction phase (i.e., open pit, MRA and TMF) but not all fish will be able to be collected, therefore individual fish will be lost during construction.	Relocate fish (representative numbers of the community) to established habitats. Time relocation relative to life cycle requirements and environmental conditions to minimize stress.	Non-destructive fishing will be conducted in fish habitats that will be lost. Timing of removals will be planned around life cycle requirements to minimize losses of individuals. Fish captured as part of the relocation program will be released within the watershed they are captured. Small and large-bodied fish will be targeted.	Section 35 of the <i>Fisheries Act</i> does not allow for the destruction of fish. A permit is required to provide for loss of some individuals.	The mitigation measure has not changed from the EA.
Aquatic Biology	Construction	Loss of existing lentic and lotic habitat will occur through the construction of the Project.	Design of the realignment channels will incorporate the life cycle requirements of the resident fish species and promote, where possible, an increase in habitat that is currently limited within the local study area.	Construct realignments to provide for life cycle requirements of resident fish	<i>Fisheries Act</i> Section 35. No loss of productive habitat related to commercial, aboriginal or recreational fisheries.	The mitigation measure has not changed from the EA.

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Aquatic Biology	Construction	Reduction in flow associated with the loss of the TMF drainage to Bagsverd Creek will reduce flow and water levels and could affect fish passage and use of habitats.	Predicted reductions in flow will be compared to the measured stream morphology and the stream bed will be modified, as required to ensure fish passage and utilization of habitats. The modifications should be conducted as part of the fish habitat compensation plan.	Conduct a survey of the stream morphology at critical times of the year (low and peak flows) and assess the potential impact to habitat associated with predicted reductions in flow and water levels. Incorporate streambed modifications into the habitat compensation plan, if required.	<i>Fisheries Act</i> Section 35. No loss of productive habitat related to commercial, aboriginal or recreational fisheries.	Mitigation measure no longer applicable Loss of habitat associated with reduction in flow is not anticipated under the Project plan in Bagsverd Creek, or in any other habitats and therefore this mitigation is no longer required.
Aquatic Biology	Operations	Water intake structures will trap, impinge fish.	Design water intake structures to meet DFO requirements to prevent/limit fish impingement.	Ensure intake pipe are fitted with screens to prevent fish impingement and consistent with DFO guidelines.	DFO Freshwater Intake End-of-Pipe Fish Screen Guideline	The mitigation measure has not changed from the EA.



Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Aquatic Biology	Construction, Operations	Blasting in the open pit during construction may affect spawning success and limit habitat utilization by some fish in water bodies adjacent to the open pit. However, the area affected is primarily profundal habitat and is of limited value for fish spawning thus any effects are expected to be minimal.	The spawning habitat within the water bodies affected will be included in the Fisheries Act Authorization for the site as a loss of habitat and will be addressed through the compensation plan.	Spawning habitat in Clam Lake within 238.5 m from open pit will be included in the Fisheries Act Authorization and ensuing compensation plan.	DFO guideline - Wright D-G., and Hopky G-E., 1998. Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters. <i>Fisheries Act</i> Section 35. No loss of productive habitat related to commercial, aboriginal or recreational fisheries.	Mitigation measure updated. There are two areas where fish habitat quality will potentially be affected during construction; Clam Lake and New Lake. The potential disruption in habitat will be addressed through the offsetting / compensation plan.

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Aquatic Biology	Operations	During the first years of operation the watercourse realignments may not be fully established and resident fish may experience some interruption in access to habitat or the quality of habitats.	Time construction of watercourse realignments to allow for vegetation growth for one season prior to commissioning of watercourse realignments, if possible or conduct planting of aquatic vegetation immediately following commissioning of channel realignments to promote the establishment of vegetation within the newly constructed habitats.	Construct habitat/realignments during the winter so that growth can occur over the spring and summer period and water can inundate new habitat areas to allow for vegetation growth or conduct planting of aquatic vegetation in newly constructed habitats immediately following commissioning. Planting of aquatic vegetation during this time will promote more rapid establishment of habitat.	Section 35 <i>Fisheries Act</i> authorization	The mitigation measure has not changed from the EA.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Aquatic Biology	Operations	Maximum values of several substances are predicted to exceed water quality guidelines in a few locations but concentrations of most substances are less than acute toxicity values appropriate for the assessment of short term exposure. Copper, iron and zinc will periodically exceed water quality guidelines in the effluent mixing zone with potential for short term effects to aquatic life.	Since toxicity of these substances can be modified by factors within the receiving environment such as hardness, dissolved organic carbon and pH, the predicted concentrations may not result in effects to aquatic biota. Site specific water quality objectives will need to be developed for these substances or effluent treatment will need to be employed such that protection of aquatic life is assured. To ensure that effluent is non-toxic, IAMGOLD will commit to a pH effluent limit of 6.7 to 9.0.	Prepare site-specific water quality guidelines following CCME protocols.	Water quality outside the mixing zone will need to achieve water quality guidelines and within the mixing zone must be non-acutely toxic to aquatic life– Ontario <i>Water Resources Act</i> (OWRA) and Section 36 of the <i>Fisheries Act</i>	Mitigation measure no longer applicable. Under the Project mine plan, metals are not predicted to exceed water quality guidelines, with the exception of arsenic during the dry year (1 in 25 yr) scenario. However, toxicity thresholds are not predicted to be exceeded even in the dry year. While mixing zone modelling will be required to support permitting, it is not anticipated that site specific water quality guidelines will be required.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Aquatic Biology	Post-closure (stage II)	Dams will be removed and the open pit reconnected to Upper Three Duck Lakes through an outlet channel. Until these habitats are established some reduction in fish access to habitat or the quality of habitats may occur. Once established a net increase in fish habitat will be provided.	Time construction of water realignments to allow for vegetation growth for one or more growing seasons prior to commissioning of watercourse realignments or conduct planting of aquatic vegetation immediately following commissioning of channel realignments to promote the establishment of vegetation within the newly constructed habitats.	Construct habitat/realignments during the winter so that growth can occur over the spring and summer period and water can inundate new habitat areas to allow for vegetation growth or conduct planting of aquatic vegetation in newly constructed habitats immediately following commissioning. Planting of aquatic vegetation during this time will promote more rapid establishment of habitat.	Section 35 <i>Fisheries Act</i> authorization	The mitigation measure has not changed from the EA.
Land Use	Construction	Other Recreational Use – access limitations along transmission line alignment	Consult with local snowmobile clubs and organizations, particularly when construction timing and transmission line engineering / pole placement is better known, to minimize potential conflicts.	Consult with local snowmobile clubs and organizations, as applicable, to minimize potential conflicts with snowmobilers during construction of the transmission line.	n/a	The mitigation measure has not changed from the EA.

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Land Use	Construction	Trapping – relocation of trapper cabins or buildings along transmission line alignment	Appropriate mitigation measures to be determined through consultation between the MNRF and affected trappers.	Discuss with the MNRF and the affected trappers about appropriate effects management strategies for the removal of trapper cabins or associated buildings that may be overlap with the selected transmission line alignment.	n/a	The mitigation measure has not changed from the EA.
Land and Resource Use	Construction, Operations	Navigable Waters – restricted access to the 4M Circle Canoe Route	To be determined through consultation with any potential canoe route users to facilitate safe navigation during Construction and Operations.	Through consultation with users, establish a suitable portage / connection such that the portage route will still be usable or an alternative route is developed. This could also include placing markers to ensure canoes do not approach active construction sites. The area will be posted with signage indicating which camp sites are closed and access is limited to a period of 24-hours. If the need arises the area can be monitored.	<i>Navigation Protection Act</i>	Mitigation measure updated.  Updated to remove reference to diversion dams in Three Duck Lakes and Bagsverd Lake as the previously affected waterways are no longer being re-routed. Clarification about the area signage was also updated.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Land and Resource Use	Construction, Operations, Closure	Incompatibility with Ontario Ministry of the Environment and Climate Change's Land-Use Policy (D-Series Guidelines)	Incorporate the MOECC D-series guidelines (MOE, 1995).	Develop minimum 300 metre setbacks from provincially or municipally designated sensitive recreation uses, any building or associated amenity area not associated with industrial use where humans or the natural environment may be adversely affected by air emissions from the Class III Industrial facilities (excludes transmission line) such as campgrounds, residences, as per the MOECC D-Series Guidelines (MOE, 1995).	MOECC D-Series Guidelines	The mitigation measure has not changed from the EA.
Land and Resource Use	Construction, Operations, Closure	Maintain access to forestry resources	Re-route the Chester Access Road south of the Project site.	Discuss alignment with the Forestry Management Area holders and EACOM for re-routing the Chester Access Road south of the Project site.	n/a	The mitigation measure has not changed from the EA.
Land and Resource Use	Construction, Operations, Closure	<i>Maintain access to cottages on Schist Lake</i>	<i>Provide road alternate access to cottages north of Schist Lake</i>	<i>IAMGOLD will provide alternative road access to the cottages north of Schist Lake.</i>	n/a	This is a new mitigation measure

