GOLIATH GOLD PROJECT MITIGATION, MONITORING, AND COMMITMENT LIST

MMC.1 Introduction

In April of 2018, Treasury Metals submitted a revised version of the Environmental Impact Statement (EIS) for the proposed Goliath Gold Project (the Project) to the Canadian Environmental Assessment Agency (the Agency) for consideration under the Canadian Environmental Assessment Act (CEAA), 2012. The Agency reviewed the submission and informed Treasury Metals that the requirements of the EIS Guidelines for the Project were met and that the Agency would issue a series of information requests to Treasury Metals regarding the technical review of the EIS and supporting appendices (referred to herein as the Round 2 information requests). The Round 2 information requests were issued to Treasury Metals from July 6th, 2018 to July 27th, 2018 and included questions from the Agency, other Federal and Provincial reviewers, Indigenous communities and interested stakeholders.

Upon review of the Round 2 information requests, it was clear that there was an emphasis from the reviewers on potential changes to water, fish and fish habitat, and the follow-up program presented in the revised EIS (April 2018). To effectively capture any changes to these aspects of the Project and to provide a consolidated, fulsome response to the Round 2 information requests, the following four (4) addendums have been prepared to accompany the Round 2 information request responses:

- Goliath Gold Project Fish Addendum;
- Goliath Gold Project Water Addendum;
- Goliath Gold Project Follow-up Program Addendum; and
- Goliath Gold Project Preliminary Environmental Monitoring Program.

In addition to the four addenda, a Human Health and Ecological Risk Assessment (HHERA) was completed and a memo was issued with respect to geochemistry and mine waste to address comments raised by NRCan and the Agency.

As part of the Round 2 process, the Agency asked that an updated mitigation, monitoring and commitment list be issued to support the Round 2 information requests. At the request of the Agency, a comprehensive listing of mitigation, monitoring and commitments by discipline has been provided. Information as to which phase of the Project the mitigation, monitoring, or commitment is specific to, has also been stated. Where applicable to any combination of site preparation, operations, and closure, the phrase "Active Life of the Project" has been used which refers to refers to site preparation and construction, operations, closure, and the period of post-closure where Treasury Metals retains care and control of the site.

To facilitate the review of the Round 2 information requests and the tracking of delivery on these commitments and mitigation measures during the life of the Project, each mitigation, monitoring, and commitment have been given a unique Round 2 identifier starting with "MMC" and organized by technical discipline assessed in the revised EIS (April 2018). The list of mitigation, monitoring and commitments

provided herein, represent a comprehensive list of actions currently planned by Treasury Metals for each discipline and consider the CEAA guidelines for the Goliath Gold Project, recent guidance documents, the Round 1 and 2 information requests, and specific requests made by Indigenous communities to-date. As the assessment process continues to advance, Treasury Metals understands that additional mitigation measures, monitoring, and commitments may be identified and requested within the EA process, as well as through engagement with Federal and Provincial governments, Indigenous communities, and public stakeholders, and that any such additional commitments and mitigations will be added to the series of tables at appropriate intervals, as the EA process progresses.

The commitments made by Treasury Metals are focused on specific measurable items that are relevant and will stand up over the life of the Project. Once commitments are made, they cannot be easily withdrawn or adapted to reflect changing conditions. Therefore, specific mitigation measures incorporated into the assessment of Project effects have not been identified individually as commitments per se to ensure flexibility within the Project for incorporating new and evolving technologies. The mitigation measures establish a level of control to be achieved, while affording flexibility to adapt to the conditions encountered as the Project advances, as well as adapting to allow the adoption of new technologies and standards as they become available. This approach allows for adaptive management within the Project, which supports the concept of continuous improvement. Monitoring requirements in support of the EA as part of the follow up program function to verify the predicted effects of the project and the efficiency of the mitigation measures. Amendments can be made as required to the follow up program as the project progresses.

The commitments and mitigation measures outlined in the revised EIS (April 2018) also had unique identifiers. These have been maintained for reference herein. The summary tables from Section 10 of the revised EIS (April 2018) for commitments and mitigation are also included in Sections MMC.3 and MMC.4, respectively, however, are superseded by the language in Section MMC.2..

MMC.2 Updated Mitigation, Monitoring, and Commitment List

Table MMC-1: Terrain and Soils- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-1.1	Commitment	Progressive reclamation of mine waste rock area will be undertaken, where practical, once maximum height has been reached [Cmt_037]	Operations	6.23
MMC-1.2	Commitment	Site will be reclaimed to a naturalized state per the mine closure plan [Cmt_038]	Closure	Section 6.23 and Section 10
MMC-1.3	Commitment	Progressive reclamation of WRSA will be undertaken once maximum height is reached [Cmt_037]	Closure	
MMC-1.4	Mitigation	Limit the height of the constructed landscape features. [Mit_001].	Prior to Site Preparation and Construction	6.2.5
MMC-1.5	Mitigation	Construct WRSA and overburden stockpiles with an overall a 3:1 (horizontal to vertical) side slope to maintain a more natural appearance. [Mit_002].	Active Life of the Project	6.2.5
MMC-1.6	Mitigation	Vegetate the western edge of the WRSA to create a natural looking feature. [Mit_004].	Active Life of the Project	6.2.5
MMC-1.7	Mitigation	Vegetate overburden stockpiles once constructed to make them appear natural as soon as practicable. [Mit_005].	Active Life of the Project	6.2.5
MMC-1.8	Mitigation	The WRSA will be capped with a low permeability cover, then a layer of overburden, then vegetated during closure. [Mit_018].	Active Life of the Project	6.2.5
MMC-1.9	Mitigation	Remove material from the low-grade ore (LGO) stockpile during closure. [Mit_006].	Active Life of the Project	6.2.5
MMC-1.10	Mitigation	Overburden materials (clay, sand or organic material) stripped during the site preparation and construction phase will be placed in the overburden stockpiles located directly to the south of the proposed open pits. [Mit_007].	Active Life of the Project	6.2.5
MMC-1.11	Mitigation	Construct WRSA and overburden stockpiles with an overall a 3:1 (horizontal to vertical) side slope to maintain a more natural appearance. [Mit_002].	Active Life of the Project	6.2.5
MMC-1.12	Mitigation	Maintain equipment in good working order and inspected regularly. [Mit_009].	Active Life of the Project	6.2.5
MMC-1.13	Mitigation	Re-fueling done in a manner to limit the potential for spills. [Mit_010].	Active Life of the Project	6.2.5
MMC-1.14	Mitigation	Store fuel in a lined, contained area. [Mit_011].	Active Life of the Project	6.2.5
MMC-1.15	Mitigation	Fueling vehicles will be parked in a concrete lined area when not in use. [Mit_012].	Active Life of the Project	6.2.5
MMC-1.16	Mitigation	Emulsion explosives will be stored and dispensed in a lined, contained area. [Mit_013].	Active Life of the Project	6.2.5
MMC-1.17	Mitigation	Emulsion explosive delivery vehicles will be parked in a concrete lined area when not in use. [Mit_014].	Active Life of the Project	6.2.5
MMC-1.18	Mitigation	The processing plant will be lined and equipped with runoff collections system and perimeter ditching to protect the soil beneath and adjacent from effects. [Mit_015].	Active Life of the Project	6.2.5
MMC-1.19	Mitigation	The low-grade ore (LGO) stockpile area will be lined and equipped with runoff collections system and perimeter ditching to protect the soil beneath and adjacent from effects. [Mit_016].	Active Life of the Project	6.2.5
MMC-1.20	Mitigation	Activities on the overburden stockpiles will be minimized and the stockpiles left undisturbed until closure activities are underway. [Mit_017].	Active Life of the Project	6.2.5
MMC-1.21	Mitigation	In the event of a spill, on-site or off-site, Treasury Metals would follow the requirements for spill reporting under Part X of the Environmental Protection Act as well as O.Reg. 675/98.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions

Table MMC-1: Terrain and Soils- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-1.22	Mitigation	In the event of a reportable spill, as defined under O.Reg. 675/98, the Ministry of the Environment, Conservation and Parks would oversee the response to the spill to ensure that the spilled material is clean-up and remediated in a timely manner. Records of the spill event would be kept and reported as part of the annual reporting for the site.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-1.23	Mitigation	In the event of the tailings pipeline failure, an emergency shutdown of the process plant would be initiated to limit the quantity of tailings from the ruptured pipeline. The process plant would remain shutdown until the section of ruptured pipeline had been repaired or replaced as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-1.24	Mitigation	In the event of a spill, on-site or off-site, Treasury Metals would follow the requirements for spill reporting under Part X of the Environmental Protection Act as well as O.Reg. 675/98.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-1.25	Mitigation	In the event of a reportable spill, as defined under O.Reg. 675/98, the Ministry of the Environment, Conservation and Parks would oversee the response to the spill to ensure that the spilled material is clean-up and remediated in a timely manner. Records of the spill event would be kept and reported as part of the annual reporting for the site.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-1.26	Mitigation	In the event of the tailings pipeline failure, an emergency shutdown of the process plant would be initiated to limit the quantity of tailings from the ruptured pipeline. The process plant would remain shutdown until the section of ruptured pipeline had been repaired or replaced as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-1.27	Mitigation	In the event of the effluent pipeline failure, an emergency shutdown of the water treatment plant would occur to limit the quantity of effluent released from the ruptured pipeline. The water treatment system would remain shutdown until the section of ruptured pipeline had been repaired or replaced, as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-1.28	Mitigation	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH, ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions
MMC-1.29	Mitigation	The cyanide storage and mixing tanks, the carbon-in-leach ore processing and related pipelines will be constructed of, or coated with materials compatible with cyanide and high pH conditions. Tanks and pipelines will be clearly identified as containing cyanide and the direction of flow will be indicated on pipelines.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-1.30	Mitigation	Systems and procedures will be in place to address potential recovery of released solution, remediation of any contaminated soil and possible failures of tanks as necessary to protect surface and ground water. A method to prevent overfilling of storage tanks other than direct observation and manual gauging rod will be used such as an automatic level indicator, high-level alarm or integrated tank and tanker valve-shutdown device.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-1.31	Mitigation	A written set of procedures designed to prevent and control exposures and releases during cyanide unloading, storage and mixing and the carbon-in-leach ore processing activities. These procedures may be in the form of an operating manual, standard operating procedures, checklists, signs, training documents or other written formats.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-1.32	Mitigation	Employees will also undergo specialized training in the handling of cyanide.	Operations	Round 2 Information Requests Alternatives Assessment

Table MMC-1: Terrain and Soils- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-1.33	Mitigation	Contingency procedures for responding to releases and worker exposure to cyanide that may occur will be developed and will address the issues of worker safety, environmental exposure and emergency response and will be incorporated into the overall Emergency Response Plan.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-1.34	Mitigation	Treasury Metals will strive to maintain an average target total cyanide concentration within the TSF of 1 mg/L over the long-term basis. In addition, contingency measures, such as hydrogen peroxide treatment to the TSF supernatant water, and incorporation of hydrogen peroxide into the effluent treatment process will be considered as part of the sewage Environmental Compliance Approval (ECA) process with the Ministry of the Environment, Conservation and Parks (MECP). By design, the cyanide treatment circuit will destroy cyanide to a level acceptable for direct discharge to the environment and reduce the environmental safety requirements placed on the TSF.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-1.35	Mitigation	Each Indigenous community that was engaged with during the EA process would be notified in the highly unlikely event of a TSF failure and would be a part of the remediation strategy.	Operations, closure and post-closure	Round 2 Information Requests Alternatives Assessment
MMC-1.36	Mitigation	In the highly unlikely event of a TSF failure, emergency response and contingency procedures would include: • Processing plant Operations would be immediately shut down; • The seepage reclaim system would be shut down; • The reclaim system would be re-routed to transfer water to the open pit for temporary storage if worker • safety is not compromised; • In the event of a pump failure, a temporary pump can be installed during repairs; and • In the event that water breaches the seepage collection system; the area would be cleaned up by removal and proper disposal of the potentially impacted material into the TSF.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-1.37	Monitoring	In the unlikely event of a TSF failure, fish tissue samples would be collected from Wabigoon Lake in the vicinity of Christie's Island, Thunder Creek, and Bonny Bay. To the extent possible, tissue will be collected from various trophic levels of fish but would ensure upper trophic levels were included in the samples. The tissue samples would be analyzed by an accredited laboratory for a full suite of metals via ICP-MS using the US EPA method 200.3. This suite would include all of those parameters that are predicted to exceed the PWQO in the unlikely event of a TSF failure, with the exception of cyanide. Analysis for cyanide in fish tissue using a colourimetric method will also be completed by an accredited laboratory. The fish tissue would also include lipids in tissue and moisture in tissue analyses.	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions
MMC-1.38	Monitoring	Survey the elevation of the top of the WRSA. • Use survey equipment to periodically record the elevation of the top of the WRSA.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-1.39	Monitoring	Record photographic viewscapes of the WRSA from set locations on Thunder Lake. • Establish set locations for recording photographic record of the WRSA (same locations as used in pre-construction visualization). • Annually photograph the WRSA from the set locations on Thunder Lake until the WRSA is at its maximum height, prior to vegetation of the WRSA. • Once the WRSA is vegetated, an annual photograph the WRSA will be taken in the mid-summer from the set locations on Thunder Lake until the end of the closure phase.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-2: Geology and Geochemistry- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-2.1	Commitment	Treasury Metals will be providing a detailed cover design for the closure of the TSF as part of the MENDM Closure Plan under O.Reg. 240/00.	Prior to site preparation and construction phase	Round 2 Information Request Mine Waste
MMC-2.2	Commitment	Prior to removal of the supernatant water from the TSF, Treasury Metals will consider a layer of material (silt and sand) will be deposited over the tailings surface to physically isolate the tailings. This layer will be deposited utilizing the existing tailings deposition infrastructure. This layer will help maintain the tailings in a saturated condition and prevent ARD during the construction of the closure cover.	Closure phase	Round 2 Information Request Mine Waste
MMC-2.3	Commitment	Treasury Metals will bring in commercially available packaged water treatment units to augment the existing water treatment capacity during the closure phase, if required	Closure phase	Round 2 Information Request Mine Waste
MMC-2.4	Commitment	Treasury Metals is considering placing a benign layer of tailings in the TSF during the final year or two of Operations to help delay the onset of ARD during closure, if required. There are a number of options for the benign tailings layer, including the addition of lime to the tailings, de-sulphurizing the tailings or mixing a caustic material with the tailings. Final details with regards to the placement of this benign tailings layer will be established as part of the final closure plan process in accordance with MENDM O.Reg. 240/00.	Closure phase	Round 2 Information Request Mine Waste
MMC-2.5	Commitment	Treasury Metals has committed that during operations a water cover will be maintained over the majority of the TSF with an average water cover depth of 1.2 m. During operations, Treasury Metals will monitor the TSF to ensure the tailings are being deposited evenly. While Treasury Metals realizes that tailings material will not be deposited in a strictly uniform and/or flat manner it is reasonable to assume that 1.2 m of water on top of the bulk of the TSF would be achievable.	Operations	Round 2 Information Request Mine Waste
MMC-2.6	Commitment	Treasury Metals commits to acceptable practice of liner installation and protection as per the manufacture specifications	Site preparation and construction phase	Round 2 Information Request Mine Waste
MMC-2.7	Commitment	Treasury Metals is committed to determine and evaluate the prevention of ARD onset within the WRSA and will consider all viable options to ensure its long-term viability	Operations phase	Round 2 Information Request Mine Waste
MMC-2.8	Commitment	No acidic ore from the LGO stockpile will be processed to optimize the gold extraction process and prevent acidic tailings from being deposited in the TSF	Operations phase	Round 2 Information Request Mine Waste
MMC-2.9	Commitment	It is intended that the LGO stockpile will be depleted by the closure phase. Any LGO remaining in the LGO stockpile will be removed and placed at the bottom of the open pit to be submerged by the pit lake.	Closure phase	Round 2 Information Request Mine Waste
MMC-2.10	Commitment	Treasury Metals has committed to continue the evaluation of the dry cover as well as the wet for the purposes of the EA	Prior to site preparation and construction phase	Round 2 Information Request Mine Waste
MMC-2.11	Mitigation	The geochemical properties of the waste rock will be evaluated and NAG waste rock will be segregated from PAG waste rock, if feasible. [Mit_019].	Active Life of the Project	6.3.5
MMC-2.12	Mitigation	The PAG waste rock would be placed in the mined out areas of the open pit, to the extent practical, to minimize the volume of PAG material in the WRSA. [Mit_020].	Active Life of the Project	6.3.5
MMC-2.13	Mitigation	During Operations, tailings will be maintained in saturated conditions, and a water cover will be maintained over the majority of the TSF to prevent the onset of acidification. [Mit_021].	Operations	6.3.5
MMC-2.14	Mitigation	The multi-layer low permeability cover for the WRSA will be constructed according to good engineering practice. The final design for the construction of the closure cover for the WRSA will be done as per the requirement of O.Reg 240/00 and in consultation with Indigenous communities.	Life of the Project	Clarification Memorandum

Table MMC-2: Geology and Geochemistry- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-2.15	Mitigation	At closure, the open pit will be allowed to flood, isolating the exposed mine faces and the waste rock placed underneath a static cover of water to prevent acidification. [Mit_022].	Closure and post closure	6.3.5
MMC-2.16	Mitigation	At closure the process water will be withdrawn from the TSF, treated and used to help fill the open pit. The tailings within the TSF will be isolated using either a low permeability dry cover, or a wet cover of non-process water. [Mit_023].	Closure and post closure	6.3.5
MMC-2.17	Mitigation	The pit lake will be monitored as it is filling to determine whether batch treatment will be required to ensure the water meets PWQO, or background if background levels exceed the PWQO, prior to the discharge from the pit lake to a tributary of Blackwater Creek. [Mit_024].	Closure and post closure	6.3.5
MMC-2.18	Mitigation	Once the pit lake is fully flooded, it is expected that the monitoring of the water quality in the pit lake will continue for a period of time to determine whether additional batch treatment may be required to ensure the water released from the pit lake meets effluent release limits. [Mit_124].	Post closure	6.3.5
MMC-2.19	Mitigation	In the event of a spill, on-site or off-site, Treasury Metals would follow the requirements for spill reporting under Part X of the Environmental Protection Act as well as O.Reg. 675/98.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-2.20	Mitigation	In the event of a reportable spill, as defined under O.Reg. 675/98, the Ministry of the Environment, Conservation and Parks would oversee the response to the spill to ensure that the spilled material is clean-up and remediated in a timely manner. Records of the spill event would be kept and reported as part of the annual reporting for the site.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-2.21	Mitigation	In the event of the tailings pipeline failure, an emergency shutdown of the process plant would be initiated to limit the quantity of tailings from the ruptured pipeline. The process plant would remain shutdown until the section of ruptured pipeline had been repaired or replaced as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-2.22	Mitigation	In the event of the effluent pipeline failure, an emergency shutdown of the water treatment plant would occur to limit the quantity of effluent released from the ruptured pipeline. The water treatment system would remain shutdown until the section of ruptured pipeline had been repaired or replaced, as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-2.23	Mitigation	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH, ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions
MMC-2.24	Mitigation	Contingency procedures for responding to releases and worker exposure to cyanide that may occur will be developed and will address the issues of worker safety, environmental exposure and emergency response and will be incorporated into the overall Emergency Response Plan.	Active Life of the Project	Round 2 Information Requests Alternatives Assessment
MMC-2.25	Mitigation	Treasury Metals will strive to maintain an average target total cyanide concentration within the TSF of 1 mg/L over the long-term basis. In addition, contingency measures, such as hydrogen peroxide treatment to the TSF supernatant water, and incorporation of hydrogen peroxide into the effluent treatment process will be considered as part of the sewage Environmental Compliance Approval (ECA) process with the Ministry of the Environment, Conservation and Parks (MECP). By design, the cyanide treatment circuit will destroy cyanide to a level acceptable for direct discharge to the environment and reduce the environmental safety requirements placed on the TSF.	Active Life of the Project	Round 2 Information Requests Alternatives Assessment

Table MMC-2: Geology and Geochemistry- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-2.26	Mitigation	Each Indigenous community that was engaged with during the EA process would be notified in the highly unlikely event of a TSF failure and would be a part of the remediation strategy.	Active Life of the Project	Round 2 Information Requests Alternatives Assessment
MMC-2.27	Mitigation	In the highly unlikely event of a TSF failure, emergency response and contingency procedures would include: • Processing plant Operations would be immediately shut down; • The seepage reclaim system would be shut down; • The reclaim system would be re-routed to transfer water to the open pit for temporary storage if worker • safety is not compromised; • In the event of a pump failure, a temporary pump can be installed during repairs; and In the event that water breaches the seepage collection system; the area would be cleaned up by removal and proper disposal of the potentially impacted material into the TSF.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-2.28	Mitigation	Tailings beaches would be kept to a minimum in the TSF by rotating the tailings discharge location using spigotting in order to cover exposed tailings evenly. The TSF will be monitored and tailings deposition will be rotated, as required, to maintain the tailings beaches in a saturated condition.	Operations phase	Round 2 Information Request Mine Waste
MMC-2.29	Monitoring	In the unlikely event of a TSF failure, fish tissue samples would be collected from Wabigoon Lake in the vicinity of Christie's Island, Thunder Creek, and Bonny Bay. To the extent possible, tissue will be collected from various trophic levels of fish but would ensure upper trophic levels were included in the samples. The tissue samples would be analyzed by an accredited laboratory for a full suite of metals via ICP-MS using the US EPA method 200.3. This suite would include all of those parameters that are predicted to exceed the PWQO in the unlikely event of a TSF failure, with the exception of cyanide. Analysis for cyanide in fish tissue using a colourimetric method will also be completed by an accredited laboratory. The fish tissue would also include lipids in tissue and moisture in tissue analyses.	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions
MMC-2.30	Monitoring	Pit Lake Monitoring: Pit lake water samples will be taken from a safe location on the ramp leading down into the pit using standard surface water sampling procedures.	Closure and Post Closure	Goliath Gold Project Follow Up Program Addendum
MMC-2.31	Monitoring	Pit Lake Monitoring: Pit lake monitoring will be conducted following the cessation of groundwater pumping until the open pit is flooded or until released from monitoring by regulatory agencies.	Closure and Post Closure	Goliath Gold Project Follow Up Program Addendum
MMC-2.32	Monitoring	Pit Lake Monitoring: Pit Lake Samples will be analyzed for: • Metals (dissolved). • Major anions and cations. In-situ field parameters (temperature, reduction-oxidation potential, pH, dissolved oxygen).	Closure and Post-Cloure	Goliath Gold Project Follow Up Program Addendum
MMC-2.33	Monitoring	Pit Lake Monitoring: data analysis will include long-term tracking of seasonal and annual trends, together with applicable climate and hydrological data necessary to calculate trends in loading criteria.	Closure and Post Closure	Goliath Gold Project Follow Up Program Addendum
MMC-2.34	Monitoring	Pit Lake Monitoring: Use the results of the monitoring, along with additional geochemical data collected during the life of the Project to update the pit lake model.	Closure and Post Closure	Goliath Gold Project Follow Up Program Addendum

Table MMC-2: Geology and Geochemistry- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-2.35	Monitoring	Pit Lake Discharge Monitoring: Water samples will be taken from the discharge location from the pit lake into Blackwater Creek Tributary 1.	Closure and Post Closure	Goliath Gold Project Follow Up Program Addendum
MMC-2.36	Monitoring	Pit Lake Discharge Monitoring: Samples will be analyzed for: • Metals (total and dissolved). • Major anions and cations. In-situ field parameters (temperature, reduction-oxidation potential, pH, dissolved oxygen).	Closure and Post Closure	Goliath Gold Project Follow Up Program Addendum
MMC-2.37	Monitoring	Geochemical Monitoring: Conduct supplemental ML/ARD static testing analysis to assess the potential influence of aged (2009 and 2010) drill core on previous ML/ARD investigations and more completely assess mercury and selenium as contaminants of potential concern, as well as chloride and phosphorus. Mercury, selenium, chloride and phosphorous will be routinely included in any additional follow-up geochemical testing and monitoring programs.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-2.38	Monitoring	Geochemical Monitoring: With the support of project geologists, review the potential value (and execute as appropriate) an expanded geological study and static ML/ARD testing program to identify whether there is potential geological zonation of neutralization potential within the future open pit that could result in the ability to segregate rapid and delayed acid onset PAG waste rock that would potentially reduce water treatment requirements. To the extent possible with available sample materials, assess whether waste rock grain-size is likely to exert an influence on ML/ARD for Goliath rock.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-2.39	Monitoring	Geochemical Monitoring: Review underground mine-plan and geology when available and conduct a targeted analysis of representative samples of ore, waste rock and tailings as required.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-2.40	Monitoring	Geochemical Monitoring: With the support of geology and mining teams review the range in ore characteristics expected over the life of mine and assess potential variability in ore through supplemental ML/ARD characterization of selected ore samples and low grade ore samples as appropriate.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-2.41	Monitoring	Geochemical Monitoring: Continue operation of existing field cells (one for each lithology) and consider initiation of a supplemental program using crushed drill core or early blasted rock as available to more closely simulate field leaching conditions for major lithologies	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-2.42	Monitoring	Geochemical Monitoring: Initiate a supplemental kinetic testing program for low grade ore, waste rock and tailings to address gaps in the current program. The specific details of this program would be informed by additional studies and testing described above. • A focus of this program will be to better understand acid onset times of low grade ore, waste rock and tailings and the evolution of acidic drainage to support updated water quality modelling for the project. • Execution of column tests (e.g. trickle leach or subaqueous) on selected representative waste rock or tailings materials will be considered where such additional water quality assessment is warranted. • Materials for tailings kinetic test work would originate from metallurgical test work and include analysis of tailings supernatant as an assessment of future mill process water. The work would include analysis suitable to assess the concentration of thiosalts present (if any).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-2: Geology and Geochemistry- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		All kinetic test work would be guided, executed and continued to appropriate termination in accordance with MEND 2009 guidance. Humidity cell closeout analysis will be completed in accordance with MEND 2009.		
MMC-2.43	Monitoring	Geochemical Monitoring: Mineralogical analysis by petrographic microscopy and Rietveld X-ray diffraction will be completed on selected samples to aid in understanding acid drainage and metal leaching. As a value-added item, detailed mineralogical studies such as QEMScan or MLA may be considered if they are deemed to provide value in understanding and managing future drainage quality from waste rock and tailings.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-2.44	Monitoring	Geochemical Monitoring: Develop a program to identify suitable construction rock for the Project that could target previously unsampled regions of the open pits, other potentially low sulphide on-site rock or identification of an off-site source.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-2.45	Monitoring	Geochemical Monitoring: Continue to update mine rock management planning for all aspects of the Project including underground Operations, based on the further and continuing geochemical studies.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-2.46	Monitoring	Geochemical Monitoring: Explore mitigation options and possibly further studies on waste rock and tailings covers to support detailed planning and design to minimize the risk of ARD development and to lower potential water treatment costs during Operations and work toward eliminating a need for water treatment in the closure and post-closure phases of the Project.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-2.47	Monitoring	Geochemical Monitoring: Develop a pit lake model to predict pit lake water quality during the pit filling and post-closure periods, with such model to identify applicable short-term and long-term water management and treatment requirements. The pit lake model may be periodically updated as new information becomes available.	Closure and Post Closure	Goliath Gold Project Follow Up Program Addendum
MMC-2.48	Commitment	Treasury Metals will complete a detailed closure plan prior to the start of operations as required by MENDM under the formal closure planning process (Mining Act, O.Reg. 240/00). As part of that process, there will be a requirement for funds to be set aside to ensure the successful implementation of site closure.	Closure and Post Closure	Clarification Memorandum
MMC-2.49	Mitigation	In addition to a multi-layer low permeability cover for the WRSA, Treasury Metals has identified and will consider a number of additional design options for mitigation of deterioration in cover performance, enhanced design, and/or to extend the functional life of the cover. These may include measures to address: the effect of compacted clay liner issues with freeze thaw; decreasing final slope grade and length, as appropriate; frost protection and/or water storage; erosion; seepage management; and burrowing animals and human disturbance. The final design for the construction of the closure cover for the WRSA will be done as per the requirement of O.Reg 240/00 and in consultation with Indigenous communities.	Closure and Post Closure	Clarification Memorandum
MMC-2.50	Monitoring	Monitoring of the multi-layer low permeability dry cover for the WRSA will be conducted and in the event that monitoring indicates that the cover is deteriorating or not performing as efficiently as accounted, Treasury Metals would consider implementing alternative mitigation measures, as required, to ensure that the receiving environment is protected.	Closure and Post Closure	Clarification Memorandum
MMC-2.51	Monitoring	Dust formation from tailings beaches during operation will be minimized by maintaining tailings in a saturated condition. Beach areas within the TSF will be monitored and tailings deposition will be rotated using spigotting, as required, to maintain the tailings beaches in a saturated condition.	Operations	Clarification Memorandum
MMC-2.52	Mitigation	Treasury Metals intends to line the entire TSF basin with a geosynthetic liner (HDPE or a liner of comparable performance). The estimated seepage rate for the proposed geosynthetic liner for the TSF is 3.13 m^3/day. This is based on current industry research presented by Kerry Rowe et al. (2016), which suggests that this rate is an approximate upper bound estimate for a	Life of Project	Clarification Memorandum

