


Greenstone Mine

2024 Federal Decision Statement Annual Report, Conditions 2.9 and 2.10

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			Name:	GGM	GGM	Braeden Connor Greenstone Mine

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List of Acronyms

2024 Reporting Period	October 1, 2023 to September 30, 2024
AQMMP	Air Quality Management and Monitoring Plan
BMMP	Biodiversity Management and Monitoring Plan
CEAA	Canadian Environmental Assessment Agency
DFO	Fisheries and Oceans Canada
DO	dissolved oxygen
EAS	Environmental Advisory Sub-committee
ECCC	Environment and Climate Change Canada
EIS	Environmental Impact Statement
ESC	Erosion and Sediment Control
ETP	Effluent Treatment Plant
GFC	Goldfield Creek
GGM	Greenstone Gold Mines
IAAC	Impact Assessment Agency Canada
MDMER	Metal and Diamond Mining Effluent Regulations
MECP	Ontario Ministry of the Environment, Conservation and Parks
MNR	Ontario Ministry of Natural Resources
MTO	Ontario Ministry of Transportation
PDA	Project Development Area
the Mine	Greenstone Mine, formerly called the Hardrock Project
SMP	Soil management Plan
SWAT	Southwest Arm Tributary
WRSA	Waste Rock Storage Area

Executive Summary – English

Greenstone Gold Mines (GGM) has constructed, is currently operating and will ultimately decommission/close a new open pit gold mine, process plant, and associated ancillary facilities, collectively known as the Greenstone Mine (the Mine), formerly known as the Hardrock Project (the Project). The Mine site is located just south of Geraldton, Ontario, within the municipality of Greenstone, at the intersection of Highway 11 and Highway 584.

The Minister of the Environment and Climate Change issued a Decision Statement under Section 54 of the Canadian Environmental Assessment Act, 2012 dated December 10, 2018 for the Mine's Environmental Impact Statement (EIS) (Stantec 2017), which included a series of conditions to be met for GGM to proceed with the Project. This report is submitted to meet the Annual Report requirements described under Conditions 2.9 and 2.10 of the Decision Statement and describes activities undertaken by GGM to comply with each of the conditions in the Decision Statement during the reporting period of October 1, 2023 to September 30, 2024 (2024 reporting period).

Significant milestones were achieved in 2024, including announcement of commercial production on November 6, 2024 and the following notable activities:

- The first gold from Greenstone Mine was poured May 22, 2024.
- Official mine opening occurred on August 29, 2024.
- Drilling, blasting, and excavation of the open pit has been ongoing in Q4 2023 and 2024, with blasting typically occurring a few times each week.
- Commissioning of the TMF in late December 2023 with the relocation of historical MacLeod tailings to the TMF commencing. Placement of fresh tailings within the TMF commenced in April 2024.
- The third quarter of 2024 saw an important project-based milestone of achieving a 30-day running average of 60% nameplate throughput, signaling the end of hot commissioning and performance testing and the start of mill ramp up.
- The temporary bypass channel was completed in Q1 2024, to divert flow around portions of the Goldfield Creek (GFC) realignment that require remediation.

During the 2024 reporting period, the following follow-up monitoring plans were implemented and the results are summarized in this report:

- Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan (GGM 2021a)
- Biodiversity Monitoring and Management Plan (GGM 2022)
- Current Use of Lands and Resources for Traditional Purposes – Follow-Up Plan (GGM 2020a)
- Indigenous Peoples Health Risk Assessment Follow-up Plan (GGM 2020b)

These follow-up programs describe the results of the 2024 reporting period.

GGM has established environmental advisory sub-committees (EASs) with the local Indigenous groups, which meet regularly. These committees have agreed upon methods of communication, types of information to be provided, review timelines, and discussion of views/information.

A Fish and Fish Habitat Follow-up Monitoring Plan (GGM 2021a) was prepared to address seven specific federal Conditions of Approval related to monitoring potential effects of the Project on fish and fish habitat (conditions 3.14, 3.15, 3.16, 3.17, 3.2, 5.4, and 5.5.1). The results of the 2024 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report are summarized below.

As per the requirements of federal condition 3.14, GGM has developed and implemented measures to control erosion and sedimentation. An Erosion and Sediment Control (ESC) Plan (GGM 2020d) was implemented to mitigate potential effects of erosion and sedimentation on fish and fish habitat. Erosion and sediment control measures were regularly inspected to verify the effectiveness. Management practices were implemented to protect the environment, and to determine whether new management strategies and/or mitigation measures were required.

The Noise and Vibration Monitoring and Management Plan (NVMMP) (GGM 2020c) identifies an overpressure threshold of 50 kPa in water and a vibration threshold of 13mm/sec (in substrate). Throughout the 2024 monitoring period, a total of 169 blasts were conducted. A total of two vibration exceedances occurred during the spawning period, and no pressure exceedances were identified during this reporting period. Pressure recorded for all blast events were well below the 50 kPa threshold.

The Fish and Fish Habitat Follow-up Monitoring Plan identifies methods for monitoring water quality in Kenogamisis Lake, Mosher Lake, and the Southwest Arm Tributary (SWAT). During routine monthly sampling, surface water samples were collected as grab samples and were submitted to an accredited laboratory for analysis. Additionally, in-situ temperature, pH, conductivity, turbidity, and dissolved oxygen (DO) were measured at the water surface during sample collection using a multi parameter water quality meter. Temperature and DO water column profile sampling was also completed quarterly (February, June, August, October) at ten surface water monitoring locations.

Surface water quality data collected in the 2024 monitoring period for the 10 stations and parameters were compared to the seasonal site-specific surface water quality trigger thresholds. The following presents a summary of the Trigger Threshold 1 and Trigger Threshold 2 exceedances documented during the 2024 monitoring period and the results of the associated response plan. In summary:

- **Station 25:**

Trigger Threshold 1 exceedance of phosphorus and arsenic occurred in October 2023. Resampling of both parameters was conducted in December 2023 once ice conditions were safe, which showed the parameters below the seasonal 95th percentile baseline concentration and five times the analytical detection limit. Therefore, Trigger Threshold 1 was not confirmed, and no further action was required.

Trigger Threshold 1 exceedance of methylmercury occurred in August 2024. Resampling of the parameter was completed in September 2024, which also exceeded the seasonal 95th percentile baseline concentration and five times the detection limit. Therefore, exceedance of Trigger Threshold 1 for methylmercury was confirmed in September 2024. Trigger Threshold 2 evaluation was completed and concluded that there was a statistically significant upward trend for methylmercury at station 25 and therefore Trigger Threshold 2 was exceeded. Methylmercury exceedances above the 95th percentile baseline concentration and five times the detection limit had been predicted in the EIS/EA Amendment. The predicted methylmercury concentrations were below the Canadian Water Quality Guidelines for the Protection of Aquatic Life (CWQG-FAL) guideline by the Canadian Council of Ministers of the Environment (CCME). An investigation report for the Trigger Threshold 2 exceedance is being prepared and will be released once complete.

Trigger Threshold 1 exceedance for uranium occurred in February 2024. Resampling of the parameter was completed in March 2024, which also exceeded the seasonal 95th percentile baseline concentration and five times the detection limit. Therefore, an exceedance of Trigger Threshold 1 for uranium was confirmed in March 2024. Trigger Threshold 2 evaluation was completed and concluded that there was a statistically significant upward trend for uranium at station 25 and therefore, Trigger Threshold 2 was exceeded. Uranium at station 25 continued to exceed the 95th percentile baseline concentration and five times the detection limit in April, May and June 2024. An investigation report regarding uranium at Station 25 was completed in May 2024 and is attached to the 2024 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report. Station 25 was one of the two stations addressed in the investigation report. Station 39 was the other station, as explained below. The increased concentration of uranium concentrations at station 25 are consistent with predictions in the EIS/EA and is due to the diversion of flow from GFC and groundwater discharge to the GFC diversion channel, both of which have higher uranium concentration than the baseline uranium concentrations in the headwaters of the SWAT. As noted in the May 2024 Trigger Threshold 2 investigation report, the concentration of uranium in the SWAT is predicted to increase from an average baseline concentration of 0.065 µg/L to a predicted concentration at the end of operation of 1.064 µg/L which is less than the PWQO. Recommendations in the May 2024 Trigger Threshold 2 investigation report were to revise Trigger Threshold 1 to 1.17 µg/L, which is the predicted concentration of uranium in the SWAT (1.06 µg/L) plus 10% to account for the natural and new sources of uranium to the SWAT. GGM intends to submit the recommended revised Trigger Threshold 1 criteria for uranium at stations located in the SWAT/GFC diversion to IAAC and Ontario Ministry of Environment, Conservation, and Parks (MECP) for approval after consultation on the

proposed change is complete. Until such time, uranium at station 39 will continue to be evaluated per the existing criteria in the Plan. The proposed Trigger Threshold 2 for uranium at station 25 is less than the PWQO of 5 µg/L.