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Land and Resource Use	Construction, Operations, Closure	Hunting – loss of Bear Management Area (BMA)	The Ministry of Natural Resources and Forestry (MNRF) has advised that the affected BMA holder can apply to obtain licenses to additional BMAs in the Timmins District to augment the loss of access to the northern portion of the affected BMA.	Discuss potential Project effects with MNRF and the affected BMA holders.	n/a	The mitigation measure has not changed from the EA.
Land and Resource Use	Construction, Operations, Closure	Hunting – potential adverse effects due to increased vehicular traffic	Enforce speed limits and warn IAMGOLD personnel of areas of high wildlife activity and crossings.	Enforce speed limits along proposed Project access roads to reduce the potential adverse effects of increased vehicular traffic associated with the Project.	n/a	The mitigation measure has not changed from the EA.
Land and Resource Use	Construction, Operations, Closure	Hunting – safety of Project site workers	Prohibit hunting on IAMGOLD property to provide safety for both hunters and workers.	Inform workers of the no hunting policy and post signs warning hunters. Control access to the site for general public including hunters.	n/a	The mitigation measure has not changed from the EA.
Land and Resource Use	Construction, Operations, Closure	Hunting - potential adverse effects due to poor waste management practices	Food wastes generated on-site will be appropriately disposed of to reduce the attraction of wildlife.	Ensure frequent pick-up and removal of waste generated on-site.	n/a	The mitigation measure has not changed from the EA.

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Land and Resource Use	Construction, Operations, Closure	Trapping – loss of access to trapline area (GO031)	Based on discussion with the MNRF no compensation is required for trap line losses. Appropriate mitigation measures to be determined through consultation between the MNRF and affected trappers.	Continue discussions with the MNRF and affected trappers about potential effects and/or effects management strategies, where appropriate.	n/a	The mitigation measure has not changed from the EA.
Land and Resource Use	Construction, Operations, Closure	Cottagers and Outfitter Camps – increased boating on Mesomikenda Lake	Limit recreational boating for workers while they are staying at the work camp on-site. Potential purchase of cottages.	Inform workers of the recreational boating policy.	n/a	The mitigation measure has not changed from the EA.
Land and Resource Use	Construction, Operations, Closure	Maintain access for mineral exploration	Work with claim holders to identify access changes and negotiate access agreements if there is any requirement to use or cross IAMGOLD properties.	Negotiate access as necessary and maintain access agreements.	As per existing access agreements and exploration permit ( <i>Mining Act</i> )	Mitigation measure no longer applicable.  No longer required as IAMGOLD secured all mining claims within the Project footprint.



Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Traditional Land Use	Construction, Operations	Canoeing (traditional) – loss of portage route	To be determined through consultation with any potential canoe route users to facilitate safe navigation during construction and operations.	Through consultation with users, establish a suitable portage/ connection such that the portage route will still be usable or an alternative route is developed. <i>The area will be posted with signage indicating which camp sites are closed and access is limited to a period of 24-hours. If the need arises the area can be monitored. Notification processes related to land access controls and/or activity restrictions on current use will be developed in consultation with affected Indigenous groups, in consideration of individual consultation preferences of each community and consistent with any potential commercial agreements.</i>	<i>Navigation Protection Act</i>	New mitigation measure.  Text in italics was added post-EA submission in response to comments received during the EA review period. This update to the mitigation was added to the updated Appendix Y EA Commitment Tables and shared with the CEAA, Ministry of Environment and Climate Change (MOECC) and Wabun Tribal Council in February 2016. Clarification about the area signage was also updated.
Traditional Land Use	Construction	Fishing (traditional) – in-water works along transmission line alignment	Design or time construction activities so there are limited or no in-water works required.	In-water works are limited during construction of the transmission line alignment.	n/a	The mitigation measure has not changed from the EA.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Traditional Land Use	Construction, Operations	Cultural, Spiritual and Ceremonial Sites, Eagle's Nest – impacts to raptors	Inform workers of locally nesting raptors. <i>Consult with Mattagami First Nation and Flying Post First Nation on how the removal of an eagle's nest can be conducted in a culturally sensitive manner and be open to hosting a traditional ceremony (ies) on site should one be requested.</i>	Inform workers of locally nesting raptors to avoid unnecessary disturbance.	n/a	New mitigation measure.  Text in italics was added post-EA submission in response to comments received during the EA review period. This update to the mitigation was added to the updated Appendix Y EA Commitment Tables and shared with the CEAA, MOECC and Wabun Tribal Council in February 2016.
Traditional Land Use	Construction, Operations, Closure	Hunting (traditional) – safety of Project site workers.	Prohibit hunting on IAMGOLD property to provide safety for both hunters and workers.	Inform workers of the no hunting policy and post signs warning hunters. Control access to the site for general public including hunters.	n/a	The mitigation measure has not changed from the EA.
Traditional Land Use	Construction, Operations, Closure	Hunting and Fishing (traditional) – depletion of fish / wildlife	No hunting or fishing by Project personnel will be permitted while working or residing on-site.	No hunting or fishing by Project personnel will be permitted while working or residing on-site.	n/a	The mitigation measure has not changed from the EA.

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Traditional Land Use	Construction, Operations, Closure	Impacts on the exercise of Indigenous rights by the Métis rights-bearing community in the Project Area	<i>Through a memorandum of understanding, dated June 21, 2014, as amended by an Addendum dated February 1, 2016 (collectively, the "MOU"), Trelawney, a wholly-owned subsidiary of IAMGOLD, and the Métis Nation of Ontario intend to continue to develop a positive relationship and, should the Project receive regulatory approval, further commit to reaching an agreement on an Impact Benefit Agreement if</i>	IAMGOLD will continue to engage with the Métis community to address community priorities and potential impacts arising from the Project in accordance with the mechanisms outlined in the MOU.	n/a	New mitigation measure.  Added post-EA submission in response to comments received during the EA review period. This update to the mitigation was added to the updated Appendix Y EA Commitment Tables and shared with the CEAA, MOECC and Wabun Tribal Council in February 2016. Since February 2016, the commitment description was further updated to remove reference to Trelawney as it is no longer applicable.

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
(Cont.) Traditional Land Use	(Cont.) Construction, Operations, Closure	(Cont.) Impacts on the exercise of Indigenous rights by the Métis rights-bearing community in the Project Area	<i>commercially reasonable terms can be arrived at by the parties in accordance with the MOU. The agreement will aim to address mutually agreeable interests such as (i) terms for financial benefits, (ii) compensation relating to any specific and identifiable Project impacts which are not otherwise resolved through mitigation or accommodation, and (iii) other key areas including training, employment, environmental monitoring/management and business opportunities.</i>	(Cont.) IAMGOLD and its wholly-owned subsidiary Trelawney will continue to engage with the Métis community to address community priorities and potential impacts arising from the Project in accordance with the mechanisms outlined in the MOU.	(Cont.) n/a	(Cont.) New mitigation measure.  Added post-EA submission in response to comments received during the EA review period. This update to the mitigation was added to the updated Appendix Y EA Commitment Tables and shared with the CEAA, MOECC and Wabun Tribal Council in February 2016. Since February 2016, the commitment description was further updated to remove reference to Trelawney as it is no longer applicable.