Table MMC-2: Geology and Geochemistry- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		properly installed HDPE geomembrane underlying mine tailings and is independent of the soil characteristics underneath the TSF liner.		
MMC-2.53	Mitigation	Treasury Metals commits to acceptable practice of liner installation and protection as per the manufacture specifications. Installation of an HDPE liner requires that a soil cover needs to be placed as soon as possible to prevent wrinkles due to changes in temperature throughout the day resulting in increased leakage. Once there is about 0.5 m of cover (more or less depending on the cover material) the wrinkles should not expand due to changes in normal climate related thermal effects.	Life of Project	Clarification Memorandum
MMC-2.54	Monitoring	Monitoring of the TSF liner installation will be conducted, and in the event that monitoring indicates that the liner installation has not be installed appropriately or installed in such a way that it could result in liner deterioration, Treasury Metals would implement mitigation measures, as required, to ensure that the receiving environment is protected.	Active Life of Project	Clarification Memorandum
MMC-2.55	Monitoring	Monitoring of the water in the minewater pond during operations will be conducted and in the event that monitoring indicates that the water quality may pose risk to mammals and birds, Treasury Metals would consider implementing alternative mitigation measures such as water treatment, bird deterrents, or fencing as required, to ensure that ecological receptors are protected.	Operations and Closure	Clarification Memorandum
MMC-2.56	Monitoring	Monitoring of water quality of the TSF wet cover following closure will be conducted and in the event that monitoring indicates that the water quality may pose risk to mammals and birds, Treasury Metals would consider implementing alternative mitigation measures such as water treatment, bird deterrents, or fencing as required, to ensure that ecological receptors are protected.	Closure and Post-closure	Clarification Memorandum
MMC-2.57	Mitigation	Treasury Metals will consider a number of options to delay the rate of onset of ARD within the WRSA, these include, but are not limited to: for mitigation of deterioration in cover performance, enhanced design, and/or to extend the functional life of the cover. The final design for the construction of the closure cover for the WRSA will be done as per the requirement of O.Reg 240/00 and in consultation with Indigenous communities.	Active Life of the Project	Clarification Memorandum

Table MMC-3: Noise- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-3.1	Commitment	Treasury will design the operation to meet noise emission regulatory requirements (NPC-103, MOECC) [Cmt_018]	Active Life of the Project	Section 10
MMC-3.2	Commitment	Prior to construction, a blasting schedule and plan will be developed, which will include a notification process to inform Indigenous community members and other members of the public when blasting will occur and to describe all normal blasting activities on site. This plan will be developed though consultation with local Indigenous community members, stakeholders and regulatory officials and will be posted publicly on the Treasury Metals website. Treasury Metals currently plans to conduct blasting activities in the open pit between 10:00 am and 4:00 pm and would not conduct blasting on statutory holiday or agreed days of cultural importance (with at least 2 weeks prior notice given to Treasury Metals), unless required for safety purposes. Treasury Metals will notify Indigenous communities of changes to the blasting schedule 48 hours prior the changes taking effect, unless required for safety purposes.	Site Preparation and Construction Operations	Section 10
MMC-3.3	Mitigation	Blasting conducted in phased manner that optimizes the amount of explosives needed for a given area to be blasted, the amount of explosives detonated for a given time delay within the detonating procedure and that minimizes the area being blasted [Mit_029].	Active Life of the Project	6.4.5
MMC-3.4	Mitigation	Where potential effects of vibration to spawning shoals is identified, blasting practices will be adjusted to mitigate the effects [Mit_030].	Active Life of the Project	6.4.5
MMC-3.5	Mitigation	Advise nearby residents of significant noise-causing activities, such as blasting, and endeavour to schedule those events to reduce disruption to residents [Mit_026, Mit_027].	Active Life of the Project	6.4.5
MMC-3.6	Mitigation	Conduct heavy equipment activity between the hours of 07:00 and 22:00, if possible, to reduce the noise effects to neighbouring residents [Mit_025].	Active Life of the Project	6.4.5
MMC-3.7	Mitigation	Material will be loaded into haul trucks in a manner that minimizes the drop height from the loader or excavator to the bed of the truck [Mit_031].	Active Life of the Project	6.4.5
MMC-3.8	Mitigation	Ensure that all internal combustion engines are fitted with appropriate muffler systems [Mit_028].	Active Life of the Project	6.4.5
MMC-3.9	Mitigation	Possible rubber bedding material currently being investigated.	Active Life of the Project	6.4.5
MMC-3.10	Mitigation	Employing white noise backup alarms for surface equipment to reduce the tonal noise compared to traditional backup alarms. It should be noted that backup alarms are not included in the noise that is regulated in Ontario due to their importance for ensuring worker health and safety.	Active Life of the Project	6.4.5
MMC-3.11	Mitigation	In the event that complaints can lead to the identification of specific sources of concern, source-specific abatement such as noise walls, berms, or operational restrictions will be employed, as appropriate [Mit_033].	Active Life of the Project	6.4.5
MMC-3.12	Mitigation	Prior to commencing the site preparation and construction phase of the Project, Treasury Metals will develop a noise management plan. The noise management plan would include items such as the complaint process, communications process, and types of potential actions. In preparing the noise management plan, Treasury Metals will engage with affected stakeholders, including members of Indigenous communities. A key aspect of the plan would be tracking and responding to noise complaints. All complaints received under a noise management plan would need to be confirmed prior to specific action being taken. Based on the assessment results, predicted levels are below the applicable thresholds and any anticipated complaints will be dealt with through the appropriate channels using scientifically based support.	Active Life of the Project	Round 2 Information Requests Atmospheric Environment

Table MMC-3: Noise- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-3.13	Monitoring	Ambient Noise: The frequency of ambient noise monitoring will be conducted as follows, or in accordance with Provincial approvals if applicable: • A summer campaign during site preparation and construction activities. • A summer campaign during Operations. • A summer campaign during closure activities. If complaints are received, additional campaigns may be considered, as appropriate.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-3.14	Monitoring	Ambient Noise: If complaints are received, additional campaigns may be considered, as appropriate. During the program, noise will be recorded in the following manner: • Hourly, A-weighted equivalent noise levels (Leq, in dBA). • 72-hours of monitoring at each location.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-3.15	Monitoring	Wildlife Noise: A summer campaign to identify the extent of the 50-dBA noise contour to identify and confirm areas where noise might affect wildlife. Wildlife noise monitoring will be conducted as follows: • Once during site preparation and construction activities. • Once during Operations.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-3.16	Monitoring	Wildlife Noise: Although wildlife may not respond in the same manner as humans, the available literature relies on noise thresholds based on A-weighted measurements. During the program, noise will be recorded in the following manner: • Hourly, A-weighted equivalent noise levels (Leq, in dBA); and • A series of measurements at varying distance and locations around, and outside the Operations area that will be used to develop a spatial distribution of 1-hour equivalent noise readings.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-3.17	Monitoring	Blasting Noise and Vibration: Noise and vibration monitoring during blasting at selected sensitive receptors along East Thunder Lake Road;	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-3.18	Monitoring	Blasting Noise and Vibration: Blasting vibration on the main stem of Blackwater Creek, at the location closest to the open pit.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-3.19	Monitoring	Blasting Noise and Vibration: Blasting noise and vibration monitoring will be conducted as follows: • A campaign during Operations when open pit mining activities are in pit 1 (western most pit) and relatively close to the surface. If complaints are received, additional campaigns may be considered, as appropriate.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
7MMC-3.20	Monitoring	Blasting Noise and Vibration: During the program, vibration/noise will be recorded in the following manner: • Peak sound pressure (in dBA); and • Peak particle velocity (cm/s).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-3: Noise- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-3.21	Commitment	Treasury Metals is committed to working collaboratively with Indigenous communities to ensure informed and engaged dialogue throughout the life of the Project and has proposed the formation of an Environmental Management Committee to aid in continued dialoged. The Environmental Management Committee is intended to provide a forum for discussing environmental matters with the potentially affected Indigenous communities such the incorporation of traditional knowledge or items of cultural importance that might have been collected since completion of the EA process. Environmental matters that the Environmental Management Committee would review include but not limited to the blasting schedule and how it may interfere with days of cultural importance Treasury Metals will consider amendments to the blasting schedule to accommodate days of cultural importance, provided that they are brought forth to Treasury Metals at least 2 weeks in advance. The Environmental Management Committee will provide the conduit for which Treasury Metals may amend their blasting schedule. Changes in the blasting schedule in response to a request from the Environmental Management Committee, and or to address exceptional circumstances would be communicated through the Treasury Metals website or via direct communication with the community. Treasury Metals will notify Indigenous communities of changes to the blasting schedule 48 hours prior the changes taking effect, unless required for safety purposes.	Active Life of the Project	Clarification Memorandum

Table MMC-4: Light- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-4.1	Mitigation	Activities during the site preparation and construction phase will generally occur during the daytime. If there are times when lighting is required to ensure the safety of the workers, portable lighting will be used in required areas only. Portable lighting will be directed downward to minimize any off-site effects. [Mit_034, Mit_035].	Site Preparation and Construction	6.5.5
MMC-4.2	Mitigation	The higher Lux illumination levels (>80) will be placed within the process plant and mine infrastructure buildings, which contains the process and electrical equipment. [Mit_036].	Active Life of the Project	6.5.5
MMC-4.3	Mitigation	All externally mounted luminaires and their associated lamps will be designed to meet the requirements and recommendations of the Canadian Electrical Code (CEC), and the Building Code of Ontario. [Mit_037].	Active Life of the Project	6.5.5
MMC-4.4	Mitigation	External light fixtures will be installed at a tilt angle of 45° to minimize the off-site effect of the lighting system. [Mit_038].	Active Life of the Project	6.5.5
MMC-4.5	Mitigation	Cut off angles for external lightings will be designed to minimize the off-site effect of the lighting system. [Mit_039].	Active Life of the Project	6.5.5
MMC-4.6	Mitigation	Nighttime illumination will not be provided at the tailings storage facility (TSF). [Mit_040].	Active Life of the Project	6.5.5
MMC-4.7	Mitigation	Some activities in the open pit may require portable lighting to ensure the safety of the workers, portable lighting will be used in required areas only. Portable lighting will be directed downward to minimize off-site effects. Lighting within the open pit should not be visible to adjacent residents as it will be occurring below grade. [Mit_035, Mit_041].	Active Life of the Project	6.5.5
MMC-4.8	Mitigation	Activities during the closure phase will generally occur during the daytime. If there are times when lighting is required to ensure the safety of the workers, portable lighting will be used in required areas only. [Mit_035, Mit_042].	Active Life of the Project	6.5.5
MMC-4.9	Monitoring	Following the commissioning of the process plant and associated infrastructure, the configuration of the lighting will be used to confirm the lighting system was installed with consideration for the effects avoidance (Section 6.5.3) and mitigation (Section 6.5.5) measures relied on in the assessment. This is to be completed once, following the initial installation of the light system.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-4.10	Monitoring	A focused monitoring campaign to record light trespass levels associated with the commissioned process plant will be conducted once following the completion of major site building infrastructure (i.e. process plant).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-4.11	Monitoring	Document complaints from local residents regarding light trespass from the Project and determine the source of the trespass.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-5: Air Quality- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-5.1	Commitment	Best management practices for dust control will be implemented. A plan will be prepared to identify all potential sources of dusts, outline mitigation methods to employ, and detail all records and inspections required by regulatory officials. Treasury will monitor air emissions through implementation of current industry standards to meet regulatory requirements (Ontario Reg. 419/05, AAQC, MOECC) [Cmt_017]	Active Life of the Project	
MMC-5.2	Commitment	All final effluent and point source air discharge points will be sampled and results reported to the appropriate authorities in accordance with environmental permit requirements [Cmt_036]	Active Life of the Project	
MMC-5.3	Commitment	Treasury Metals has also committed to consult with Indigenous communities regarding the placement of dustfall monitoring jars to target areas of potential impact that overlap with areas where traditional land and resource occurs (this information will be shared confidentially by the community in the formal Traditional Knowledge studies completed, underway or expected in the future).	Active Life of the Project	HHERA
MMC-5.4	Mitigation	Blasting will be conducted in a phased manner that optimizes the amount of explosives needed for a given area to be blasted, and that minimizes the area being blasted. Modern blasting methods used in mining are designed to direct the energy from the blasts into the rock. This reduces the amount of blasting agents required to achieve the desired blast objectives, and ultimately reduces the amount of dust generated. The dust generated from modern blasting result primarily from the physical impact of the displaced rock. The proposed blasting at the Project will likely be restricted to once per day, and only a few days during each week. [Mit_029, Mit_043].	Active Life of the Project	6.6.5
MMC-5.5	Mitigation	Material will be loaded into haul trucks in a manner that minimizes the drop height from the loader or excavator bucket to the bed of the truck (or equivalent bed height as material is loaded into the truck). [Mit_031].	Active Life of the Project	6.6.5
MMC-5.6	Mitigation	Ensure that all internal combustion engines are properly maintained and all emission control systems (e.g., diesel particulate filters) are in good working order. [Mit_044].	Active Life of the Project	6.6.5
MMC-5.7	Mitigation	A best management practices plan for dust will be implemented on the site to provide specific directions for operators. A draft Best Practices Plan for Dust was included as part of Appendix J to the EIS. Water and chemical suppressants will be used for dust control on the haul roads is used at the mine site, when temperatures are above freezing. [Mit_046].	Active Life of the Project	6.6.5
MMC-5.8	Mitigation	The air monitoring program described in the Goliath Gold Project Follow-up Program Addendum has been revised to include specifically identify PM2.5 as the fine particulate to be monitored at the continuous monitoring station. Treasury Metals plan to commission a single continuous monitoring station at a suitable location. For obvious reasons, the air continuous monitoring station should be located in a secure but accessible location, with ready access to power, and in a location relatively close to the areas where the maximum concentrations were predicted.	Active Life of the Project	Round 2 Information requests Atmospheric Environment
MMC-5.9	Adaptive Mitigation	In the event that vibration due to blasting is identified to cause effects to fish and fish habitat, the quantity of explosives used during one detonation will be altered along with the timing of blasting. These changes to blasting practices will be completed by a qualified person and will continue to be altered until blasting effects no longer effect fish or fish habitat.	Active Life of the Project	Round 2 Information requests Atmospheric Environment
MMC-5.10	Monitoring	The proposed air monitoring to support the Follow-Up Program for the Goliath Gold Project would include commissioning a monitoring station equipped with a combination of periodic samplers (e.g., high volume	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-5: Air Quality- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		samplers for TSP, and one of PM10 or PM2.5), passive samplers (e.g., dustfall), and if warranted, continuous monitors (e.g., samplers for NO2).		
MMC-5.11	Monitoring	An air monitoring station will be installed. • The station will possibly include analyzers to measure the following: total suspended particulate matter (TSP); one of either particulate matter nominally smaller than 10 µm (PM_{10}) or particulate matter nominally smaller than 2.5 µm ($PM_{2.5}$); and nitrogen dioxide (NO_2).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-5.12	Monitoring	Passive sampling of NO_2 and SO_2 would monitor average concentrations over 30-day periods through the year.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-5.13	Monitoring	Particulate matter will be collected passively over a 30-day period using dust fall jars. These collected samples will be submitted for analysis of total dustfall, as well as for the metals content within the collected particulates.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-5.14	Monitoring	A meteorological station will be installed in the Operations area to record continuous meteorological data. This data will be used in conjunction with the air quality data to determine trends, and will provide support information for ongoing Project engineering.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-5.15	Monitoring	Treasury Metals will record any complaints received regarding air quality associated with the Project.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-6: Climate- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-6.1	Mitigation	Using the 115 kV power line that runs adjacent to the Project for supplying electrical instead of generating electricity on-site. [Mit_047].	Active Life of the Project	6.7.5
MMC-6.2	Mitigation	Placing the waste rock storage area immediately to the north of the open pit to reduce the haul distances. Shorter haul distances will reduce the fuel consumed and the associated GHG emissions. [Mit_048].	Active Life of the Project	6.7.5
MMC-6.3	Mitigation	Once mining is complete in pit 1, waste rock will be placed in the mined out areas of the open pit. This reduces haul distances, fuel consumption and GHG emissions. [Mit_020].	Active Life of the Project	6.7.5
MMC-6.4	Mitigation	Placing the overburden storage area immediately to the south of the open pit to reduce the haul distances. Reducing the haul distances reduces fuel consumption and GHG emissions. [Mit_049].	Active Life of the Project	6.7.5
MMC-6.5	Mitigation	The compact footprint of the Project reduces the distances travelled, which will ultimately reduce the GHG emissions from the Project. [Mit_050].	Active Life of the Project	6.7.5
MMC-6.6	Monitoring	The climate monitoring program would focus on the requirements under Section 46 of the *Canadian Environmental Protection Act*, and would include: • Record the annual fuel usage, as described in the Greenhouse Gas Management Plan (Section 12.8); and • Use the calculation stipulated in the Technical Guidance Document on Reporting Greenhouse Gas Emissions, as set out in the Greenhouse Gas Management Plan (Section 12.8) to calculate the annual Project GHG emissions.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-7: Surface Water Quality- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-7.1	Commitment	Ditching and drainage will be designed to collect and manage runoff from site, and will be established around stockpiles. All collection ponds will be integrated with the site water management plan [Cmt_013].	Active Life of the Project	Section 10
MMC-7.2	Commitment	During Operations, effluent discharged from the Project to Blackwater Creek will meet the Provincial Water Quality Objectives (PWQO) for the parameters listed below, or background concentrations if background levels are above the PWQO. Where there is no PWQO for a parameter, the commitment will be to meet the Canadian Water Quality Guidelines (CWQG). For total mercury, the commitment will be that effluent discharged to Blackwater Creek will meet background concentrations for that watercourse. Background concentrations for Blackwater Creek are defined as the 75th percentile in accordance MOECC receiving water assessment policy. Detailed parameters will be determined through engagement with appropriate Provincial and Federal regulatory bodies [Cmt_034].	Operations	Section 10
MMC-7.3	Commitment	All final effluent discharge points will have control structures to immediately cease discharge if and when necessary [Cmt_035]	Operations	
MMC-7.4	Mitigation	A perimeter runoff and seepage collection system will be progressively constructed around the Operations area. There will be no runoff from the Operations area to the environment. [Mit_008].	Site Preparation and Construction	6.8.5
MMC-7.5	Mitigation	Industry standard erosion and sediment controls, such as sediment traps within ditches, will be implemented during the site preparations and construction phase. [Mit_054].	Site Preparation and Construction	6.8.5
MMC-7.6	Mitigation	Once the perimeter ditch has been completed, there would be no discharges to surface water during this phase. [Mit_055].	Site Preparation and Construction	6.8.5
MMC-7.7	Mitigation	All runoff from the Operations area will be collected by the perimeter runoff and seepage collection system constructed at the start of the site preparation and construction phase. [Mit_008].	Operations	6.8.5
MMC-7.8	Mitigation	Effectively manage water collected on-site using constructed storage facilities, reducing the need for fresh water withdrawals and discharges of treated water. [Mit_057].	Operations	6.8.5
MMC-7.9	Mitigation	During Operations, excess water not required in the process will be treated to concentrations that meet Provincial Water Quality Objectives (PWQO) or Canadian Water Quality Guidelines (CWQG) for the protection of aquatic life, or background if background levels exceed the PWQO, prior to discharging to Blackwater Creek. In the case of mercury, effluent will be treated to meet the background concentrations in Blackwater Creek. [Mit_053].	Operations	6.8.5
MMC-7.10	Mitigation	A perimeter runoff and seepage collection systems will be constructed around the TSF. [Mit_051].	Operations	6.8.5
MMC-7.11	Mitigation	Seepage that escapes the seepage collection systems will be captured by the drawdown zone created by the dewatering of the open pit and underground mine. This captured seepage will report to the open pit. [Mit_052].	Operations	6.8.5
MMC-7.12	Mitigation	The process will employ a thickener to help recover cyanide solution from the tailings for reuse in processing. The resulting tailings will then be treated using the SO_2-air process to reduce cyanide in the tailings directed to the TSF so as to meet MMER requirements over a long-term basis. [Mit_061].	Operations	6.8.5
MMC-7.13	Mitigation	During closure, the site will be graded such that runoff from the Operations area will be directed to the open pit during closure and post-closure phases. [Mit_056].	Closure	6.8.5

Table MMC-7: Surface Water Quality- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-7.14	Mitigation	The pit lake will be monitored as it is filling on a quarterly basis to determine whether batch treatment will be required to ensure the water meets PWQO, or background concentrations if background levels are greater than the PWQ, prior to the discharge from the pit lake to a tributary of Blackwater Creek.	Closure	6.8.5
MMC-7.15	Mitigation	Once the pit lake is fully flooded, monitoring of the water quality in the pit lake will continue on an annual basis to support batch treatment if any, until the pit lake meets effluent release limits.	Closure	6.8.5
MMC-7.16	Mitigation	Although dewatering will stop at the end of Operations, the drawdown zone will remain until the open pit fills with water and the groundwater returns to near pre-development levels. Seepage that escapes the collection systems will be captured by the drawdown zone caused by the dewatering of the open pit and underground mine during Operations. This captured seepage will report to the open pit. [Mit_052].	Closure	6.8.5
MMC-7.17	Mitigation	There will be no discharges to surface water during this phase. [Mit_055].	Closure	6.8.5
MMC-7.18	Mitigation	A wet cover is the preferred closure option over the TSF. A wet cover prevents acidification of the tailings, which improves the quality of seepage in the long-term and results in improved surface water quality in the receiving environment. [Mit_023].	Post-closure	6.8.5
MMC-7.19	Mitigation	Should monitoring of water quality within the fully flooded pit lake indicate that batch treatment(s) is not effective at ensuring the water released from the pit lake meets effluent release limits, Treasury Metals will look to mitigate any potential effects on surface water with additional water treatment options.	Post-closure	Clarification Memorandum
MMC-7.20	Monitoring	Once the pit lake is fully flooded, Treasury Metals will collect water data at various depths to confirm whether condition of permanent stratification would be form within the pit lake. The data collected would include, at a minimum, temperature, dissolved oxygen, redox potential, pH and dissolved ions.	Post-closure	Clarification Memorandum
MMC-7.21	Mitigation	In the event of a spill, on-site or off-site, Treasury Metals would follow the requirements for spill reporting under Part X of the Environmental Protection Act as well as O.Reg. 675/98.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-7.22	Mitigation	In the event of a reportable spill, as defined under O.Reg. 675/98, the Ministry of the Environment, Conservation and Parks would oversee the response to the spill to ensure that the spilled material is clean-up and remediated in a timely manner. Records of the spill event would be kept and reported as part of the annual reporting for the site.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-7.23	Mitigation	In the event of the tailings pipeline failure, an emergency shutdown of the process plant would be initiated to limit the quantity of tailings from the ruptured pipeline. The process plant would remain shutdown until the section of ruptured pipeline had been repaired or replaced as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-7.24	Mitigation	In the event of the effluent pipeline failure, an emergency shutdown of the water treatment plant would occur to limit the quantity of effluent released from the ruptured pipeline. The water treatment system would remain shutdown until the section of ruptured pipeline had been repaired or replaced, as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-7.25	Mitigation	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH, ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions

Table MMC-7: Surface Water Quality- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.		
MMC-7.26	Mitigation	Unloading and storage areas for cyanide will be located within the Process Plant and will be located on concrete surfaces to prevent seepage to the subsurface.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.27	Mitigation	Secondary containment will be included in the design for any cyanide storage as well as the carbon-in-leach ore processing area. The carbon-in-leach processing area is within the Process Plant and will be located on concrete surfaces to prevent seepage.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.28	Mitigation	The secondary containment external to the CIL tanks, will consist of a combination of concrete pads and a containment bund, and will provide storage (spill) capacity equivalent to 110% of the largest tank in the system, together with containment provision for any piping that drains back to the system.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.29	Mitigation	The cyanide storage and mixing tanks, the carbon-in-leach ore processing and related pipelines will be constructed of, or coated with materials compatible with cyanide and high pH conditions. Tanks and pipelines will be clearly identified as containing cyanide and the direction of flow will be indicated on pipelines.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.30	Mitigation	Systems and procedures will be in place to address potential recovery of released solution, remediation of any contaminated soil and possible failures of tanks as necessary to protect surface and ground water. A method to prevent overfilling of storage tanks other than direct observation and manual gauging rod will be used such as an automatic level indicator, high-level alarm or integrated tank and tanker valve-shutdown device.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.31	Mitigation	A written set of procedures designed to prevent and control exposures and releases during cyanide unloading, storage and mixing and the carbon-in-leach ore processing activities. These procedures may be in the form of an operating manual, standard operating procedures, checklists, signs, training documents or other written formats.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.32	Mitigation	Employees will also undergo specialized training in the handling of cyanide.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.33	Mitigation	Contingency procedures for responding to releases and worker exposure to cyanide that may occur will be developed and will address the issues of worker safety, environmental exposure and emergency response and will be incorporated into the overall Emergency Response Plan.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.34	Mitigation	Treasury Metals will strive to maintain an average target total cyanide concentration within the TSF of 1 mg/L over the long-term basis. In addition, contingency measures, such as hydrogen peroxide treatment to the TSF supernatant water, and incorporation of hydrogen peroxide into the effluent treatment process will be considered as part of the sewage Environmental Compliance Approval (ECA) process with the Ministry of the Environment, Conservation and Parks (MECP). By design, the cyanide treatment circuit will destroy cyanide to a level acceptable for direct discharge to the environment and reduce the environmental safety requirements placed on the TSF.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.35	Mitigation	Each Indigenous community that was engaged with during the EA process would be notified in the highly unlikely event of a TSF failure and would be a part of the remediation strategy.	Operations, closure and post-closure	Round 2 Information Requests Alternatives Assessment