- **Station 39:**

Trigger Threshold 1 exceedance of cobalt occurred in May 2024. Resampling of cobalt occurred in June 2024 and the concentrations did not exceed the seasonal 95th percentile baseline concentration and five times the detection limit. Therefore, Trigger Threshold 1 exceedance was not confirmed, resulting in no further action being required. Trigger Threshold 1 exceedance of cobalt occurred again in September 2024. The resampling of cobalt completed in October 2024 will determine whether the occurrence of Trigger Threshold 1 exceedance is confirmed.

As detailed in the 2023 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report, Trigger Threshold 1 and 2 exceedances of uranium at Station 39 occurred in March 2023, which was during the 2023 monitoring period (October 1, 2022 through September 30, 2023). Uranium concentration at Station 39 stayed above the 95th percentile baseline concentration and five times the detection limit from October 2023 through September 2024 in the 2024 monitoring period. Since March 2023, two investigation reports were prepared. The first report was submitted in May 2023, and attached to the 2023 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report. Due to persistent exceedances of uranium at Station 39, the second report was prepared and submitted in May 2024, which is attached to the 2024 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report. As pointed out previously, the May 2024 investigation report addressed uranium exceedances in both stations 25 and 39. The investigation aimed to determine if there was an additional source or cause for the increased uranium concentrations at the two stations including Station 39. It was concluded that the uranium concentration exceedances were related to the additional mass load from the diversion of GFC and groundwater discharge to the GFC diversion channel. In the EIS/EA, the concentration of uranium was predicted to increase throughout the mine operations but predicted to remain below the PWQO. As detailed previously for station 25, recommendations in the May 2024 Trigger Threshold 2 investigation report were to revise Trigger Threshold 1 to 1.17 µg/L, which is the predicted concentration of uranium in the SWAT (1.06 µg/L) plus 10% to account for the natural and new sources of uranium to the SWAT. GGM intends to submit the recommended revised Trigger Threshold 1 criteria for uranium at stations located in the SWAT/GFC diversion to MECP for approval after consultation on the proposed change is complete. Until such time, uranium at station 39 will continue to be evaluated per the existing criteria in the Plan. The proposed Trigger Threshold 2 for uranium at station 39 is less than the PWQO of 5 µg/L.

- **Station 52:**

Trigger Threshold 1 exceedance of iron occurred in December 2023. Resampling of iron occurred in January 2024 and iron concentrations did not exceed the seasonal 95th percentile baseline concentration and five times the detection limit. Therefore, Trigger Threshold 1 exceedance was not confirmed, resulting in no further action being required.

- **Other Fish and Fish Habitat Monitoring**

The Fish and Fish Habitat Follow-up Monitoring Plan identifies the following main groundwater monitoring components 1) Pumped Volume Monitoring, 2) Water Level Monitoring, and 3) Water Quality Monitoring. During the 2024 monitoring period, there were no exceedances of the groundwater level and horizontal hydraulic gradient trigger thresholds for groundwater quantity. Most groundwater quality trigger thresholds were not exceeded during the reporting period. Details of the respective occurrences are summarized in Section 2.5 and 2.6.

The management and monitoring requirements of condition 5.5.1 deal specifically with potential effects related to changes in mercury and methylmercury in Walleye from Kenogamisis Lake.

Fish tissue monitoring activities were first required by the Plan for Kenogamisis Lake during the 2023 monitoring period. The fish tissue monitoring cycle is scheduled to occur every two years for the first six years of operation, after which time the need for additional monitoring will be evaluated. Walleye tissue sampling occurred in late September and October of 2023, in keeping with the requirements of the Monitoring Plan. *Mercury, methylmercury and arsenic concentrations in Walleye were measured in 2023 and reported on in the 2023 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report.* GGM will continue to implement the fish tissue monitoring program as planned with sampling for Walleye tissue in 2025 and 2027.

Barn swallow (*Hirundo rustica*), a threatened species (ESA 2007, SARO 2011) at the time of the EA, were present in two buildings in the former Ministry of Transportation of Ontario (MTO) Patrol Yard that had required removal by GGM. Removal occurred in 2023 reporting period, prior to the nesting season. The Barn Swallow habitat compensation structure was monitored during the 2024 nesting season and resulted in no evidence of use of the structure by Barn Swallows or other bird or bat species in 2024. The monitoring program will be discontinued per the Conditions and BMMP.

A bald eagle nest survey was conducted in 2024, targeting previously identified eagle nests. Nest E-623 was observed to be active and successful, with an eaglet observed throughout 2024 at the nest. As a result, mitigation was applied with access and activities restricted from May 1 through August 31.

The purpose of the Indigenous Peoples Health Risk Assessment Follow-up Program is to verify the accuracy of the assumptions relied on in the EIS as it pertains to the potential for adverse environmental effects of the Mine on the health of Indigenous People. For the 2024 monitoring period, the data collected relevant to this program included air quality and surface water. An evaluation of these data is provided in the 2024 Indigenous Peoples Health Risk Assessment Follow-up Report. The data collected during the 2024 monitoring period were compared to applicable guidelines and trigger levels and it was concluded that the assumptions relied on in the HHRA remain applicable. Overall, the monitoring data reviewed suggests that the assumptions relied on in the HHRA remain applicable. Further evaluation of the potential for Mine-related changes to air quality to affect the health of Indigenous Peoples is not required based on the data collected during the 2024 monitoring period.

These assumptions will be re-evaluated based on updated monitoring data in next year's Indigenous Peoples Health Risk Assessment Follow Up Report. With respect to water quality, a review of methyl-mercury concentrations in surface water in the SWAT has triggered an investigation aimed at evaluating whether the concentrations of methyl-mercury at Station 25 are consistent with those predicted in the EIS/EA. If the concentrations at Station 25 are found to have increased beyond the predicted levels, this will trigger further evaluation of potential effects on Indigenous Health and whether adaptive management is required.

Condition 6.1 of the federal Decision Statement requires GGM to establish unrestricted access to the Southwest Arm of Kenogamisis Lake and to maintain that alternate access during all phases of the Designated Project, to the extent that such access is safe. GGM has included a public access road from Highway 11 along the east side of the PDA to maintain access to the Southwest Arm of Kenogamisis Lake. For the Goldfield Creek diversion channel access, the main access point of Lahti's Road is closed during construction and operation due to safety reasons, and remained closed during the reporting period.

Implementation of the follow-up programs will remain generally unchanged in the upcoming monitoring year, with the exception of proposed changes per the Multimedia Management and Monitoring Plan (GGM 2021b) and established adaptive management, as described in section 2.4.

Executive Summary – French

Greenstone Gold Mines (GGM) a construit et exploite une mine d'or à ciel ouvert, une usine de traitement et des installations auxiliaires associées qu'elle déclassera/fermera un jour, collectivement connues sous le nom de mine Greenstone (la Mine), et anciennement connue sous le nom de projet Hardrock (le Projet). Le site minier est situé juste au sud de Geraldton, en Ontario, dans la municipalité de Greenstone, à l'intersection des routes 11 et 584.

Le ministère Environnement et Changement climatique Canada a émis un énoncé de décision en vertu de l'article 54 de la Loi canadienne sur l'évaluation environnementale (2012) daté du 10 décembre 2018 pour l'étude d'impact environnemental (EIE) de la mine (Stantec 2017), qui comprenait une série de conditions à remplir pour que GGM poursuive le projet. Le présent rapport est soumis pour répondre aux exigences de déclaration annuelle décrites aux conditions 2.9 et 2.10 de l'énoncé de décision et décrit les activités entreprises par GGM pour se conformer à chacune des conditions de l'énoncé de décision au cours de la période du rapport, soit du 1^{er} octobre 2023 au 30 septembre 2024 (période de déclaration 2024).

Des étapes importantes ont été franchies en 2024, notamment l'annonce de la production commerciale le 6 novembre 2024 et les activités suivantes :

- Le premier lingot d'or de la mine Greenstone a été coulé le 22 mai 2024.
- L'ouverture officielle de la mine a eu lieu le 29 août 2024.
- Les activités de forage, de dynamitage et d'excavation dans la mine à ciel ouvert se sont poursuivies au quatrième trimestre de 2023 et en 2024, des travaux de dynamitage ayant lieu généralement quelques fois par semaine.
- Il y a eu mise en service de l'installation de confinement des résidus à la fin du mois de décembre 2023, et début du déplacement des résidus de l'ancienne mine MacLeod dans l'installation de confinement. L'enfouissement des résidus récemment produits dans l'installation a débuté en avril 2024.
- Le troisième trimestre de 2024 a été marqué par une étape importante, à savoir l'atteinte d'une moyenne de 60 % du débit nominal sur 30 jours de fonctionnement, signalant la fin de la mise en service à chaud et des essais de performance ainsi que le début de l'exploitation du broyeur.
- Le canal de dérivation temporaire a été achevé au premier trimestre 2024, afin de dévier le débit des portions du canal de dérivation du ruisseau Goldfield qui nécessitent une réhabilitation.