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Traditional Land Use	Operations	Plant Harvesting (traditional) – contamination of vegetation from use of chemical agents for vegetation management along transmission line alignment.	Vegetation clearing will avoid the use of chemical agents.	No use of chemical agents for vegetation clearing along transmission line right of way; use of mechanical vegetation management only.	n/a	The mitigation measure has not changed from the EA.
Visual Aesthetics	Construction, Operations, Closure	Obstruction of the viewscape	Limit the design height of the MRA to 150 meters. Removal of the trapper's cabin on Three Duck Lakes.	Mitigation and management measures inherent within the Project design that limit the extent of the visual effects includes: selection of one MRA, located further away from receptors and limiting the design height of the MRA to 150 m. Additionally, the trapper's cabin on Three Duck Lakes, given its location with respect to Project components, will be negotiated for removal to limit visual aesthetics, air quality and noise and vibration effects from the Project.	n/a	The mitigation measure has not changed from the EA.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Socio-economic	Construction, Operations	Labour Market / Population Demographics – local employment	Support employment of local community members where possible.	Support employment for local community members (First Nation, Métis communities and Gogama) <i>including opportunities to support environmental monitoring activities.</i>	n/a or as established in negotiated agreements.	New mitigation measure.  Text in italics was added post-EA submission in response to comments received during the EA review period.
Socio-economic	Construction, Operations	Labour Market / Population Demographics– cultural awareness training	Cultural awareness training.	Develop a cultural awareness-training program and require employees and contractors to complete the training.	n/a or as established in negotiated agreements.	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations	Public Utilities – demands on Gogama’s wastewater treatment capacity	Work with Gogama Local Service Board.	Continue to support Gogama Local Services Board to identify ways to improve Gogama’s wastewater treatment capacity.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations	Business Opportunities – monitor/report on local and regional procurement	Establish a system to monitor and report on local and regional content with mechanisms to adapt procurement policies where required.	Establish a system to monitor and report on local and regional content with mechanisms to adapt procurement policies, where required.	n/a or as established in negotiated agreements.	The mitigation measure has not changed from the EA.

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Socio-economic	Construction, Operations	Labour Market / Population Demographics – employee training and development	Provide on-the-job Common Core training to workers.	Provide on-the-job Common Core training to assist local and regional workers to develop mining-specific skills or develop partnerships with existing initiatives. Employees would be part of IAMGOLD's Performance Management Process and development needs and opportunities would be identified through this process	n/a or as established in negotiated agreements.	The mitigation measure has not changed from the EA.

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Socio-economic	Construction, Operations	Labour Market / Population Demographics – training to access Project employment	Support and/or provide training and education in local communities, where possible.	Support and/or provide education and training for potential employees from local communities (Aboriginal communities and members of Gogama). Initiate discussions with potential partners for developing youth mentorship programs. <i>Work with appropriate community contacts to identify training needs, develop relevant training plans, and identify potential participants.</i>	n/a or as established in negotiated agreements.	New mitigation measure.  Text in italics was added post-EA submission in response to comments received during the EA review period. This update was added to the updated Appendix Y EA Commitment Tables and shared with the CEAA, MOECC and Wabun Tribal Council in February 2016.



Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Socio-economic	Construction, Operations, Closure	<p>Impacts on the exercise of Aboriginal* rights by the Métis rights-bearing community in the Project Area</p> <p>*Indigenous (previously referred to as Aboriginal in the EA), original wording maintained for consistency in wording comparison.</p>	<p><i>Through a memorandum of understanding, dated June 21, 2014, as amended by an Addendum dated February 1, 2016 (collectively, the "MOU"), Trelawney, a wholly-owned subsidiary of IAMGOLD, and the Métis Nation of Ontario intend to continue to develop a positive relationship and, should the Project receive regulatory approval, further commit to reaching an agreement on an Impact Benefit Agreement if commercially reasonable terms can be arrived at by the parties in accordance with the MOU. The agreement will aim to address mutually agreeable interests such as (i) terms for financial benefits, (ii)</i></p>	<p>IAMGOLD will continue to engage with the Métis community to address community priorities and potential impacts arising from the Project in accordance with the mechanisms outlined in the MOU.</p>	n/a	<p>New mitigation measure.</p> <p>Added post-EA submission in response to comments received during the EA review period. This mitigation was added to the updated Appendix Y EA Commitment Tables and shared with the CEAA, MOECC and Wabun Tribal Council in February 2016. Since February 2016, the commitment</p>

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(Cont.) Socio-economic	(Cont.) Construction, Operations, Closure	(Cont.) Impacts on the exercise of Aboriginal* rights by the Métis rights-bearing community in the Project Area  *Indigenous (previously referred to as Aboriginal in the EA), original wording maintained for consistency in wording comparison.	<i>compensation relating to any specific and identifiable Project impacts which are not otherwise resolved through mitigation or accommodation, and (iii) other key areas including training, employment, environmental monitoring/management and business opportunities.</i>	(Cont.) IAMGOLD will continue to engage with the Métis community to address community priorities and potential impacts arising from the Project in accordance with the mechanisms outlined in the MOU.	(Cont.) n/a	description was further updated to remove reference to Trelawney as it is no longer applicable.

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Socio-economic	Construction, Operations, Closure	Unidentified Project-related socio-economic / community effects	<i>Management plan to address potential Project-related socio-economic / community effects.</i>	IAMGOLD will work with potentially affected Aboriginal groups to develop a socio-economic / community management plan to address potential Project-related socio-economic / community effects identified through the environmental assessment process and/or at later stages of the Project	n/a or as established in negotiated agreements.	New mitigation measure.  Added post-EA submission in response to comments received during the EA review period. This mitigation was added to the updated Appendix Y EA Commitment Tables and shared with the CEAA, MOECC and Wabun Tribal Council in February 2016.
Socio-economic	Construction, Operations, Closure	Labour Market / Population Demographics – local suppliers	Implement a procurement process that promotes Aboriginal and local suppliers.	Develop and implement a procurement process that promotes suppliers from the local community (First Nations, Métis and Gogama).	n/a or as established in negotiated agreements.	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Business Opportunities – Encourage local suppliers	Implement a procurement process that encourages Aboriginal and local suppliers.	Implement a procurement process that encourages suppliers from local Aboriginal communities and Gogama.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.

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Socio-economic	Construction, Operations, Closure	Business Opportunities – support local businesses through procurement process	Support capacity building for local businesses.	Increase capacity building for local businesses during the Construction and Operations phases to help them effectively bid for opportunities in the Closure and Post-closure phases.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Community Health Conditions – long distance phone service for worker health	Provide access to long distance phone service for employees.	Provide access to long-distance calls and internet connections to help maintain healthy family relationships.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Community Health Conditions – demands on local health services Emergency Services – demands on local emergency services	Provide for basic worker health care.	Provide immediate access to care if required to minimize additional demands on off-site community health facilities.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Community Health Conditions – health management	Provide information on health-related issues such as nutrition, sexually transmitted infections, alcohol abuse etc. to workers.	Provide information on health-related issues such as nutrition, sexually transmitted infections, alcohol abuse etc. to workers to promote a healthy living culture in surrounding communities.	n/a	The mitigation measure has not changed from the EA.

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Socio-economic	Construction, Operations, Closure	Community Health Conditions – unsafe driving conditions potentially leading to traffic accidents	Provide worker transportation to and from Project site.	IAMGOLD will consider bussing from communities that are beyond a reasonable commuting distance, e.g., Timmins and Sudbury.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Housing and Temporary Accommodations – on-site camp	Develop on-site camp.	Develop on-site camp while supporting the needs of commuters from across the regional study area through the provision of transportation services.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Housing and Temporary Accommodations – demands for housing	Monitor indicators of Project housing effects and adapting management measures.	Monitor indicators of Project housing effects and adapting management measures with the local study area communities and appropriate agencies.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Education – training to facilitate access to employment	Support post-secondary education of workers.	Encourage and support post-secondary education of workers (including scholarships for programs related to mining for First Nation and Métis students).	n/a	The mitigation measure has not changed from the EA.