Table MMC-7: Surface Water Quality- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-7.36	Mitigation	In the highly unlikely event of a TSF failure, emergency response and contingency procedures would include: • Processing plant Operations would be immediately shut down; • The seepage reclaim system would be shut down; • The reclaim system would be re-routed to transfer water to the open pit for temporary storage if worker • safety is not compromised; • In the event of a pump failure, a temporary pump can be installed during repairs; and • In the event that water breaches the seepage collection system; the area would be cleaned up by removal and proper disposal of the potentially impacted material into the TSF.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-7.37	Monitoring	In the unlikely event of a TSF failure, fish tissue samples would be collected from Wabigoon Lake in the vicinity of Christie's Island, Thunder Creek, and Bonny Bay. To the extent possible, tissue will be collected from various trophic levels of fish but would ensure upper trophic levels were included in the samples. The tissue samples would be analyzed by an accredited laboratory for a full suite of metals via ICP-MS using the US EPA method 200.3. This suite would include all of those parameters that are predicted to exceed the PWQO in the unlikely event of a TSF failure, with the exception of cyanide. Analysis for cyanide in fish tissue using a colourimetric method will also be completed by an accredited laboratory. The fish tissue would also include lipids in tissue and moisture in tissue analyses.	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions
MMC-7.38	Monitoring	A total of 12 proposed monitoring locations are shown in Figure FUP1.8.3-1 that are associated with off site locations and 2 locations are shown on Figure FUP.1.8.3-1 that are associated with the Blackwater Creek Tributary 2 diversion channel. The total number of monitoring stations will be identified in consultation with MECP. The stations identified in this report are considered preliminary possible options that may be used in the monitoring to support the follow-up program.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-7.39	Monitoring	The frequency of monitoring each location is proposed and is subject to change with consultation with MECP and site conditions. Each sample location may be analyzed for relevant parameter suites, as per Table FUP1.8.3-1 and may be altered due to site conditions and safety considerations. Each sample location may be analyzed for relevant parameter suites, as per Table FUP1.8.3-1 and may be altered due to site conditions and safety considerations: **Table FUP1.8.3-1: Summary of Surface Water Quality Follow-up Programs** **Sampling Location** / **Parameter Group**: Group A (1); Group B (2); Group C (3); Group D (4); Group E (5); Group F (6); G SW-TL1A, SW-JCT, SW-2, SW TL3, SW-4, SW-7, SW-8, SW-9, TSF Supernatant Water: **Monthly**; **Monthly**; **Monthly**; —; —; — SW-10, SW-11: **Monthly**; **Monthly**; —; —; — SW-5, SW-6: **Annually**; **Annually**; **Annually**; —; —; — BW-T2-UP, BW-T2_DN: **Quarterly**; **Quarterly**; **Q (d** Effluent Discharge: —; **Monthly**; —; **Thrice Weekly**; **Weekly**; **Monthly** Minewater pond: **Quarterly**; **Quarterly**; —; —; —; — Pit Lake: **Quarterly**; **Quarterly**; —; —; —; — Notes: (1) **Group A:** pH, acidity, alkalinity, dissolved oxygen, chloride, conductivity, dissolved and total organic carbon, hardness, nitrate, nitrite, phosphate, sulphate, temperature (field), total and un-ionized ammonia, total dissolved solids, total suspended solids, turbidity. (2) **Group B:** Total ICP metals scan. Total chromium and hexavalent chromium will be reported. (3) **Group C:** free cyanide, total cyanide, weak acid dissociable cyanide. (4) **Group D:** pH, total cyanide, total suspended solids (5) **Group E:** copper, lead, nickel, zinc, arsenic (6) **Group F**: Acute toxicity testing (Rainbow Trout and *Daphnia magna*) (7) **Group G:** Temperature (continuous)	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-7: Surface Water Quality- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-7.40	Monitoring	Relevant parameter suites may include inorganics including metals, sulphate and organics including methyl-mercury. Given the intrinsically low water solubility of methylmercury in surface water, it does not been to be measured in surface water at the same frequency as Group B. Instead a frequency of methylmercury measurement in surface water will be determined in consultation with the MECP and Indigenous Stakeholders.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-7.41	Monitoring	As per Information Request SW(2)-02 and SW(2)-02B, the effluent discharge sampling location may also be monitored for ammonia and hydrocarbons in the form of oil and grease on a basis with Group B parameters.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-7.42	Monitoring	In-situ field parameters (temperature, reduction-oxidation potential, pH, dissolved oxygen) will also be sampled for at receiving water stations.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-7.43	Monitoring	The Goliath Gold Regulatory Monitoring Addendum includes monitoring for both dissolved and total metals according to the appropriate regulatory requirements.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-8: Surface Water Quantity- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-8.1	Mitigation	Progressively construct a perimeter ditch and seepage collection system around the Operations area to capture and direct all runoff from the site to the water management system. [Mit_008].	Site Preparation and Construction	6.9.5
MMC-8.2	Mitigation	Industry standard erosion and sediment controls will be implemented during the site preparations and construction phase. [Mit_054].	Site Preparation and Construction	6.9.5
MMC-8.3	Mitigation	Once the perimeter ditch has been completed, there would be no discharges to surface water during this phase. [Mit_055].	Site Preparation and Construction	6.9.5
MMC-8.4	Mitigation	A perimeter ditch around the Operations area will capture all runoff during the site preparation and construction phase. [Mit_008].	Operations	6.9.5
MMC-8.5	Mitigation	The Operations area will be minimized to the extent possible to reduce the amount of runoff directed from the Little Creek and Hoffstrom's Bay watersheds. [Mit_050].	Operations	6.9.5
MMC-8.6	Mitigation	On-site storage facilities will allow for the effective management of water, reducing the need for discharges, especially during periods when conditions are not suitable. On-site storage facilities will allow for the effective management of water, reducing the amount for water taken from adjacent watercourses. [Mit_057].	Operations	6.9.5
MMC-8.7	Mitigation	Excess water not required for processing will be treated and discharged to Blackwater Creek through an engineered structure designed to dissipate flows and avoid erosion. [Mit_058].	Operations	6.9.5
MMC-8.8	Mitigation	Periodically, fresh water will be required to support Project Operations. Fresh water withdrawals will be taken from two existing ponds on Thunder Lake Tributary 3 (referred to as the tree nursery ponds) and an existing pond on Thunder Lake Tributary 2. Fresh water takings from these ponds will not exceed 5% of the flow entering the ponds. [Mit_059].	Operations	6.9.5
MMC-8.9	Mitigation	A perimeter ditch around the Operations area will capture all runoff during the closure phase. [Mit_008].	Closure	6.9.5
MMC-8.10	Mitigation	There will be no surface water discharges during this phase, thus, no mitigation measures are proposed. [Mit_055].	Closure	6.9.5
MMC-8.11	Mitigation	During closure, the site will be graded such that runoff for the Operations area will be directed to the open pit during closure and post-closure phases [Mit_056].	Post-closure	6.9.5
MMC-8.12	Mitigation	Once the open pit has been filled, excess water from the open pit will be passively released through an engineered spillway into the existing channel of Blackwater Creek Tributary 1. [Mit_060].	Post-closure	6.9.5
MMC-8.13	Monitoring	The proposed monitoring program in support of the Follow-Up Program presented herein will rely on a subset of the data presented as part of the proposed monitoring program for regulatory monitoring as detailed in the Goliath Gold Regulatory Monitoring Addendum. The predictions made with respect to surface water quality in the EIS relied on total metals, and therefore the measurement of total metals is the appropriate measurement endpoint for the Follow-Up Program described for verifying the prediction made in the EIS and for determining the effectiveness of the mitigation measures described.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-8.14	Monitoring	The following monitoring of Blackwater Creek is proposed to support the follow-up program: • Discrete flow monitoring would be conducted upstream (SW-TL1a) and downstream (SW_JCTa) of the proposed discharge point in Blackwater Creek (see Figure FUP1.9.1-1);	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-8: Surface Water Quantity - Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		• Periodic (at least annual) inspection of the Blackwater Creek system for any evidence of undue erosion related to Project discharges, with satellite imagery of the downstream portion of the creek to be obtained once every three years; and • Volume of effluent discharged into Blackwater Creek on a daily basis, per O.Reg 560/90, 561/94, Clean Water Regulation.		
MMC-8.15	Monitoring	The following monitoring of Thunder Lake Tributaries 2 and 3 is proposed to support the follow-up program: • Two discrete flow measurement stations downstream of the Project area, one on Thunder Lake Tributary 2 (SW 7) and one on Thunder Lake Tributary 3 (SW 8), as shown on Figure FUP1.9.1-1. • In addition, continuous flows will be recorded as water flows into the irrigation ponds on Thunder Lake Tributaries 2 and 3. These readings will be used to demonstrate that the withdrawals from the irrigation ponds were in accordance with the committed upper bound of 5% of the inflow.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-8.16	Monitoring	The following monitoring of Little Creek and Hoffstrom's Bay Tributary is proposed to support the follow-up program: • Flow readings will be taken periodically in both Little Creek (SW-2) and Hoffstrom's Bay Tributary (SW-9)	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-9: Groundwater Quality- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-9.1	Commitment	Groundwater monitoring wells will be installed across Project site (as described in Section 13 and Appendix M) [Cmt_023]	Active Life of the Project	Section 10
MMC-9.2	Commitment	If sufficient clay of suitable quality are not available on site, Treasury Metals will obtain the necessary materials from other sources to ensure the cap over the WRSA achieves the designed performance	Closure phase	Response to Round 2 Information Request Groundwater
MMC-9.3	Commitment	The groundwater follow-up monitoring program will include a new well located between the TSF and the open pit.	Active phases of the Project	Response to Round 2 Information Request Groundwater
MMC-9.4	Commitment	The water cover of the TSF will be maintained at 418 masl	Closure and post-closure phase	Response to Round 2 Information Request Groundwater
MMC-9.5	Commitment	A finger drain will be installed as a foundation drain in the existing creek to collect and convey groundwater inflows that may report to the drainage during the construction of the TSF.	Site preparation and construction phase	Response to Round 2 Information Request Groundwater
MMC-9.6	Commitment	Treasury Metals has committed to a comprehensive groundwater monitoring program to confirm all assumptions relied upon in the groundwater model, including the kinematic porosities and other factors that could influence transport times.	Active phases of the Project	Response to Round 2 Information Request Groundwater
MMC-9.7	Mitigation	A perimeter runoff and seepage collection ditch will be progressively constructed around what is referred to as the Operations area. [Mit_008].	Active Life of the Project	6.10.5
MMC-9.8	Mitigation	The geochemical properties of the waste rock will be evaluated and non-acid generating (NAG) waste rock will be segregated from potentially acid generating (PAG) waste rock, if feasible. [Mit_019].	Active Life of the Project	6.10.5
MMC-9.9	Mitigation	The WRSA will be capped with a low permeability cover, then a layer of overburden, then vegetated during closure. [Mit_018].	Active Life of the Project	6.10.5
MMC-9.10	Mitigation	The PAG waste rock would be placed in the mined out areas of the open pit, to the extent practical, to minimize the volume of PAG material in the waste rock storage area (WRSA). [Mit_020].	Active Life of the Project	6.10.5
MMC-9.11	Mitigation	At closure, the open pit will be allowed to flood, isolating the exposed mine faces and the waste rock placed underneath a static cover of water to prevent acidification. [Mit_022].	Active Life of the Project	6.10.5
MMC-9.12	Mitigation	The floor of the tailings storage facility (TSF) will be a low-permeability layer capable of achieving seepage rates that ensures receiving surface water quality are equivalent to baseline, or meet PWQO. The liner would be comprised of natural material, or if necessary, an HPDE liner laid over a prepared basin of sand or comparable material. [Mit_062].	Active Life of the Project	6.10.5
MMC-9.13	Mitigation	The TSF will be equipped with a perimeter seepage collection system. [Mit_051].	Active Life of the Project	6.10.5
MMC-9.14	Mitigation	During Operations, tailings will be maintained in saturated conditions, and a water cover will be maintained over the majority of the TSF to prevent the onset of acidification. [Mit_021].	Active Life of the Project	6.10.5

Table MMC-9: Groundwater Quality- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-9.15	Mitigation	At closure, the process water will be withdrawn from the TSF, treated and used to help fill the open pit. The tailings within the TSF will be isolated using either a low permeability dry cover, or a wet cover of non-process water. [Mit_023].	Active Life of the Project	6.10.5
MMC-9.16	Mitigation	Dewatering of the open pit and underground mine workings will provide dry working conditions and a safe working environment. These dewatering activities will lower the groundwater table around the perimeter of the open pit and mine workings, creating what is referred to as a drawdown zone. Within this drawdown zone, groundwater will migrate towards the open pit. Therefore, seepage that escapes the seepage collection systems will be captured within the drawdown zone caused by dewatering and ultimately report to the open pit (Operations and closure phases). [Mit_052].	Active Life of the Project	6.10.5
MMC-9.17	Mitigation	The use of a wet cover as a closure option over the TSF is the preferred option. A wet cover prevents acidification of the tailings, which improves the quality of seepage in the long-term. The mitigation also benefits the quality of surface water in the receiving environment. [Mit_023].	Active Life of the Project	6.10.5
MMC-9.18	Mitigation	Alternative configurations will be used for constructing ditches around the perimeter of the site, based on the actual conditions encountered when constructing the perimeter ditches	Site preparation and construction phase	Response to Round 2 Information Request Groundwater
MMC-9.19	Mitigation	The infiltration into the WRSA that would drain laterally through the WRSA to the perimeter of the WRSA would be captured by the perimeter ditches and directed to a segregated runoff collection pond where it would be monitored, and if required, treated prior to the incorporation of the seepage from the WRSA into the overall water management system. Monitoring of this water would commence at the beginning of Operations, at the start of the construction of the WRSA.	Active phases of the Project	Response to Round 2 Information Request Groundwater
MMC-9.20	Monitoring	As part of the Follow-up Program for groundwater, non-retardant species (chloride, sulphate) will be used to establish bulk kinematic porosity values for the geology at the site and retardant species (metals, cyanide) will be used to establish transport parameter values (retardation, decay where applicable).	Operations phase	Response to Round 2 Information Request Groundwater
MMC-9.21	Monitoring	Groundwater Monitoring Wells: Groundwater monitoring wells will be either for groundwater sampling or groundwater level recording, with some wells serving both purposes. Most monitoring wells will be screened within either the SBR or BS, or possibly both depending on ground conditions encountered during drilling. In the vicinity of the TSF, a sand-clay/silt-sand sequence occurs. In this location, wells will be nested to sample the surficial sand (SS) and BS if the sand-clay/silt-sand sequence is encountered (i.e., similar to the existing BH3A Shallow and BH3A Deep). The well screen in the SS will monitor the performance of the seepage collection ditches in collecting shallow horizontal groundwater flow out of the TSF, whereas the well screen in the BS will provide monitoring for vertical seepage out of the base of the TSF	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-9.22	Monitoring	Groundwater Monitoring Installations: It is expected that a total of eight well / piezometers (six single-screen wells, one nested well and one nested vibrating wire piezometer [VWP]) of the current groundwater monitoring installations will be used for the future groundwater monitoring network. The locations of the monitoring wells in the proposed network are provided in Figure FUP1.10.3.2-1.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-9.23	Monitoring	Groundwater Monitoring Installations: The proposed monitoring wells are described below, and summarized in Table FUP1.10.3.2-1:	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-9: Groundwater Quality- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		• The east-west striking mineralized zone is expected to have elevated bedrock hydraulic conductivities, which could influence the extension of the drawdown cone towards the west. The western VWP nest (TL131121) lies in a strategic location for measuring the groundwater pressure during dewatering around the mineralized zone to the west of open pit. • Three of the wells are located around the TSF (BH1A, BH2A and BH3A) and one well close to the WRSA (BH6D) which are suitable for groundwater quality monitoring. BH2A is in an up-gradient location and would provide background groundwater quality data during operation of the TSF.		
MMC-9.24	Monitoring	Groundwater Monitoring Installations: An additional eight monitoring locations will be installed, as per Figure FUP1.10.3.2-1 (proposed new wells for GWM network) to expand coverage of the groundwater quality monitoring network. These will include: • Three wells (NW1, NW2 and NW3) are close to the perimeter of the TSF for groundwater quality monitoring. These will be nested with a screen in the SS and the BS/SBR (i.e., top and bottom of sand-clay/silt-sand sequence). • Three wells (NW4, NW5 and NW6) with single screens in BS/SBR to the west of the open pit in distal locations to monitor groundwater levels between Thunder Lake and the perimeter of the Treasury property. Two of these will also be used for groundwater quality monitoring of the WRSA (NW4 and NW5). • Two wells (NW7 and NW8) with single screens in BS/SBR are required to the south of the open pit in distal locations to monitor groundwater levels along the perimeter of the Treasury property in the direction of Wabigoon. • All the installations of the groundwater monitoring network will be constructed and/or modified where necessary to include protective casings and markings and, if required, a barricade to prevent damage by heavy equipment during mine construction and operation.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-9.25	Monitoring	Groundwater Quality Monitoring: There are four single screen and four nested well locations in the groundwater quality monitoring program providing a total of 12 monitoring well screens. These wells are to be screened in the SBR and/or BS with the nested well locations having an additional screen in the SS where sand-clay/silt-sand sequence is present. Groundwater quality wells will be sampled at a frequency of four times per year. Water levels will be taken prior to sampling. Samples will be analyzed for the following parameters suites: • Metals (dissolved); • Cyanide in monitoring wells around TSF (total, free and weak acid dissociable (WAD) for first year, then total and WAD thereafter); • Major anions and cations; and • In-situ field parameters (temperature, reduction-oxidation potential, pH, dissolved oxygen).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-9.26	Monitoring	Groundwater Quality Monitoring: Several existing wells in the proposed groundwater quality monitoring program have been sampled as part of baseline studies with the earliest sampling dating from June 2013. These wells will continue to be sampled as appropriate to allow for comparison in the future.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-9.27	Monitoring	Groundwater Quality Monitoring: The groundwater quality program sampling frequency will be quarterly when possible excluding freezing conditions, for the pre-construction, site preparation and construction, and	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-9: Groundwater Quality- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		operation phases. The pre-construction phase will provide for well installation a year before site preparation and construction so as to provide a year of pre-development data.		
MMC-9.28	Monitoring	Groundwater Quality Monitoring: Treasury Metals will periodically monitor the water quality of private wells off-site (e.g., houses along East Thunder Lake Rd.) to verify that the EA predictions were accurate regarding the water quality of these wells. This monitoring will be dependent on the private well owners' consent of water quality sampling and a reasonable level of access.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-9.29	Monitoring	Groundwater quality monitoring would be continued in whole or in part, at least until both the TSF and WRSA are capped and/or consistent with the Closure Plan prepared pursuant to the Mining Act. Termination of the program would be expected following a satisfactory review of the monitoring data collected during mine closure.	Post-closure	Goliath Gold Project Follow Up Program Addendum
MMC-9.30	Mitigation	As part of the formal closure process (O.Reg. 240/00), Treasury Metals will consider the use of treated supernatant water from the TSF to rapidly flood the underground workings to mitigate additional ARD effects from exposed walls of the underground mine if justified.	Active Life of the Project	Clarification Memorandum
MMC-9.31	Mitigation	The seepage collection ditches will be constructed according to good engineering practice. The contact water ditches will be lined because the contact runoff water may contain materials that may need to be collected and treated prior to its release to the environment. These ditches will be lined to minimize seepage from the ditches; typical ditch lining could include a geosynthetic liner (HDPE or similar material) and/or slush grout depending on the conditions along the ditch alignment, suitably protected from erosion (such as by stone riprap or geotextile).	Active Life of the Project	Clarification Memorandum
MMC-9.32	Mitigation	In addition to the typical ditch configurations, Treasury Metals have identified a series of additional ditch configurations (see TMI_910 GW(2) 04_Attachment_1), which represent a “toolbox of options” that will be used to select the configuration of ditches constructed around the perimeter of the site, based on the actual conditions encountered when constructing the perimeter ditches. The final design for the construction of the perimeter ditches will be done to address specific conditions that are encountered.	Active Life of the Project	Clarification Memorandum
MMC-9.33	Monitoring	Monitoring of the seepage collection system will be conducted and in the event that monitoring indicates that more seepage is escaping the site than expected, Treasury Metals would consider implementing alternative seepage collection configurations to ensure the receiving environment is protected.	Active Life of the Project	Clarification Memorandum

Table MMC-10: Groundwater Quantity- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-10.1	Monitoring	A comprehensive groundwater quantity monitoring program will be developed as part of the permitting and approvals process under the MECP to obtain a permit to take water (PTTW) for open pit dewatering. The PTTW will include details on monitoring groundwater levels in the drawdown zone.	Active Life of the Project	Goliath Gold Project Follow Up Addendum
MMC-10.2	Monitoring	Treasury Metals will conduct groundwater level monitoring in the wells installed for baseline measurements to confirm the predicted location of the drawdown zone from dewatering activities.	Active Life of the Project	Goliath Gold Project Follow Up Addendum
MMC-10.3	Monitoring	Section FUP1.10.3 describes the groundwater monitoring well network that will be used.	Active Life of the Project	Goliath Gold Project Follow Up Addendum
MMC-10.4	Monitoring	The groundwater quantity follow-up program will begin prior to the start of dewatering activities, and will cease once the groundwater levels return to near pre-development levels in the post-closure phase.	Active Life of the Project	Goliath Gold Project Follow Up Addendum
MMC-10.5	Adaptive Mitigation	In the event that unexpected adverse groundwater level drawdown is recorded from the groundwater monitoring network, this may trigger investigations, comprising: • Recalibration of the groundwater model and update of predictions incorporating any changes to the mine plan. With the respect to groundwater quality this may include an assessment of post-closure conditions when the open pit no longer acts to capture groundwater; • Installation of new monitoring wells and/or increase of frequency of monitoring (e.g. installation; and • Other investigations.	Active Life of the Project	6.11.5
MMC-10.1	Adaptive Mitigation	If the investigation determines a mine-related cause, mitigation measures to be completed, may include the following: • Suitable replacement of private water supply until groundwater level recovery has occurred on completion of mining depending on location and requirements (e.g., deepening of existing water wells, drilling of new water wells, installation of cistern and supply of potable water) [Mit_063]	Active Life of the Project	6.11.5

Table MMC-11: Wildlife and Wildlife Habitat- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-11.1	Commitment	A monitoring program intended to contribute to the baseline data collection will be initiated in spring of 2019, as requested	Site preparation and construction phase	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.2	Commitment	Barn Swallow habitat loss will be offset by the construction of new Barn Swallow habitat	Site preparation and construction phase	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.3	Commitment	Treasury Metals will rehabilitate the shore of the west pit basin to marsh habitat by placing organic material from the overburden stockpile and planting riparian and marsh vegetation to accelerate marsh formation	Closure phase	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.4	Commitment	A detailed rehabilitation plan will be developed in consultation with government agencies and Indigenous communities as partial fulfillment of the formal closure plan	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.5	Commitment	If the loss of wetlands as a result of the Project is greater than 3% of the wetlands within the LSA, Treasury Metals will construct new wetlands within the Treasury Metals property as offset	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.6	Commitment	Treasury Metals will strive to maintain an average target total cyanide concentration within the TSF of 1 mg/L over the long-term basis. Contingency measures, such as hydrogen peroxide treatment to the TSF supernatant water and incorporation of hydrogen peroxide into the effluent treatment process will be considered as part of the Environmental Compliance Approval (ECA) process	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.7	Commitment	In the event that cyanide in the TSF is measured to be higher than 0.16 mg/L (protective of SAR) and Barn swallow / migratory bird monitoring program indicates that the Barn Swallow are frequently using the TSF, then Treasury Metals will implement further contingency measures which could include bird deterrent flags or other effective measures. The success of these additional measures will be monitored.	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.8	Commitment	Treasury Metals will coordinate with the Agency, ECCC, and MNRF to develop a wetland monitoring program and mitigation measures that would accurately assess potential effects to wetlands within the LSA and RSA (including Lola Lake Reserve)	Prior to site preparation and construction phase	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.9	Commitment	Speed limits on Operations roads are expected to be 30 km/hr. Speed limits on established non-operation roads, such as the existing Tree Nursery Road, will be maintained at current levels, or reduced to 30 km/hr to mitigate the risk of collisions between equipment, passenger vehicles and wildlife (including Snapping Turtles if present)	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.10	Commitment	A Snapping Turtle education and monitoring plan will be prepared in consultation with MNRF and Indigenous stakeholders prior to being distributed to all Project personnel during the site preparation and construction, Operations and closure phases of the Project.	Prior to site preparation and construction phase	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.11	Commitment	Vegetation stripping/removal will be limited to only those areas required for Project activities, thereby limiting exposed soil which may open areas for infiltration by invasive species	Site preparation and construction phase	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.12	Commitment	Only local seeds will be used for any re-vegetation efforts (e.g. MTO seed mix)	Closure phase	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.13	Commitment	Only native species will be planting during all reclamation activates	Closure phase	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.14	Commitment	Herbicides will only be used when necessary to reduce the spread of invasive species (as per vegetation management plan developed in conjunction with local indigenous groups and the MNR)	Active Life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat

Table MMC-11: Wildlife and Wildlife Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-11.15	Commitment	Treasury Metals is committed to ensuring the health of all wildlife, including migratory birds and species at risk has been appropriately assessed in the revised EIS (April 2018)	Active Life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.16	Commitment	Dangerous wildlife awareness will be part of the site's safety program. Safety training will be provided to workers to raise awareness and to assist in protecting them from injury. Food waste will be managed in a manner that limits contact/attraction of potentially dangerous wildlife [Cmt_020].	Active Life of the Project	
MMC-11.17	Commitment	Road-killed animals or any other carcasses found on-site will be removed in a timely and legal manner to limit the attraction of wildlife [Cmt_021]	Active Life of the Project	
MMC-11.18	Commitment	Ditching and drainage will be designed to collect and manage runoff from site, and will be established around stockpiles. All collection ponds will be integrated with the site water management plan [Cmt_013].	Post-closure	
MMC-11.19	Mitigation	Project design incorporates a compact footprint. [Mit_050].	Prior to Site Preparation and Construction	6.12.5
MMC-11.20	Mitigation	Minimized the amount of habitat clearing required for the Project by siting Project infrastructure, to the extent practicable, in previously disturbed areas and optimizing the use of existing roadways. [Mit_065].	Active Life of the Project	6.12.5
MMC-11.21	Mitigation	Provide vegetated buffers of 120 m along rivers creeks and wetlands wherever feasible [Mit_066].Conducting timber clearing outside of the breeding bird window (May 1 to August 15) to avoid potential mortality to birds. This will also protect roosting bats. [Mit_067].	Active Life of the Project	6.12.5
MMC-11.22	Mitigation	The WRSA will be capped with a low permeability cover, then a layer of overburden, then vegetated during closure. [Mit_018].	Active Life of the Project	6.12.5
MMC-11.23	Mitigation	Restoration of disturbed habitats at closure or encouraging development of habitats capable of supporting a diversity of wildlife species. [Mit_068].	Active Life of the Project	6.12.5
MMC-11.24	Mitigation	Enforcement of speed limits within the Project area to reduce the potential for wildlife/vehicle collisions. [Mit_069].	Active Life of the Project	6.12.5
MMC-11.25	Mitigation	Protection of suitable bird breeding habitat, where possible. [Mit_070].	Active Life of the Project	6.12.5
MMC-11.26	Mitigation	Wildlife awareness training for all staff including SAR identification / legislation and education regarding seasonal changes in animal behaviour and their presence. [Mit_071].	Active Life of the Project	6.12.5
MMC-11.27	Mitigation	Disposing of food waste generated on site in an appropriate manner to limit wildlife attraction to the area. [Mit_072].	Active Life of the Project	6.12.5
MMC-11.28	Mitigation	Restricting the clearing of potential terrestrial reptile and amphibian breeding habitats to periods outside the breeding season as directed by MNRF. [Mit_073].	Active Life of the Project	6.12.5
MMC-11.29	Mitigation	Implementation of noise abatement strategies to limit the negative effects of sound on wildlife. [Mit_025, Mit_028, Mit_029, Mit_031].	Active Life of the Project	6.12.5
MMC-11.30	Mitigation	Develop a wetland clearing strategy with the local MNRF reduce the effects to overwintering frogs (e.g., draining wetlands to discourage hibernation). [Mit_074].	Active Life of the Project	6.12.5

Table MMC-11: Wildlife and Wildlife Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-11.31	Mitigation	Where feasible, direct anthropogenic lighting to reduce excess production of light into the surrounding environment. [Mit_034, Mit_035, Mit_036, Mit_037, Mit_038, Mit_039, Mit_040, Mit_041, Mit_042].	Active Life of the Project	6.12.5
MMC-11.32	Mitigation	Construct a perimeter ditch around the Operations area to prevent the release of runoff from the mine site to adjacent wetlands and watercourses. [Mit_008].	Active Life of the Project	6.12.5
MMC-11.33	Mitigation	Implement sediment and erosion control during the site preparation and construction phase. [Mit_054].	Active Life of the Project	6.12.5
MMC-11.34	Mitigation	In the event of a spill, on-site or off-site, Treasury Metals would follow the requirements for spill reporting under Part X of the Environmental Protection Act as well as O.Reg. 675/98.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-11.35	Mitigation	In the event of a reportable spill, as defined under O.Reg. 675/98, the Ministry of the Environment, Conservation and Parks would oversee the response to the spill to ensure that the spilled material is clean-up and remediated in a timely manner. Records of the spill event would be kept and reported as part of the annual reporting for the site.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-11.36	Mitigation	In the event of the tailings pipeline failure, an emergency shutdown of the process plant would be initiated to limit the quantity of tailings from the ruptured pipeline. The process plant would remain shutdown until the section of ruptured pipeline had been repaired or replaced as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-11.37	Mitigation	In the event of the effluent pipeline failure, an emergency shutdown of the water treatment plant would occur to limit the quantity of effluent released from the ruptured pipeline. The water treatment system would remain shutdown until the section of ruptured pipeline had been repaired or replaced, as necessary.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-11.38	Mitigation	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH, ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-11.39	Mitigation	Ensure that invasive seed sources are not brought onto Project work site from non-Proejct work sites by washing all machinery and equipment off-site before entering the Project area	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.40	Mitigation	Locate vehicle wash areas a minimum of 30 m from the High-water Mark from all surface water features	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.41	Mitigation	Keep machinery on designated routes to reduce damage to surrounding vegetation	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.42	Mitigation	Utilize existing roads, trails or cut lines wherever possible	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.43	Mitigation	Locate lay-down areas a minimum of 15 m from the High-Water Mark from all surface water features	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.44	Mitigation	Prevent all debris from entering watercourses through a comprehensive erosion and sediment control plan	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat

Table MMC-11: Wildlife and Wildlife Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-11.45	Adaptive Mitigation	If habitat destruction / damage cannot be avoided, provide alternate nesting habitat as a provision of compensatory habitat for species protected under the ESA (e.g., Barn Swallow). [Mit_075].	Active Life of the Project	6.12.5
MMC-11.46	Adaptive Mitigation	Providing acceptable buffers around any raptor nests identified throughout all Project phases. [Mit_076].	Active Life of the Project	6.12.5
MMC-11.47	Monitoring	In the unlikely event of a TSF failure, fish tissue samples would be collected from Wabigoon Lake in the vicinity of Christie's Island, Thunder Creek, and Bonny Bay. To the extent possible, tissue will be collected from various trophic levels of fish but would ensure upper trophic levels were included in the samples. The tissue samples would be analyzed by an accredited laboratory for a full suite of metals via ICP-MS using the US EPA method 200.3. This suite would include all of those parameters that are predicted to exceed the PWQO in the unlikely event of a TSF failure, with the exception of cyanide. Analysis for cyanide in fish tissue using a colourimetric method will also be completed by an accredited laboratory. The fish tissue would also include lipids in tissue and moisture in tissue analyses.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-11.48	Monitoring	A monitoring program has been proposed by Treasury Metals that involves site personnel reporting to the Environmental Manager if a Snapping Turtle is observed on site. A qualified person will then trap and relocated the Snapping Turtle from the Project area, if required.	Active life of the Project	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.49	Monitoring	An invasive species survey plan for monitoring the presence of invasive species within the Project Study Area will be included as part of the environmental management plan. Surveys of existing invasive species populations will be conducted prior to construction, followed by a monitoring plan for operations and closure to ensure invasive species populations are not increasing in numbers or areas. The frequency of the invasive species surveys will be determined prior to construction.	Site Preparation and Construction, Operations, Closure	Round 2 Information Request Wildlife and Wildlife Habitat
MMC-11.50	Monitoring	Monitor wildlife species composition and abundance • Using the same protocols as used in baseline data collection so changes in species relative abundance can be detected. • To be completed every five years. • To be completed for the LSA (specific to the species for the study).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-11.51	Monitoring	Utilization of offset habitat for SAR species, if required.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-11.52	Monitoring	In the case of Barn Swallow replacement nesting structures are required as partial fulfillment of an Overall Benefit Permit: • Compensation nesting structures (e.g., nesting kiosks) will follow standard designs approved by the MNRF • Nesting structures will be established adjacent to the existing nesting habitat (i.e., human dwelling) prior to decommissioning activities. • Decommissioning activities will take place outside of the migratory bird breeding window. • Nesting structures will be routinely (annually, at a minimum) monitored for signs of use (e.g., active nests, scat or nest scars) • To be completed 1 year following the offset habitat construction and bi-annually or as required thereafter.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-11: Wildlife and Wildlife Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		• Annual reports will be submitted to the MNRF presenting the dates of monitoring activities and findings. • If Barn Swallows do not appear to be using the nesting structures within three (3) years of their construction, the MNRF will be consulted regarding nesting habitat enhancement strategies.		
MMC-11.53	Monitoring	Utilization of Operations area habitat following closure: • Using the same protocols as used in the baseline data collection to determine if species are utilizing the rehabilitated Operations area. • To be completed 5 and 10 years following closure.	Post-Closure	Goliath Gold Project Follow Up Program Addendum
MMC-11.54	Monitoring	Keep log of large wildlife collisions (e.g., moose, deer, etc.) to determine effectiveness of speed limits and to identify areas of high wildlife collision potential in order to apply additional mitigation, and will include the following: • Date, Time, Location, Species	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-11.55	Monitoring	The monitoring of wildlife for quality for consumption as a country food item is also considered as part of the Follow-Up Program for Human Health as per Health Canada's 2018 guidance document entitled *"Guidance for Evaluating Human Health Impacts in Environmental Assessment: Country Foods"*.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-11.56	Commitment	Treasury Metals will consult with the local trapping council, Indigenous communities and the MNRF in the preparation and implementation of a Wildlife Management Plan the removal of wildlife that pose a threat to the safety of Project operations or workers (e.g., beaver) within the Blackwater Creek Watershed or Project Study Area.	Active Life of the Project	Clarification Memorandum