Au cours de la période de déclaration 2024, les plans de surveillance et de suivi suivants ont été mis en œuvre et les résultats sont résumés dans le présent rapport :

- Plan de surveillance du poisson et de son habitat relativement à l'EIE fédérale (GGM 2021a)

- Plan de surveillance et de gestion de la biodiversité (GGM 2022)
- Utilisation actuelle des terres et des ressources à des fins traditionnelles – Plan de suivi (GGM 2020a)
- Plan de suivi de l'évaluation des risques pour la santé des peuples autochtones (GGM 2020b)

Ces programmes de suivi décrivent les résultats correspondant à la période de déclaration 2024.

GGM a mis sur pied des comités consultatifs environnementaux avec les groupes autochtones locaux, qui se réunissent régulièrement. Ces comités ont convenu des méthodes de communication, des types d'informations à fournir, des délais d'examen et de la discussion des points de vue/informations.

Un Plan de surveillance et de suivi du poisson et de son habitat (GGM 2021) a été préparé pour répondre à sept conditions d'autorisation fédérales liées à la surveillance des effets potentiels du Projet sur le poisson et son habitat (3.14, 3.15, 3.16, 3.17, 3.2, 5.4 et 5.5.1). Les résultats du rapport de surveillance et de suivi de l'EIE du poisson et de son habitat de 2024 sont résumés ci-dessous.

Conformément aux exigences de la condition fédérale 3.14, GGM a élaboré et mis en œuvre des mesures pour lutter contre l'érosion et la sédimentation. Un plan de lutte contre l'érosion et la sédimentation (ESCP) (GGM 2020d) a été mis en œuvre pour atténuer les effets potentiels de l'érosion et de la sédimentation sur le poisson et son habitat. L'efficacité des mesures de lutte contre l'érosion et la sédimentation a été régulièrement évaluée. Des pratiques de gestion ont été mises en œuvre pour protéger l'environnement et pour déterminer si de nouvelles stratégies de gestion ou mesures d'atténuation sont nécessaires.

Le plan de surveillance et de gestion du bruit et des vibrations (NVMMP) (GGM 2020c) fixe un seuil de surpression de 50 kPa dans l'eau et un seuil de vibration de 13 mm/sec (dans le substrat). Au cours de la période de surveillance 2024, un total de 169 dynamitages ont été effectués. Deux dépassements du seuil de vibration ont été constatés pendant la période de frai et aucun dépassement du seuil de surpression n'a été relevé au cours de cette période de déclaration. La pression enregistrée pour toutes les explosions était de beaucoup inférieure au seuil de 50 kPa.

Le plan de surveillance et de suivi du poisson et de son habitat indique les méthodes de surveillance de la qualité de l'eau mises en place pour le lac Kenogamisis, le lac Mosher et l'affluent du bras sud-ouest. Au cours de l'échantillonnage mensuel, des échantillons d'eau de surface ont été prélevés au hasard et ont été soumis à un laboratoire agréé pour analyse. De plus, la température, le pH, la conductivité, la turbidité et l'oxygène dissous (OD) de l'eau de surface ont été mesurés in situ à l'aide d'une sonde multiparamètres. La mesure de la température et de l'OD de la colonne d'eau a également été effectuée tous les trimestres (février, juin, août, octobre) à dix emplacements de surveillance des eaux de surface.

Les données relatives à la qualité des eaux de surface recueillies au cours de la période de surveillance de 2024 pour les dix stations et les paramètres de suivi ont été comparées aux seuils de déclenchement saisonniers spécifiques au site pour la qualité des eaux de surface. Voici un résumé des dépassements du seuil de déclenchement 1 et du seuil de déclenchement 2 documentés au cours de la période de surveillance de 2024 et les résultats du plan d'intervention associé.

- **Station 25 :**

Un dépassement du seuil de déclenchement 1 pour le phosphore et l'arsenic s'est produit en octobre 2023. Un nouvel échantillonnage pour le suivi des deux paramètres a été réalisé en décembre 2023 lorsque les conditions relatives à la glace étaient sécuritaires. Il a été démontré que les résultats des paramètres étaient inférieurs à la valeur au 95^e percentile de la concentration de base saisonnière et à cinq fois la limite de détection analytique. Par conséquent, le seuil de déclenchement 1 n'a pas été confirmé et aucune mesure supplémentaire n'a été prise.

Un dépassement du seuil de déclenchement 1 pour le méthylmercure s'est produit en août 2024. Un nouvel échantillonnage pour le suivi du paramètre a été réalisé en septembre 2024 et les résultats dépassaient la valeur au 95^e percentile de la concentration de base saisonnière et cinq fois la limite de détection. Par conséquent, le dépassement du seuil de déclenchement 1 pour le méthylmercure a été confirmé en septembre 2024. L'évaluation du seuil de déclenchement 2 a été réalisée et a conclu à une tendance à la hausse statistiquement significative pour le méthylmercure à la station 25; le seuil de déclenchement 2 a donc été dépassé. Des dépassements de méthylmercure supérieurs à la valeur au 95^e percentile de la concentration de référence et à cinq fois supérieurs à la limite de détection avaient été prévus dans l'amendement de l'EIE/EE. Les concentrations de méthylmercure prévues étaient inférieures aux recommandations canadiennes pour la qualité des eaux en vue de la protection de la vie aquatique du Conseil canadien des ministres de l'environnement (CCME). Un rapport d'enquête sur le dépassement du seuil de déclenchement 2 est en cours de préparation et sera publié une fois terminé.

Un dépassement du seuil de déclenchement 1 pour l'uranium s'est produit en février 2024. Un nouvel échantillonnage pour le suivi du paramètre a été réalisé en mars 2024 et a également dépassé la valeur au 95^e percentile de la concentration de base saisonnière et cinq fois la limite de détection. Par conséquent, un dépassement du seuil de déclenchement 1 pour l'uranium a été confirmé en mars 2024. L'évaluation du seuil de déclenchement 2 a été réalisée et a conclu à une tendance à la hausse statistiquement significative pour l'uranium à la station 25; le seuil de déclenchement 2 a donc été dépassé. L'uranium à la station 25 a continué de dépasser la valeur au 95^e percentile de la concentration de base et cinq fois la limite de détection en avril, mai et juin 2024. Un rapport d'enquête concernant l'uranium à la station 25 a été réalisé en mai 2024 et est joint au rapport de surveillance et de suivi de l'EIE fédérale 2024 du poisson et de son habitat. La station 25 était l'une des deux stations abordées dans le rapport d'enquête, l'autre étant la station 39, comme expliqué ci-dessous. L'augmentation des concentrations d'uranium à la station 25 est conforme aux prévisions de l'EIE/EE et est due à la dérivation du débit du ruisseau Goldfield et au déversement des eaux souterraines dans le canal de dérivation du ruisseau Goldfield, qui présentent tous deux des concentrations d'uranium plus élevées que les concentrations d'uranium de référence dans les eaux d'amont de l'affluent du bras sud-ouest. Comme indiqué dans le rapport d'enquête sur le seuil de déclenchement 2 de mai 2024, la concentration d'uranium dans l'affluent du sud-ouest devrait passer d'une concentration de référence moyenne de 0,065 µg/l à une concentration prévue à la fin de l'activité de 1,064 µg/l, ce qui est inférieur aux objectifs provinciaux de qualité de l'eau (OPQE). Les recommandations du rapport d'enquête sur le seuil de déclenchement 2 de mai 2024 étaient de revoir le seuil de déclenchement 1 à 1,17 µg/L, soit la concentration prévue d'uranium dans le bras sud-ouest (1,06 µg/L) plus 10 % pour tenir compte des sources naturelles et nouvelles d'uranium dans le bras sud-ouest. GGM a l'intention de soumettre les critères revus du seuil de déclenchement 1 recommandés pour l'uranium aux stations situées dans l'affluent du bras sud-ouest et dans la dérivation du ruisseau Goldfield à l'Agence d'évaluation d'impact du Canada (AEIC) et au ministère de l'Environnement, de la Protection de la nature et des Parcs (MECP) de l'Ontario pour approbation une fois que les consultations sur le changement proposé auront été réalisées. D'ici là, l'uranium à la station 39 continuera d'être évalué selon les critères existants du plan de surveillance. Le seuil de déclenchement 2 proposé pour l'uranium à la station 25 est inférieur à la valeur de 5 µg/L fixée par l'OPQE.