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Socio-economic	Construction, Operations, Closure	Emergency Services – demands on local emergency services	Maintain open communication with local service providers to monitor existing social issues.	Maintain open communication with local service providers to monitor existing social issues. Indicators will be selected with input from these service providers so that any Project effects are identified and managed properly by responsible parties.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Other Community Services and Infrastructure – demands on local medical services	Implement the Zero Harm policy at the Project site.	Implement the Zero Harm policy and associated health and safety plans that could assist in promoting a safety culture in local communities, potentially reducing demands on local medical services.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Transportation – road safety training	Road safety awareness training.	Implement regular road safety awareness training for workers and contractors.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Transportation – highway safety and conflicts with large equipment transport	Schedule major equipment delivery and removal.	Schedule major equipment delivery and removal at off-peak travel times, where practical.	Ministry of Transportation (MTO) <i>Highway Traffic Act</i>	The mitigation measure has not changed from the EA.

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Socio-economic	Construction, Operations, Closure	Transportation – conflicts with other traffic	Schedule shuttle bus travel.	Schedule shuttle bus travel at off-peak travel times to avoid traffic conflicts with other commuters, school buses and recreation traffic.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Transportation – traffic volumes at peak travel times	Schedule shifts to limit the number of daily shuttle buses.	Schedule shifts so that not all construction workers travel off-site on the same days, and thereby limiting the number of daily shuttle buses.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Transportation – effects on highway infrastructure	Ensure heavy load sizing and seasonal load restrictions.	Ensure heavy loads are sized appropriately and that truck traffic observes seasonal load restrictions.	MTO – <i>Highway Traffic Act</i> O.Reg., 413/05	The mitigation measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Transportation – effects on highway infrastructure	Transport oversized loads in parts.	Transport oversized loads in parts to the mine site, if possible, to limit load stress on highway surfaces and obstruction of other traffic.	MTO – <i>Highway Traffic Act</i> O.Reg., 413/05	The mitigation measure has not changed from the EA.

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Socio-economic	Construction, Operations, Closure	Transportation – potential for wildlife-vehicular accidents	Report wildlife sightings on highways. <i>Implement a wildlife observation log for all mammals (and road kill) on or near the Project roads.</i>	Report wildlife sightings on highways and on or near Project roads to inform workers and identify areas where wildlife is persistently present.	n/a	New mitigation measure.  Text in italics was added post-EA submission in response to comments received during the EA review period. This update to the mitigation was added to the updated Appendix Y EA Commitment Tables and shared with the CEAA, MOECC and Wabun Tribal Council in February 2016.
Socio-economic	Operations, Closure	Labour Market / Population Demographics – further training	Identify and implement basic skills and technical training for Aboriginal and local community members to upgrade marketable skills and increase capacity, where possible.	Identify and implement basic skills and technical training for Aboriginal and local community members to upgrade marketable skills and increase capacity.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.



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Socio-economic	Operations, Closure	Business Opportunities – procurement process	Implement a procurement policy that structures opportunities in terms of package size and bid evaluation to reflect Aboriginal and local capabilities.	Implement a procurement policy that structures opportunities in terms of package size and bid evaluation to reflect local capabilities, where practicable.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.
Socio-economic	Closure	Labour Market / Population Demographics – job placement assistance	Offer company services linking workers with local social services that provide job placement assistance.	IAMGOLD will facilitate access to external job placement or community services, etc. to transition laid-off or downsized employees into career opportunities as available	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.
Socio-economic	Closure	Labour Market / Population Demographics – employment relations	Develop an employment community relations program.	Develop an employment community relations program to provide appropriate parties with plans and progress throughout the life of the Project.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.
Socio-economic	Closure	Labour Market / Population Demographics – closure planning	Work with local communities to develop a Project closure strategy that will minimize potential adverse effects of Project closure on regional communities.	Engage and support local communities to develop specific strategies and actions as part of the closure plan that minimizes potential adverse closure effects on the regional communities.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.

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Socio-economic	Closure	Labour Market / Population Demographics –future site use	Engage and support local and regional communities and stakeholders in planning decisions relating to future use of the Project site.	Engage and support local and regional stakeholders in planning decisions for future use of the Project site that might benefit the regional economy or contribute to community pride, cohesiveness, and sense of place.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.
Socio-economic	Closure	Labour Market / Population Demographics – connect workers and employment opportunities	Support the establishment of local/regional job opportunities roster/forum accessible for workers.	Support local communities and government efforts to connect workers to a local/regional job opportunities forum prior to Project closure.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.
Socio-economic	Closure	Labour Market / Population Demographics – support for small business development	Post information on site for workers about other services agencies in the region that support small business ventures and planning.	Inform workers about regional service agencies that support small business ventures and planning, if available.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.
Socio-economic	Closure	Other Community Services and Infrastructure –closure effects on employment	Inform and/or provide employees with access to resources to support transition to other employment.	Inform employees of resources to help support employment training, provide information about available financial assistance programs, and career development initiatives.	n/a	The mitigation measure has not changed from the EA.

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Socio-economic	Closure	Housing and Temporary Accommodations – resident retention after Project closure	Support local economic diversification programs that could facilitate resident retention after Project closure.	Support local economic diversification programs that could facilitate resident retention after Project closure.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Closure	Business Opportunities – entrepreneurial economic development	Support local entrepreneurial development.	Support local entrepreneurial development for a diverse range of industries in order to lay foundations of post-operations economic diversification.	n/a	The mitigation measure has not changed from the EA.
Socio-economic	Closure	Business Opportunities – communicate contract terminations effectively	Communicate with affected businesses to prepare for the effects of contract termination.	Communicate with affected businesses to prepare for the effects of contract termination.	n/a or as established in negotiated agreements or Closure Plan.	The mitigation measure has not changed from the EA.
Archaeology	Construction	Exposure of potential marine archaeological resources or values	Monitor the dewatering of Côté Lake, as per previous requirements of MTCS.	A licensed archaeologist and First Nation monitor is required to monitor the dewatering event.	n/a (as requested by the MOECC and agreed to by MTCS)	New mitigation measure.  Approach to inspecting newly-exposed shorelines not previously included in archaeology section of EA Technical Support Document

Discipline	Project Phase	Issue / Concern / Interaction	Mitigation Measure	Description / Commitment	Standard	Comparison between EA and EER measures
Archaeology	Construction, Operations, Closure	Disturbance to archaeological sites	Archaeological assessments Stages 1, 2, 3 and 4, as required	Archaeological assessment at identified areas when sub-surface impacts are anticipated; monitoring, as required, of secondary impacts (i.e. erosion) when present	MTCS Regulations	<p>Mitigation measure updated.</p> <p>General approach to site mitigation (i.e. completion of Stage 1-4 archaeological assessments, as required) has not changed from the EA.</p> <p>Site-specific mitigation measures and future work recommendations have been updated from the EA (see Table 2).</p>

<b>Discipline</b>	<b>Project Phase</b>	<b>Issue / Concern / Interaction</b>	<b>Mitigation Measure</b>	<b>Description / Commitment</b>	<b>Standard</b>	<b>Comparison between EA and EER measures</b>
Archaeology	Construction, Operations, Closure	Storage of artifacts	Transfer excavated artifacts to a public storage and curation facility for long-term protection	Active consultation with MFN to coordinate the transfer of all artifact collections in accordance with MTCS protocols after analysis has been completed along with a community presentation. An MTCS collection transfer form will be completed by the surrendering licensee(s) and MFN and collections shall be curated to such standards in a public institution or other location as approved by MTCS.	MTCS Regulations	<p>Mitigation measure updated.</p> <p>Changes in MTCS protocols regarding the curation and storage of artifacts state that collections must now be curated in public institutions, or other locations approved by MTCS. As such, discussions with MFN are in progress to identify suitable public institution(s) and coordinate the transfer of artifact collections.</p>