Table MMC-12: Migratory Birds- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-12.1	Mitigation	Project design incorporates a compact footprint [Mit_050].	Prior to Site Preparation and Construction	6.13.5
MMC-12.2	Mitigation	Minimized the amount of habitat clearing required for the Project by siting Project infrastructure, to the extent practicable, in previously disturbed areas and optimizing the use of existing roadways. [Mit_065].	Active Life of the Project	6.13.5
MMC-12.3	Mitigation	Provide vegetated buffers of 120 m along rivers creeks and wetlands wherever feasible [Mit_066].	Active Life of the Project	6.13.5
MMC-12.4	Mitigation	Conducting timber clearing outside of the breeding bird window (May 1 to August 15) to avoid potential mortality to birds. This will also protect roosting bats. [Mit_067].	Active Life of the Project	6.13.5
MMC-12.5	Mitigation	Restoration of disturbed habitats at closure or encouraging development of habitats capable of supporting a diversity of wildlife species. [Mit_068].	Active Life of the Project	6.13.5
MMC-12.6	Mitigation	Enforcement of speed limits within the Project area to reduce the potential for wildlife/vehicle collisions. [Mit_069].	Active Life of the Project	6.13.5
MMC-12.7	Mitigation	Protection of suitable bird breeding habitat, where possible. [Mit_070].	Active Life of the Project	6.13.5
MMC-12.8	Mitigation	Implementation of noise abatement strategies to limit the negative effects of sound on migratory birds. [Mit_025, Mit_028, Mit_029, Mit_031].	Active Life of the Project	6.13.5
MMC-12.9	Mitigation	Where feasible, direct anthropogenic lighting to reduce excess production of light into the surrounding environment. [Mit_034, Mit_035, Mit_036, Mit_037, Mit_038, Mit_039, Mit_040, Mit_041, Mit_042].	Active Life of the Project	6.13.5
MMC-12.10	Mitigation	Construct a perimeter ditch around the Operations area to prevent the release of runoff from the mine site to adjacent wetlands and watercourses. [Mit_008].	Active Life of the Project	6.13.5
MMC-12.11	Mitigation	Implement sediment and erosion control during the site preparation and construction phase. [Mit_054].	Active Life of the Project	
MMC-12.12	Mitigation	In the event of a spill, on-site or off-site, Treasury Metals would follow the requirements for spill reporting under Part X of the Environmental Protection Act as well as O.Reg. 675/98.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-12.13	Mitigation	In the event of a reportable spill, as defined under O.Reg. 675/98, the Ministry of the Environment, Conservation and Parks would oversee the response to the spill to ensure that the spilled material is clean-up and remediated in a timely manner. Records of the spill event would be kept and reported as part of the annual reporting for the site.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-12.14	Mitigation	In the event of the tailings pipeline failure, an emergency shutdown of the process plant would be initiated to limit the quantity of tailings from the ruptured pipeline. The process plant would remain shutdown until the section of ruptured pipeline had been repaired or replaced as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-12.15	Mitigation	In the event of the effluent pipeline failure, an emergency shutdown of the water treatment plant would occur to limit the quantity of effluent released from the ruptured pipeline. The water treatment system would remain shutdown until the section of ruptured pipeline had been repaired or replaced, as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-12.16	Mitigation	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH,	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions

Table MMC-12: Migratory Birds- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.		
MMC-12.17	Adaptive Mitigation	Providing acceptable buffers around any raptor nests identified throughout all Project phases. [Mit_076].	Active Life of the Project	6.13.5
MMC-12.18	Monitoring	In the unlikely event of a TSF failure, fish tissue samples would be collected from Wabigoon Lake in the vicinity of Christie's Island, Thunder Creek, and Bonny Bay. To the extent possible, tissue will be collected from various trophic levels of fish but would ensure upper trophic levels were included in the samples. The tissue samples would be analyzed by an accredited laboratory for a full suite of metals via ICP-MS using the US EPA method 200.3. This suite would include all of those parameters that are predicted to exceed the PWQO in the unlikely event of a TSF failure, with the exception of cyanide. Analysis for cyanide in fish tissue using a colourimetric method will also be completed by an accredited laboratory. The fish tissue would also include lipids in tissue and moisture in tissue analyses.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-12.19	Monitoring	Monitor wildlife species composition and abundance • Using the same protocols as used in baseline data collection so changes in species relative abundance can be detected. • To be completed every five years. To be completed for the LSA (specific to the species for the study).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-12.20	Monitoring	Utilization of offset habitat for SAR species, if required.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-12.21	Monitoring	In the case of Barn Swallow replacement nesting structures are required as partial fulfillment of an Overall Benefit Permit: • Compensation nesting structures (e.g., nesting kiosks) will follow standard designs approved by the MNRF • Nesting structures will be established adjacent to the existing nesting habitat (i.e., human dwelling) prior to decommissioning activities. • Decommissioning activities will take place outside of the migratory bird breeding window. • Nesting structures will be routinely (annually, at a minimum) monitored for signs of use (e.g., active nests, scat or nest scars) • To be completed 1 year following the offset habitat construction and bi-annually or as required thereafter. • Annual reports will be submitted to the MNRF presenting the dates of monitoring activities and findings. If Barn Swallows do not appear to be using the nesting structures within three (3) years of their construction, the MNRF will be consulted regarding nesting habitat enhancement strategies.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-12.22	Monitoring	Utilization of Operations area habitat following closure: • Using the same protocols as used in the baseline data collection to determine if species are utilizing the rehabilitated Operations area.	Post-closure	Goliath Gold Project Follow Up Program Addendum

Table MMC-12: Migratory Birds- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		• To be completed 5 and 10 years following closure.		
MMC-12.23	Monitoring	Keep log of large wildlife collisions (including migratory birds) to determine effectiveness of speed limits and to identify areas of high wildlife collision potential in order to apply additional mitigation, and will include the following: Date, Time, Location, Species	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-13: Fish and Fish Habitat- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-13.1	Commitment	The Blackwater Creek Tributary 2 diversion channel will be designed and constructed to provide fish habitat in order to meet the requirements of fish compensation under Schedule 2 of the MDMER	Site preparation and construction phase	Round 2 Information Request Fish and Fish Habitat
MMC-13.2	Commitment	The low flow channel and bank full channel of Blackwater Creek Tributary 2 diversion channel will provide comparable flow conveyance and water depth for fish as the upstream reach of Blackwater Creek Tributary 2	Site preparation and construction phase	Round 2 Information Request Fish and Fish Habitat
MMC-13.3	Commitment	The perimeter runoff and seepage collection ditches will be constructed to accommodate an Environmental Design Storm flood event (minimum of 1:20 year event) to ensure that water does not overflow the ditching and migrate off-site.	Site preparation and construction phase	Round 2 Information Request Fish and Fish Habitat
MMC-13.4	Commitment	A riparian zone of native species will be planted to help establish and naturalize the margins of the Blackwater Creek Tributary 2 diversion channel.	Site preparation and construction phase	Round 2 Information Request Fish and Fish Habitat
MMC-13.5	Commitment	Ditching and drainage will be designed to collect and manage runoff from site, and will be established around stockpiles. All collection ponds will be integrated with the site water management plan [Cmt_013].	Site Preparation and Construction Operations	6.23 and Section 10
MMC-13.6	Commitment	During Operations, effluent discharged from the Project to Blackwater Creek will meet the Provincial Water Quality Objectives (PWQO) for the parameters listed below, or background concentrations if background levels are above the PWQO. Where there is no PWQO for a parameter, the commitment will be to meet the Canadian Water Quality Guidelines (CWQG). For total mercury, the commitment will be that effluent discharged to Blackwater Creek will meet background concentrations for that watercourse. Background concentrations for Blackwater Creek are defined as the 75th percentile in accordance MOECC receiving water assessment policy. Detailed parameters will be determined through engagement with appropriate Provincial and Federal regulatory bodies [Cmt_034]	Operations	6.23 and Section 10
MMC-13.7	Commitment	All final effluent discharge points will have control structures to immediately cease discharge if and when necessary [Cmt_035]	Operations	6.23 and Section 10
MMC-13.8	Commitment	Treasury Metals is commitment to completing a fish compensation plan for the Goliath Gold Project in consultation with regulatory agencies and Indigenous communities	Prior to Site Preparation and Construction	Round 2 Information Requests Aboriginal Consultation
MMC-13.9	Mitigation	Prior to overburden removal, any beaver dams within the Project footprint will be removed and the impoundments will be allowed to draw down. Beaver dam removal will be conducted in accordance with the Wildlife Management Plan as per MMC-11.56. Removal of beaver dams will reduce the number of fish that will remain in isolated sections of Blackwater Creek Tributary 1 and Blackwater Creek Tributary 2.	Prior to Site Preparation and Construction	6.14.5
MMC-13.10	Mitigation	Activities and the construction of Project components that will impact or overprint watercourses (i.e., the perimeter ditch, the effluent diffuser, water intakes) will occur during the fisheries timing window when in-stream work is permitted. [Mit_078].	Active Life of the Project	6.14.5
MMC-13.11	Mitigation	To the extent practicable, fish in the sections of Blackwater Creek Tributary 1 that will be isolated by the construction of the perimeter ditch and overprinted by the removal of overburden from the open pit will be captured and relocated to the same tributary downstream from the Operations area, or to the main branch of Blackwater Creek. [Mit_079].	Active Life of the Project	6.14.5
MMC-13.12	Mitigation	To the extent practicable, fish in the sections of Blackwater Creek Tributary 2 that will be isolated by the construction of the perimeter ditch and overprinted by the construction of the TSF will be captured and	Active Life of the Project	6.14.5

Table MMC-13: Fish and Fish Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		relocated to the same tributary downstream from the Operations area, or to the main branch of Blackwater Creek. [Mit_080].		
MMC-13.13	Mitigation	Optimize the layout of the Project to minimize the footprint, and to the extent possible, minimizing the catchment areas diverted from Little Creek and Hoffstrom's Bay Tributary. [Mit_050].	Active Life of the Project	6.14.5
MMC-13.14	Mitigation	A perimeter ditch around the Operations area will prevent the release of runoff. [Mit_008].	Active Life of the Project	6.14.5
MMC-13.15	Mitigation	The refined water balance for the Project looks to optimize the use of water collected within the Operations area for use in the processing of ore. This limits the effects on surface water quantities by minimizing water taking and providing flexibility regarding the volumes discharged from the Project [Mit_057].	Active Life of the Project	6.14.5
MMC-13.16	Mitigation	The fresh water needs for the Project will be met by withdrawals from the irrigation ponds on Thunder Lake Tributary 2 and Thunder Lake Tributary 3. The withdrawals will not exceed 5% of the flows in either of the two creeks. Pump intakes will be fitted with fish screens to prevent entrainment [Mit_059, Mit_081].	Active Life of the Project	6.14.5
MMC-13.17	Mitigation	During Operations, excess water not required in the process will be treated to concentrations that meet Provincial Water Quality Objectives (PWQO) or Canadian Water Quality Guidelines (CWQG) for the protection of aquatic life, or background if background levels exceed the PWQO, prior to discharging to Blackwater Creek. In the case of mercury, effluent will be treated to meet the background concentrations in Blackwater Creek. [Mit_053].	Operations	6.14.5
MMC-13.18	Mitigation	Treated effluent will be discharged to Blackwater Creek through an engineered structure designed to minimize erosion risks [Mit_058].	Active Life of the Project	6.14.5
MMC-13.19	Mitigation	The pit lake will be monitored as it is filling to determine whether batch treatment will be required to ensure the water meets PWQO, or background concentrations if background levels are greater than the PWQ, prior to the discharge from the pit lake to a tributary of Blackwater Creek. [Mit_024].	closure	6.14.5
MMC-13.20	Mitigation	Once the pit lake is fully flooded, it is expected that the monitoring of the water quality in the pit lake will continue for a period of time to determine whether additional batch treatment may be required to ensure the water released from the pit lake meets effluent release limits. [Mit_124].	Closure and post-closure	6.14.5
MMC-13.21	Mitigation	Once the pit has filled during the post-closure phase, excess water will be allowed to passively discharge through a spillway into the former channel of Blackwater Creek Tributary 1 [Mit_060].	Post-closure	6.14.5
MMC-13.22	Mitigation	As the Project advances, detailed engineering will be completed to ensure that all downstream culverts on Blackwater Creek can support any predicted increases in flows. This would include ensuring that the downstream culverts will continue to provide adequate fish passage [Mit_082].	Active Life of the Project	6.14.5
MMC-13.23	Mitigation	In addition, the Project will likely require a *Fisheries Act* authorization and will likely require Treasury Metals to mitigate the losses of fish habitat that it causes as a condition of that authorization. Typically, the offsetting involves the creation of new habitat or the enhancement of existing habitat that is commensurate with the habitat losses. The *Fisheries Act* authorization, which is issued by DFO, details the offsetting measures to be completed and, typically also specifies monitoring to be conducted. DFO uses a letter of credit to provide a financial assurance mechanism in the event that an offsetting plan is not completed [Mit_083].	Active Life of the Project	6.14.5

Table MMC-13: Fish and Fish Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-13.24	Mitigation	In the event of a spill, on-site or off-site, Treasury Metals would follow the requirements for spill reporting under Part X of the Environmental Protection Act as well as O.Reg. 675/98.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-13.25	Mitigation	In the event of a reportable spill, as defined under O.Reg. 675/98, the Ministry of the Environment, Conservation and Parks would oversee the response to the spill to ensure that the spilled material is clean-up and remediated in a timely manner. Records of the spill event would be kept and reported as part of the annual reporting for the site.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-13.26	Mitigation	In the event of the tailings pipeline failure, an emergency shutdown of the process plant would be initiated to limit the quantity of tailings from the ruptured pipeline. The process plant would remain shutdown until the section of ruptured pipeline had been repaired or replaced as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-13.27	Mitigation	In the event of the effluent pipeline failure, an emergency shutdown of the water treatment plant would occur to limit the quantity of effluent released from the ruptured pipeline. The water treatment system would remain shutdown until the section of ruptured pipeline had been repaired or replaced, as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-13.28	Mitigation	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH, ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions
MMC-13.29	Mitigation	Unloading and storage areas for cyanide will be located within the Process Plant and will be located on concrete surfaces to prevent seepage to the subsurface.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-13.30	Mitigation	Secondary containment will be included in the design for any cyanide storage as well as the carbon-in-leach ore processing area. The carbon-in-leach processing area is within the Process Plant and will be located on concrete surfaces to prevent seepage.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-13.31	Mitigation	The secondary containment external to the CIL tanks, will consist of a combination of concrete pads and a containment bund, and will provide storage (spill) capacity equivalent to 110% of the largest tank in the system, together with containment provision for any piping that drains back to the system.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-13.32	Mitigation	The cyanide storage and mixing tanks, the carbon-in-leach ore processing and related pipelines will be constructed of, or coated with materials compatible with cyanide and high pH conditions. Tanks and pipelines will be clearly identified as containing cyanide and the direction of flow will be indicated on pipelines.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-13.33	Mitigation	Systems and procedures will be in place to address potential recovery of released solution, remediation of any contaminated soil and possible failures of tanks as necessary to protect surface and ground water. A method to prevent overfilling of storage tanks other than direct observation and manual gauging rod will be used such as an automatic level indicator, high-level alarm or integrated tank and tanker valve-shutdown device.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-13.34	Mitigation	A written set of procedures designed to prevent and control exposures and releases during cyanide unloading, storage and mixing and the carbon-in-leach ore processing activities. These procedures may be	Operations	Round 2 Information Requests Alternatives Assessment

Table MMC-13: Fish and Fish Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		in the form of an operating manual, standard operating procedures, checklists, signs, training documents or other written formats.		
MMC-13.35	Mitigation	Employees will also undergo specialized training in the handling of cyanide.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-13.36	Mitigation	Contingency procedures for responding to releases and worker exposure to cyanide that may occur will be developed and will address the issues of worker safety, environmental exposure and emergency response and will be incorporated into the overall Emergency Response Plan.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-13.37	Mitigation	Treasury Metals will strive to maintain an average target total cyanide concentration within the TSF of 1 mg/L over the long-term basis. In addition, contingency measures, such as hydrogen peroxide treatment to the TSF supernatant water, and incorporation of hydrogen peroxide into the effluent treatment process will be considered as part of the sewage Environmental Compliance Approval (ECA) process with the Ministry of the Environment, Conservation and Parks (MECP). By design, the cyanide treatment circuit will destroy cyanide to a level acceptable for direct discharge to the environment and reduce the environmental safety requirements placed on the TSF.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-13.38	Mitigation	Each Indigenous community that was engaged with during the EA process would be notified in the highly unlikely event of a TSF failure and would be a part of the remediation strategy.	Operations, closure and post-closure	Round 2 Information Requests Alternatives Assessment
MMC-13.39	Mitigation	In the highly unlikely event of a TSF failure, emergency response and contingency procedures would include: • Processing plant Operations would be immediately shut down; • The seepage reclaim system would be shut down; • The reclaim system would be re-routed to transfer water to the open pit for temporary storage if worker • safety is not compromised; • In the event of a pump failure, a temporary pump can be installed during repairs; and • In the event that water breaches the seepage collection system; the area would be cleaned up by removal and proper disposal of the potentially impacted material into the TSF.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-13.40	Mitigation	The riparian zone of the Blackwater Creek Tributary 2 diversion channel will function to mitigate against bank erosion, elevated TSS in the channel and water temperature	Site preparation and construction phase	Round 2 Information Request Fish and Fish Habitat
MMC-13.41	Monitoring	The monitoring of fish for quality for consumption as a country food item is also considered as part of the Follow-Up Program for Human Health as per Health Canada's 2018 guidance document entitled *"Guidance for Evaluating Human Health Impacts in Environmental Assessment: Country Foods"*.	Active Life of the Project	HHERA, Goliath Gold Project Follow Up Program Addendum
MMC-13.42	Monitoring	Determination of site-specific uptake factors (bioconcentration or bioaccumulation factors) for all chemicals considered in the country foods pathway including methyl-mercury	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.43	Monitoring	The effects of blasting (noise and vibration) on fish and fish habitat will be monitored using the monitoring program described in Section FUP1.4 of the Goliath Gold Follow-Up and Monitoring Program addendum for Noise and Vibration.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.44	Monitoring	Water chemistry will be monitored using the monitoring program described in Section FUP1.8 of the Goliath Gold Follow-Up and Monitoring Program addendum Surface Water Quality.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-13: Fish and Fish Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-13.45	Monitoring	To address the concerns raised in TMI_984-FFH(2)-03 regarding the water quality within the Blackwater Creek Tributary 2 diversion channel, two (2) additional sampling locations have been added to the Surface Water Quality Follow-up monitoring program in Section FUP1.8.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.46	Monitoring	The sampling location upstream of the diversion channel and the one at the downstream section of the diversion channel will help to verify the predictions of the EIS that the water quality in the diversion channel is not being affected by the Project from background conditions.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.47	Monitoring	Water temperature will be monitored with temperature loggers that include out of water detection (Onset HOBO TidbiT MX Temperature 400' or similar) from June 1 through September 30 each year, with temperature logged at half-hour intervals. Specifically, to address the concerns raised in TMI_895-FF(2)-04 regarding the potential temperature change in the Blackwater Creek Tributary 2 diversion channel prior to the establishment of riparian vegetation, these temperature loggers will be installed upstream of the diversion channel and at the downstream end of the diversion channel to verify that changes in water temperatures do not increase substantially. These temperature loggers will be used for the first 4 years that water is flowing down the Blackwater Creek Tributary 2 diversion channel, which corresponds with when the riparian vegetation is anticipated to be fully established.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.48	Monitoring	Fish habitat will be monitored using the Site Features, Channel Morphology module of the Ontario Stream Assessment Protocol (Point-Transect Sampling for Channel Structure, Substrate and Bank Conditions - S4:M1; Stanfield, L. (editor). 2013. Ontario Stream Assessment Protocol. Version 9.0. Fisheries Policy Section. Ontario Ministry of Natural Resources. Peterborough, Ontario. 505 p.).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.49	Monitoring	Other monitoring, for example the erosion monitoring, is intended to detect changes in physical habitat that might arise from the project.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.50	Monitoring	The benthic invertebrate community will be assessed following the Ontario Benthic Biomonitoring Network protocol (Jones, C., K.M. Somers, B. Craig and T.B. Reynoldson. 2007. Ontario Benthos Biomonitoring Network: Protocol Manual. Queen's Printer for Ontario, 109p.). Samples will be collected using quantitative sampling methods. Organisms will be identified to lowest practical level. Abundance and standard indices of community composition (diversity, evenness, Hilsenhoff Biotic Index) will be calculated will be calculated and compared in order to assess change or lack thereof.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.51	Monitoring	The fish community will be monitored using the single pass method of the Ontario Stream Assessment Protocol (Section 3 – Module 1). Total and relative abundance of species in the catches will be used to assess change or lack thereof.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.52	Monitoring	Monitoring of fish and fish habitat will be undertaken, at a minimum, at the following locations: • Four representative reaches (2 upstream reference reaches and two potentially impacted reaches) of Blackwater Creek; • One reach in Blackwater Creek Tributary 1, between the project footprint and Blackwater Creek; • One reach in the upper catchment of Blackwater Creek Tributary 2; • One reach in Blackwater Creek Tributary 2 between the project footprint and Blackwater Creek; • One reach in Little Creek; • One reach in Hoffstrom's Bay Tributary; and • One reach in Thunder Lake Tributary 2	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-13: Fish and Fish Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-13.53	Monitoring	Fish and fish habitat Monitoring will commence in 2018 and be conducted annually for a minimum of three years. Subsequently, the monitoring will be conducted on a three-year cycle, to coincide with Environmental Effects Monitoring (EEM) that is required under the Metal Mining Effluent Regulation (MMER) of the Fisheries Act. Monitoring will continue until it is demonstrated that there are no unpredicted harmful effects on fish and fish habitat post-closure.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.54	Monitoring	EEM requires biological (fish population health and benthic invertebrate community) monitoring, on a three-year repeating cycle, and the study design for each cycle must be reviewed and approved by Environment Canada prior to the study taking place (Environment Canada, 2012. Metal mining technical guidance for environmental effects monitoring, ix+539 p.). The established EEM triggers will be used to determine if additional actions (confirmation of effects, determination of cause, elimination of cause) are required. In addition to the field investigations, monitoring of effluent quality and laboratory testing of effluent toxicity is a legal requirement of EEM under the MDMER.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.55	Monitoring	Effluent and Water Quality Monitoring: This monitoring requirement is captured by the surface water quality monitoring program outlined in Section FUP1.8.3.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.56	Monitoring	Biological Monitoring: Effluent • Acute and sub-lethal toxicity sample taken from end of pipe location will be conducted for benthic invertebrate and fish species, as prescribed by O. Reg. 560/94 and the MMER.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.57	Monitoring	Biological Monitoring: Blackwater Creek • Acute and sub-lethal toxicity testing on benthic invertebrate and fish species from a sample taken downstream of the effluent discharge location. This monitoring should be done quarterly, and will supplement the monthly testing done on the effluent from the Project (see Table FUP1.8.3 1). • Survey of fish species composition using the same techniques used for baseline studies once every three years. • Monitoring of mercury in fish flesh would be undertaken in accordance with MDMER Environmental Effects Monitoring protocols, and appropriate guidance from Health Canada. The MDMER Environmental Effects Monitoring protocols provide for fish flesh monitoring of mercury if the concentration of total mercury in the effluent is equal to or greater than 0.10 µg/L. Based on appropriate guidance, Treasury will undertake tissue analysis using the updated Country Foods guidance from Health Canada which includes sampling of tissue for total mercury (inclusive of methyl mercury) regardless of the defined effluent concentrations. • Where tissue sampling is indicated, the species selected for tissue analyses should be, if present, sport, subsistence and/or commercial species (including molluscs and crustaceans) where relevant. The fish species used for the tissue analysis may or may not be the same as the species used in the fish survey. On a site-specific basis, the tissue used for the analysis should be chosen based on the portion of the fish constituting the edible portion locally consumed, including the muscle, liver, eggs, hepatopancreas (crustaceans), bone or any other relevant portion.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.58	Monitoring	Biological Monitoring: Thunder Lake Tributaries 2 and 3	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-13: Fish and Fish Habitat- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		• Survey of fish species composition using the same techniques used for baseline studies once every three years; and • An adaptive management strategy will be considered. If changes in surface water quality in Thunder Lake Tributaries 2 and 3 are identified as part of the surface water quality follow-up and monitoring programs (as outlined in Section FUP1.8), then biological monitoring via methods comparable to those outlined for Blackwater Creek will be completed.		
MMC-13.59	Monitoring	Biological Monitoring: Little Creek and Hoffstrom's Bay Tributary • Survey of fish species composition using the same techniques used for baseline studies once every three years; and • An adaptive management strategy will be considered. If changes in surface water quality in Little Creek and Hoffstrom's Bay Tributary are identified as part of the surface water quality follow-up and monitoring programs (as outlined in Section FUP1.8), then biological monitoring via methods comparable to those outlined for Blackwater Creek will be completed.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.60	Monitoring	Biological Monitoring: Control Site • Acute and sub-Lethal toxicity testing on benthic invertebrate and fish species, and • Survey of fish species composition using the same techniques used for baseline studies once every three years.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.61	Monitoring	Fish Habitat Offset Monitoring: Fish and fish habitat surveys of habitat offsets will be conducted to determine effectiveness. Specific monitoring methods will be developed through discussions with DFO once the offsets are determined and will be a described as one or more conditions of the Fisheries Act Authorization for the project.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-13.62	Monitoring	In the unlikely event of a TSF failure, fish tissue samples would be collected from Wabigoon Lake in the vicinity of Christie's Island, Thunder Creek, and Bonny Bay. To the extent possible, tissue will be collected from various trophic levels of fish but would ensure upper trophic levels were included in the samples. The tissue samples would be analyzed by an accredited laboratory for a full suite of metals via ICP-MS using the US EPA method 200.3. This suite would include all of those parameters that are predicted to exceed the PWQO in the unlikely event of a TSF failure, with the exception of cyanide. Analysis for cyanide in fish tissue using a colourimetric method will also be completed by an accredited laboratory. The fish tissue would also include lipids in tissue and moisture in tissue analyses.	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions
MMC-13.1	Monitoring	Monitoring of fish and fish habitat will have several components –water chemistry, water temperature, fish habitat, benthic invertebrate community and fish community, at each monitoring location.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-14: Wetlands and Vegetation- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-14.1	Mitigation	Minimized the amount of wetland and vegetated area clearing required for the Project by optimizing the pit design and siting Project infrastructure in previously disturbed areas. [Mit_050, Mit_065].	Active Life of the Project	6.15.5
MMC-14.2	Mitigation	Retention of forested areas wherever feasible. [Mit_084].	Active Life of the Project	6.15.5
MMC-14.3	Mitigation	Identification and protection of known vegetative SAR locations. [Mit_085].	Active Life of the Project	6.15.5
MMC-14.4	Mitigation	Avoid broadcast spraying of herbicides for vegetation management. [Mit_086].	Active Life of the Project	6.15.5
MMC-14.5	Mitigation	Ensure proper culvert sizing for all new water crossing installations, allowing for maintenance of existing flows and water levels. [Mit_082].	Active Life of the Project	6.15.5
MMC-14.6	Mitigation	Develop slope dependent vegetated buffers along rivers creeks and wetlands in conjunction with the MNRF. [Mit_066].	Active Life of the Project	6.15.5
MMC-14.7	Mitigation	Develop sediment and erosion plans which will reduce sedimentation into wetlands and reduce the potential for dust cover on roadside vegetation. [Mit_008, Mit_046, Mit_054].	Active Life of the Project	6.15.5
MMC-14.8	Mitigation	Restoration of all disturbed habitats upon closure to the extent feasible. [Mit_068].	Active Life of the Project	6.15.5
MMC-14.9	Mitigation	Develop a wetland clearing strategy with the local MNRF reduce the effects to overwintering frogs (i.e., draining wetlands to discourage hibernation). [Mit_074].	Active Life of the Project	6.15.5
MMC-14.10	Mitigation	Re-vegetation of all slopes after closure with a focus on riparian habitat in the open pit. [Mit_068, Mit_087].	Active Life of the Project	6.15.5
MMC-14.11	Mitigation	Reclamation and re-vegetation of the mining footprint will be carried out in accordance with O.Reg. 240/00. [Mit_088].	Active Life of the Project	6.15.5
MMC-14.12	Mitigation	Seeding or hydroseeding with native seed mix. [Mit_089].	Active Life of the Project	6.15.5
MMC-14.13	Mitigation	All runoff from the Operations area will be collected by the perimeter runoff and seepage collection system constructed at the start of the site preparation and construction phase. [Mit_008].	Active Life of the Project	6.15.5
MMC-14.14	Mitigation	During Operations, excess water not required in the process will be treated to concentrations that meet Provincial Water Quality Objectives (PWQO) or Canadian Water Quality Guidelines (CWQG) for the protection of aquatic life, or background if background levels exceed the PWQO, prior to discharging to Blackwater Creek. In the case of mercury, effluent will be treated to meet the background concentrations in Blackwater Creek. [Mit_053].	Operations	6.15.5
MMC-14.15	Mitigation	A wet cover is the preferred closure option over the TSF. A wet cover prevents acidification of the tailings, which improves the quality of seepage in the long-term and results in improved surface water quality in the receiving environment. [Mit_023].	Closure	6.15.5
MMC-14.16	Mitigation	The pit lake will be monitored as it is filling to determine whether batch treatment will be required to ensure the water meets PWQO, or background concentrations if background levels are greater than the PWQ, prior to the discharge from the pit lake to a tributary of Blackwater Creek. [Mit_024].	Closure and post-closure	6.15.5
MMC-14.17	Mitigation	Identify and protect the locations of any known SAR or provincially significant plant [Mit_085].	Active Life of the Project	6.15.5
MMC-14.18	Monitoring	Wetland extent mapping will be carried out to determine the wetland extent within the LSA, and the 2 m groundwater drawdown zone:	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-14: Wetlands and Vegetation- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		• Mapping to be conducted every 3 years beginning just prior to the start of Operations. • Mapping will be completed using OWES.		
MMC-14.19	Monitoring	Water level monitoring will be conducted to ensure no impacts to wetland water levels inside the drawdown zone is occurring: • Conducted on wetlands located both outside (reference) and within the drawdown zone. • Water level will be collected and downloaded using water level loggers and barometric pressure loggers.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-14.20	Monitoring	WLD3, WLD5, WLD10, WLD12 (upstream of the diversion channel),WLD 13a and WLD14 (downstream of the irrigation ponds) will be monitored, and floral and faunal communities remain consistent with surrounding wetlands.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-14.21	Monitoring	Songbird monitoring will occur within Lola Lake wetland as per the discussions with Environment Canada. Reference sites, WLD1, WLD9 and several sites within the Lola Lake Reserve (sites to be determined in discussion with the Agency), will also be monitored. The exact locations for monitoring will vary depending on the attribute being monitored but will likely follow previous survey locations for consistency.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-14.22	Monitoring	TMI will coordinate with ECCC and MNRF to develop a wetland monitoring program and mitigation measures that would accurately assess potential effects to wetlands within the LSA and RSA (including the Lola Lake Reserve).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-14.23	Monitoring	Areas and types of vegetation habitat removed as a result of Project development;	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-14.24	Monitoring	Monitoring of visual signs to dust accumulation on plant surfaces adjacent to roadways and active mining areas;	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-14.25	Monitoring	Monitor whether the mitigation measures outlined in Section 6.15.5 have been properly implemented; and	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-14.26	Monitoring	Wetland floral surveys will be conducted to verify that wetland species diversity is maintained: • Conducted on wetlands located within the drawdown zone. • Survey will be completed every 3 years beginning just prior to the start of Operations. • Surveys will be completed using the same procedures as done in the wetland baseline study.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-15: Land Use- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-15.1	Commitment	Progressive reclamation of mine waste rock area will be undertaken, where practical, once maximum height has been reached.	Site Preparation and Construction	Section 6.23 and Section 10
MMC-15.2	Commitment	All final effluent and point source air discharge points will be sampled and results reported to the appropriate authorities in accordance with environmental permit requirements.	Site Preparation and Construction	Section 6.23 and Section 10
MMC-15.3	Commitment	Ditching and drainage will be designed to collect and manage runoff from site, and will be established around stockpiles. All collection ponds will be integrated with the site water management plan. [Cmt_013]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.4	Commitment	During Operations, effluent discharged from the Project to Blackwater Creek will meet the Provincial Water Quality Objectives (PWQO) for the parameters listed below, or background concentrations if background levels are above the PWQO. Where there is no PWQO for a parameter, the commitment will be to meet the Canadian Water Quality Guidelines (CWQG). For total mercury, the commitment will be that effluent discharged to Blackwater Creek will meet background concentrations for that watercourse. Background concentrations for Blackwater Creek are defined as the 75th percentile in accordance MOECC receiving water assessment policy.[Cmt_034]	Operations	Section 6.23 and Section 10
MMC-15.5	Commitment	All final effluent discharge points will have control structures to immediately cease discharge if and when necessary.[Cmt_035]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.6	Commitment	Mitigation measures for changes to natural landscapes (Section 6.2.3.1) will minimize the noticeability of the Project from off-site [Mit_001, Mit_002, Mit_003, Mit_004, Mit_005, Mit_006, Cmt_037].	Active Life of the Project	Section 6.23 and Section 10
MMC-15.7	Commitment	Best management practices for dust control will be implemented. A plan will be prepared to identify all potential sources of dusts, outline mitigation methods to employ, and detail all records and inspections required by regulatory officials. Treasury will monitor air emissions through implementation of current industry standards to meet regulatory requirements (Ontario Reg. 419/05, AAQC, MOECC).[Cmt_017]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.8	Commitment	Although the results of the HHERA do not indicate that risk management or mitigation measures are required during traditional land and resource use, as part of the sign in and access policy, Treasury Metals will offer appropriate personal protective equipment to those who prefer to wear it while within the Property Boundary.	Active Life of the Project	HHERA
MMC-15.9	Commitment	Treasury will design the operation to meet noise emission regulatory requirements (NPC-103, MOECC) [Cmt_018]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.10	Commitment	Tailings Storage Facility (TSF) will be constructed to meet all regulatory requirements and industry best practices standards as described within the Provincial Lake and Rivers Improvement Act. TSF will be designed and constructed to withstand the probable maximum flood and maximum credible earthquake. A remedial action plan will be developed as part of the emergency management plan, and environmental management plan with appropriate government agencies, in the event of a dam breach. [Cmt_022]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.11	Commitment	Treasury will consult local stakeholders throughout Project life to ensure the Company is aware of general or specific concerns the public may have. A formal public complaint logging and feedback system will be implemented when plant construction commences. This system will be in place for the life of the mine. [Cmt_019]	Active Life of the Project	Section 6.23 and Section 10