- **Station 39 :**

Un dépassement du seuil de déclenchement 1 pour le cobalt s'est produit en mai 2024. Un nouvel échantillonnage a été réalisé en juin 2024 et les concentrations du cobalt n'ont pas dépassé la valeur au 95^e percentile de la concentration de base saisonnière et cinq fois la limite de détection. Par conséquent, le dépassement du seuil de déclenchement 1 n'a pas été confirmé et aucune mesure supplémentaire n'a été prise. Le dépassement du seuil de déclenchement 1 pour le cobalt s'est à nouveau produit en septembre 2024. Le rééchantillonnage pour le suivi du cobalt réalisé en octobre 2024 déterminera si l'occurrence du dépassement du seuil de déclenchement 1 est confirmée.

Comme l'indique le rapport de surveillance et de suivi de l'EIE sur le poisson et son habitat de 2023, les dépassements des seuils de déclenchement 1 et 2 de l'uranium à la station 39 se sont produits en mars 2023, soit pendant la période de surveillance de 2023 (du 1^{er} octobre 2022 au 30 septembre 2023). La concentration d'uranium à la station 39 est restée supérieure à la valeur au 95^e percentile de la concentration de référence et à cinq fois la limite de détection d'octobre 2023 à septembre 2024 au cours de la période de surveillance 2024. Depuis mars 2023, deux rapports d'enquête ont été préparés. Le premier rapport a été soumis en mai 2023 et joint au rapport de surveillance et de suivi de l'EIE du poisson et de son habitat de 2023. En raison de dépassements persistants de l'uranium à la station 39, un deuxième rapport a été préparé et soumis en mai 2024, qui est joint au rapport de surveillance et de suivi de l'EIE sur le poisson et de son habitat de 2024. Comme indiqué précédemment, le rapport d'enquête de mai 2024 aborde les dépassements d'uranium aux stations 25 et 39. L'enquête visait à déterminer s'il existait une autre source ou une autre cause expliquant l'augmentation des concentrations d'uranium dans les deux stations. Il a été conclu que les dépassements de concentration d'uranium étaient liés à la charge massique supplémentaire provenant de la dérivation du ruisseau Goldfield et de l'écoulement des eaux souterraines dans le canal de dérivation du ruisseau Goldfield. Dans l'EIE/EE, il était prévu que la concentration d'uranium augmente tout au long des activités de la mine, mais qu'elle reste inférieure à la valeur fixée par l'OPQE. Comme indiqué précédemment pour la station 25, les recommandations du rapport d'enquête sur le seuil de déclenchement 2 de mai 2024 étaient de revoir le seuil de déclenchement 1 à 1,17 µg/L, soit la concentration prévue d'uranium dans l'affluent du bras sud-ouest (1,06 µg/L) plus 10 % pour tenir compte des sources naturelles et nouvelles d'uranium dans l'affluent du bras sud-ouest. GGM a l'intention de soumettre les critères revus du seuil de déclenchement 1 recommandés pour l'uranium aux stations situées dans l'affluent du bras sud-ouest et dans la dérivation du ruisseau Goldfield au MECP pour approbation une fois que les consultations sur le changement proposé auront été réalisées. D'ici là, l'uranium à la station 39 continuera d'être évalué selon les critères existants du Plan. Le seuil de déclenchement 2 proposé pour l'uranium à la station 39 est inférieur à la valeur de 5 µg/L fixée par l'OPQE.

- **Station 52 :**

Un dépassement du seuil de déclenchement 1 pour le fer a eu lieu en décembre 2023. Un nouvel échantillonnage a été réalisé en janvier 2024 et les concentrations de fer n'ont pas dépassé la valeur au 95^e percentile de la concentration de base saisonnière et cinq fois la limite de détection. Par conséquent, le dépassement du seuil de déclenchement 1 n'a pas été confirmé et aucune mesure supplémentaire n'a été prise.

- **Autres activités de surveillance des poissons et de leur habitat**

Le plan de surveillance et de suivi du poisson et de son habitat indique les principales activités de surveillance des eaux souterraines suivantes : 1) surveillance du volume pompé, 2) surveillance du niveau d'eau et 3) surveillance de la qualité de l'eau. Au cours de la période de surveillance 2024, aucun dépassement des seuils de déclenchement du niveau des eaux souterraines et du gradient hydraulique horizontal n'a été enregistré pour la quantité d'eaux souterraines. La plupart des seuils de déclenchement de la qualité des eaux souterraines n'ont pas été dépassés au cours de la période de référence. Les détails des événements respectifs sont résumés dans les sections 2.5 et 2.6.

Les exigences de gestion et de surveillance de la condition 5.5.1 traitent des effets potentiels liés aux changements de concentration de mercure et de méthylmercure dans le doré jaune du lac Kenogamisis.

Des activités de surveillance des tissus de poissons ont d'abord été réalisées selon le plan de surveillance dans le lac Kenogamisis au cours de la période de surveillance de 2023. La surveillance des tissus de poissons doit avoir lieu tous les deux ans pendant les six premières années d'exploitation, après quoi la nécessité d'une surveillance supplémentaire sera évaluée. Un prélèvement de tissus de doré a été effectué à la fin du mois de septembre et en octobre 2023, conformément aux exigences du plan de surveillance. *Les concentrations de mercure, de méthylmercure et d'arsenic dans le doré jaune* ont été mesurées en 2023 et ont été consignées dans le rapport de surveillance et de suivi de l'EIE du poisson et de son habitat de 2023. GGM continuera à mettre en œuvre le programme de surveillance des tissus de poissons comme prévu, avec l'échantillonnage des tissus de dorés en 2025 et en 2027.

Des hirondelles rustiques (*Hirundo rustica*), une espèce menacée (ESA 2007, SARO 2011) au moment de l'étude environnementale, étaient présentes dans deux bâtiments du ministère des Transports de l'Ontario (MTO) ayant été démolis par GGM. La démolition a eu lieu au cours de la période de déclaration 2023, avant la saison de nidification. L'ouvrage de compensation de l'habitat de l'hirondelle rustique a été surveillé pendant la saison de nidification de 2024, et il n'y a aucune preuve d'utilisation de l'ouvrage par l'hirondelle rustique ou d'autres espèces d'oiseaux ou de chauves-souris en 2024. Le programme de surveillance sera interrompu conformément aux conditions et au Plan de surveillance et de gestion de la biodiversité.

Un relevé des nids d'aigles à tête blanche a été effectué en 2024, dont les nids d'aigles déjà identifiés. Le nid E-623 a été observé comme étant actif, un aiglon y ayant été observé tout au long de l'année 2024. Conséquemment, des mesures d'atténuation ont été mises en œuvre, puis les activités et l'accès ont été restreints du 1^{er} mai au 31 août.

L'objectif du Programme d'évaluation des risques pour la santé des peuples autochtones est de vérifier la validité des hypothèses sur lesquelles s'appuie l'énoncé des impacts environnementaux en ce qui concerne le potentiel d'effets environnementaux négatifs de la mine sur la santé de ces populations. Dans le cadre du programme et pour la période de surveillance de 2024, des données ont été recueillies sur la qualité de l'air et les eaux de surface. Une étude de ces données est fournie dans le rapport de suivi de l'évaluation des risques pour la santé des peuples autochtones de 2024. Les données recueillies au cours de la période de surveillance de 2024 ont été comparées aux lignes directrices et aux seuils de déclenchement applicables, et il a été conclu que les hypothèses sur lesquelles s'appuie l'évaluation des risques pour la santé humaine restent valables. Globalement, l'étude des données suggère que les hypothèses sur lesquelles s'appuie l'évaluation des risques pour la santé humaine restent valables. Aussi, selon les données recueillies au cours de la période de surveillance de 2024, il n'est pas nécessaire de mener une étude plus poussée quant au risque pour les populations autochtones d'être touchées par les effets sur la qualité de l'air des activités de la mine.

Ces hypothèses seront réévaluées en fonction des données de surveillance actualisées dans le rapport de suivi de l'évaluation des risques pour la santé des peuples autochtones de l'année prochaine. En ce qui concerne la qualité de l'eau, un examen des concentrations de méthylmercure dans les eaux de surface dans l'affluent du bras sud-ouest a mené à une enquête visant à évaluer si les concentrations de méthylmercure à la station 25 sont conformes à celles prévues dans l'EIE/EE. S'il s'avère que les concentrations à la station 25 ont augmenté au-delà des niveaux prévus, une évaluation plus poussée des effets potentiels sur la santé des populations autochtones et de la nécessité d'une gestion adaptative sera réalisée.