**C-2: Site-Specific Mitigation Measures and Future Work for  
Archaeological Sites**

**Appendix C-2: Site-Specific Mitigation Measures and Future Work for Archaeological Sites**

Site Name, Borden Number, and Location	Fieldwork Carried Out to Date	Status and Mitigative Measures		
		Current CHVI Status (EA updates in bold)	Future Work Recommendations	Description of Protection (EA updates in bold)
Flat Rock Site (CjHI-2)  Mollie River	Stage 1, Stage 2, Stage 3	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)
Makwa Point (CjHI-3)  Clam Lake	Stage 1, Stage 2	No further CHVI (significance revised from EA due to small site size, low productivity, and poor artifact quality)	Completed mitigation – No further work required	None – site has no provincial significance (updated from EA to reflect the revised CHVI)
Chester 1 (CjHI-4)  Chester Lake	Stage 1, Stage 2, Stage 3, Stage 4	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)
Chester 3 (CjHI-5)  Chester Lake	Stage 1, Stage 2, Stage 3, Stage 4	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)
Chester 4 (CjHI-6)  Chester Lake	Stage 1, Stage 2	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)

Site Name, Borden Number, and Location	Fieldwork Carried Out to Date	Status and Mitigative Measures		
		Current CHVI Status (EA updates in bold)	Future Work Recommendations	Description of Protection (EA updates in bold)
Chester 5 (CjHI-7)  Chester Lake	Stage 1, Stage 2, Stage 3, Stage 4	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)
Chester 6 (CjHI-8)  Chester Lake	Stage 1, Stage 2	No further CHVI	Completed mitigation – No further work required	None – site has no ongoing significance (unchanged from EA)
Lookout Site (CjHI-9)  Chester Lake	Stage 1, Stage 2	<b>Continued CHVI</b>	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 70 m of site	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (updated from EA to reflect passive protection measures)
Upper Duck Pine Point (CjHI-10)  Upper Three Duck Lake	Stage 1, Stage 2	<b>Continued CHVI</b> (revised from EA to reflect results of 2017 Stage 2 assessment)	Passive site protection measures in place, Stage 3 work scheduled for 2018	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (updated from EA to reflect passive protection measures)
Two Pike Point (CjHI-11)  Upper Three Duck Lake	Stage 1, Stage 2, Stage 3, Stage 4	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)



Site Name, Borden Number, and Location	Fieldwork Carried Out to Date	Status and Mitigative Measures		
		Current CHVI Status (EA updates in bold)	Future Work Recommendations	Description of Protection (EA updates in bold)
Côté Lake 1 (CjHI-12)  Côté Lake	Stage 1, Stage 2, Stage 3	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)
Côté Lake 2 (CjHI-13)  Côté Lake	Stage 1, Stage 2	No further CHVI	Completed mitigation – No further work required	None – site has no ongoing significance (unchanged from EA)
Rocky Narrows 1 (CjHI-14)  Mollie River	Stage 1, Stage 2	No further CHVI	Completed mitigation – No further work required	None – site has no ongoing significance (unchanged from EA)
Rocky Narrows 2 (CjHI-15)  Mollie River	Stage 1, Stage 2, Stage 3	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)
Rocky Island Campsite (CjHI-16)  Bagsverd Lake	Stage 1, Stage 2	<b>Continued CHVI</b> (site significance revised from EA to reflect the site's productivity and size)	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 70 m of site	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (updated from EA to reflect revised CHVI)

Site Name, Borden Number, and Location	Fieldwork Carried Out to Date	Status and Mitigative Measures		
		Current CHVI Status (EA updates in bold)	Future Work Recommendations	Description of Protection (EA updates in bold)
Table Point Site (CjHI-17)  Bagsverd Lake	Stage 1, Stage 2	<b>Continued CHVI</b>	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 70 m of site	No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone (unchanged from EA)
Bagsverd Creek 1 (CjHI-27)  Bagsverd Creek	Stage 1, Stage 2	<b>Continued CHVI</b>	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 70 m of site	No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone (unchanged from EA)
Bagsverd Creek 2 (CjHI-28)  Bagsverd Creek	Stage 1, Stage 2	No further CHVI	Completed mitigation – No further work required	None – site has no ongoing significance (unchanged from EA)
Bagsverd Creek 4 (CkHI-3)  Bagsverd Creek	Stage 1, Stage 2	<b>Continued CHVI</b> (revised from EA to reflect Stage 2 report recommendations)	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 70 m of site	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (updated from EA to reflect revised CHVI)

Site Name, Borden Number, and Location	Fieldwork Carried Out to Date	Status and Mitigative Measures		
		Current CHVI Status (EA updates in bold)	Future Work Recommendations	Description of Protection (EA updates in bold)
Mollie River 1 (CjHI-30)  Mollie River	Stage 1, Stage 2	<b>Continued CHVI</b> (new site identified in 2017)	Passive site protection measures in place, Stage 3 work scheduled for 2018	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (new site not previously included in EA)
Weeduck Lake 1 (CjHI-31)  Weeduck Lake	Stage 1, Stage 2	<b>Continued CHVI</b> (new site identified in 2017)	Passive site protection measures in place, Stage 3 work scheduled for 2018	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (new site not previously included in EA)
Upper Three Duck Lake 1 (CjHI-32)  Upper Three Duck Lake	Stage 1, Stage 2	<b>Continued CHVI</b> (new site identified in 2017)	Passive site protection measures in place, Stage 3 work scheduled for 2018	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (new site not previously included in EA)
Upper Three Duck Lake 2 (CjHI-33)  Upper Three Duck Lake	Stage 1, Stage 2	<b>Continued CHVI</b> (new site identified in 2017)	Passive site protection measures in place, Stage 3 work scheduled for 2018	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (new site not previously included in EA)

Site Name, Borden Number, and Location	Fieldwork Carried Out to Date	Status and Mitigative Measures		
		Current CHVI Status (EA updates in bold)	Future Work Recommendations	Description of Protection (EA updates in bold)
Upper Three Duck Lake 3 (CjHI-34)  Upper Three Duck Lake	Stage 1, Stage 2	<b>Continued CHVI</b> (new site identified in 2017)	Passive site protection measures in place, Stage 3 work scheduled for 2018	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (new site not previously included in EA)
Clam Lake Gold Mining Company (CjHI-18)  Clam Lake	Stage 1, Stage 2	No further CHVI	Completed mitigation – No further work required	None – site has no ongoing significance (unchanged from EA)
Chester Lake 2 (CjHI-19)  Chester Lake	Stage 1, Stage 2, Stage 3	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)
Gosselin Mining Site (CjHI-20)  Upper Three Duck Lake	Stage 1, Stage 2	Continued CHVI	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 70 m of site	No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone (unchanged from EA)

Site Name, Borden Number, and Location	Fieldwork Carried Out to Date	Status and Mitigative Measures		
		Current CHVI Status (EA updates in bold)	Future Work Recommendations	Description of Protection (EA updates in bold)
Sheppard Mining Site (CjHI-21)  Middle Three Duck Lake	Stage 1, Stage 2, Stage 3	Continued CHVI	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 10 m of site	<b>No active protection measures, passive protection measures include 10 m no-work buffer zone</b> (updated from EA to reflect reduced buffer width implemented following Stage 3 assessment)
Headframe Point (CjHI-22)  Clam Lake	Stage 1, Stage 2	<b>Continued CHVI</b> (revised from EA upon reassessing significance)	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 70 m of site	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (updated from EA to reflect the revised CHVI)
Large Pit Mine Site (CjHI-23)  Clam Lake	Stage 1, Stage 2	No further CHVI	Completed mitigation – No further work required	None – site has no ongoing significance (unchanged from EA)
Weeduck Cabin Site (CjHI-24)  Weeduck Lake	Stage 1, Stage 2	No further CHVI (revised from EA to reflect the recent age of the structures and the low site significance)	Completed mitigation – No further work required	None – site has no ongoing significance (updated from EA to reflect the revised CHVI)