Table MMC-15: Land Use- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-15.12	Commitment	Dangerous wildlife awareness will be part of the site's safety program. Safety training will be provided to workers to raise awareness and to assist in protecting them from injury. Food waste will be managed in a manner that limits contact/attraction of potentially dangerous wildlife. [Cmt_020]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.13	Commitment	Road-killed animals or any other carcasses found on-site will be removed in a timely and legal manner to limit the attraction of wildlife. [Cmt_021]	Active Life of the Project	
MMC-15.14	Commitment	Best management practices for dust control will be implemented. A plan will be prepared to identify all potential sources of dusts, outline mitigation methods to employ, and detail all records and inspections required by regulatory officials. Treasury will monitor air emissions through implementation of current industry standards to meet regulatory requirements (Ontario Reg. 419/05, AAQC, MOECC). [Cmt_017]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.15	Commitment	Treasury Metals will develop community access management plans	Active Life of the Project	Round 2 Information Request: Aboriginal Consultation
MMC-15.16	Commitment	Treasury Metals will develop a risk communications plan		HHERA
MMC-15.17	Commitment	During Operations, effluent discharged from the Project to Blackwater Creek will meet the Provincial Water Quality Objectives (PWQO) for the parameters listed below, or background concentrations if background levels are above the PWQO. Where there is no PWQO for a parameter, the commitment will be to meet the Canadian Water Quality Guidelines (CWQG). For total mercury, the commitment will be that effluent discharged to Blackwater Creek will meet background concentrations for that watercourse. Background concentrations for Blackwater Creek are defined as the 75th percentile in accordance MOECC receiving water assessment policy. Detailed parameters will be determined through engagement with appropriate Provincial and Federal regulatory bodies. [Cmt_034}	Operations	Section 6.23 and Section 10
MMC-15.18	Commitment	All final effluent discharge points will have control structures to immediately cease discharge if and when necessary.[Cmt_035]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.19	Commitment	All final effluent and point source air discharge points will be sampled and results reported to the appropriate authorities in accordance with environmental permit requirements. [Cmt_036]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.20	Commitment	Progressive reclamation of mine waste rock area will be undertaken, where practical, once maximum height has been reached. [Cmt_037]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.21	Commitment	The site will be reclaimed and the land restored to a naturalized state per the mine closure plan approved by the Ministry of Northern Development and Mines [Cmt_038]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.22	Commitment	Treasury will continue to document all comments, issues, or concerns raised by stakeholder groups. All input Treasury receives will be duly considered and acted upon according to the nature of the input received. [Cmt_001]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.23	Commitment	Treasury will continue to engage with Aboriginal communities and groups through the life of the project. [Cmt_012]	Active Life of the Project	Section 6.23 and Section 10
MMC-15.24	Commitment	Following final closure of the Project (as per the requirement of O.Reg 240/00), traditional land and resource use may safety resume in all areas of the Project.	Post-Closure	HHERA

Table MMC-15: Land Use- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-15.25	Mitigation	Project design incorporates a compact footprint. [Mit_050].	Prior to Site Preparation and Construction	6.16.5
MMC-15.26	Mitigation	Minimize crown land in the Project footprint. [Mit_090].	Prior to Site Preparation and Construction	6.16.5
MMC-15.27	Mitigation	Minimize activities on the eastern portion of the Project property. [Mit_091].	Prior to Site Preparation and Con	6.16.5
MMC-15.28	Mitigation	During the operating life of the Project, the Operations area will be fenced and no access will be permitted for security and safety reasons. Access to the former MNRF tree nursery will be controlled. Aboriginal peoples will be able to arrange for accompanied access to these areas with Treasury Metals. Appropriate signage will be placed around areas where access is limited. [Mit_092].	Active Life of the Project	6.16.5
MMC-15.29	Mitigation	Implement a Communications Management Plan to address ongoing engagement with potentially affected stakeholders and Aboriginal peoples throughout the life of the Project. The plan should include a transparent grievance process. [Mit_093].	Active Life of the Project	6.16.5
MMC-15.30	Mitigation	Mitigation measures for changes to natural landscapes (Section 6.2.3.1) will minimize the noticeability of the Project from off-site. [Mit_001, Mit_002, Mit_003, Mit_004, Mit_005, Mit_006].	Active Life of the Project	6.16.5
MMC-15.31	Mitigation	Air quality mitigation measures (Section 6.6.3) will minimize the areas where changes to air quality may affect land uses. [Mit_029, Mit_031, Mit_043, Mit_046].	Active Life of the Project	6.16.5
MMC-15.32	Mitigation	Noise and blasting mitigation measures (Section 6.4.3) will minimize the areas where noise and vibration from the Project will be noticeable. [Mit_025, Mit_026, Mit_027, Mit_028, Mit_029, Mit_032].	Active Life of the Project	6.16.5
MMC-15.33	Mitigation	Light mitigation measures (Section 6.5.3) will minimize the areas where light trespass from the Project will be noticeable. [Mit_034, Mit_035, Mit_036, Mit_037, Mit_038, Mit_039, Mit_040, Mit_041, Mit_042].	Active Life of the Project	6.16.5
MMC-15.34	Mitigation	Mitigation measures for changes to surface water quality (Section 6.8.3) will minimize the effects of the Project to surface water quality. [Mit_008, Mit_053, Mit_052, Mit_056, Mit_024, Mit_124].	Active Life of the Project	6.16.5
MMC-15.35	Mitigation	Mitigation measures for changes to wildlife and wildlife habitat (Section 6.12.3) will minimize the area where there are Project affects to wildlife and wildlife habitat. [Mit_018, Mit_050, Mit_065, Mit_066, Mit_067, Mit_068, Mit_069, Mit_070, Mit_071, Mit_072, Mit_073, Mit_074].	Active Life of the Project	6.16.5
MMC-15.36	Mitigation	Mitigation measure for changes to fish and fish habitat (Section 6.14.3) will minimize the area where there are Project affects to fish and fish habitat. [Mit_077, Mit_078, Mit_079, Mit_080, Mit_050, Mit_008, Mit_057, Mit_059, Mit_081, Mit_053, Mit_058, Mit_024, Mit_060, Mit_082].	Active Life of the Project	6.16.5
MMC-15.37	Mitigation	Mitigation measures for changes to vegetation and wetlands (Section 6.15.5) will minimize the area of vegetation and wetlands effected by the Project. [Mit_008, Mit_046, Mit_050, Mit_054, Mit_065, Mit_066, Mit_068, Mit_074, Mit_082, Mit_084, Mit_085, Mit_086, Mit_087, Mit_088, Mit_089].	Active Life of the Project	6.16.5

Table MMC-16: Social Factors- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-16.1	Commitment	Treasury will continue to document all comments, issues, or concerns raised by stakeholder groups. All input Treasury receives will be duly considered and acted upon according to the nature of the input received. [Cmt_001]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.2	Commitment	Treasury will follow CEAA protocols in distributing the EIS document for review, including posting for Notice of Public Information Events for Project updates to stakeholder groups. [Cmt_002]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.3	Commitment	Treasury will maintain a local hiring policy, including First Nation communities. The application of this policy is dependent upon the skills and workforce being available locally. [Cmt_003]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.4	Commitment	Treasury will maintain, where applicable, a local purchasing policy to purchase goods and services from local suppliers. This policy has the expectation that goods and services will be purchased locally assuming price, delivery and service is competitive with outside suppliers. [Cmt_004]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.5	Commitment	Treasury will maintain an active safety program aimed at protecting worker safety ensured by meeting applicable occupational health and safety legislation standards, as well as utilizing other best practices. Employee involvement will be a cornerstone of the safety plans, policies and programs. [Cmt_005]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.6	Commitment	All workers and visitors will receive an orientation and safety training prior to conducting work on site. This will include a health and safety overview. [Cmt_006]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.7	Commitment	All health and safety policies and procedures will be reviewed annually. [Cmt_007]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.8	Commitment	Emergency response procedures will be established. All incidents will be reported as per the applicable standards set with the health and safety policies and procedures. [Cmt_008]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.9	Commitment	All vehicles will maintain an emergency kit including communication equipment, first aid kit, and a fire extinguisher where appropriate. [Cmt_009]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.10	Commitment	All chemicals used at the site will have a Material Safety Data Sheet (MSDS) for safe use, relevant regulatory and safety requirements in place and PPE available for use at all times. [Cmt_010]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.11	Commitment	All buildings will meet fire protection requirements and codes. Fire drills will occur on a regularly scheduled basis. All new workers, contractors and visitors will receive a safety orientation which will include a fire response training [Cmt_011]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.12	Commitment	Treasury will continue to engage with Aboriginal communities and groups through the life of the project. [Cmt_012]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.13	Commitment	All chemicals on site will be stored according to government regulations and industry best practices. Spill protection systems will be designed according to industry best practices. [Cmt_014]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.14	Commitment	All chemical spills within the processing plant, or chemical storage areas will be controlled through provision of secondary containment as appropriate. Spills of potentially hazardous materials during transport, or from on-site material storage and handling facilities will be managed. Measure will be taken to prevent and clean up any hydrocarbon spills (and other spills) at source to ensure such materials do not enter the surrounding natural environment where practical. [Cmt_015]	Active Life of the Project	Section 6.23 and Section 10

Table MMC-16: Social Factors- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-16.15	Commitment	In the event of a spill, it will be reported according to Ministry of Environment and Climate Change (MOECC) protocols. [Cmt_016]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.16	Commitment	Treasury will consult local stakeholders throughout Project life to ensure the Company is aware of general or specific concerns the public may have. A formal public complaint logging and feedback system will be implemented when plant construction commences. This system will be in place for the life of the mine. [Cmt_017]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.17	Commitment	Tailings Storage Facility (TSF) will be constructed to meet all regulatory requirements and industry best practices standards as described within the Provincial Lake and Rivers Improvement Act. TSF will be designed and constructed to withstand the probable maximum flood and maximum credible earthquake. A remedial action plan will be developed as part of the emergency management plan, and environmental management plan with appropriate government agencies, in the event of a dam breach. [Cmt_022]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.18	Commitment	Groundwater monitoring wells will be installed across Project site (as described in Section 13 and Appendix M). [Cmt_023]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.19	Commitment	A blasting schedule and plan will be developed to notify the public when blasting will occur and to describe all blasting activities on site. This plan will be developed though consultation with local stakeholders and regulatory officials. [Cmt_025]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.20	Commitment	Environmental aspects and potential impacts of the project will be managed within an environmental management plan (EMP) which integrates environmental performance with overall project management. [Cmt_031]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.21	Commitment	Implementation and maintenance of the EMP will be driven by Treasury commitment to environmental compliance and regulatory needs. Workers will be educated on Treasury's commitment to environmental excellence and environmental policies. [Cmt_032]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.22	Commitment	MP will be reviewed annually using a precautionary and progressive approach considering changing circumstances which could affect the suitability of monitoring and effectiveness of the goals of the EMP. [Cmt_033]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.23	Commitment	During Operations, effluent discharged from the Project to Blackwater Creek will meet the Provincial Water Quality Objectives (PWQO) for the parameters listed below, or background concentrations if background levels are above the PWQO. Where there is no PWQO for a parameter, the commitment will be to meet the Canadian Water Quality Guidelines (CWQG). For total mercury, the commitment will be that effluent discharged to Blackwater Creek will meet background concentrations for that watercourse. Background concentrations for Blackwater Creek are defined as the 75th percentile in accordance MOECC receiving water assessment policy[Cmt_034]	Operations	Section 6.23 and Section 10
MMC-16.24	Commitment	All final effluent discharge points will have control structures to immediately cease discharge if and when necessary. [Cmt_035]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.25	Commitment	All final effluent and point source air discharge points will be sampled and results reported to the appropriate authorities in accordance with environmental permit requirements. [Cmt_036]	Active Life of the Project	Section 6.23 and Section 10

Table MMC-16: Social Factors- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-16.26	Commitment	Progressive reclamation of mine waste rock area will be undertaken, where practical, once maximum height has been reached. [Cmt_037]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.27	Commitment	The site will be reclaimed and the land restored to a naturalized state per the mine closure plan approved by the Ministry of Northern Development and Mines [Cmt_038]	Active Life of the Project	Section 6.23 and Section 10
MMC-16.28	Commitment	Treasury Metals will develop an access management plan	Active Life of the Project	Round 2 Information Requests: Aboriginal Consultation
MMC-16.29	Commitment	Treasury Metals will develop a risk communication plan	Active Life of the Project	Round 2 Information Requests: Aboriginal Consultation HHERA
MMC-16.30	Commitment	Treasury Metals will continue to engage indigenous communities and work towards developing community specific mitigation measures	Active Life of the Project	Round 2 Information Requests: Aboriginal Consultation
MMC-16.31	Mitigation	Ongoing engagement with potentially affected stakeholders and Aboriginal peoples throughout the life of the Project.	Active Life of the Project	6.17.5
MMC-16.32	Mitigation	Treasury Metals will work with potentially affected stakeholders and Aboriginal peoples to develop a socio-economic monitoring and management plan designed to address potential Project-related socio-economic effects, including optimization of benefits, identified through the environmental assessment process and/or at later stages of the Project.	Active Life of the Project	6.17.5
MMC-16.33	Mitigation	Treasury Metals will undertake an update of the socio-economic baseline (GCK Consulting 2014) to establish a pre-construction baseline of the affected communities prior to commencing Project site preparation and construction. This will serve as the basis for future monitoring and management of socio-economic effects throughout the life of the Project.	Active Life of the Project	6.17.5
MMC-16.34	Mitigation	Treasury Metals will develop and implement employment practices that give preference to local and regional labour to the extent possible.	Active Life of the Project	6.17.5
MMC-16.35	Mitigation	Treasury Metals will develop training policies and job transfer plans to support workforce development in the socio-economic study area.	Active Life of the Project	6.17.5
MMC-16.36	Mitigation	Treasury Metals will develop training programs for unemployed and under employed residents and non-workers.	Active Life of the Project	6.17.5
MMC-16.37	Mitigation	Treasury Metals will communicate appropriate information (e.g., the timing and communities in which new residents may locate) to the school district(s) to assist with their resource planning process. Treasury Metals will communicate education requirements needed for employment on the site to discourage dropouts.	Active Life of the Project	6.17.5

Table MMC-16: Social Factors- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		Treasury Metals will work with specific affected homeowners to ensure that their concerns about potential Project-related effects are addressed.		
MMC-16.38	Mitigation	Treasury will work with local and regional governments to minimize the effects of in-migration and out-migration, as appropriate, communicating with government agencies as appropriate, including but not limited to: Project plans, proposed transportation volumes and workforce requirements.	Active Life of the Project	6.17.5
MMC-16.39	Mitigation	Include contracted security services to help promote a secure and safe worksite environment.	Active Life of the Project	6.17.5
MMC-16.40	Mitigation	Treasury will work with public safety services to develop safety and work policy guidelines for mine workers, including a policy of no alcohol or drugs onsite and policies and guidelines to support a respectful work environment.	Active Life of the Project	6.17.5
MMC-16.41	Mitigation	Develop a mine closure plan that identifies strategies and actions to aid residents.	Active Life of the Project	6.17.5
MMC-16.42	Mitigation	Included in the development of a socio-economic monitoring and management plan, Treasury will work with local agencies to assist in monitoring community wellbeing and take corrective actions where appropriate.	Active Life of the Project	6.17.5
MMC-16.43	Mitigation	The need to engage local fire services from the socio-economic study area communities will be mitigated through onsite fire suppression equipment will be provided to support trained responders in extinguishing and/or ensuring exposure protection from natural fires. Site hydrants will ensure that cooling water can be applied if threatened by external fire source.	Active Life of the Project	6.17.5
MMC-16.44	Mitigation	Best management practices plan for dust control will be implemented on the site during site preparation and construction, operations and closure.	Active Life of the Project	6.17.5
MMC-16.45	Mitigation	Treasury Metals will engage the Local Services Board in Wabigoon to acquire Tree Nursery Road in its entirety from north of Normans Road.	Active Life of the Project	6.17.5
MMC-16.46	Mitigation	Treasury Metals will establish and enforce traffic safety protocols, regulatory and cautionary signage, road maintenance and emergency response plans on all Project roads to prevent collisions and accidents.	Active Life of the Project	6.17.5
MMC-16.47	Mitigation	As part of the traffic and site control policy, Treasury Metals will continue to evolve its current practices and take into consideration all comments from the public, Aboriginal peoples and stakeholders.	Active Life of the Project	6.17.5
MMC-16.48	Mitigation	Treasury Metals as part of the suitability assessment associated with CSAS 23 standards for Anderson Road and Highway 17 will discuss the options presented within Appendix E for the snow plough turnaround with MTO. Treasury Metals will move forward with the change suggested by MTO if deemed necessary, to ensure that snow removal equipment can use the turn-around in a safe efficient manner.	Active Life of the Project	6.17.5
MMC-16.49	Mitigation	Treasury Metals will work with MTO to ensure that the proper lighting structures are in place to support the projected traffic volumes associated with the Project.	Active Life of the Project	6.17.5
MMC-16.50	Mitigation	Treasury Metals will clear shrubbery, trees, soil mounds, etc. that could cause a visual obstruction between vehicles on Anderson Road and Highway 17.	Active Life of the Project	6.17.5
MMC-16.51	Mitigation	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH,	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions

Table MMC-16: Social Factors- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.		
MMC-16.52	Monitoring	In the unlikely event of a TSF failure, fish tissue samples would be collected from Wabigoon Lake in the vicinity of Christie's Island, Thunder Creek, and Bonny Bay. To the extent possible, tissue will be collected from various trophic levels of fish but would ensure upper trophic levels were included in the samples. The tissue samples would be analyzed by an accredited laboratory for a full suite of metals via ICP-MS using the US EPA method 200.3. This suite would include all of those parameters that are predicted to exceed the PWQO in the unlikely event of a TSF failure, with the exception of cyanide. Analysis for cyanide in fish tissue using a colourimetric method will also be completed by an accredited laboratory. The fish tissue would also include lipids in tissue and moisture in tissue analyses.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-16.53	Monitoring	Several of the preceding list of social aspects can be tracked through Treasury Metals human resource and health and safety records. These include: • In-migration / out-migration of employees; • Local hiring; • Training; • Use of emergency services; and • Traffic accidents related to Project activities. • The remaining aspects will require assistance from local governments, or in the case of crime general information from police records.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-16.54	Monitoring	Ongoing engagement activities with Indigenous communities will assist in monitoring social effects of the project	Active Life of the Project	Round 2 Information Requests: Aboriginal Consultation

Table MMC-17: Economic Factors- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-17.1	Commitment	Treasury will maintain a local hiring policy, including First Nation communities. The application of this policy is dependent upon the skills and workforce being available locally.	Active Life of the Project	Section 6.23 and Section 10
MMC-17.2	Commitment	Treasury will maintain, where applicable, a local purchasing policy to purchase goods and services from local suppliers. This policy has the expectation that goods and services will be purchased locally assuming price, delivery and service is competitive with outside suppliers.	Active Life of the Project	Section 6.23 and Section 10
MMC-17.3	Mitigation	To promote the participation of local residents in employment and contacting opportunities, Treasury has policies for hiring and purchasing locally. Treasury has demonstrated deep commitment to both of these policies as evidenced by the makeup of its local workforce and purchasing record.	Active Life of the Project	Section 6.23 and Section 10
MMC-17.4	Mitigation	To promote the use of local goods, services and businesses, Treasury purchases the majority of its goods and services locally and within the Province of Ontario (Appendix CC of the EIS).	Active Life of the Project	Section 6.23 and Section 10
MMC-17.5	Mitigation	To promote the participation of local residents in the economic activities of the Project, multiple skill category/level training including on the job training will be provided.	Active Life of the Project	Section 6.23 and Section 10
MMC-17.6	Mitigation	Training work experience and additional skills gained through involvement in the Project are expected to result in abilities that are transferrable to other economic sectors including forestry and manufacturing. This will be of value to Treasury and its employees for the life of mine and post-Closure.	Closure and post closure phase	Section 6.23 and Section 10
MMC-17.7	Mitigation	Many of the skills developed while working at Treasury will be transferrable to other mining Operations and industries, should people either choose to move or be compelled to move following Closure and/or Post Closure. The skill building associated with the Project will thereby allow the region's economic base to take advantage of other future employment and business opportunities well beyond the life of the Project.	Closure and post closure phase	Section 6.23 and Section 10
MMC-17.8	Mitigation	The Project will help encourage other mineral development projects in the region and enhance Dryden's economic role a support service and supply hub for other similar regional exploration and mining projects.	Post Closure	Section 6.23 and Section 10
MMC-17.9	Mitigation	In the event of the tailings pipeline failure, an emergency shutdown of the process plant would be initiated to limit the quantity of tailings from the ruptured pipeline. The process plant would remain shutdown until the section of ruptured pipeline had been repaired or replaced as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-17.10	Mitigation	In the event of the effluent pipeline failure, an emergency shutdown of the water treatment plant would occur to limit the quantity of effluent released from the ruptured pipeline. The water treatment system would remain shutdown until the section of ruptured pipeline had been repaired or replaced, as necessary.	Operations	Round 2 Information Requests Accidents and Malfunctions
MMC-17.11	Mitigation	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH, ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions
MMC-17.12	Monitoring	In the unlikely event of a TSF failure, fish tissue samples would be collected from Wabigoon Lake in the vicinity of Christie's Island, Thunder Creek, and Bonny Bay. To the extent possible, tissue will be collected from various trophic levels of fish but would ensure upper trophic levels were included in the samples. The	Operations, closure and post-closure	Round 2 Information Requests Accidents and Malfunctions

Table MMC-17: Economic Factors- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		tissue samples would be analyzed by an accredited laboratory for a full suite of metals via ICP-MS using the US EPA method 200.3. This suite would include all of those parameters that are predicted to exceed the PWQO in the unlikely event of a TSF failure, with the exception of cyanide. Analysis for cyanide in fish tissue using a colourimetric method will also be completed by an accredited laboratory. The fish tissue would also include lipids in tissue and moisture in tissue analyses.		
MMC-17.13	Monitoring	Ongoing engagement activities with Indigenous communities will assist in monitoring economic effects of the project	Active Life of the Project	Round 2 Information Requests: Aboriginal Consultation