La condition 6,1 de l'énoncé de décision fédérale exige que GGM établisse un accès sans restriction au bras sud-ouest du lac Kenogamisis, et qu'elle maintienne cet accès pendant toutes les étapes du projet désigné, dans la mesure où cet accès est sûr. GGM a prévu une route publique à partir de l'autoroute 11 le long du côté est de la zone d'étude du projet pour maintenir l'accès au bras sud-ouest du Kenogamisis Lake. Le chemin Lahtis, principal accès au canal de dérivation du ruisseau Goldfield, est fermé pendant la construction et l'exploitation pour des raisons de sécurité, et il est demeuré fermé durant la présente période de déclaration.

La mise en œuvre des programmes de suivi demeurera généralement inchangée au cours de la prochaine année, à l'exception des modifications proposées au plan de gestion et de surveillance des différents milieux [Multimedia Management and Monitoring Plan]), comme décrit à la section 2.4.

1 Introduction

Greenstone Gold Mines (GGM) has constructed, is currently operating and will ultimately decommission/close a new open pit gold mine, process plant, and associated ancillary facilities, collectively known as the Greenstone Mine (the Mine). The Minister of the Environment and Climate Change issued a Decision Statement under Section 54 of the Canadian Environmental Assessment Act, 2012 dated December 10, 2018 for the Mine's Environmental Impact Statement (EIS) (Stantec 2017).

This report has been prepared to meet the Annual Report requirements described under conditions 2.9 and 2.10 of the Decision Statement and describes activities undertaken by GGM to comply with each of the conditions in the Decision Statement during the period of October 1, 2023 to September 30, 2024 (2024 reporting period). As specified in condition 2.10, the Annual Report is required to be submitted no later than December 31 following the reporting year to which the annual report applies.

Significant milestones were achieved in 2024, including announcement of commercial production on November 6, 2024 and the following notable activities:

- The first gold from Greenstone Mine was poured May 22, 2024.
- Official mine opening occurred on August 29, 2024.
- Drilling, blasting, and excavation of the open pit has been ongoing in Q4 2023 and 2024, with blasting typically occurring a few times each week.
- Commissioning of the TMF in late December 2023 with the relocation of historical MacLeod tailings to the TMF commencing. Placement of fresh tailings within the TMF commenced in April 2024.
- The third quarter of 2024 saw an important project-based milestone of achieving a 30-day running average of 60% nameplate throughput, signaling the end of hot commissioning and performance testing and the start of mill ramp up.
- The temporary bypass channel was completed in Q1, 2024, to divert flow around portions of the Goldfield Creek (GFC) realignment that require redesign and reconstruction.

During the 2024 reporting period, the following follow-up monitoring plans were implemented and the results are summarized in this report:

- Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan (GGM 2021a)
- Biodiversity Monitoring and Management Plan (GGM 2022)
- Current Use of Lands and Resources for Traditional Purposes Follow-Up Plan (GGM 2020a)
- Indigenous Peoples Health Risk Assessment Follow-up Plan (GGM 2020b)

2 Annual Report Requirements

Condition 2.9 of the Decision Statement outlines the requirements for the Annual Report that is required under Condition 2.10, as follows:

2.9 The Proponent shall, commencing in the reporting year during which the Proponent begins the implementation of the conditions set out in this Decision Statement, prepare an annual report that sets out:

- 2.9.1 the activities undertaken by the Proponent in the reporting year to comply with each of the conditions set out in this Decision Statement;*
- 2.9.2 how the Proponent complied with condition 2.1;*
- 2.9.3 for conditions set out in this Decision Statement for which consultation is a requirement, how the Proponent considered any views and information that the Proponent received during or as a result of the consultation;*
- 2.9.4 the information referred to in conditions 2.4 and 2.5 for each follow-up program;*
- 2.9.5 the results of the follow-up program requirements identified in conditions 3.15, 3.16, 3.17, 4.6, 4.7, 5.3, 5.4, 5.5 and 6.9; and*
- 2.9.6 any modified or additional mitigation measures implemented or proposed to be implemented by the Proponent, as determined under condition 2.7.*

These requirements are addressed in the following sections.

2.1 Activities Undertaken to Comply with Decision Statement - Conditions 2.9.1, 2.9.2 and 2.9.3

Table 2-1 presents a list of the conditions included in the Decision Statement for the Project and describes the activities that GGM carried out during the reporting period to comply with the conditions; and for the conditions that require consultation as per the Decision Statement the table presents how views and information received during consultation have been considered in implementing the conditions.

Table 2-1: List of Conditions and Activities Undertaken during Reporting Period to Comply with Conditions 2.9.1 and 2.9.2

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
2.1	<p>GGM shall ensure that its actions in meeting the conditions set out in the CEAA Decision Statement during all phases of the Designated Project are considered in a careful and precautionary manner, promote sustainable development, are informed by the best information and knowledge available at the time the Proponent takes action, including community and Indigenous traditional knowledge, are based on methods and models that are recognized by standard-setting bodies, are undertaken by qualified individuals, and have applied the best available economically and technically feasible technologies.</p>	<p>GGM continues to routinely engage regulators, community members, Indigenous groups, and the services of several qualified consultants and engineering firms to implement activities during operation.</p> <p>GGM established Environmental Advisory Sub-committees (EASs) with Indigenous groups and their chosen technical consultants to review and discuss permit applications, project updates, environmental management and monitoring plans, and other topics of interest to the Indigenous groups. Environmental project-specific newsletters are provided to Indigenous groups as requested to assist with community member awareness. EAS members report to their Implementation Coordinators, who participate in monthly meetings with GGM and the Implementation Committee. During the reporting period regular EAS project update meetings and meetings specific to permit applications/ approvals were completed.</p> <p>GGM established a Community Sustainability Committee (CSC), comprised of community members that continued to meet quarterly with GGM representatives to discuss various topics of interest on environmental and sustainability initiatives and participate in site tours.</p> <p>GGM publishes a public newsletter quarterly that is provided by various means to the public, including access on the company website. This newsletter provides information on various Mine updates, including environmental and social updates, and welcomes any feedback from newsletter recipients by providing contact information.</p> <p>GGM visits communities and Indigenous groups to provide Mine updates and environmental project specific updates to communities. Site tours for communities and various stakeholders are also regularly hosted. During the reporting period, site tours were hosted for the Municipality of Greenstone Mayor and Council, Indigenous communities, and update presentations were provided in the communities.</p> <p>GGM started a Cross-Cultural Training program for its employees in January 2024 and continues monthly. The program includes Indigenous community-based, community-specific presentations created and delivered by Greenstone Mine Indigenous partners. GGM also established an Employee Relations Committee, which meets monthly to discuss employee suggestions and feedback on various Mine components.</p>	<p>Refer to summary of activities undertaken to comply with the condition.</p>

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
2.2	<p>Where consultation is a requirement of a condition set out in the CEAA Decision Statement:</p> <p>2.2.1 provide a written notice of the opportunity for the party or parties being consulted to present their views and information on the subject of the consultation;</p> <p>2.2.2 provide all information relevant and applicable on the scope and the subject matter of the consultation and a period of time agreed upon with the party or parties being consulted, not to be less than 15 days, to prepare their views and information;</p> <p>2.2.3 undertake an impartial consideration of all views and information presented by the party or parties being consulted on the subject matter of the consultation; and</p> <p>2.2.4 advise in a timely manner the party or parties being consulted on how the views and information received have been considered by the Proponent.</p>	<p>GGM has established EASs with Indigenous groups. Methods of communication, types of information to be provided, review timelines and discussion of views/information have been agreed upon. Where consultation is a requirement or engagement is sought, GGM provides draft documents to EASs for review and comment with requested timelines for comments to be provided. Periods of time of at least 15 days are provided for EASs to review the provided information. Depending on the item under consultation and the EAS's views on the matter, GGM receives verbal or written comments, which are responded to and discussed in meetings as necessary. EASs are provided opportunity to discuss approvals, documents, processes etc. during regularly scheduled EAS meetings. GGM captures meeting minutes and incorporates the feedback into final documents and the records of consultation that are included in permit and approval applications. EASs are then provided the final versions of the draft documents after consultation is complete.</p>	<p>Refer to summary of activities undertaken to comply with the condition.</p>
2.3	<p>Where consultation with Indigenous groups is a requirement of a condition set out in the CEAA Decision Statement, communicate with each Indigenous group with respect to the manner to satisfy the consultation requirements referred to in condition 2.2, including methods of notification, the type of information and the period of time to be provided when seeking input, the process to be used by the Proponent to undertake impartial consideration of all views and information presented on the subject of the consultation, and the period of time and the means to advise Indigenous groups of how their views and information were considered by the Proponent.</p>	<p>Refer to summary of activities undertaken to comply with condition 2.2.</p>	<p>Refer to summary of activities undertaken to comply with condition 2.2.</p>
2.4	<p>Where a follow-up program is a requirement of a condition set out in the CEAA Decision Statement, determine, as part of the development of each follow-up program and in consultation with the party or parties being consulted during the development, the following information:</p> <p>2.4.1 the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program;</p> <p>2.4.2 the scope, content and frequency of reporting of the results of the follow-up program;</p> <p>2.4.3 the levels of environmental change relative to baseline conditions that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities to be stopped; and</p> <p>2.4.4 the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.4.3 have been reached or exceeded.</p>	<p>Refer to conditions 3.15, 3.16, 3.17, 4.6, 4.7, 5.3, 5.4, 5.5 and 6.9 below.</p>	<p>Refer to conditions 3.15, 3.16, 3.17, 4.6, 4.7, 5.3, 5.4, 5.5 and 6.9 below.</p>
2.5	<p>Maintain the information referred to in condition 2.4 during the implementation of each follow-up program in consultation with the party or parties being consulted during the development of each follow-up program.</p>	<p>Refer to conditions 3.15, 3.16, 3.17, 4.6, 4.7, 5.3, 5.4, 5.5 and 6.9 below.</p>	<p>n/a</p>
2.6	<p>Provide the follow-up programs referred to in conditions 3.15, 3.16, 3.17, 4.6, 4.7, 5.3, 5.4, 5.5 and 6.9 to CEAA and to the party or parties being consulted during the development of each follow-up program prior to the implementation of each follow-up program. The Proponent shall also provide any update(s) made pursuant to condition 2.5 to the Agency and to the party or parties being consulted during the development of each follow-up program within 30 days of the follow-up program being updated.</p>	<p>Refer to conditions 3.15, 3.16, 3.17, 4.6, 4.7, 5.3, 5.4, 5.5 and 6.9 below.</p>	<p>Refer to conditions 3.15, 3.16, 3.17, 4.6, 4.7, 5.3, 5.4, 5.5 and 6.9 below.</p>