Site Name, Borden Number, and Location	Fieldwork Carried Out to Date	Status and Mitigative Measures		
		Current CHVI Status (EA updates in bold)	Future Work Recommendations	Description of Protection (EA updates in bold)
Shannon Cabin (CjHI-25)  Little Clam Lake	Stage 1, Stage 2, Stage 3, Stage 4	No further CHVI	Completed mitigation – No further work required	None – site has been excavated (unchanged from EA)
Cryderman Site (CjHI-26)  Lower Three Duck Lake	Stage 1, Stage 2	Continued CHVI	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 70 m of site	No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone (unchanged from EA)
Bagsverd Creek 3 (CjHI-29)  Bagsverd Creek	Stage 1, Stage 2	Continued CHVI	Passive site protection measures in place, additional Stage 3 and/or Stage 4 work required if development impacts are planned within 70 m of site	No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone (unchanged from EA)
Cryderman Camp 2 (CjHI-35)  East of Moore Lake	Stage 1	Continued CHVI	Passive site protection measures in place, additional Stage 2, Stage 3, and/or Stage 4 work required if development impacts are planned within 70 m of site Stage 2	<b>No active protection measures, passive protection measures include 20 m no-work buffer zone and 50 m monitoring zone</b> (new site not previously included in EA)

**C-3: Summary of Monitoring Commitments**

**Appendix C-3: Summary of Monitoring Commitments**

<b>Discipline</b>	<b>Project Phase</b>	<b>Parameter</b>	<b>Monitoring Method</b>	<b>Standard</b>	<b>Frequency / Timeframe</b>	<b>Location</b>	<b>Comparison between EA and EER measures</b>
Air Quality	Construction, Operations	Total Suspended Particulate (TSP)	High Volume (hi-vol) samplers	Ontario Reg.419/05 air quality standard for TSP (24-hr averaging time).	Construction and Operations phases. One sample every 6 days.	Three locations (to be determined) triangulating the site to provide upwind / downwind assessment.	The monitoring measure has not changed from the EA.



Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Air Quality	Construction, Operations	Metals	Analysis of hi-vol TSP samples collected (filter)	Ontario Reg.419/05 air quality standards for metals. The metals to be monitored will be identified in the Ambient Monitoring Plan that will be submitted to the Ministry of the Environment and Climate Change (MOECC) prior to initiating the monitoring program.	Construction and Operations phases Select TSP filters (highest loading) to be analysed monthly.	Three locations (to be determined), triangulating the site to provide upwind / downwind assessment.	The monitoring measure has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Air Quality	Construction, Operations	NO <sub>x</sub> /SO <sub>2</sub>	Passive samplers	Screening Level to be established based upon Alberta's proposed Air Monitoring Directive and Ontario's AAQC for other averaging times.	Construction and Operations phases. Monthly samples.	Co-located with the hi-vol samplers.	The monitoring measure has not changed from the EA.
Noise and Vibration	Construction, Operations	Vibration Levels (PPV), construction or operational vibration	Vibration monitor	NPC-103, NPC-119	Construction and Operations. PPV to be monitored at the closest receptor location (<1 km) at least once in a year during blasting operations. Vibration monitors to be setup to record PPV for each blast. Vibration monitor to record instantaneous blast vibration levels during the blasting period.	Specific sensitive receptors to be determined within the study area based on blasting at that time. Typically, the closest sensitive receptor to the blast vibration can be used to represent a group of receptors.	The monitoring measure has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Noise and Vibration	Construction, Operations, Closure	A-weighted decibels (dBA), construction noise	Noise Monitor	NPC-103	<p>Construction through Closure.</p> <p>Noise to be monitored for a minimum period of 1 week at any receptor closer than 1 km from the construction activity.</p> <p>Noise monitor to record hourly sound levels, over 24/7 period, during the monitoring period.</p>	<p>When construction is within 1 km of any sensitive noise receptor defined within the regional study area.</p> <p>When a group of receptors fall within the 1 km range of construction activity, the closest receptor can be taken as the representative location for monitoring, if it is shown to have the highest exposure to construction noise for a group of receptors.</p>	The monitoring measure has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Noise and Vibration	Construction, Operations, Closure	A-weighted decibels (dBA), operations noise	Noise Monitor	NPC-103	<p>Construction through Closure.</p> <p>Noise level to be monitored at the closest receptor location (&lt;1 km) at least once per year between the initial operation period (Year 1) and mid-operation period (Year 7) to confirm NPC-300 criteria are not exceeded.</p> <p>Noise monitor to record hourly sound levels for a minimum period of 1 week.</p>	<p>Specific sensitive receptors to be determined within the study area based on operations at that time.</p> <p>Typically, the closest sensitive receptor to the operational noise can be used to represent a group of receptors.</p>	The monitoring measure has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Noise and Vibration	Construction, Operations, Closure	Decibels (dBL), construction or operational blasting noise	Noise Monitor	NPC-103, NPC-119	<p>Construction through Closure.</p> <p>Noise level to be monitored at the closest receptor location (&lt;1 km) at least once per year during blasting operations.</p> <p>Noise monitor to be setup to record noise levels for each blast.</p> <p>Noise monitor to record instantaneous sound levels, during the blasting period.</p>	<p>Specific sensitive receptors to be determined within the study area based on blasting at that time.</p> <p>Typically, the closest sensitive receptor to the blast noise can be used to represent a group of receptors.</p>	The monitoring measure has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Hydrogeology	Construction, Operations, Closure	Groundwater monitoring	Installation of well nests, if necessary, adjacent to select hydrological monitoring stations, which allows determination of interactions between groundwater and surface water.	Good Industry Practice	Construction through Closure phases.  Manual measurements will occur quarterly.	At select hydrological monitoring stations.	The monitoring measure has not changed from the EA.
Hydrogeology	Construction, Operations, Closure	Groundwater levels around the open pit	Monitoring wells instrumented with data loggers to obtain continuous records of groundwater levels along with quarterly manual depth to groundwater measurements.	Good Industry Practice	Construction through Closure phases.  Water level transducers will be set to record on a half-hourly basis. Manual measurements will occur quarterly.	Deep groundwater monitoring well nests at select locations around the perimeter of the open pit.	The monitoring measure has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Hydrogeology	Construction, Operations, Closure	Groundwater levels around the MRA and TMF	Monitoring wells instrumented with data loggers to obtain continuous records of groundwater levels along with quarterly manual depth to groundwater measurements.	Good Industry Practice	Construction through Closure phases.  Water level transducers will be set to record on a half-hourly basis. Manual measurements will occur quarterly.	Up to 15 existing well locations and up to 10 new well locations around the perimeter of the MRA and TMF.	The monitoring measure has not changed from the EA.
Hydrogeology	Construction, Operations, Closure	Groundwater levels in vicinity of surface water features to assess interactions between groundwater and surface water	Monitoring wells instrumented with data loggers to obtain continuous records of groundwater levels along with quarterly manual depth to groundwater measurements.	Good Industry Practice	Construction through Closure phases.  Water level transducers will be set to record on a half-hourly basis. Manual measurements will occur quarterly.	Monitoring well nests adjacent to select hydrological monitoring stations.	The monitoring measure has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Hydrology and Climate	Construction, Operations, Closure	Surface water level (lakes and streams)	Automatic water level recorder (transducer) along with manual staff gauge measurements.	Good Industry Practice	Construction through closure phases.  Water level transducers will be set to record on a half-hourly basis. Manual staff gauge measurements will occur quarterly and will be surveyed to a geodetic datum annually.	Selected existing locations*, additional new stations in waterways and realignments surrounding the infrastructure footprint.  * Existing locations may require upgrades or improvements for long term monitoring	The monitoring measure has not changed from the EA
Hydrology and Climate	Construction, Operations, Closure	Streamflow (lake outflows and streams)	Standard velocity-area stream current methodology.	Environment Canada (1981) Hydrometric Field Manual – Measurement of Streamflow	Construction through closure phases.  Initially quarterly, frequency may be reduced as natural variability is addressed.	Selected existing locations*, additional new stations in waterways and realignments surrounding the infrastructure footprint.  * Existing locations may require upgrades or improvements for long term monitoring	The monitoring measure has not changed from the EA



Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Hydrology and Climate	Construction, Operations, Closure	Meteorological parameters including air temperature, relative humidity, wind speed, wind direction, solar radiation and total precipitation.	Meteorological sampling equipment located on 10 m tower.	Environment Canada (1992) Atmospheric Environment Service (AES) Guidelines for Co-operative Climatological Autostations	Construction through closure phases.  Parameters will be recorded on an hourly-time interval, data downloaded quarterly.	Continue sampling at the current location.	The monitoring measure has not changed from the EA
Hydrology and Climate	Construction, Operations, Closure	Environment Canada Mollie River Streamflow station	Desktop review using available records from Environment Canada.	Good Industry Practice	Construction through closure phases.  Monthly review, annual summary.	Mollie River Streamflow gauging station.	The monitoring measure has not changed from the EA
Hydrology and Climate	Construction, Operations, Closure	Water Levels at Ontario Power Generation (OPG) Mesomikenda Lake Dam	Desktop review using available records from OPG.	Good Industry Practice	Construction through closure phases.  Annual review and summary.	Mesomikenda Lake dam	The monitoring measure has not changed from the EA

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Hydrology and Climate	Construction, Operations, Closure	In-stream Characteristics	<p>Water samples for total suspended solids will be manually sampled and submitted for laboratory analysis.</p> <p>Measurement of stream cross sections for channel geometry.</p> <p>Installation of erosion pin in stream bank and disturbance rods in streambed for sediment erosion / accumulation.</p> <p>Aerial or photographic analysis to assess stream meander.</p>	Good Industry Practice	<p>Construction to closure phases.</p> <p>Twice annually, during the spring melt and low flow conditions, to be initiated prior to realignment construction.</p>	Reach of Bagsverd Creek downstream of Un-named Lake #1 and upstream of Neville Lake.	<p>Monitoring measure no longer applicable.</p> <p>Potential effects on Bagsverd Creek mitigated by project footprint reconfiguration.</p>

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Hydrology and Climate	Operations	Water usage from freshwater sources	Flow meter capable of recording instantaneous and total daily volume.	Ontario <i>Water Resources Act</i> (Section 34)	Operations phase Daily	Mesomikenda Lake or other freshwater source.	The monitoring measure has not changed from the EA
Hydrology and Climate	Operations	Discharge to the environment	Flow meter or calibrated flow conveyance feature capable of providing instantaneous and total daily volume.	Ontario <i>Water Resources Act</i> (Section 53)	Operations phase Daily	Polishing pond outlet.	The monitoring measure has not changed from the EA
Hydrology and Climate	Operations	Water transfer	Flow meter capable of recording instantaneous and total daily volume.	Good Industry Practice	Operations phase Daily	MRA collection ponds, mine water pond, reclaim pond, polishing pond.	The monitoring measure has not changed from the EA
Hydrology and Climate	Operations	Reservoir Water Levels	Manual staff gauges or automatic water level sensors.	Good Industry Practice	Operations phase Monthly	MRA collection ponds, mine water pond, reclaim pond, polishing pond.	The monitoring measure has not changed from the EA

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Water Quality	Construction, Operations, Closure, Post-closure	<p>Surface water quality samples will be analyzed for various general chemistry, metals, ions, nutrients, cyanide species, a radionuclide, organic parameters, and total and methyl mercury.</p> <p>The parameters suite may be reduced if it can be demonstrated that any of the tests are not applicable. Additional parameters may be considered depending on site-specific characteristics.</p>	<p>Surface water grab sample collection using in-field filtering and preservation, as required.</p> <p>Quality assurance / quality control samples such as blind duplicates, trip blanks, field blanks and filter blanks will be collected during each sampling event to represent a minimum of 10% of the samples.</p>	<p>Provincial Water Quality Objectives (PWQO) and Canadian Water Quality Guidelines (CWQG), with laboratory limits suitable for comparison to these guidelines.</p> <p><i>Metal Mining Effluent Regulations</i> (MMER) and Ontario Regulation 560/94.</p> <p>Concentrations in mine-exposed areas will also be compared to baseline and reference area values.</p>	<p>Sampling events will be conducted during all Project phases at a frequency sufficient to detect changes in water quality; the frequency will depend on the station location and will aim to capture a range of flow conditions, as required. The frequency of effluent monitoring will meet federal and provincial effluent discharge requirements.</p>	<p>Project site components: open pit sump, seepage collection ponds, mine water pond, reclaim pond, polishing pond and domestic sewage effluent outlets as appropriate to the mine phase.</p> <p>Surface water receivers: Moore Lake, Chester Lake, Little Clam Lake, Clam Lake, Three Duck Lakes (upper, middle and lower basins), Mollie River between Three Duck Lakes and Dividing Lake, Dividing Lake, Bagsverd Lake, Unnamed Lake #6, Schist Lake, Neville Lake, Mesomikenda Lake (upper basin) and downstream from the local study area (downstream from Mesomikenda Lake and Dividing Lake). Samples will also be collected in appropriate reference areas.</p>	<p>Monitoring measure updated.</p> <p>Surface water receivers to be monitored have been updated from the EA to reflect the EER project description.</p>

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Water Quality	Construction, Operations, Closure, Post-closure	<p>Groundwater quality samples will be analyzed for various general chemistry, major ions, metals nutrients, cyanide species and organic parameters. A complete parameter list is attached below.</p> <p>The parameters suite may be reduced if it can be demonstrated that any of the tests are not applicable. Additional parameters may be considered depending on site-specific characteristics.</p>	<p>Groundwater sample collection using pumping techniques and in-field filtering and preservation, as required.</p> <p>Quality assurance / quality control samples such as blind duplicates, trip blanks, field blanks and filter blanks will be collected during each sampling round.</p>	<p>Ontario Drinking Water Standards (ODWS), PWQO and CWQG, with laboratory detection limits suitable for comparison to these guidelines.</p> <p>MMER and Ontario Regulation 560/94</p>	<p>Sampling events will be conducted during all Project phases at a frequency sufficient to detect changes in water quality; the frequency will therefore depend on the station location and will aim to capture a range of flow conditions, as required. The frequency of effluent monitoring will meet federal and provincial effluent discharge requirements</p>	<p>Groundwater monitoring wells around the MRA, ore stockpiles, and TMF, polishing pond and landfill (if constructed).</p>	<p>The monitoring measure has not changed from the EA.</p>

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Water Quality	Construction, Operations, Closure, Post-closure	<p>Sediment quality samples will be analyzed for major ions, metals, nutrients (total nitrogen, total phosphorus), carbonate, organic carbon, sulphate, sulphide, particle size, total cyanide, total and methyl mercury.</p> <p>The parameters suite may be reduced if it can be demonstrated that any of the tests are not applicable. Additional parameters may be considered depending on site-specific characteristics.</p>	Sampling method will be consistent with that described for the aquatic monitoring program (i.e., grab or core sample).	<p>Ontario's Provincial Sediment Quality Objectives (PSQO) and the Canadian Sediment Quality Guidelines (CSQG).</p> <p>Concentrations in mine-exposed areas will also be compared to baseline and reference area values.</p>	Sampling events will be conducted at a frequency sufficient to detect changes in sediment quality, and harmonized with the Environmental Effects Monitoring (EEM) as practicable.	Lakes where changes to water quality are expected. Harmonized with EEM as practicable.	The monitoring measure has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Terrestrial Biology	Construction, Operations, Closure	Wildlife-project interactions (incidents <sup>1</sup> )	Site surveillance monitoring to identify the species, number, and location of wildlife incidents and risks to wildlife. The information provides direct feedback for adaptive management of Project operations, Project designs and effectiveness of mitigation.	n/a	Frequency of interactions will be recorded as they occur from Construction through Closure phases.	Project Site	The monitoring measure has not changed from the EA.
Terrestrial Biology	Construction, Operations, Closure	Wildlife observations	Record incidental observations of Common Nighthawk and Bank Swallow on wildlife logs.	n/a	Continuous throughout from Construction through Closure phases.	Project Site	The monitoring measure has not changed from the EA.
Aquatic Biology	Construction	Water- TSS and turbidity	Standard Methods and water quality multi-meter	1 mg/L TSS and 1 Nephelometric Turbidity Unit ( NTU) as Method Detection Limits (MDLs)	Daily during construction.	Downstream of active construction areas.	The monitoring requirement has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Aquatic Biology	Construction, Operations	Noise and Vibration	Acoustic monitoring to confirm the predicted effects of blasting in the Open Pit	DFO guideline for instantaneous underwater over pressure of 100 kPa for various fish habitats and a 13 mm/sec vibration guideline for various spawning habitats (Wright and Hopky 1998).	During Construction and within the first two years of Operations.	South east bay of Clam Lake and the north bay of New Lake.	The EA did not anticipate potential effects from blasting on fish habitat in Clam Lake and New Lake.



Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Aquatic Biology	Construction, Operations, Closure, Post-closure	Water - metals, pH, nutrients, hardness, dissolved organic carbon, alkalinity. The parameters suite may be reduced if it can be demonstrated that any of the tests are not applicable. Additional parameters may be considered depending on site-specific characteristics.	Surface water grab sample collection using in-field filtering and preservation, as required. Inductively Coupled Plasma Mass Spectrometry (ICP-MS). Quality assurance /quality control samples such as blind duplicates, trip blanks, field blanks and filter blanks will be collected during each sampling event to represent a minimum of 10% of the samples.	(MDL< PWQO/CWQ G standards). Concentrations in mine-exposed areas will also be compared to baseline and reference area values.	Sampling events will be conducted during all project phases at a frequency sufficient to detect changes in water quality; the frequency will therefore depend on the station location and will aim to capture a range of flow conditions, as required monitoring will be conducted until conditions are stable or less than guidelines for the protection of aquatic life.	Downstream of Project discharge and in all areas potentially affected by mine related discharges as well as in appropriate reference areas.	Monitoring measure updated.  Total and free cyanide should be added to the monitoring parameter list.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Aquatic Biology	Operations, Closure	Sediment-metals, total organic carbon, grain size, mercury and methyl mercury. The parameters suite may be reduced if it can be demonstrated that any of the tests are not applicable. Additional parameters may be considered depending on site-specific characteristics.	Surficial sediment collected from grab or core sample (top depositional layer). Method detection limits will be less than federal and provincial water quality guidelines.	Ontario's Provincial Sediment Quality Objectives and the Canadian Sediment Quality Guidelines. Concentrations in mine-exposed areas will also be compared to baseline and reference area values.	Every 3 years during Operations and twice following Closure.	Locations downstream of Project discharge and reference areas.	The monitoring requirement has not changed from the EA.
Aquatic Biology	Operations, Closure	Benthic invertebrate community	Depositional sampling using petite Ponar, reduced to 500 micron and identified to lowest practical level.	EEM under Federal Metal Mining Effluent Regulations (MMER) and Canadian-Ontario Agreement (COA) requirements under OWRA.	Every 3 years during Operations and twice following Closure.	Locations downstream of the Project discharge and reference areas.	The monitoring requirement has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Aquatic Biology	Operations, Closure	Fish community	Collect fish (small-bodied and large bodied) using standardized collection methods. Identify and enumerate and determine relative abundance.	EEM under MMER and COA requirements under OWRA.	Every 3 years during Operations and twice following Closure.	Locations downstream of the Project discharge and habitats affected by watercourse realignments.	The monitoring requirement has not changed from the EA.
Aquatic Biology	Operations, Closure	Fish health	Two sentinel species – either a non-destructive study design (i.e. 100 individuals for length, weight and age) or a lethal survey (40 males and 40 females for length, weight, age, liver weight, gonad weight, egg size and fecundity). Measures of abnormalities on all fish collected.	EEM under MMER and COA requirements under OWRA.	Every 3 years during Operations and twice following Closure.	Locations downstream of the Project discharge and reference areas.	The monitoring requirement has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Aquatic Biology	Operations, Closure	Fish tissue	<p>Non-lethal biopsy tissue sampling methods will be used to collect skinless, boneless muscle samples (5 g filet) from live individuals.</p> <p>Samples will be analyzed for total mercury. Samples will be weighed and acid digested prior to analysis using a variant of “Environmental Protection Agency Method 1631-mercury in water by oxidation, purge and trap, and cold vapour atomic fluorescence spectrometry”. Using this technique, low method detection limits of approximately 1 ng Hg/g wet tissue weight can be achieved.</p>	Health Canada and Ministry of the Environment and Climate Change consumption benchmarks.	Every 3 years during Operations and twice following Closure or until mercury concentrations in fish are stable or equal to reference areas.	In areas affected by stream realignments and reference areas.	<p>Monitoring measure updated.</p> <p>This monitoring should be conducted in New Lake and in reference lakes as no other terrestrial habitats are proposed for flooding.</p>

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Traditional Land Use	Construction, Operations, Closure	Project effects on Indigenous traditional activities / traditional land use	<i>IAMGOLD will continue to discuss potential Project effects on traditional activities with potentially affected Indigenous communities throughout the life of the Project. Should additional information regarding an Indigenous community's traditional practices become available, IAMGOLD will review and consider any potential effects, and develop and implement necessary mitigation measures as appropriate.</i>	n/a	Construction to closure phases	n/a	<p>New monitoring measure.</p> <p>Added post-EA submission in response to comments received during the EA review period. This measure was added to the updated Appendix Y EA Commitment Tables and shared with the CEEA, MOECC and Indigenous groups in February 2016.</p>

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Socio-economic	Construction, Operations, Closure	Project-related socio-economic effects on Aboriginal and non-Aboriginal populations	<i>Socio-economic / Community Management Plan to monitor and respond to Project effects on Aboriginal and non-Aboriginal populations. Ongoing consultation with affected Aboriginal communities and stakeholders.</i>	n/a	Construction through Closure phases	n/a	<p>New monitoring measure.</p> <p>Added post-EA submission in response to comments received during the EA review period. This measure was added to the updated Appendix Y EA Commitment Tables and shared with the CEAA, MOECC and Indigenous groups in February 2016.</p>

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Socio-economic	Construction, Operations, Closure	Number, skill sets and positions held by local, First Nation and Métis persons and contractors at the Project site (direct employment with IAMGOLD as well as contract employment)	Database system maintained by IAMGOLD Human Resources or others as required.	n/a	Construction through Closure phases Annually for the life of the Project	n/a	The monitoring measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Number of employees moving into regional study area communities from outside of the region.	Database system maintained by IAMGOLD Human Resources or others as required.	n/a	Construction through Closure phases Annually for life of the Project	n/a	The monitoring measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Number of employees taking cultural awareness training as part of their on-boarding procedure.	Database system maintained by IAMGOLD Human Resources or others as required.	n/a	Construction through Closure phases Annually for life of the Project	n/a	The monitoring measure has not changed from the EA.

Discipline	Project Phase	Parameter	Monitoring Method	Standard	Frequency / Timeframe	Location	Comparison between EA and EER measures
Socio-economic	Construction, Operations, Closure	Number of local employees or local applicants obtaining IAMGOLD-funded training to access Project employment.	Database system maintained by IAMGOLD Human Resources or others as required.	n/a	Construction through Closure phases Annually for life of the Project	n/a	The monitoring measure has not changed from the EA.
Socio-economic	Construction, Operations, Closure	Number of local employees obtaining upgrade training to access higher-paid positions with IAMGOLD.	Database system maintained by IAMGOLD Human Resources or others as required.	n/a	Construction through Closure phases Annually for life of the Project	n/a	The monitoring measure has not changed from the EA.
Socio-economic	Operations, Closure	Number of local employees making successful transition to new work after closure	Database system maintained by IAMGOLD Human Resources or others as required.	n/a	Starting towards the end of the Operations phase as production levels decline until completion of the Closure phase	n/a	The monitoring measure has not changed from the EA.
Socio-economic	Closure	Number of local or First Nation and Métis companies hired for decommissioning and closure contracts	Database system maintained by IAMGOLD Human Resources or others as required.	n/a	Closure phase	n/a	The monitoring measure has not changed from the EA.