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-18.1	Commitment	Treasury Metals is committed to the development of risk communication plans when required.	Active Life of the Project	HHERA (February 2019)
MMC-18.2	Commitment	Treasury Metals has committed to consult with Indigenous communities regarding the placement of dustfall monitoring jars to target areas of potential impact that overlap with areas where traditional land and resource occurs (this information will be shared confidentially by the community in the formal Traditional Knowledge studies completed, underway or expected in the future).	Active Life of the Project	
MMC-18.3	Mitigation	Treasury Metals recognizes that the perception of risk, safety, and well-being is a concern to members Indigenous communities and has proposed to work with each Indigenous stakeholder community to develop a risk communication plan to help mitigate the perceptions of risk, safety and well-being associated with the Goliath Gold Project	Active Life of the Project	HHERA (February 2019)
MMC-18.4	Mitigation	In the event of a spill, on-site or off-site, Treasury Metals would follow the requirements for spill reporting under Part X of the Environmental Protection Act as well as O.Reg. 675/98.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-18.5	Mitigation	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH, ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-18.6	Mitigation	Secondary containment will be included in the design for any cyanide storage as well as the carbon-in-leach ore processing area. The carbon-in-leach processing area is within the Process Plant and will be located on concrete surfaces to prevent seepage.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-18.7	Mitigation	The secondary containment external to the CIL tanks, will consist of a combination of concrete pads and a containment bund, and will provide storage (spill) capacity equivalent to 110% of the largest tank in the system, together with containment provision for any piping that drains back to the system.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-18.8	Mitigation	The cyanide storage and mixing tanks, the carbon-in-leach ore processing and related pipelines will be constructed of, or coated with materials compatible with cyanide and high pH conditions. Tanks and pipelines will be clearly identified as containing cyanide and the direction of flow will be indicated on pipelines.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-18.9	Mitigation	Systems and procedures will be in place to address potential recovery of released solution, remediation of any contaminated soil and possible failures of tanks as necessary to protect surface and ground water. A method to prevent overfilling of storage tanks other than direct observation and manual gauging rod will be used such as an automatic level indicator, high-level alarm or integrated tank and tanker valve-shutdown device.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-18.10	Mitigation	A written set of procedures designed to prevent and control exposures and releases during cyanide unloading, storage and mixing and the carbon-in-leach ore processing activities. These procedures may be in the form of an operating manual, standard operating procedures, checklists, signs, training documents or other written formats.	Operations	Round 2 Information Requests Alternatives Assessment

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-18.11	Mitigation	Employees will also undergo specialized training in the handling of cyanide.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-18.12	Mitigation	Contingency procedures for responding to releases and worker exposure to cyanide that may occur will be developed and will address the issues of worker safety, environmental exposure and emergency response and will be incorporated into the overall Emergency Response Plan.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-18.13	Mitigation	Treasury Metals will strive to maintain an average target total cyanide concentration within the TSF of 1 mg/L over the long-term basis. In addition, contingency measures, such as hydrogen peroxide treatment to the TSF supernatant water, and incorporation of hydrogen peroxide into the effluent treatment process will be considered as part of the sewage Environmental Compliance Approval (ECA) process with the Ministry of the Environment, Conservation and Parks (MECP). By design, the cyanide treatment circuit will destroy cyanide to a level acceptable for direct discharge to the environment and reduce the environmental safety requirements placed on the TSF.	Operations	Round 2 Information Requests Alternatives Assessment
MMC-18.14	Mitigation	Each Indigenous community that was engaged with during the EA process would be notified in the highly unlikely event of a TSF failure and would be a part of the remediation strategy.	Active Life of the Project	Round 2 Information Requests Alternatives Assessment
MMC-18.15	Mitigation	A Health and Safety Plan will be required for Project Workers within the Operations Area	Active Life of the Project	HHERA (February 2019)
MMC-18.16	Mitigation	Although the results of the HHERA do not indicate that risk management or mitigation measures are required during traditional land and resource use, as part of the sign in and access policy, Treasury Metals will offer appropriate personal protective equipment to those who prefer to wear it while within the Property Boundary.	Active Life of the Project	HHERA (February 2019)
MMC-18.17	Adaptive Mitigation	If the chemical concentrations in Project-specific media exceed the health-based criteria for the protection of human health or ecological receptors, then additional mitigation or risk management measures for the protection of human health and ecological receptors may be considered. These additional risk management/mitigation measures to restrict access (i.e. exposure) to Project-specific media including the TSF and the pit-lake. This might include fencing and/or bird and mammal deterrent flags or noise deterrents. The effectiveness of these risk management/mitigation measures may be monitored and site-specific receptor characteristics with respect to frequency of exposure (i.e. number of time per day an ecological receptor visits the media source) determined. Finally, as detailed by the Government of Canada in their Federal Contaminated Sites Action Plan guidance for completing an Ecological Risk Assessment, a weight of evidence approach may be considered to the assessment of potential risk to ecological receptors. The weight-of-evidence approach would dictate that population surveys and community profiles be considered in addition to the calculation of chemical exposure and associated potential risk.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.18	Adaptive Mitigation	Together, the site-specific exposure values with risk management/mitigation measures in place may be used to revise the HHERA, and if required, calculate site-specific risk -based target levels for Project-specific media. The development of site-specific target levels for project-specific media would be performed following Health Canada's 2010 guidance entitled "Part V: Guidance on Human Health Detailed Quantitative Risk Assessment For Chemicals (DQRACHEM)" and the Canadian Council of Ministers of Environment (CCME) 1996 guidance entitled "A protocol for the derivation of Environmental and Human Health Soil Quality Guidelines", using the most-up to date toxicity reference values for plants, invertebrates, mammals, birds, and human receptors considered.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-18.19	Monitoring	In the unlikely event of a TSF failure, fish tissue samples would be collected from Wabigoon Lake in the vicinity of Christie's Island, Thunder Creek, and Bonny Bay. To the extent possible, tissue will be collected from various trophic levels of fish but would ensure upper trophic levels were included in the samples. The tissue samples would be analyzed by an accredited laboratory for a full suite of metals via ICP-MS using the US EPA method 200.3. This suite would include all of those parameters that are predicted to exceed the PWQO in the unlikely event of a TSF failure, with the exception of cyanide. Analysis for cyanide in fish tissue using a colourimetric method will also be completed by an accredited laboratory. The fish tissue would also include lipids in tissue and moisture in tissue analyses.	Active Life of the Project	Round 2 Information Requests Accidents and Malfunctions
MMC-18.20	Monitoring	In the highly unlikely event of a TSF failure, Treasury Metals would complete an assessment of water and sediment quality at Christie's Island, Thunder Creek, and Bonny Bay. The same suite of metals would be sampled in water as was sampled in fish tissue; however, both total and dissolved metals would be analyzed for. The water analysis would also include cyanide, alkalinity, dissolved organic carbon, hardness, pH, ammonia, total phosphorus, total dissolved solids, suspended solids, and total organic carbon. The sediments would be analyzed for the same suite of metals as was sampled in fish tissue, and would also be analyzed for cyanide, methyl mercury, pH, total organic carbon and fraction of organic carbon.	Active Life of the Project	Round 2 Information Requests Alternatives Assessment
MMC-18.21	Monitoring	Air: The proposed air monitoring to support the Follow-Up Program for the Goliath Gold Project would include commissioning a monitoring station equipped with a combination of periodic samplers (e.g., high volume samplers for TSP, and one of PM10 or PM2.5), passive samplers (e.g., dustfall), and if warranted, continuous monitors (e.g., samplers for NO2).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.22	Monitoring	Air: An air monitoring station will be installed. The station will possibly include analyzers to measure the following: total suspended particulate matter (TSP); one of either particulate matter nominally smaller than 10 µm (PM10) or particulate matter nominally smaller than 2.5 µm (PM2.5); and nitrogen dioxide (NO2).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.23	Monitoring	Air: Passive sampling of NO_2 and SO_2 would monitor average concentrations over 30-day periods through the year.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.24	Monitoring	Air: Particulate matter will be collected passively over a 30-day period using dust fall jars. These collected samples will be submitted for analysis of total dustfall, as well as for the metals content within the collected particulates.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.25	Monitoring	Air: A meteorological station will be installed in the Operations area to record continuous meteorological data. This data will be used in conjunction with the air quality data to determine trends, and will provide support information for ongoing Project engineering.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.26	Monitoring	Air: Treasury Metals will record any complaints received regarding air quality associated with the Project.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.27	Monitoring	Surface Water: The results of the HHERA screening identified 14 contaminants of concern/valued components in environmental and Project-specific media based on exceedances of their respective criteria/ guidelines/ standards. All 14 were carried forward for a quantitative human health risk assessment and assessment of residual adverse effects, cumulative effects, and significance (where required). All 14 parameter should be monitored in surface water. These include:	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		Aluminum, Antimony, Arsenic, Cadmium, Cobalt, Copper, Cyanide, Lead, Mercury, Methylmercury, Silver, Thallium, Uranium, Zinc		
MMC-18.28	Monitoring	Surface Water: Aluminum concentrations in surface water will be monitored in the event that a health-based criteria is derived in the future for aluminum.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.29	Monitoring	Surface Water: In addition to the results from the follow up program described in FUP1.8, the surface water quality program for human health should include contaminant screening to health-based water quality criteria.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.30	Monitoring	Surface Water: A total of 12 proposed monitoring locations are shown in Figure FUP1.8.3-1 that are associated with off site locations and 2 locations are shown on Figure FUP.1.8.3-1 that are associated with the Blackwater Creek Tributary 2 diversion channel. The total number of monitoring stations will be identified in consultation with MECP. The stations identified in this report are considered preliminary possible options that may be used in the monitoring to support the follow-up program.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.31	Monitoring	Surface Water: The frequency of monitoring each location is proposed and is subject to change with consultation with MECP and site conditions. Each sample location may be analyzed for relevant parameter suites, as per Table FUP1.8.3-1 and may be altered due to site conditions and safety considerations. Each sample location may be analyzed for relevant parameter suites, as per Table FUP1.8.3-1 and may be altered due to site conditions and safety considerations:	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments (continued)

<table>
<tr><th>Unique Identifier</th><th>Mitigation, Monitoring Requirement, or Commitment</th><th>Description</th><th>Phase</th><th>Reference in revised EIS or Round 2 Response</th></tr>
<tr><td></td><td></td><td>
Table FUP1.8.3-1: Summary of Surface Water Quality Follow-up Programs
<table>
<tr><th rowspan="2">Sampling Location</th><th colspan="7">Parameter Group</th></tr>
<tr><th>Group A (1)</th><th>Group B (2)</th><th>Group C (3)</th><th>Group D (4)</th><th>Group E (5)</th><th>Group F (6)</th><th>C</th></tr>
<tr><td>SW-TL1A, SW-JCT, SW-2, SW TL3, SW-4, SW-7, SW-8, SW-9, TSF Supernatant Water</td><td>Monthly</td><td>Monthly</td><td>Monthly</td><td>—</td><td>—</td><td>—</td><td></td></tr>
<tr><td>SW-10, SW-11</td><td>Monthly</td><td>Monthly</td><td></td><td>—</td><td>—</td><td>—</td><td></td></tr>
<tr><td>SW-5, SW-6</td><td>Annually</td><td>Annually</td><td>Annually</td><td>—</td><td>—</td><td>—</td><td></td></tr>
<tr><td>BW-T2-UP, BW-T2_DN</td><td>Quarterly</td><td>Quarterly</td><td></td><td></td><td></td><td></td><td>C (d</td></tr>
<tr><td>Effluent Discharge</td><td>—</td><td>Monthly</td><td>—</td><td>Thrice Weekly</td><td>Weekly</td><td>Monthly</td><td></td></tr>
<tr><td>Minewater pond</td><td>Quarterly</td><td>Quarterly</td><td>—</td><td>—</td><td>—</td><td>—</td><td></td></tr>
<tr><td>Pit Lake</td><td>Quarterly</td><td>Quarterly</td><td>—</td><td>—</td><td>—</td><td>—</td><td></td></tr>
</table>
Notes:
(1) Group A: pH, acidity, alkalinity, dissolved oxygen, chloride, conductivity, dissolved and total organic carbon, hardness, nitrate, nitrite, phosphate, sulphate, temperature (field), total and un-ionized ammonia, total dissolved solids, total suspended solids, turbidity.
(2) Group B: Total ICP metals scan. Total chromium and hexavalent chromium will be reported.
(3) Group C: free cyanide, total cyanide, weak acid dissociable cyanide.
(4) Group D: pH, total cyanide, total suspended solids
(5) Group E: copper, lead, nickel, zinc, arsenic
(6) Group F: Acute toxicity testing (Rainbow Trout and Daphnia magna)
(7) Group G: Temperature (continuous)
</td><td></td><td></td></tr>
<tr><td>MMC-18.32</td><td>Monitoring</td><td>Surface Water: Relevant parameter suites may include inorganics including metals, sulphate and organics including methyl-mercury. Given the intrinsically low water solubility of methylmercury in surface water, it does not been to be measured in surface water at the same frequency as Group B. Instead a frequency of methylmercury measurement in surface water will be determined in consultation with the MECP and Indigenous Stakeholders.</td><td>Active Life of the Project</td><td>Goliath Gold Project Follow Up Program Addendum</td></tr>
<tr><td>MMC-18.33</td><td>Monitoring</td><td>Surface Water: As per Information Request SW(2)-02 and SW(2)-02B, the effluent discharge sampling location may also be monitored for ammonia and hydrocarbons in the form of oil and grease on a basis with Group B parameters.</td><td>Active Life of the Project</td><td>Goliath Gold Project Follow Up Program Addendum</td></tr>
<tr><td>MMC-18.34</td><td>Monitoring</td><td>Surface Water: In-situ field parameters (temperature, reduction-oxidation potential, pH, dissolved oxygen) will also be sampled for at receiving water stations.</td><td>Active Life of the Project</td><td>Goliath Gold Project Follow Up Program Addendum</td></tr>
<tr><td>MMC-18.35</td><td>Monitoring</td><td>Surface Water: The Goliath Gold Regulatory Monitoring Addendum includes monitoring for both dissolved and total metals according to the appropriate regulatory requirements.</td><td>Active Life of the Project</td><td>Goliath Gold Project Follow Up Program Addendum</td></tr>
<tr><td>MMC-18.36</td><td>Monitoring</td><td>Project-Specific Media: The 2018 HHERA included an assessment of potential risk via exposure to Project-specific media including waste rock, tailing storage facility supernatant water, and pit-lake water via the direct contact to a Project Worker and uptake into country foods pathways. The results of the HHERA screening identified 14 contaminants of concern/valued components in Project-specific media based on exceedances of their respective criteria/ guidelines/ standards. All 14 were carried forward for a quantitative human health risk assessment and assessment of residual adverse effects, cumulative effects, and</td><td>Active Life of the Project</td><td>Goliath Gold Project Follow Up Program Addendum</td></tr>
</table>

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		significance (where required). All 14 parameter should be monitored in Project specific media. These include: Aluminum, Antimony, Arsenic, Cadmium, Cobalt, Copper, Cyanide, Lead, Mercury, Methylmercury, Silver, Thallium, Uranium, Zinc		
MMC-18.37	Monitoring	Project-Specific Media: The follow up programs for wildlife, migratory birds, and species at risk, exposure of mammals and birds to the onsite structures (waste rock storage area, TSF supernatant water, pit lake) should be confirmed prior to requirement to implement risk management measures. Should the follow up monitoring indicate exposure at a frequency that may pose ecological effects, then risk management measures including fencing, and bird deterrent flags will serve as appropriate mitigation measures to effectively reduce exposure and subsequently potential risk if required. The ERA was conducted based on a single line of evidence approach and, in all cases modelled or predicted data. As per the Federal Contaminated Sites Action Plan (FCSAP) Guidance for completing an ERA, a multiple line of evidence approach should be applied prior to accepting the results of an ERA and implementing risk management measures.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.38	Monitoring	Project-Specific Media: As part of the Round 2 process, a number of revisions were requested to the follow-up programs to geology and geochemistry and hydrogeology as described in section FUP1.3 and FUP1.10, respectively. The results of the follow-up monitoring for these technical disciplines involve confirming the onset of ARD and metal concentrations in the waste rock and tailings storage facility which in turn may impact seepage and surface water quality. Metal analysis would include a full suite of metals via ICP-MS. Methyl-mercury would be analyzed in at least 10% of the samples collected to support the human health follow-up program and the methylation rate determined in each of the Project-specific media. The measured metal concentrations in project-specific media including waste rock, TSF supernatant water, pit-lake water quality, and the TSF cover (wet or dry) at closure will be compared to health-based soil and water criteria and used to assess potential risk via the direct contact pathway to potential human receptors.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.39	Monitoring	Project-Specific Media: The measured concentrations in Project-specific media will be used to update the modelling predictions of chemical concentrations in country foods and used to derive site-specific uptake factors which would reduce the uncertainty associated with the use of literature derived uptake factors (refer to the proposed country foods monitoring program for human health below).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.40	Monitoring	Project-Specific Media: The follow-up programs for wildlife and wildlife habitat, migratory birds, vegetation and wetlands, and fish and fish habitat described in FUP 1.12, FUP1.13, FUP1.14, and FUP1.15, respectively will be relied on to confirm biota exposure to Project-specific media. If biota are confirmed to be exposed to project-specific media, and the chemical concentrations in those media are sufficiently high to classify them as contaminants of concern, then these species would become the target of dietary consumption surveys to quantify the proportion of country foods ingestion that these country food items represent. For those biota that are exposed to project-specific media and not considered a species at risk (SAR), then tissue sampling may be considered to confirm chemical concentrations in the tissue.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-18.41	Monitoring	Country Foods: The 2018 HHERA identified 14 contaminants of concern/valued components in environmental and Project-specific media based on exceedances of their respective criteria/ guidelines/ standards. All 14 were carried forward for a quantitative human health risk assessment and assessment of residual adverse effects, cumulative effects, and significance (where required). All 14 parameter should be monitored in country foods. These include: Aluminum, Antimony, Arsenic, Cadmium, Cobalt, Copper, Cyanide, Lead, Mercury, Methylmercury, Silver, Thallium, Uranium, Zinc	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.42	Monitoring	Country Foods: Ingestion of country foods contributed the highest proportion to the overall characterization of residual adverse effects via the sum of risk from all operable exposure pathways for thallium and zinc. Particular emphasis should be placed on the measurement of thallium and zinc in country foods.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.43	Monitoring	Country Foods: As per the 2018 Health Canada country foods guidance document entitled "Guidance for Evaluating Human Health Impacts in Environmental Assessment: Country Foods"., if concentrations of chemicals in country foods were either not measured or not comprehensive, then it is recommended that they be identified prior to project start. As detailed in the Follow-Up Program Treasury Metals will measure concentrations of COCs in environmental and Project-specific media as well as country foods items. Given that this guidance was only made available following the submission of the revised EIS (April 2018), in an effort to satisfy the monitoring requirements described by Health Canada with respect to country foods, Treasury Metals will include a reference site (i.e., nearby site with similar environmental conditions, but outside the influence of the Project) to established baseline conditions. This approach is considered acceptable as per the 2018 Health Canada country foods guidance document.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.44	Monitoring	Country Foods: The following lists provides details of the follow up program for country foods which should be completed for baseline conditions (i.e. prior to site preparation and construction) and then considered as part of the follow-up program during the active phases of the Project. Details on the frequency of the follow-up program for country foods sampling may be determined in consultation with regulators and indigenous stakeholders, however Treasury Metals suggests at a frequency that matches the commitments to update other models such as the Groundwater Model (i.e. every 3 years).	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.45	Monitoring	Country Foods: A Follow-Up Program for Human Health including a Country Foods Assessment will include the following with respect to chemical analysis: • Inclusion of sediment and groundwater sampling as part of their respective follow-up programs. • Collection of the environmental (soil, water, air, sediment, and groundwater) and Project-specific media (waste rock, tailings supernatant water pit lake water) to confirm the exposure point concentrations relied upon in the HHERA. ○ The samples would be analyzed for a suite of metals via ICP-MS with methyl-mercury being analyzed in at least 10% of the samples to determine the rate of methylation (if any) in each media type.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		○ The concentration results from analytical testing would be compared to relevant human health-based criteria as well as criteria for the protection of ecological receptors. ○ The measured concentrations in environmental and Project-specific media would then be used to update the modelling into country food items if and when required. • Collection of country food items from the terrestrial and aquatic food webs in consultation with the Indigenous communities. ○ Emphasis will be placed on the collection of biota items known to be consumed via ongoing engagement and dietary consumption surveys, and to the biota for which exposure to project-specific media is confirmed via the follow-up programs related to vegetation, fish, wildlife, and birds. ○ All country food items will be analyzed for a suite of metals via ICP-MS with methylmercury being analyzed in at least 10% of the samples to determine the rate of methylation (if any) in each media type. ○ The measured concentrations in country foods can be used to determine the site-specific uptake factors into each biota type which can then be used to update the modelling for other country foods items that have not been sampled (for example species at risk), if required. This would alleviate the uncertainty associated with the use of literature derived uptake factors. ○ For non-mobile country food items (i.e. plants including medicinal plants and wild rice, root vegetables, mushrooms, and berries), co-located surface water, sediment, or soil samples will be collected in addition to the country food item and submitted for the same chemical analysis to aid in the derivation of site-specific uptake factors. This would alleviate the uncertainty associated with the use of literature derived uptake factors. Consideration will be given to account for the fact that some species and tissues may have higher concentrations of COPCs due to bioaccumulation and biomagnification, and some plants are known hyperaccumulators ○ Collection of fish including fish from different tropic levels and habitat types (i.e. stream resident fish versus lake resident fish) as well as the water and sediment sample from where these fish are collected to allow for determination of site-specific uptake factors and tissue concentrations. All fish will be analyzed for a suite of metals via ICP-MS with methylmercury being analyzed in at least 10% of the samples to determine the rate of methylation. The proportion of methylmercury: total mercury in fish is anticipated to be greater than 95% thus methylmercury analysis of fish tissue samples is unlikely required to continue long term as total mercury concentrations may be assumed to be almost entirely comprised of methylmercury. Collection of fish from different tropic levels and habitat types along with co-located sediment and water samples would allow for the determination of site-specific uptake factors and would alleviate the uncertainty associated with the use of literature derived uptake factors. • If arsenic is measured in environmental and Project-specific media at concentrations greater than their standard analytical detection limits, then consideration will be given to chemical speciation of arsenic in select food items given that toxicity differs based on chemical speciation. For example, mushrooms and aquatic invertebrates uptake and biotransform arsenic from substrates including in tailings from gold mines to arsenobetaine which is the only non-toxic		

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		form of arsenic, therefore using total arsenic concentrations from ICP-MS would overestimate the potential risk to human receptors via the ingestion of mushrooms aquatic invertebrates. • If arsenic and lead are measured in environmental and Project-specific media at concentrations greater than their standard analytical detection limits, then consideration will be given to performing bioavailability testing using physiologically based extraction test (PBET) on a smaller proportion of the media samples given that lead and arsenic bioaccessbility is known to be decreased by 40-60% in select substrates. Therefore, using total lead and arsenic concentrations form total metal analysis via ICP-MS would overestimate potential uptake and subsequent toxicity/risk.		
MMC-18.46	Monitoring	Country Foods: As part of the Round 2 information request process, TMI_942-AC(2)-09 asked that Treasury Metals provide a reference site for the collection of additional baseline wild rice data. In an effort to understand the effect, if any, the Goliath Gold Project may have on the concentrations of metals in wild rice, it is important to understand the baseline levels of metals that are present in the wild rice at baseline. Those baseline levels will, arguably, reflect the effects of other industrial activities and historical sources of contamination within Wabigoon Lake. These are the levels against which Treasury Metals would compare the measured concentrations to see if they are contributing to the levels of metal in wild rice. In selecting reference sites for use in follow-up program, those sites should include the same environmental conditions as the wild rice at the mouth of Blackwater Creek (i.e., reflect the effects of other industrial activities and historical sources of contamination within Wabigoon Lake), but be far enough removed to be outside the influence of the Project. Guidance for selecting reference sites is provided by the CCME in their document entitled *"Guidance Manual for Environmental Site Characterization in support of Environmental and Human Health Risk Assessment- Volume 1 Guidance Manual"* dated 2016. As stated by the CCME in the 2016 guidance manual, it is advisable that more than one reference location be chosen. Figure FUP1.19.3-1 (TMI_942-AC(2)-09_Figure_1) shows the proposed sampling for rice, and includes the following: • The wild rice at the mouth of Blackwater Creek—to confirm the predictions regarding the effects of the Project; • The wild rice stand on the south shore of Wabigoon Lake, adjacent to the Butler Lake Nature Reserve—a reference site within Wabigoon Lake, in close proximity to the Project but outside the predicted influence of the Project based on the finite element modelling of Wabigoon Lake (Appendix GG of the revised EIS [April 2018]); • The wild rice stand in the channel connecting Dinorwic Lake and Wabigoon Lake— a reference site upstream of Wabigoon Lake, and well outside the influence of the Project; and • The south end of Rice Lake—a background site, free of the effects of other industrial activities and historical sources of contamination within Wabigoon Lake. The location for the sampling site will be finalized prior to the start of the Project through input received from the Indigenous communities who currently harvest wild rice in these areas.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-18.47	Monitoring	Country Foods: Treasury Metals has stated to all Indigenous communities who wish to take part, that they will work with the communities to collect dietary consumption data as part of ongoing engagement activities. The dietary consumption data collection will target the collection of the following on a community, or household specific basis:	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-18: Human Health- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		• Receptor characteristics (i.e., age, gender, cultural affiliation, etc.), including receptors with atypical consumption patterns due to occupational, recreational, and cultural activities relevant to country food consumption (e.g., hunters, trappers, fishers); • A list of the country foods consumed, including common and scientific names of species. • The source of country foods (i.e., where the food is typically harvested and how it is obtained—hunted, fished, gathered, etc.). • Specific tissues (skin, fatty flesh, muscular flesh or organs) or parts of plants (roots, leaves, flowers, berries, seeds, etc.) that are consumed. • The typical portion size for each tissue or part of plants consumed, using standard measures such as measuring cups or spoons, or weights. • The frequency of country foods consumption (i.e., the number of servings per week or month or season, and the typical method of preparation: skin on/off, washing, peeling, cooking (raw, fried, baked, etc.), drying, fermenting, and any other preparation methods that may affect the COPC concentration of the foods consumed. • The frequency of foods consumed that have been purchased from a grocery store or supermarket and Determination of exposure to chemicals through market food ingestion, as certain contaminants of concern associated with the proposed project may be present in commercially available foods, are naturally occurring (e.g., metals) or are associated with other anthropogenic processes unrelated to the proposed project. • Additional traditional knowledge (i.e., species consumed, when the foods are consumed, their residence times, and times of increased consumption of specific foods such as, seasonal patterns or migration periods).		
MMC-18.48	Monitoring	Country Foods: The HHERA was completed using the most conservative assumptions regarding contaminant uptake, exposure frequency and duration, and country foods ingestion and therefore represents the maximum risk anticipated for each operable pathway of exposure and residual adverse effects via the sum of all pathways. The application of the most conservative assumptions may result in the overestimation of potential risk and a level of uncertainty that hinders the ability of regulators to apply the findings in making management decisions. Although no residual adverse human health effects are predicted as a result of the Goliath Gold Project, the follow up program for country foods, project-specific media, surface water quality, and air should be relied upon to reduce the level of conservatism associated with the reliance on modelled predictions. Once the uncertainty associated with the risk assessment inputs is reduced, then the HHERA model should be employed to re-calculate the results of the country foods assessment or residual adverse effects. If requested, this could be done on a community-specific or household specific basis. The collection of these data as part of the follow up program for human health will provide Treasury Metals a meaningful tool for communicating the effects of the Project on human health relative to the current baseline conditions.	Active Life of the Project	Goliath Gold Project Follow Up Program Addendum

Table MMC-19: Heritage Resources- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-19.1	Mitigation	Minimize the overall footprint of the Project [Mit_050].	Prior to Site Preparation and Construction	Section 6.23 and Section 10
MMC-19.2	Mitigation	Leave a 50 m buffer zone around remaining watercourses within the Project area [Mit_118].	Active Life of the Project	Section 6.23 and Section 10
MMC-19.3	Mitigation	If previously undocumented archaeological resources be discovered, the person discovering the resources must stop alteration of the site immediately of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (I) of the Ontario Heritage Act. [Mit_119].	Active Life of the Project	Section 6.23 and Section 10
MMC-19.4	Mitigation	If human remains are discovered, alteration of the site must stop and the person making the discovering must immediately notify the police, or coroner, and the Registrar of cemeteries, at the Ministry of Consumer Services, as required under the *Cemeteries Act*, R.S.O. 1990 c.C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force). [Mit_120].	Active Life of the Project	Section 6.23 and Section 10
MMC-19.5	Mitigation	Restrict activities and development within 300 m of major water sources and within 300 m of historical travel routes, to only those areas where an archeological assessment has been completed. [Mit_121].	Active Life of the Project	Section 6.23 and Section 10
MMC-19.6	Mitigation	Do not allow new ground altering activities to occur in areas where an archaeological assessment has not been completed. [Mit_122].	Active Life of the Project	Section 6.23 and Section 10
MMC-19.7	Mitigation	If previously undocumented archaeological resources be discovered, the person discovering the resources must stop alteration of the site immediately of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (I) of the Ontario Heritage Act. [Mit_119].	Active Life of the Project	Section 6.23 and Section 10
MMC-19.8	Mitigation	If human remains are discovered, alteration of the site must stop and the person making the discovering must immediately notify the police, or coroner, and the Registrar of cemeteries, at the Ministry of Consumer Services, as required under the *Cemeteries Act*, R.S.O. 1990 c.C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force). [Mit_120].	Active Life of the Project	Section 6.23 and Section 10