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
2.7	<p>Where a follow-up program is a requirement of a condition set out in the CEAA Decision Statement:</p> <p>2.7.1 conduct the follow-up program according to the information determined pursuant to condition 2.4;</p> <p>2.7.2 undertake monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure(s);</p> <p>2.7.3 determine whether modified or additional mitigation measures are required based on the monitoring and analysis undertaken pursuant to condition 2.7.2; and</p> <p>2.7.4 if modified or additional mitigation measures are required pursuant to condition 2.7.3, develop and implement these mitigation measures in a timely manner and monitor them pursuant to condition 2.7.2.</p>	Follow-up programs that were implemented during the reporting period are discussed in Sections 2.3 and 2.4 of this report.	n/a
2.8	Where consultation with Indigenous groups is a requirement of a follow-up program, GGM shall discuss with each Indigenous group opportunities for their participation in the implementation of the follow-up program, including the analysis of the follow-up results and whether modified or additional mitigation measures are required, as set out in condition 2.7.	GGM has funded Environmental Technician positions employed by each of the five Indigenous groups identified in the Decision Statement, who are involved in the implementation of the follow-up programs and receive copies of the follow-up monitoring reports which provide an analysis of the follow-up results and whether modified or additional mitigation measures are required. These Environmental Technicians also participate in EAS meetings and are on all EAS correspondence.	Refer to summary of activities undertaken to comply with the condition.
2.9	<p>Commencing in the reporting year during which GGM begins the implementation of the conditions set out in the CEAA Decision Statement, prepare an annual report that sets out:</p> <p>2.9.1 the activities undertaken by the Proponent in the reporting year to comply with each of the conditions set out in the CEAA Decision Statement;</p> <p>2.9.2 how the Proponent complied with condition 2.1;</p> <p>2.9.3 for conditions set out in the CEAA Decision Statement for which consultation is a requirement, how the Proponent considered any views and information that the Proponent received during or as a result of the consultation;</p> <p>2.9.4 the information referred to in conditions 2.4 and 2.5 for each follow-up program;</p> <p>2.9.5 the results of the follow-up program requirements identified in conditions 3.15, 3.16, 3.17, 4.6, 4.7, 5.3, 5.4, 5.5 and 6.9; and</p> <p>2.9.6 any modified or additional mitigation measures implemented or proposed to be implemented by the Proponent, as determined under condition 2.7.</p>	Submission of this annual report fulfills this condition.	n/a
2.10	Submit an annual report to CEAA, referred to in condition 2.9, including an executive summary in both official languages, no later than December 31 following the reporting year to which the annual report applies.	Submission of this annual report fulfills this condition.	n/a
2.11	Publish on the Internet, or any medium which is publicly available, the annual reports and the executive summaries referred to in conditions 2.9 and 2.10, the information submitted to CEAA pursuant to condition 2.15, the offsetting plan(s) referred to in condition 3.12, the Community Relations Management Plan referred to in condition 5.7, the Community Relations Management Plan referred to in condition 6.4, the concerns raised pursuant to condition 6.5 and measures taken by the Proponent to address these concerns, the bald eagle (<i>Haliaeetus leucocephalus</i>) protection plan referred to in condition 7.1, the reports related to accidents and malfunctions referred to in conditions 9.4.2 and 9.4.3, the Community Relations Management Plan referred to in condition 9.5, the schedules referred to in conditions 10.1, and 10.2, and any update(s) or revision(s) to the above documents, upon submission of these documents to the parties referenced in the respective conditions. The Proponent shall keep these documents publicly available for 25 years following the end of operation, or until the end of decommissioning of the Designated Project, whichever comes first. The Proponent shall notify the CEAA and Indigenous groups of the availability of these documents within 48 hours of their publication.	This report and other documents required per condition 2.11 are published on the GGM website (https://www.greenstonegoldmines.com/). IAAC and EASs are also emailed copies of the documents.	Refer to summary of activities undertaken to comply with the condition.
2.12	When the development of any plan is a requirement of a condition set out in the CEAA Decision Statement, GGM shall submit the plan to CEAA prior to construction, unless otherwise required through the condition.	Refer to conditions 3.15, 3.16, 3.17, 4.6, 4.7, 5.3, 5.4, 5.5 and 6.9 below.	n/a

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
2.13	GGM must notify CEAA and Indigenous groups in writing no later than 30 days after the day on which there is any transfer of ownership, care, control or management of the Designated Project in whole or in part.	In 2024, Equinox Gold Corp. completed an acquisition of the remaining 40% of Greenstone Gold Mine GP Inc. from Orion Mine Finance Management LP, giving Equinox Gold Corp. 100% ownership of the Greenstone Gold Mines GP Inc. and Greenstone Mine.	n/a
2.14	Consult with Indigenous groups and relevant authorities prior to initiating any changes to the Designated Project that may result in adverse environmental effects, and shall notify the CEAA in writing no later than 60 days prior to initiating the change(s).	GGM consulted with EASs on and subsequently submitted a proposed project change to IAAC in October to December 2023 for the design and construction of a temporary bypass channel that would receive the flows from the Goldfield Creek Diversion Channel, allowing for the Diversion Channel to be taken offline and remediated. The temporary bypass channel was constructed from January to March 2024. An amendment to the Decision Statement is currently being processed by IAAC with a draft Decision Statement issued June 1, 2024 for public consultation to incorporate the temporary bypass channel.	GGM hosted various meetings and workshops with the EASs to engage and consult on the temporary bypass channel, including providing community update presentations on the proposed project change. Feedback received during the consultation process was incorporated as appropriate into the design and permit applications for the temporary bypass channel.
2.15	In notifying CEAA pursuant to condition 2.14, GGM shall provide a description of the potential adverse environmental effects of the change(s) to the Designated Project, the proposed mitigation measures and follow-up requirements to be implemented by GGM and the results of the consultation with Indigenous groups and relevant authorities.	The proposed project change submitted to IAAC and EASs regarding the temporary bypass channel in November 2023 contained the required description and information required in condition 2.15.	n/a
3.1	Salvage and relocate fish prior to conducting any Designated Project activity requiring removal of fish habitat in a manner consistent with any authorization issued under the Fisheries Act and its regulations. The Proponent shall salvage and relocate fish in consultation with Indigenous groups and to the satisfaction of Fisheries and Oceans Canada and other relevant authorities. 3.1.1 GGM shall discuss, prior to the start of fish salvaging and relocating activities, with each Indigenous group, opportunities for their participation in these activities.	In accordance with condition 3.1, fish salvages were completed during the 2024 monitoring period prior to conducting any activity that requires removal or disturbance of fish habitat. The required Licence to Collect Fish for Scientific Purposes was obtained from MNR. GGM communicated fish salvage plans with EASs, and EAS Environmental Technicians were listed on the Licence and were provided opportunity to participate in fish salvage activities.	Refer to summary of activities undertaken to comply with the condition.
3.2	Develop, prior to the start of blasting activities in or near water, and implement, during blasting activities in or near water, mitigation measures to avoid or prevent adverse effect to fish and fish habitat from the use of explosives in a manner consistent with the Fisheries Act and its regulations. When developing these measures, the Proponent shall take into account Fisheries and Oceans Canada's Measures to avoid causing harm to fish and fish habitat including aquatic species at risk as it pertains to the use of explosives in or near water. The Proponent shall submit these measures to CEAA before implementing them.	The Noise and Vibration Management and Monitoring Plan (NVMMMP; GGM 2020c) was developed and submitted to IAAC in July 2020 prior to the start of blasting activities. The plan identifies measures to mitigate potential adverse effect to fish and fish habitat from the use of explosives.	n/a
3.3	Design, install and operate the water intake structures in Kenogamisis Lake in a manner which reduces the incidental capture of fish by entrainment and impingement through the use of an appropriately sized fish screen, taking into account Fisheries and Oceans Canada's Freshwater Intake End-of-Pipe Fish Screen Guideline and in a manner consistent with the Fisheries Act and its regulations.	Design of the freshwater intake structure installed in Kenogamisis Lake was in a manner consistent with the Freshwater Intake End-of-Pipe Fish Screen Guidelines (DFO 1995).	n/a
3.4	Comply with the Metal and Diamond Mining Effluent Regulations and the pollution prevention provisions of the Fisheries Act.	GGM continues to monitor and report on effluent treatment plant discharges as per the requirements of the Metal and Diamond Mining Effluent Regulations.	n/a
3.5	Collect and direct contact water from the waste rock storage areas (including any temporary storage location of excavated historical tailings), overburden storage area and ore stockpile to contact water collection ditches for reuse in Designated Project activities, and treat excess water that cannot be reused.	Waste Rock Storage Area (WRSA) C and A and the ore stockpiles were utilized in the 2024 monitoring period. Contact water was collected in the respective collection pond and conveyed to Pond M1, and then to the Full Scale ETP for treatment prior to either discharge or reuse in the process plant.	n/a