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-20.1	Commitment	All final effluent discharge points will have control structures to immediately cease discharge if and when necessary. [Cmt_035]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.2	Commitment	Treasury Metals will develop community specific risk communication plans	Active Life of the Project	Round 2 Information Request: Aboriginal Consultation
MMC-20.3	Commitment	Although the results of the HHERA do not indicate that risk management or mitigation measures are required during traditional land and resource use, as part of the sign in and access policy, Treasury Metals will offer appropriate personal protective equipment to those who prefer to wear it while within the Property Boundary.	Active Life of the Project	Round 2 Information Request: Aboriginal Consultation HHERA
MMC-20.4	Commitment	Treasury Metals has committed to consult with Indigenous communities regarding the placement of dustfall monitoring jars to target areas of potential impact that overlap with areas where traditional land and resource occurs (this information will be shared confidentially by the community in the formal Traditional Knowledge studies completed, underway or expected in the future).	Active Life of the Project	Round 2 Information Request: Aboriginal Consultation HHERA
MMC-20.5	Commitment	Treasury Metals will continue to engage indigenous communities and work towards developing community specific mitigation measures	Active Life of the Project	Round 2 Information Requests: Aboriginal Consultation
MMC-20.6	Commitment	Progressive reclamation of mine waste rock area will be undertaken, where practical, once maximum height has been reached.	Active Life of the Project	Section 6.23 and Section 10
MMC-20.7	Commitment	All final effluent and point source air discharge points will be sampled and results reported to the appropriate authorities in accordance with environmental permit requirements.	Active Life of the Project	Section 6.23 and Section 10
MMC-20.8	Commitment	Ditching and drainage will be designed to collect and manage runoff from site, and will be established around stockpiles. All collection ponds will be integrated with the site water management plan. [Cmt_013]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.9	Commitment	During Operations, effluent discharged from the Project to Blackwater Creek will meet the Provincial Water Quality Objectives (PWQO) for the parameters listed below, or background concentrations if background levels are above the PWQO. Where there is no PWQO for a parameter, the commitment will be to meet the Canadian Water Quality Guidelines (CWQG). For total mercury, the commitment will be that effluent discharged to Blackwater Creek will meet background concentrations for that watercourse. Background concentrations for Blackwater Creek are defined as the 75th percentile in accordance MOECC receiving water assessment policy.[Cmt_034]	Operations	Section 6.23 and Section 10
MMC-20.10	Commitment	Mitigation measures for changes to natural landscapes (Section 6.2.3.1) will minimize the noticeability of the Project from off-site [Mit_001, Mit_002, Mit_003, Mit_004, Mit_005, Mit_006, Cmt_037].	Active Life of the Project	Section 6.23 and Section 10
MMC-20.11	Commitment	Best management practices for dust control will be implemented. A plan will be prepared to identify all potential sources of dusts, outline mitigation methods to employ, and detail all records and inspections required by regulatory officials. Treasury will monitor air emissions through implementation of current industry standards to meet regulatory requirements (Ontario Reg. 419/05, AAQC, MOECC).[Cmt_017]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.12	Commitment	Although the results of the HHERA do not indicate that risk management or mitigation measures are required during traditional land and resource use, as part of the sign in and access policy, Treasury Metals	Active Life of the Project	Section 6.23 and Section 10

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		will offer appropriate personal protective equipment to those who prefer to wear it while within the Property Boundary.		
MMC-20.13	Commitment	Treasury will design the operation to meet noise emission regulatory requirements (NPC-103, MOECC) [Cmt_018]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.14	Commitment	Tailings Storage Facility (TSF) will be constructed to meet all regulatory requirements and industry best practices standards as described within the Provincial Lake and Rivers Improvement Act. TSF will be designed and constructed to withstand the probable maximum flood and maximum credible earthquake. A remedial action plan will be developed as part of the emergency management plan, and environmental management plan with appropriate government agencies, in the event of a dam breach. [Cmt_022]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.15	Commitment	Treasury will consult local stakeholders throughout Project life to ensure the Company is aware of general or specific concerns the public may have. A formal public complaint logging and feedback system will be implemented when plant construction commences. This system will be in place for the life of the mine. [Cmt_019]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.16	Commitment	Dangerous wildlife awareness will be part of the site's safety program. Safety training will be provided to workers to raise awareness and to assist in protecting them from injury. Food waste will be managed in a manner that limits contact/attraction of potentially dangerous wildlife. [Cmt_020]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.17	Commitment	Road-killed animals or any other carcasses found on-site will be removed in a timely and legal manner to limit the attraction of wildlife. [Cmt_021]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.18	Commitment	Best management practices for dust control will be implemented. A plan will be prepared to identify all potential sources of dusts, outline mitigation methods to employ, and detail all records and inspections required by regulatory officials. Treasury will monitor air emissions through implementation of current industry standards to meet regulatory requirements (Ontario Reg. 419/05, AAQC, MOECC). [Cmt_017]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.19	Commitment	Treasury Metals will develop community access management plans	Active Life of the Project	Section 6.23 and Section 10
MMC-20.20	Commitment	Treasury Metals will develop a risk communications plan	Active Life of the Project	Section 6.23 and Section 10
MMC-20.21	Commitment	During Operations, effluent discharged from the Project to Blackwater Creek will meet the Provincial Water Quality Objectives (PWQO) for the parameters listed below, or background concentrations if background levels are above the PWQO. Where there is no PWQO for a parameter, the commitment will be to meet the Canadian Water Quality Guidelines (CWQG). For total mercury, the commitment will be that effluent discharged to Blackwater Creek will meet background concentrations for that watercourse. Background concentrations for Blackwater Creek are defined as the 75th percentile in accordance MOECC receiving water assessment policy. Detailed parameters will be determined through engagement with appropriate Provincial and Federal regulatory bodies. [Cmt_034}	Operations	Section 6.23 and Section 10
MMC-20.22	Commitment	All final effluent discharge points will have control structures to immediately cease discharge if and when necessary. [Cmt_035]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.23	Commitment	All final effluent and point source air discharge points will be sampled and results reported to the appropriate authorities in accordance with environmental permit requirements. [Cmt_036]	Active Life of the Project	Section 6.23 and Section 10

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-20.24	Commitment	Progressive reclamation of mine waste rock area will be undertaken, where practical, once maximum height has been reached. [Cmt_037]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.25	Commitment	The site will be reclaimed and the land restored to a naturalized state per the mine closure plan approved by the Ministry of Northern Development and Mines [Cmt_038]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.26	Commitment	Treasury will continue to document all comments, issues, or concerns raised by stakeholder groups. All input Treasury receives will be duly considered and acted upon according to the nature of the input received. [Cmt_001]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.27	Commitment	Treasury will continue to engage with Aboriginal communities and groups through the life of the project. [Cmt_012]	Active Life of the Project	Section 6.23 and Section 10
MMC-20.28	Commitment	Following final closure of the Project (as per the requirement of O.Reg 240/00), traditional land and resource use may safety resume in all areas of the Project.	Post-Closure	HHERA
MMC-20.29	Commitment	Treasury Metals will continue to work with ANA and NFN to discuss scope plans for the completion of a formal TK study (or similar).	Prior to site preparation and construction	Round 2 Information Request Aboriginal Consultation
MMC-20.30	Commitment	Treasury Metals will work with Indigenous communities to develop community-specific access management plans consistent with site safety needs, and the sensitive nature of traditional and recreational harvest.	Prior to site preparation and construction	Round 2 Information Request Aboriginal Consultation
MMC-20.31	Commitment	Treasury Metals will offer personal protective equipment to those who prefer to wear it while within the Property Boundary	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.32	Commitment	Treasury Metals will complete a more detailed socio-economic effects assessment for traditional land and resource use, once the information is collected and use the results to develop community specific monitoring and management plans, as well as specific mitigation measures.	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.33	Commitment	Treasury Metals will continue to ensure that all communities are aware of activities being conducted on site	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.34	Commitment	Treasury Metals will take all proposed mitigation measures under consideration to ensure the continued responsible development of the Project	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.35	Commitment	Treasury Metals will measure concentrations of COCs in environmental media, including country foods items	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.36	Commitment	Treasury Metals commit to consult with Indigenous communities regarding the placement of dustfall monitoring jars to target areas of potential impact that overlap with areas where traditional land and resources occurs	Prior to site preparation and construction	Round 2 Information Request Aboriginal Consultation
MMC-20.37	Commitment	Treasury Metals is committed to working with the Indigenous communities to ensure that the effects of the Project on their traditional land and resource use, or alternatively referred to as Aboriginal and Treaty Rights, are appropriately considered and protected	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.38	Commitment	Treasury Metals is committed to working with Indigenous communities to define traditional land use aspects within the Project area, and define a suitable procedure for safe access to these resources	Active phases of the Project	Round 2 Information Request Aboriginal Consultation

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-20.39	Commitment	Treasury Metals is committed to ensure that Indigenous communities have input into the effectiveness of the Environmental Management Plans and Follow-up Programs, Treasury Metals proposes to form an Environmental Management Committee	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.40	Commitment	Commitment to ELFN to hold a seminar regarding the results of the TK study once available	Once the TK study is complete	Round 2 Information Request Aboriginal Consultation
MMC-20.41	Commitment	Commitment to share information with ELFN (and other Indigenous Communities) as it is available including additional baseline studies	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.42	Commitment	Commitment to have a qualified third party review of mine waste features (specifically cyanide management and transport practices, and an independent tailings review board)	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.43	Commitment	Treasury Metals are committed to focusing on the safety-first mentality	Active phases of the Project	Round 2 Information Request Aboriginal Consultation
MMC-20.44	Mitigation	Implement a Communications Management Plan to address ongoing engagement with potentially affected stakeholders and Aboriginal peoples throughout the life of the Project. The plan should include a transparent grievance process. [Mit_093].	Active Life of the Project	6.21.5
MMC-20.45	Mitigation	Environmental aspects and potential impacts of the project will be managed within an environmental management plan (EMP) which integrates environmental performance with overall project management. The EMP will have measures to minimize the potential for the release of deleterious substances and will include a Spill Response Plan and a Waste Management Plan. [Cmt_031].	Active Life of the Project	6.21.5
MMC-20.46	Mitigation	Treasury Metals will undertake a land and resources use baseline to establish a pre-construction baseline of the land and resource users. This will serve as the basis for future monitoring and management of land and resources uses effects throughout the life of the Project. [Mit_094].	Active Life of the Project	6.21.5
MMC-20.47	Mitigation	Mitigation measures for changes to natural landscapes (Section 6.2.3.1) will minimize the noticeability of the Project from off-site. [Mit_001, Mit_002, Mit_003, Mit_004, Mit_005, Mit_006].	Active Life of the Project	6.21.5
MMC-20.48	Mitigation	Air quality mitigation measures (Section 6.6.5) will minimize the areas where changes to air quality may affect land uses. [Mit_029, Mit_031, Mit_043, Mit_044, Mit_046].	Active Life of the Project	6.21.5
MMC-20.49	Mitigation	Noise and blasting mitigation measures (Section 6.4.5) will minimize the areas where noise and vibration from the Project will be noticeable. [Mit_025, Mit_026, Mit_027, Mit_028, Mit_029, Mit_030, Mit_031, Mit_043].	Active Life of the Project	6.21.5
MMC-20.50	Mitigation	Light mitigation measures (Section 6.5.5) will minimize the areas where light trespass from the Project will be noticeable. [Mit_034, Mit_035, Mit_036, Mit_037, Mit_038, Mit_039, Mit_040, Mit_041, Mit_042].	Active Life of the Project	6.21.5
MMC-20.51	Mitigation	Mitigation measures for changes to surface water quality (Section 6.8.3) will minimize the effects of the Project to surface water quality. [Mit_008, Mit_053, Mit_052, Mit_056, Mit_024].	Active Life of the Project	6.21.5
MMC-20.52	Mitigation	Mitigation measures for changes to wildlife and wildlife habitat (Section 6.12.3) will minimize the area where there are Project affects to wildlife and wildlife habitat. [Mit_018, Mit_050, Mit_065, Mit_066, Mit_067, Mit_068, Mit_069, Mit_070, Mit_071, Mit_072, Mit_073, Mit_074].	Active Life of the Project	6.21.5

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-20.53	Mitigation	Mitigation measure for changes to fish and fish habitat (Section 6.14.3) will minimize the area where there are Project affects to fish and fish habitat. [Mit_077, Mit_078, Mit_079, Mit_080, Mit_050, Mit_008, Mit_057, Mit_059, Mit_081, Mit_053, Mit_058, Mit_024, Mit_060, Mit_082].	Active Life of the Project	6.21.5
MMC-20.54	Mitigation	Mitigation measures for changes to vegetation and wetlands (Section 6.15.5) will minimize the area of vegetation and wetlands effected by the Project. [Mit_008, Mit_046, Mit_050, Mit_054, Mit_065, Mit_066, Mit_068, Mit_074, Mit_082, Mit_084, Mit_085, Mit_086, Mit_087, Mit_088, Mit_089].	Active Life of the Project	6.21.5
MMC-20.55	Mitigation	Mitigation measures for changes to social factors (Section 6.16.5) will minimize the predicted social effects to Aboriginal peoples by the Project.	Active Life of the Project	6.21.5
MMC-20.56	Mitigation	Mitigation measure for changes to economic factors (Section 6.17.5) will minimize the predicted economic effects to local Indigenous communities and emphasize the positive economic effects of the Project.	Active Life of the Project	6.21.5
MMC-20.57	Mitigation	Mitigation measure for effects to heritage resources (Section 6.20.5) will minimize the predicted effects to Indigenous heritage resource from the Project. [Mit_050, Mit_118, Mit_119, Mit_120, Mit_121, Mit_122].	Active Life of the Project	6.21.5
MMC-20.58	Mitigation	Plan to ensure socio-economic commitments are implemented, adverse socio-economic effects are minimized, results are monitored, and effects are adaptively managed. [Mit_095].	Active Life of the Project	6.21.5
MMC-20.59	Mitigation	Continue to collect traditional land use information for the Project area through meetings and traditional land use studies to identify any additional areas of plant gathering, hunting, trapping, fishing, and cultural activities. [Mit_096].	Active Life of the Project	6.21.5
MMC-20.60	Mitigation	During the operating life of the Project, the Operations area will be fenced and no access will be permitted for security and safety reasons. Access to the former MNRF Tree Nursery will be controlled. Aboriginal peoples will be able to arrange for accompanied access to these areas with Treasury Metals. Appropriate signage will be placed around areas where access is limited. [Mit_092].	Active Life of the Project	6.21.5
MMC-20.61	Mitigation	Develop and implement employment practices that give preference to local and regional labour where possible, including Aboriginal communities. This includes participation in job fairs and the direct distribution of employment opportunities to local First Nation and Aboriginal administration offices to encourage qualified Aboriginal persons to seek employment opportunities with Treasury Metals. The application of this policy is dependent upon the skills and workforce being available locally. [Mit_103].	Active Life of the Project	6.21.5
MMC-20.62	Mitigation	Closure mitigation measures will focus on working with the affected communities and government agencies to develop a mine closure plan that includes a strategy for buffering the effects of eventually losing direct mine-related jobs and assist in the placement of potentially affected employees. [Mit_098].	Active Life of the Project	6.21.5
MMC-20.63	Mitigation	Develop training programs for unemployed and under employed resident and non-resident workers. Training would be done through in-house programs and in conjunction with local and regional educational institutes. [Mit_105].	Active Life of the Project	6.21.5
MMC-20.64	Mitigation	Treasury will maintain, where applicable, a local purchasing policy to purchase goods and services from local suppliers. This policy has the expectation that goods and services will be purchased locally assuming price, delivery and service is competitive with outside suppliers. [Mit_116].	Active Life of the Project	6.21.5
MMC-20.65	Mitigation	Closely and frequently communicate with government agencies and service providers to ensure that the appropriate information (e.g., proposed transportation volumes, potential variation to the local population)	Active Life of the Project	6.21.5

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		are considered in the planning of future services and response capabilities. Work with Aboriginal communities and other local and regional governments to minimize the in-migration workforce where possible. [Mit_109].		
MMC-20.66	Mitigation	Work with public safety services to develop safety and work policy guidelines for mine workers. [Mit_110].	Active Life of the Project	6.21.5
MMC-20.67	Mitigation	Work with local agencies to assist in monitoring community wellbeing and take corrective actions where appropriate. [Mit_111].	Active Life of the Project	6.21.5
MMC-20.68	Monitoring	Ongoing engagement will be the most effective tool for monitoring the effects of the Project on the Indigenous stakeholder groups. Treasury Metals has continued dialogue with MNO, WLON, ELF, ANA, and NFN as it relates to the potential effects of the Project, capacity for informed dialogue, acceptable protocols, plans and timelines, as well as the overall objectives and scope of engagement activities. Treasury Metals in good faith has executed funding agreements to allow for continued dialogue, and execution of critical support items to the development of the Project (e.g. traditional land and resource studies). Further, this funding has allowed for the development of a Memorandum of Understanding, which formalizes the relationship between two Indigenous communities (ELFN and MNO) and Treasury Metals.	Active phases of the Project	Round 2 Information Requests: Aboriginal Consultation
MMC-20.69	Monitoring	Monitoring of some of the potential effects of the Project on Aboriginal peoples is captured within other Follow-up programs outlined in Section 13 of the revised EIS. These include: • Noise and Vibration follow-up (see Section FUP1.4); • Light follow-up (see Section FUP1.5); • Air Quality follow-up (see Section FUP1.6); • Surface Water Quality follow-up (see Section FUP1.8); • Groundwater Quality follow-up (see Section FUP1.10); • Wildlife follow-up (see Section FUP1.12); • Fish and Fish Habitat follow-up (see Section FUP1.14) • Land Use follow-up (see Section FUP1.16); and • Social follow-up (see Section FUP1.17). • Human Health (see Section FUP1.19)	Active phases of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-20.70	Monitoring	To date, there have been three proposed Follow-up programs for the economic effects of the Project, which will be developed following consultation with Indigenous communities. These proposed programs include: • Indigenous employment during site preparations and construction, Operations, and closure phases of the Project, as well as any employment during the care and control phase of the post-closure phase; and • Indigenous business opportunities during site preparations and construction, Operations, and closure phases of the Project.	Active phases of the Project	Goliath Gold Project Follow Up Program Addendum
MMC-20.71	Commitment	**Engagement and Communications:** Treasury Metals is committed to working collaboratively with Indigenous communities to ensure informed and engaged dialogue throughout the life of the Project. This goal will be achieved through the implementation of the following, at a minimum: i. Continued dialogue with all Indigenous stakeholders for the life of the Project;	Active phases of the Project	TMI_862-AC(2)-02_Attachment_1

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		ii. The development of community specific mitigation and accommodation measures as required; and iii. Amendments to the follow up program over the life of the Project to ensure that the community-specific mitigation measures are effective. Treasury Metals has proposed the formation of an Environmental Management Committee to aid in the above. This committee would be made up of members from Indigenous communities and would meet with representatives from Treasury Metals on a to-be-determined basis, possibly quarterly or semi-annually. Treasury Metals would present any reportable information on the monitoring and management plans as well as the results of the follow up programs to the Environmental Management Committee. If exceedances or issues arise that show mitigation measures have not been as effective as expected, the potential for further actions would be discussed with the committee. The Environmental Management Committee is intended to provide a forum for discussing other environmental matters with the potentially affect Indigenous communities such as upcoming regulatory permitting, the continued evolution of community-specific monitoring, the incorporation of traditional knowledge or items of cultural significant that might have been collected since completion of the EA process, and any other environmental matters of relevance to the committee including financial support for operation of the Committee. Environmental matters that the Environmental Management Committee would review include but not limited to: fish compensation opportunities, closure planning, environmental sampling results and proposed efforts, and as previously noted adaptive review and dialogue on follow up programs and environmental monitoring efforts for the Goliath Gold Project. Further the Environmental Management Committee will aid in the collation and distribution of the reviewed information to each respective community, reflecting the direction and concerns brought forward. Treasury Metals is committed to sharing information regarding the Project with all Indigenous community members and will do so, via the following reporting mechanisms: i. Sharing updates on notable events inclusive of environment, social/community, operational, and exploration aspects occurring at the Project with the communities on a quarterly basis. Treasury Metals envisions the notable events report to be posted publicly to the Treasury Metals website, and or delivered to each community in the form of a news letter, with the overall objective to provide the Indigenous communities and the Agency the confidence that the Project, mitigation measures, follow-up program and monitoring plans are functioning as designed, and therefore that there are no socio-economic effects anticipated to Indigenous communities who rely on the lands and resources.; ii. Providing a summary of the ongoing activities of the Environmental Management Committee, as part of the annual reporting for the Goliath Gold Project; and iii. Providing the annual environmental report, summarizing all of the environmental monitoring results associated with the Project. To facilitate public access of this information, Treasury Metals will establish a link on their website where the above information can be readily accessed. Additionally, Treasury Metals will share the above information with each of the communities in the form most suitable for the specific community members. Further, Treasury Metals is committed to reflect the needs of its Indigenous stakeholders, and as part of continued		

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		dialogue and engagement will only provide data to the public sphere that has been mutually agreed upon and reviewed by applicable stakeholders.		
MMC-20.72	Commitment	**Wild Rice:** Treasury Metals is committed to sharing updates on notable events inclusive of environment, social/community, operational, and exploration aspects occurring at the Project with the communities on a quarterly basis to ensure that the community is kept apprised of the operational results that may affect the commercial wild rice harvest. Treasury Metals envisions the notable events report to be posted publicly to the Treasury Metals website thus being available to Indigenous communities and to nearby recreational or commercial land users. Treasury Metals is committed to the collection of wild rice samples as part of continued dialogue and engagement activities with Indigenous communities for the life of the Project. Wild rice samples will be collected annually, or as needed, prior to the harvest season and sent for chemical analysis to capture any potential effects of the Project on the quality of wild rice harvested commercially and used for consumption and in turn socio-economic effects. According to the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), wild rice is typically harvested from late August to September, but this would vary by the region of the province. As part of the program, collocated samples of sediment and surface water will also be collected annually or as needed. Treasury Metals will work with the Indigenous communities and applicable commercial enterprises to identify suitable timing, and location for sample collection prior to the rice harvest. Treasury Metals has currently proposed three sampling locations within Wabigoon Lake to effectively capture possible effects of the Project on wild rice, as well as a reference location on Rice Lake against which the samples can be compared (Figure TMI_942-AC(2)-09_Figure 1) the locations of these sites will be confirmed as part of continuing dialogue with Indigenous communities notably Wabigoon Lake Ojibway Nation. The results of the annual wild rice sampling program will be shared with the Indigenous communities currently commercially harvesting wild rice within Wabigoon Lake once the results are available, allowing them to share the information with their members, with the option for them to also share information publicly. If the Indigenous communities currently commercially harvesting wild rice within Wabigoon Lake authorize Treasury Metals to publish this information, it will be included in the annual environmental report. If required, Treasury Metals is committed to the development of community-specific mitigation measures and accommodation measures. Treasury Metals is also committed to amending the follow up program, if required, to verify the effectiveness of those the community-specific mitigation measures. Given that wild rice is typically harvested once a season, and that the growing season in Northwestern Ontario near Dryden is relatively short (i.e. < 100 days), it is only practicable to sample wild rice and report once per year.	Active phases of the Project	TMI_862-AC(2)-02_Attachment_1
MMC- 20.73	Commitment	**Commercial Fisheries:** Treasury Metals is committed to sharing updates on notable events occurring at the Project on a quarterly basis with the communities to ensure that the community is kept apprised of the operational results that may affect the commercial fish harvest. Treasury Metals envisions the notable events report to be posted publicly to the Treasury Metals website thus being available to Indigenous communities and to nearby recreational or commercial land users. Treasury Metals is committed to the collection of fish tissue samples as part of continued dialogue and engagement activities with Indigenous communities for the life of the Project. Fish tissue samples collected	Active phases of the Project	TMI_862-AC(2)-02_Attachment_1

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		from fish of various trophic levels will be collected annually and sent for chemical analysis to capture any potential effects of the Project on the quality of fish for consumption harvested commercially or for subsistence use and in turn socio-economic effects. As part of the program, collocated samples of sediment and surface water will also be collected annually. Treasury Metals will work with the Indigenous communities to identify preferred species for consumption and/or sale in both Wabigoon Lake and Thunder Lake. The results of the annual fish sampling program will be shared with the Indigenous communities. Additionally, Treasury Metals will include the results of the fish sampling program in the annual environmental report. If required, Treasury Metals is committed to the development of community-specific mitigation measures and accommodation measures. Examples of additional mitigation measures include Treasury Metals commitment to the development of community specific risk communication plans to help reassure the community members and the public that the Project is not impacting the quality of the fish for consumption. Additionally, Treasury Metals will work with Indigenous communities holding commercial fishing licenses on Wabigoon Lake and Thunder Lake to develop mutually acceptable strategies to help manage perceived risks (both existing and future concerns) associated with the fish harvest. Treasury Metals is also committed to amending the follow up program, if required, to verify the effectiveness of those additional community-specific mitigation measures. Treasury Metals will also work with the affected communities, either through the Environmental Management Committee, or community specific committees, for the life of the Project to aid communications regarding fish and aquatic habitat research, monitoring, mitigation, and offsetting. To the reasonable extent possible Treasury Metals would establish, fund and operationalize this collaborative committee. Given the time required for trophic transfer of chemicals within the food web, fish tissue sampling will be conducted and reported on annually.		
MMC-20.74	Commitment	**Chanterelle Mushroom:** Based on input received from Indigenous communities in 2015, Treasury Metals is aware of the potential for the Project to have an effect on the harvesting of chanterelle mushrooms located proximal to the former MNRF Tree Nursey, which is within the property boundary (but outside of the operations area) of the Goliath Gold Project. Based on the comments received Treasury Metals acknowledges that these resources have the potential to provide economic benefits to those that harvest the resource. Although the Project will not directly impact any areas known for chanterelle mushroom harvesting, for health and safety purposes, access to the known harvesting areas will be controlled for the life of the Project. Treasury Metals is committed to developing community-specific access management plans in consultation with the Indigenous communities. Treasury Metals envisions these plans would detail how community members would be escorted safely through the operations area, and then allowed to safely harvest chanterelle mushrooms in those areas identified outside of the operations area, unaccompanied. The plan would also detail how Indigenous community members would then be escorted safely back through the operation area, once traditional harvesting of chanterelle mushrooms has been completed as well as communications protocols for while community members are onsite. Treasury Metals will install gates as needed on Tree Nursery Road to the north and south of the operations area, demarking those areas through which members of Indigenous communities will require an escort for safety reasons. Treasury Metals will collect chanterelle mushrooms samples and collocated soil samples, as available, and send all samples for chemical analysis to capture any potential effects of the Project on the quality of chanterelle mushrooms for consumption harvested by Indigenous communities for commercial or	Active phases of the Project	TMI_862-AC(2)-02_Attachment_1

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		subsistence purposes, and in turn socio-economic effects. Full details of the chanterelle mushroom sampling methodology will be determined prior to construction in consultation with the Indigenous communities by way of the Environmental Management Committee, and adjusted as needed throughout the life of the Project by way of the Environmental Management Committee. However, it is expected that monitoring for chanterelle mushrooms presence will occur annually in the month of September and that if present samples will be collected, placed in a brown paper bag, rinsed, frozen prior to analysis and sent to an accredited laboratory. The results of the annual chanterelle mushrooms sampling program including abundance and chemical concentrations, will be shared with the Indigenous communities. Additionally, Treasury Metals will include the results of the chanterelle mushrooms sampling program (if any) in the annual environmental report. If required, Treasury Metals is committed to the development of community-specific mitigation measures and accommodation measures. Examples of additional mitigation measures include Treasury Metals commitment to the development of community specific risk communication plans to help reassure the community members and the public that the Project is not impacting the quality of chanterelle mushrooms for consumption. Treasury Metals is also committed to amending the follow up program, if required, to verify the effectiveness of those additional community-specific mitigation measures. Given the opportunistic nature of sample collection of chanterelle mushroom, it is only practicable to collect on a seasonal basis and hence report once per year. However, Treasury Metals is committed to sharing with the communities' updates on notable events inclusive of environment, social/community, operational, and exploration aspects occurring at the Project on a quarterly basis. Treasury Metals envisions the notable events report to be posted publicly to the Treasury Metals website thus being available to Indigenous communities and to nearby recreational or commercial land users.		
MMC- 20.75	Commitment	**Tourism with respect to WLON:** Based on input received from Wabigoon Lake Ojibway Nation (WLON) in 2015, Treasury Metals is aware that the community is concerned regarding the potential impacts of the Project on local tourism activities including: sport and recreational fishing, tourist camps, and local employment as fishing guides. Treasury Metals is committed to sharing with WLON updates on notable events inclusive of environment, social/community, operational, and exploration aspects occurring at the Project on a quarterly basis and will work with WLON as to the preferred method for public distribution. Treasury Metals is committed to working with WLON for the life of the Project to manage and mitigate the possible effects of the Project on local tourism and associated activities specifically with respect to fishing and guiding. Treasury Metals is committed to the development of community-specific mitigation measures and accommodation measures. An example of additional mitigation is Treasury Metals commitment to the development of community specific risk communication plans to help reassure the community members and the public that the Project is not impacting the water quality or quality of fish in Thunder Lake and Wabigoon Lake which would include specific mention in the quarterly updates of notable events. Treasury Metals will also look for opportunities to contribute to the growth of local tourism through sponsorship of local events designed to enhance tourism in the area. Treasury Metals is also committed to amending the follow up program, if required, to verify the effectiveness of those additional community-specific mitigation measures. Treasury Metals will include the results of the surface water quality program and the fish sampling program in the annual environmental report.	Active phases of the Project	TMI_862-AC(2)-02_Attachment_1

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
MMC-20.76	Commitment	**Access and Blueberries:** Treasury Metals is aware of the potential for the Project to have an effect on the harvesting of blueberries within the property boundary. The Project will overprint an area of known blueberry harvesting near the proposed tailings storage facility (TSF). For health and safety purposes, access to other known harvesting areas proximal to the former MNRF Tree Nursey will be controlled for the life of the Project. Treasury Metals is committed to developing community-specific access management plans in consultation with the Indigenous communities. Treasury Metals envisions that these plans would detail how community members would be escorted safely through the operations area, and then allowed to safely harvest blueberries in those areas identified outside of the operations area, unaccompanied. The plan would also detail how Indigenous community members would then be escorted safely back through the operations area, once harvest activities have been completed. Treasury Metals will install gates as needed on Tree Nursery Road to the north and south of the operations area, demarking those areas through which members of Indigenous communities will require an escort for safety reasons. Treasury Metals will collect blueberry samples, collocated with soil and dustfall samples, as required and send all samples for chemical analysis to capture any potential effects of the Project on the quality of blueberries for consumption harvested by Indigenous communities for commercial or subsistence purposes, and in turn socio-economic effects. The sampling locations will be chosen as part of continued dialogue and engagement activities with Indigenous communities. The results of the annual blueberry sampling program will be shared with the Indigenous communities. Additionally, Treasury Metals will include the results of the blueberry sampling program in the annual environmental report. If required, Treasury Metals is committed to the development of community-specific mitigation measures and accommodation measures. Examples of additional mitigation measures include Treasury Metals commitment to the development of community specific risk communication plans to help reassure the community members and the public that the Project is not impacting the quality of blueberries for consumption. Treasury Metals is also committed to amending the follow up program, if required, to verify the effectiveness of those additional community-specific mitigation measures. Given the nature of blueberry growth and blueberry harvest patterns, it is only practicable to sample and report once per year. Treasury Metals is committed to sharing updates on notable events inclusive of environment, social/community, operational, and exploration aspects occurring at the Project with the communities on a quarterly basis to ensure that the community is kept apprised of the operational conditions that may affect the harvest of blueberries. Treasury Metals envisions the notable events report to be posted publicly to the Treasury Metals website thus being available to Indigenous communities and to nearby recreational or commercial land users.	Active phases of the Project	TMI_862-AC(2)-02_Attachment_1
MMC-20.77	Commitment	**Access and Baitfish Harvesting:** For health and safety purposes, access to known baitfish harvesting areas within the former MNRF Tree Nursey will be controlled for the life of the Project. Treasury Metals is committed to developing community-specific access management plans in consultation with the Indigenous communities. Treasury Metals envisions that these plans would detail how community members would be escorted safely through the operations area, and then allowed to safely harvest baitfish in those harvesting areas that are outside of the operations area, unaccompanied. The plan would also detail how Indigenous community members would then be escorted safely back through the operations area, once harvest activities have been completed. Treasury Metals will install gates as needed on Tree Nursery Road to the	Active phases of the Project	Clarification memorandum

Table MMC-20: Aboriginal Peoples- Mitigation, Monitoring, and Commitments (continued)

Unique Identifier	Mitigation, Monitoring Requirement, or Commitment	Description	Phase	Reference in revised EIS or Round 2 Response
		north and south of the operations area, demarking those areas through which members of Indigenous communities will require an escort for safety reasons.		