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
3.6	Collect and direct, during operation, contact water from the tailings management facility, including the final location of the excavated historical tailings, to the collection ponds associated with the tailings management facility.	The tailings management facility (TMF) was commissioned in the 2024 monitoring period. All contact water in this facility is captured within the TMF or within the seepage collection system surrounding the facility, where it is then directed back into the TMF.	n/a
3.7	Install, prior to operation, and use a cyanide destruction circuit to reduce cyanide concentrations in tailings before the tailings are directed to the tailings management facility during operation.	The cyanide destruction circuit was commissioned and put in operation in the 2024 monitoring period, prior to tailings were directed to the TMF.	n/a
3.8	Maintain the contact water collection ditches around the waste rock storage areas, overburden storage area, ore stockpile and the tailings management facility after operation and as necessary to comply with the Metal and Diamond Mining Effluent Regulations and the pollution prevention provisions of the Fisheries Act.	n/a – compliance with this condition will be addressed after operation. GGM has a Closure Plan filed with the Ministry of Mines that addresses requirements during closure.	n/a
3.9	GGM shall not connect the pit lake to Kenogamisis Lake until such time that water in the pit lake complies with the pollution prevention provisions of the Fisheries Act.	n/a – compliance with this condition will be addressed after operation. GGM has a Closure Plan filed with the Ministry of Mines that addresses requirements during closure.	n/a
3.10	GGM shall treat contact water taking into account the Canadian Council of Minister of the Environment's Canadian Water Quality Guidelines for Protection of Aquatic Life.	GGM continues to treat and discharge contact water with the effluent treatment plant as required, taking into account the Canadian Council of Minister of the Environment's Canadian Water Quality Guidelines for Protection of Aquatic Life. There is no update on compliance with this condition in the 2024 reporting period.	n/a
3.11	<p>GGM shall mitigate, in consultation with Indigenous groups and relevant authorities, the adverse environmental effects on water quality, including in the Southwest Arm, Central Basin and Barton Bay of Kenogamisis Lake, Goldfield Creek Tributary, Mosher Lake and the Southwest Arm Tributary, caused by the presence of unexcavated historical tailings. In doing so, the Proponent shall promote runoff and reduce infiltration by:</p> <p>3.11.1 covering the exposed portions of the in situ historical tailings. The Proponent shall complete the covering of the in situ historical tailings as soon after tailings have been excavated as technically feasible; and</p> <p>3.11.2 managing contaminated soils near the historical Hardrock and Macleod-Mosher plant sites and the unexcavated historical tailings.</p>	Relocation of the historical tailings commenced during the 2024 monitoring period. Soil in the area of the historical Hardrock and MacLeod Mosher plant sites was managed in accordance with the Soil Management Plan (SMP; GGM 2020f), as amended. Soil characterization was completed prior to excavation and then soil was managed in accordance with the requirements of the SMP and either placed in the overburden storage area, WRSA C or A, the TMF and/or disposed of off site at a licensed facility. Further compliance with this condition will be assessed once relocation of the tailings is completed.	GGM is implementing measures to mitigate potential effects on water quality primarily through the collection, containment, and treatment of water from the mine site. EAS Environmental Technicians are involved with the routine effluent and water quality monitoring program. GGM regularly consults with Indigenous groups through the EASs to provide updates on soil and historical tailings management, and provides all monitoring reports to the EASs as required.
3.12	GGM shall develop, to the satisfaction of Fisheries and Oceans Canada and Environment and Climate Change Canada and in consultation with Indigenous groups, any offsetting plan(s) related to any residual serious harm to fish associated with the carrying out of the Designated Project. The Proponent shall implement the plan. The Proponent shall submit any approved offsetting plan(s) to the Agency prior to implementation.	An offsetting plan for the Mine was developed in consultation with Indigenous groups, DFO and ECCC and approved by DFO in April 2020. The offsetting plan was implemented in 2021 and 2022. In 2023, the constructed Goldfield Creek Diversion Channel experienced significant erosion. GGM initiated designing and consulting on a temporary bypass channel in October to December, 2023, to direct flows from the Goldfield Creek Diversion pond to the Southwest Pond 3 instead of through the Diversion Channel. GGM received all regulatory approvals and Indigenous consent for the temporary bypass channel and constructed it from January to March 2024. GGM is in the process of redesigning and remediating the Diversion Channel in consultation with DFO and Indigenous groups, as part of an amendment to GGM's Fisheries Act Authorization. GGM will continue to provide IAAC with updates on planned methods to mitigate potential effect on fish and fish habitat.	GGM is providing draft and final versions of concepts, designs and plans for the redesign of the Goldfield Creek Diversion Channel to EASs. Working groups consisting of various members (i.e. community members, EASs, GGM, DFO, consultants) have been established to host meetings and provide materials to support the consultation process going forward on the Goldfield Creek Remediation.

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
3.13	GGM shall, for any fish habitat offsetting measure(s) proposed in any offsetting plan(s) referred to in condition 3.12 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement, following consultation with Indigenous groups, Fisheries and Oceans Canada and Environment and Climate Change Canada, measures to mitigate those effects. The Proponent shall submit these measures to the Agency before implementing them.	Refer to condition 3.12 above.	Refer to condition 3.12 above.
3.14	GGM shall develop, prior to construction, and implement, during all phases of the Designated Project and in a manner consistent with the Fisheries Act and its regulations, measures to control erosion and sedimentation in the project development area. The Proponent shall submit these measures to the Agency before implementing them. Among other measures, the Proponent shall maintain stream bank stability using ditches and diversion berms.	GGM has developed and implemented the Erosion and Sediment Control Plan for the Mine that is applicable site wide (GGM 2020d). Weekly erosion and sediment control inspections were completed along the Goldfield Creek Diversion during ice/snow-free conditions and provided to IAAC and DFO.	n/a
3.15	GGM shall develop, prior to the start of blasting activities in or near water and in consultation with relevant authorities, a follow-up program to determine the effectiveness of the mitigation measures as it pertains to the adverse environmental effects of blasting on fish and fish habitat, including aquatic listed species at risk. The Proponent shall implement the follow-up program during blasting activities. As part of the implementation of the follow-up program, the Proponent shall: 3.15.1 monitor instantaneous pressure and peak particle velocity during the first blasting event; 3.15.2 if the results of the monitoring referred to in conditions 3.15.1 demonstrate that modified or additional mitigation measures are required to protect fish and fish habitat, including aquatic listed species at risk, from blasting, develop, prior to the next blasting event and in consultation with relevant authorities, modified or additional mitigation measures pursuant to condition 2.7; and 3.15.3 implement the modified or additional mitigation measures referred to in condition 3.15.2 during all subsequent blasting events. The Proponent shall submit these measures to the Agency before implementing them.	Consultation on proposed mitigation measures and methods as they pertain to adverse environmental effects on fish and fish habitat caused by changes in water quality in Kenogamisis Lake, Mosher Lake and the Southwest Arm Tributary took place prior to the current monitoring period. Comments were incorporated into the Fish and Fish Habitat Federal EIS Follow-up Monitoring Plan, which was finalized in 2021. The plan was implemented during the reporting period. The Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan details the follow-up program to validate the EIS and the effectiveness of the mitigation measures as it pertains to the potential effects of blasting on fish and fish habitat. The Plan addresses specific conditions of the Decision Statement for the Project (3.14, 3.15, 3.16, 3.17, 3.2, 5.4, and 5.5.1). Results of the follow up program are presented in the 2024 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Annual Report. The first monitoring report was completed in December 2021 and provided to IAAC. The second and third monitoring reports were provided to IAAC in December 2022 and 2023, respectively.	Refer to summary of activities undertaken to comply with the condition.
3.16	GGM shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects on fish and fish habitat caused by changes in water quality in Kenogamisis Lake, Mosher Lake and the Southwest Arm Tributary. The Proponent shall implement the follow-up program during all phases of the Designated Project, including the environmental effects monitoring requirements set out in Schedule 5 of the Metal and Diamond Mining Effluent Regulations. As part of the implementation of the follow-up program, the Proponent shall: 3.16.1 monitor, at least quarterly during all phases of the Designated Project, nutrient levels, algae abundance, and dissolved oxygen levels in Kenogamisis Lake, Mosher Lake and the Southwest Arm Tributary; 3.16.2 monitor, at least quarterly during the time that effluent is discharged in Kenogamisis Lake, concentrations of arsenic, unionized ammonia and total phosphorus in Kenogamisis Lake; 3.16.3 monitor, at least quarterly during all phases of the Designated Project, concentrations of arsenic in Mosher Lake, Barton Bay and the Southwest Arm Tributary; and 3.16.4 if the results of the monitoring referred to in conditions 3.16.1, 3.16.2 or 3.16.3 demonstrate that modified or additional mitigation measures are required to protect fish and fish habitat from changes to water quality, develop and implement modified or additional mitigation measures pursuant to condition 2.7. The Proponent shall submit these measures to the Agency before implementing them.	Refer to condition 3.15 above.	Refer to condition 3.15 above.