MMC.3 Revised EIS (April 2018) Commitments for the Project

Table 10.0-1: Summary of Commitments (Revised EIS [April 2018])

Commitment Identifier	Commitment
Cmt_001	Treasury will continue to document all comments, issues, or concerns raised by stakeholder groups. All input Treasury receives will be duly considered and acted upon according to the nature of the input received.
Cmt_002	Treasury will follow CEAA protocols in distributing the EIS document for review, including posting for Notice of Public Information Events for Project updates to stakeholder groups.
Cmt_003	Treasury will maintain a local hiring policy, including First Nation communities. The application of this policy is dependent upon the skills and workforce being available locally.
Cmt_004	Treasury will maintain, where applicable, a local purchasing policy to purchase goods and services from local suppliers. This policy has the expectation that goods and services will be purchased locally assuming price, delivery and service is competitive with outside suppliers.
Cmt_005	Treasury will maintain an active safety program aimed at protecting worker safety ensured by meeting applicable occupational health and safety legislation standards, as well as utilizing other best practices. Employee involvement will be a cornerstone of the safety plans, policies and programs.
Cmt_006	All workers and visitors will receive an orientation and safety training prior to conducting work on site. This will include a health and safety overview.
Cmt_007	All health and safety policies and procedures will be reviewed annually.
Cmt_008	Emergency response procedures will be established. All incidents will be reported as per the applicable standards set with the health and safety policies and procedures.
Cmt_009	All vehicles will maintain an emergency kit including communication equipment, first aid kit, and a fire extinguisher where appropriate.
Cmt_010	All chemicals used at the site will have a Material Safety Data Sheet (MSDS) for safe use, relevant regulatory and safety requirements in place and PPE available for use at all times.
Cmt_011	All buildings will meet fire protection requirements and codes. Fire drills will occur on a regularly scheduled basis. All new workers, contractors and visitors will receive a safety orientation which will include a fire response training
Cmt_012	Treasury will continue to engage with Aboriginal communities and groups through the life of the project.

Table 10.0-1: Summary of Commitments (Revised EIS [April 2018]) (continued)

Commitment Identifier	Commitment
Cmt_013	Ditching and drainage will be designed to collect and manage runoff from site, and will be established around stockpiles. All collection ponds will be integrated with the site water management plan.
Cmt_014	All chemicals on site will be stored according to government regulations and industry best practices. Spill protection systems will be designed according to industry best practices.
Cmt_015	All chemical spills within the processing plant, or chemical storage areas will be controlled through provision of secondary containment as appropriate. Spills of potentially hazardous materials during transport, or from on-site material storage and handling facilities will be managed. Measure will be taken to prevent and clean up any hydrocarbon spills (and other spills) at source to ensure such materials do not enter the surrounding natural environment where practical.
Cmt_016	In the event of a spill, it will be reported according to Ministry of Environment and Climate Change (MOECC) protocols.
Cmt_017	Best management practices for dust control will be implemented. A plan will be prepared to identify all potential sources of dusts, outline mitigation methods to employ, and detail all records and inspections required by regulatory officials. Treasury will monitor air emissions through implementation of current industry standards to meet regulatory requirements (Ontario Reg. 419/05, AAQC, MOECC).
Cmt_018	Treasury will design the operation to meet noise emission regulatory requirements (NPC-103, MOECC)
Cmt_019	Treasury will consult local stakeholders throughout Project life to ensure the Company is aware of general or specific concerns the public may have. A formal public complaint logging and feedback system will be implemented when plant construction commences. This system will be in place for the life of the mine.
Cmt_020	Dangerous wildlife awareness will be part of the site's safety program. Safety training will be provided to workers to raise awareness and to assist in protecting them from injury. Food waste will be managed in a manner that limits contact/attraction of potentially dangerous wildlife.
Cmt_021	Road-killed animals or any other carcasses found on-site will be removed in a timely and legal manner to limit the attraction of wildlife.
Cmt_022	Tailings Storage Facility (TSF) will be constructed to meet all regulatory requirements and industry best practices standards as described within the Provincial Lake and Rivers Improvement Act. TSF will be designed and constructed to withstand the probable maximum flood and maximum credible earthquake. A remedial action plan will be developed as part of the emergency management plan, and environmental management plan with appropriate government agencies, in the event of a dam breach.

Table 10.0-1: Summary of Commitments (Revised EIS [April 2018]) (continued)

Commitment Identifier	Commitment
Cmt_023	Groundwater monitoring wells will be installed across Project site (as described in Section 13 and Appendix M).
Cmt_024	Environmental monitoring will be conducted in accordance with standard practice and regulatory requirements, including any site –specific environmental approvals (Water Resources Act (Section 34, Section 53), PWQG, ODWS, NPC-103, and NPC-119).
Cmt_025	A blasting schedule and plan will be developed to notify the public when blasting will occur and to describe all blasting activities on site. This plan will be developed though consultation with local stakeholders and regulatory officials.
Cmt_026	All personnel who handle explosive will be checked to ensure they have the required certified training. All un-authorized or non-essential personnel will be restricted from access to blasting sites, and storage facilities.
Cmt_027	Operational procedures for all unit Operations and jobs will be implemented to ensure worker safety and prevent operational upsets and equipment failure due to improper use, Accountability systems will be in place to deal with procedural violations. All operational procedures will be reviewed annually.
Cmt_028	All operational and maintenance procedures will be reviewed annually and revised if required to reflect changes that may have occurred.
Cmt_029	A “progressive change management” system will be implemented to ensure that any material changes to Operations, maintenance or engineering go through a formal review process to ensure that the possibility of injury, environmental incidents, equipment damage and production interruptions are minimized to the greatest extent possible.
Cmt_030	A list of environmental management plan commitments made during the environmental assessment process will be maintained indicating: The nature of the commitment To whom (e.g., public, agency) the commitment was made, if specific Whether the commitment is addressed or linked to a regulatory instrument such as regulation or environmental approval Any applicable timeline associated if any Status of the commitment Additional actions required to fulfill the commitment
Cmt_031	Environmental aspects and potential impacts of the project will be managed within an environmental management plan (EMP) which integrates environmental performance with overall project management.

Table 10.0-1: Summary of Commitments (Revised EIS [April 2018]) (continued)

Commitment Identifier	Commitment
Cmt_032	Implementation and maintenance of the EMP will be driven by Treasury commitment to environmental compliance and regulatory needs. Workers will be educated on Treasury's commitment to environmental excellence and environmental policies.
Cmt_033	EMP will be reviewed annually using a precautionary and progressive approach considering changing circumstances which could affect the suitability of monitoring and effectiveness of the goals of the EMP.
Cmt_034	During Operations, effluent discharged from the Project to Blackwater Creek will meet the Provincial Water Quality Objectives (PWQO) for the parameters listed below, or background concentrations if background levels are above the PWQO. Where there is no PWQO for a parameter, the commitment will be to meet the Canadian Water Quality Guidelines (CWQG). For total mercury, the commitment will be that effluent discharged to Blackwater Creek will meet background concentrations for that watercourse. Background concentrations for Blackwater Creek are defined as the 75th percentile in accordance MOECC receiving water assessment policy. Detailed parameters will be determined through engagement with appropriate Provincial and Federal regulatory bodies. • Aluminum • Antimony • Arsenic • Beryllium • Boron (total) • Cadmium • Chloride • Chromium • Cobalt • Copper • Cyanide • Iron • Lead • Mercury (total) • Molybdenum • Nickel • Nitrate • Phosphorus • Selenium • Silver • Thallium • Uranium • Vanadium • Zinc
Cmt_035	All final effluent discharge points will have control structures to immediately cease discharge if and when necessary.
Cmt_036	All final effluent and point source air discharge points will be sampled and results reported to the appropriate authorities in accordance with environmental permit requirements.
Cmt_037	Progressive reclamation of mine waste rock area will be undertaken, where practical, once maximum height has been reached.
Cmt_038	The site will be reclaimed and the land restored to a naturalized state per the mine closure plan approved by the Ministry of Northern Development and Mines

MMC.4 Revised EIS (April 2018) Mitigation Measures

Table 10.0-2: Summary of Mitigation Measures (Revised EIS [April 2018])

Mitigation Identifier	Mitigation Description
Mit_001	Reduce the overall height of the constructed features to the extent possible.
Mit_002	Construct WRSA and overburden stockpiles with an overall a 3:1 (horizontal to vertical) side slope to maintain a more natural appearance.
Mit_003	Initiate construction of the WRSA from the western edge
Mit_004	Vegetate the western facing side of the WRSA as soon as practicable.
Mit_005	Vegetate of the overburden stockpile as soon as practicable
Mit_006	Decommission the low-grade ore (LGO) stockpile at the end of Operations
Mit_007	Overburden materials (clay, sand or organic material) stripped during the site preparation and construction phase will be placed in the overburden stockpiles located directly to the south of the proposed open pits.
Mit_008	Progressively construct a perimeter ditch and seepage collection system around the Operations area to capture and direct all runoff from the site to the water management system.
Mit_009	Equipment will be maintained in good working order and inspected regularly
Mit_010	Re-fueling of equipment will be done in a manner to limit the potential for spills
Mit_011	Fuel will be stored in a lined, contained area.
Mit_012	Fueling vehicles will be parked in a concrete lined area when not in use.
Mit_013	Emulsion explosives will be stored and dispensed in a lined, contained area
Mit_014	Trucks used for the delivery of emulsion explosives will be parked in a concrete lined area when not in use.
Mit_015	Processing plant area will be lined and equipped with runoff and seepage collection
Mit_016	LGO stockpile will be equipped with runoff and seepage collection
Mit_017	Activities on the overburden stockpiles will be minimized and the stockpiles left undisturbed until closure activities are underway.
Mit_018	The WRSA will be capped with a low permeability cover, then a layer of overburden, then vegetated during closure.
Mit_019	Waste rock will be evaluated and segregated between PAG and NAG rock, if feasible
Mit_020	The PAG waste rock would be placed in the mined out areas of the open pit, to the extent practical.
Mit_021	During Operations, tailings will be maintained in saturated conditions, and a water cover will be maintained over the majority of the TSF to prevent the onset of acidification.

Table 10.0-2: Summary of Mitigation Measures (Revised EIS [April 2018]) (continued)

Mitigation Identifier	Mitigation Description
Mit_022	The open pit will be allowed to flood at closure
Mit_023	Tailings within the TSF will be isolated using either a low permeability dry cover, or a wet cover of non-process water. The preferred option for limiting environmental effects is a wet cover.
Mit_024	The pit lake will be monitored as it is filling to determine whether batch treatment will be required to ensure the water meets PWQO, or background if background levels exceed the PWQO, prior to the discharge from the pit lake to a tributary of Blackwater Creek.
Mit_025	Heavy equipment activity will be conducted between the hours of 07:00 and 22:00, if feasible
Mit_026	Endeavor to schedule noise causing events, such as blasting, to reduce disruption to residents.
Mit_027	Advise nearby residents of significant noise-causing activities, such as blasting.
Mit_028	All internal combustion engines will be fitted with appropriate muffler systems
Mit_029	Implement a modern blasting program that minimizes the blast area, the overall amount of explosives required, and through detonating procedures, minimize the amount of explosives per delay.
Mit_030	Adjust blasting practices if effects of vibration to spawning shoals is identified
Mit_031	Material will be loaded into haul trucks in a manner that minimizes the drop height from the loader or excavator bucket to the bed of the truck
Mit_032	The WRSA and overburden stockpile will be situated to act as noise berms where possible
Mit_033	In the event that complaints lead to the identification of specific sources of concern, source-specific abatement such as noise walls, berms, or operational restrictions will be employed, as appropriate.
Mit_034	Activities during the site preparation and construction phase will generally occur during the daytime. If there are times when lighting is required to ensure the safety of the workers, portable lighting will be used in required areas only.
Mit_035	Portable lighting will be directed downward
Mit_036	The higher Lux illumination levels (>80) will be placed within the process plant and mine infrastructure buildings, which contains the process and electrical equipment.
Mit_037	All externally mounted luminaires and their associated lamps will be designed to meet the requirements and recommendations of the Canadian Electrical Code (CEC), and the Building Code of Ontario.
Mit_038	External light fixtures will be installed at a tilt angle of 45°

Table 10.0-2: Summary of Mitigation Measures (Revised EIS [April 2018]) (continued)

Mitigation Identifier	Mitigation Description
Mit_039	Cut off angles for external lightings will be designed to minimize the off-site light trespass
Mit_040	Nighttime illumination will not be provided at the tailings storage facility (TSF).
Mit_041	Nighttime illumination will only be provided in the open pit when required. Portable lighting will be used in these situations.
Mit_042	Activities during the closure phase will generally occur during the daytime. If there are times when lighting is required to ensure the safety of the workers, portable lighting will be used in required areas only.
Mit_043	Blasting will likely be restricted to once per day, and only a few days per week.
Mit_044	All internal combustion engines will be properly maintained and all emission control systems (e.g., diesel particulate filters) will be kept in good working order.
Mit_045	Water and chemical suppressants will be used for dust control on the haul roads at the mine site when temperatures are above freezing
Mit_046	Best management practices plan for dust control will be implemented on the site during site preparation and construction, Operations and closure.
Mit_047	The Project will utilize the 115 kV transmission line adjacent to the Project
Mit_048	The WRSA will be located immediately to the north of the open pit
Mit_049	Placing the overburden storage area immediately to the south of the open pit to reduce the haul distances.
Mit_050	Project design incorporates a compact footprint.
Mit_051	Perimeter runoff and seepage collection systems will be constructed around the TSF.
Mit_052	The drawdown zone of the dewatering process will capture all seepage that bypasses the seepage collection systems and will report to the open pit.
Mit_053	During Operations, excess water not required in the process will be treated to concentrations that meet Provincial Water Quality Objectives (PWQO) or Canadian Water Quality Guidelines (CWQG) for the protection of aquatic life, or background if background levels exceed the PWQO, prior to discharging to Blackwater Creek. In the case of mercury, effluent will be treated to meet the background concentrations in Blackwater Creek.
Mit_054	Industry standard erosion and sediment controls, such as sediment traps within ditches, will be implemented during the site preparations and construction phase.
Mit_055	There will be no discharges to surface water during the closure phase.
Mit_056	During closure, the site will be graded such that runoff from the Operations area will be directed to the open pit during closure and post-closure phases.

Table 10.0-2: Summary of Mitigation Measures (Revised EIS [April 2018]) (continued)

Mitigation Identifier	Mitigation Description
Mit_057	Effectively manage water collected on-site using constructed storage facilities, reducing the need for fresh water withdrawals and discharges of treated water.
Mit_058	An engineered structure, designed to dissipate flows and avoid erosion, will be constructed to discharge effluent during Operations into Blackwater Creek.
Mit_059	Fresh water takings from tree nursery irrigation ponds on Thunder Lake Tributaries 2 and 3 will not exceed 5% of the flow entering the ponds
Mit_060	Once the open pit has been filled, excess water from the open pit will be passively released through an engineered spillway into the existing channel of Blackwater Creek Tributary 1.
Mit_061	The process will employ a thickener to help recover cyanide solution from the tailings for reuse in processing. The resulting tailings will then be treated using the SO_2-air process to reduce cyanide in the tailings directed to the TSF so as to meet MMER requirements over a long-term basis.
Mit_062	The floor of the TSF will be a low-permeability layer capable of achieving seepage rates that ensure receiving surface water quality is equivalent to baseline, or meet PWQO. The liner would be comprised of natural material, or if necessary, an HDPE liner laid over a prepared basin of sand or comparable material.
Mit_063	Deepen those wells where the drawdown affects the wells ability to provide the required supply.
Mit_064	Financial assurance would be provided to the MNDM as required and applicable as per regular permitting processes to ensure maintenance and provision of neighbouring residential wells
Mit_065	Minimized the amount of habitat clearing required for the Project by siting Project infrastructure, to the extent practicable, in previously disturbed areas and optimizing the use of existing roadways.
Mit_066	Develop slope dependent vegetated buffers along rivers creeks and wetlands in conjunction with the MNRF. Buffers should be 120 m, wherever feasible.
Mit_067	Timber clearing will be conducted outside the breeding bird window (May 1 to August 15).
Mit_068	Closure activities should include revegetation with species suitable for the development of habitats capable of supporting a diversity of wildlife species.
Mit_069	Enforcement of speed limits within the Project area
Mit_070	Minimize disturbing areas with suitable bird breeding habitat, where practicable.
Mit_071	Wildlife awareness training for all staff will be provided including SAR identification/legislation and education regarding seasonal changes in animal behaviour and their presence.

Table 10.0-2: Summary of Mitigation Measures (Revised EIS [April 2018]) (continued)

Mitigation Identifier	Mitigation Description
Mit_072	Disposal of food waste generated on site will be done in an appropriate manner
Mit_073	Clearing of potential terrestrial reptile and amphibian breeding habitats will be restricted to periods outside the breeding season as directed by MNRF
Mit_074	Develop a wetland clearing strategy with the local MNRF to reduce the effects to overwintering frogs (i.e. draining wetlands to discourage hibernation).
Mit_075	If habitat destruction / damage cannot be avoided, alternate nesting habitat will be provided as a provision of compensatory habitat for species protected under the ESA
Mit_076	Acceptable buffers will be provided around all raptor nests identified throughout all Project phases
Mit_077	Prior to overburden removal, any beaver dams within the Project footprint will be removed and the impoundments will be allowed to draw down.
Mit_078	Activities and the construction of Project components that will impact or overprint watercourses will occur during the fisheries timing window when in-stream work is permitted.
Mit_079	To the extent practicable, fish in the sections of Blackwater Creek Tributary 1 that will be isolated by the construction of the perimeter ditch and overprinted by the removal of overburden from the open pit will be captured and relocated to the same tributary downstream from the Operations area, or to the main branch of Blackwater Creek.
Mit_080	To the extent practicable, fish in the sections of Blackwater Creek Tributary 2 that will be isolated by the construction of the perimeter ditch and overprinted by the construction of the TSF and minewater pond will be captured and relocated to the same tributaries downstream from the Operations area, or to the main branch of Blackwater Creek.
Mit_081	Pump intakes in the irrigation ponds at the former MNRF tree nursery will be fitted with fish screens to prevent entrainment.
Mit_082	As the Project advances, detailed engineering will be completed to ensure that all downstream culverts can support any predicted increases in flows and maintain current levels of fish passage.
Mit_083	Provide offsetting of fisheries habitat losses as part of the authorization required under the Fisheries Act.
Mit_084	Retention of forested areas wherever feasible.
Mit_085	Identify and protect the locations of any known SAR or provincially significant plant.
Mit_086	Broadcast spraying of herbicides will be avoided
Mit_087	Revegetation of final grade slopes around the open pit to encourage the development of riparian habitats.
Mit_088	Reclamation of mining footprints to be carried out in accordance with O.Reg. 240/00.

Table 10.0-2: Summary of Mitigation Measures (Revised EIS [April 2018]) (continued)

Mitigation Identifier	Mitigation Description
Mit_089	Seeding or hydro-seeding of the reclaimed areas with native seed mix.
Mit_090	Minimize crown land in the Project footprint
Mit_091	Minimize activities on the eastern portion of the Project property.
Mit_092	During the operating life of the Project, no access will be permitted to the Operations area for security and safety reasons. Access to the former MNRF tree nursery will be controlled. Aboriginal peoples will be able to arrange for accompanied access to these areas with Treasury Metals. Appropriate signage will be placed around areas where access is limited.
Mit_093	Implement a Communications Management Plan to address ongoing engagement with potentially affected stakeholders and Aboriginal groups throughout the life of the Project. The plan should include a framework for a transparent grievance process.
Mit_094	Treasury Metals will undertake additional land and resources use studies to ensure a pre-construction baseline of the land and resource users as supported by local communities.
Mit_095	Develop a Socio-Economic Management Plan to help ensure commitments are implemented, adverse socio-economic effects are minimized, results are monitored, and effects are adaptively managed.
Mit_096	Continue to collect additional traditional land use information for the Project area through meetings and traditional land use studies to identify areas of plant gathering, hunting, trapping, fishing, and cultural activities.
Mit_097	Contract security services to help promote a secure and safe worksite environment
Mit_098	Incorporate strategies and actions to aid residents following closure in the Socio-Economic Management Plan.
Mit_099	Treasury Metals will establish and enforce traffic safety protocols, regulatory and cautionary signage, road maintenance and emergency response plans on all Project roads to prevent collisions and accidents.
Mit_100	Ongoing engagement with potentially affected Aboriginal peoples throughout the life of the Project.
Mit_101	Ongoing engagement with potentially affected stakeholders throughout the life of the Project.
Mit_102	Treasury Metals will undertake an update of the socio-economic baseline to establish a pre-construction baseline of the affected communities prior to commencing the Project site preparation and construction
Mit_103	Employment preference will be given to local and regional labour where possible, including Aboriginal and non-Aboriginal communities. This will be dependent upon the skills and workforce being available locally.

Table 10.0-2: Summary of Mitigation Measures (Revised EIS [April 2018]) (continued)

Mitigation Identifier	Mitigation Description
Mit_104	Develop training and job transfer policies to support workforce development in the socio-economic study area
Mit_105	Develop training programs for unemployed and under employed residents and non-workers
Mit_106	Treasury Metals will communicate appropriate information (e.g., the timing and communities in which new residents may locate) to the school district(s) to assist with their resource planning process.
Mit_107	Treasury Metals will communicate education requirements needed for employment on the site.
Mit_108	Treasury Metals will work with specific affected homeowners to ensure that their concerns about potential Project-related effects are addressed.
Mit_109	Treasury Metals will work with local and regional governments to minimize the effects of in-migration and out-migration where possible.
Mit_110	Treasury will work with public safety services to develop safety and work policy guidelines for mine workers, including a policy of no alcohol or drugs onsite and policies and guidelines to support a respectful work environment.
Mit_111	Incorporate strategies and actions to help local agencies monitor community wellbeing and take corrective actions where appropriate.
Mit_112	Treasury Metals will engage the Local Services Board in Wabigoon to acquire Tree Nursery Road in its entirety from north of Normans Road.
Mit_113	Treasury Metals will approach MTO to discuss recommendations presented within the transportation study (Appendix E to the Revised EIS) regarding the snow plow turn-around for Anderson Rd. and Highway 17.
Mit_114	Treasury Metals will approach MTO to discuss recommendations presented within the transportation study (Appendix E to the Revised EIS) regarding the need for lighting at the Anderson Rd. and Highway 17 intersection.
Mit_115	Treasury Metals will approach MTO to discuss recommendations presented within the transportation study (Appendix E to the Revised EIS) regarding clearing of shrubbery, trees, soil mounds, etc. that could cause a visual obstruction for vehicles using the Anderson Rd. and Highway 17 intersection.
Mit_116	Treasury will maintain, where applicable, a local purchasing policy to purchase goods and services from local suppliers. This policy has the expectation that goods and services will be purchased locally assuming price, delivery and service is competitive with outside suppliers.
Mit_117	Revegetation of the WRSA and TSF will be done using species that are not traditionally used for medicinal purposes, or for consumption, and would deter these types of plants from growing.

Table 10.0-2: Summary of Mitigation Measures (Revised EIS [April 2018]) (continued)

Mitigation Identifier	Mitigation Description
Mit_118	Leave a 50 m buffer zone around remaining watercourses within the Project area.
Mit_119	If previously undocumented archaeological resources are discovered, the person discovering the resources will stop alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (I) of the Ontario Heritage Act.
Mit_120	If human remains are discovered, alteration of the site will stop and the person making the discovering will immediately notify the police, or coroner, and the Registrar of cemeteries, at the Ministry of Consumer Services, as required under the Cemeteries Act, R.S.O. 1990 c.C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force).
Mit_121	Restrict activities and development within 300 m of major water sources and within 300 m of historical travel routes, to only those areas where an archeological assessment has been completed.
Mit_122	Do not allow new ground altering activities to occur in areas where an archaeological assessment has not been completed. Once an archaeological assessments has been completed ground altering activities.
Mit_123	At closure, continue training opportunities to help residents to increase their competitiveness and chances to get employment elsewhere
Mit_124	Once the pit lake is fully flooded, it is expected that the monitoring of the water quality in the pit lake will continue for a period of time to determine whether additional batch treatment may be required to ensure the water released from the pit lake meets effluent release limits.
Mit_125	Spills will be contained and the soil remediated in accordance with the Emergency and Spills Response Management Plan.
Mit_126	Prior to construction activities, Treasury Metals will engage with the local trapping council, Indigenous communities and the MNRF to prepare a plan for the removal of nuisance wildlife (i.e., beaver) within the Blackwater Creek watershed.
Mit_127	There will be no drinking water wells installed on the Project during the Operations, closure, or during the portion of the post-closure phase when monitoring is required to confirm performance of the reclamation landscape.
Mit_128	MOECC Fish consumption advisories for Thunder Lake and Wabigoon Lake will be adhered to.
Mit_129	Project workers and site visitors will receive sufficient risk protection from direct contact with soil and water and/or dust inhalation via the implementation of PPE and requirement for suitable clothing.

Table 10.0-2: Summary of Mitigation Measures (Revised EIS [April 2018]) (continued)

Mitigation Identifier	Mitigation Description
Mit_130	Access to the waste rock storage area (WRSA) and the tailings storage facility (TSF) during Operations and closure will be restricted to those workers with the required health and safety training and personal protective equipment (PPE).