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3.17	<p>GGM shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures as it pertains to the adverse environmental effects on fish and fish habitat of from changes in groundwater quality caused by the Designated Project. The Proponent shall implement the follow-up program during all phases of the Designated Project. As part of the implementation of the follow-up program, the Proponent shall:</p> <p>3.17.1 monitor groundwater seepage flows, levels and quality at sites located upgradient, downgradient and cross-gradient of the tailings management facility, waste rock storage areas, overburden storage area, ore stockpile and historical Macleod and Hardrock tailings, using as benchmarks the concentrations predicted by the Proponent in Table 9-20 of the Environmental Impact Statement; and</p> <p>3.17.2 if the results of the monitoring referred to in condition 3.17.1 demonstrate that modified or additional mitigation measures are required to mitigate adverse environmental effects on fish and fish habitat of changes in groundwater quality caused by the Designated Project, develop and implement modified or additional mitigation measures pursuant to condition 2.7. The Proponent shall submit these measures to the Agency before implementing them.</p>	Refer to condition 3.15 above.	Refer to condition 3.15 above.
4.1	<p>Carry out the Designated Project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's Avoidance Guidelines and the risk of incidental take. The Proponent's actions when carrying out the Designated Project shall be in compliance with the Migratory Birds Convention Act, 1994, the Migratory Birds Regulations and the Species at Risk Act.</p>	<p>Limited tree clearing occurred during the reporting period in the nesting window. During this window, nest surveys were conducted prior to tree clearing. Results are presented in the 2024 Biodiversity Federal Follow Up Monitoring Annual Report, which includes information on mitigation measures put in place for active nests found during surveys.</p>	n/a
4.2	<p>Undertake, in consultation with Indigenous groups and relevant authorities, progressive reclamation of the project development area. The Proponent shall identify, prior to the start of progressive reclamation and in consultation with Indigenous groups and relevant authorities, plant species native to the area of the Designated Project to use for revegetation as part of the progressive reclamation, including species suitable to create habitat for migratory birds.</p>	<p>A Draft Revegetation Plan and draft Goldfield Creek Realignment Biodiversity Monitoring Plan (Appendices K and L, respectively of the Biodiversity Management and Monitoring Plan (BMMP) were developed and sent to Indigenous groups and MNRF for review/comment in October 2019. Comments received were responded and discussed in meetings. The BMMP was finalized in 2020 based on feedback from consultation, and also updated in 2022 (GGM 2022).</p> <p>An updated closure plan was consulted on in the 2024 monitoring period through the provision of draft documents, meetings on the topic, and written comment responses. The closure plan amendment was filed by the Ministry of Mines in August 2024, which included the reclamation plan for the temporary bypass channel.</p>	Refer to summary of activities undertaken to comply with the condition.
4.3	<p>Compensate, in consultation with relevant authorities, the loss of barn swallow (<i>Hirundo rustica</i>) nesting sites as a result of the Designated Project, taking into account Ontario's Recovery Strategy for Barn Swallow (<i>Hirundo rustica</i>). In doing so, the Proponent shall install, prior to construction, and maintain, during three years, artificial barn swallow (<i>Hirundo rustica</i>) nesting structures.</p>	<p>N/A: removal of barn swallow nesting sites did not occur during the active nesting season. Artificial barn swallow nesting structures were installed in fall 2021 and were in place and monitoring during the 2024 reporting period.</p>	n/a
4.4	<p>Establish, during construction, a speed limit of no more than 65 kilometres per hour on all roads within the project development area, including the portion of Highway 11 to be realigned by the Proponent located within the project development area, and shall require employees and contractors associated with the Designated Project to abide by this limit.</p>	<p>N/A: construction of the highway realignment was complete prior to the reporting period.</p>	n/a
4.5	<p>Establish, during operation and decommissioning, a speed limit of no more than 65 kilometres per hour on all roads within the project development area, excepting the portion of Highway 11 located within the project development area, and shall require employees and contractors associated with the Designated Project to abide by this limit.</p>	<p>GGM has implemented speed limits for that are at or below 65km/hr, and installed speed limit signs and outlined these requirements during employee orientation.</p>	n/a

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4.6	<p>Develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the use by migratory birds of surface water facilities in the project development area. As a part of the implementation of the follow-up program, the Proponent shall:</p> <p>4.6.1 monitor, at times migratory birds may be present in the project development area, the use by migratory birds of the tailings management facility, contact water collection ditches and collection ponds during all phases of the Designated Project until such time that water quality in these structures meet legislative requirements and water quality objectives. The water quality objectives are to be established using an ecological risk based approach, developed in consultation with Indigenous groups and relevant authorities;</p> <p>4.6.2 monitor, at times migratory birds may be present in the project development area, the use by migratory birds of the pit lake from the start of filling of the pit lake and until the end of decommissioning; and</p> <p>4.6.3 if results of the monitoring referred to in conditions 4.6.1 or 4.6.2 indicate that migratory birds use the tailing management facility, the contact water collection ditches, the collection ponds or the pit lake, develop and implement deterrent measures pursuant to condition 2.7. The Proponent shall submit these measures to the Agency before implementing them.</p>	<p>The plan to address condition 4.6 is presented in Appendix E of the BMMP (GGM 2022), which has been developed based on consultation with Indigenous groups.</p> <p>Results are presented in the 2024 Biodiversity Federal Follow Up Monitoring Annual Report, which includes information on mitigation measures that will be put in place for waterfowl utilizing the tailings management facility.</p>	<p>A draft Wildlife-Water Follow-Up Plan was sent to Indigenous groups and the MNRF for review/comment in October 2019 and ECCC in July 2020. Comments received were responded to and discussed in meetings. Revisions based on the consultation are included in Appendix E of the BMMP (GGM 2022).</p>
4.7	<p>Develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures to avoid harm to migratory birds, their eggs and nests, including the mitigation measures used to comply with conditions 4.1 to 4.5. As part of the development of the follow-up program, the Proponent shall identify performance indicators that shall be used by the Proponent to evaluate the effectiveness of the progressive reclamation referred to in condition 4.2. The Proponent shall implement the follow-up program during all phases of the Designated Project. As part of the implementation of the follow-up program, the Proponent shall:</p> <p>4.7.1 conduct migratory bird surveys annually for the first five years following completion of construction to assess migratory bird use of the project development area. The Proponent shall determine the methodology for the migratory bird surveys in consultation with Indigenous groups and relevant authorities. The Proponent shall determine, in consultation with Indigenous groups and relevant authorities and based on the results of the initial surveys, if additional surveys within the project development area are required after the first five years following completion of construction and at what frequency and in which locations these additional surveys shall occur;</p> <p>4.7.2 monitor the effectiveness of the progressive reclamation referred to in condition 4.2, including the establishment of native plant species to create habitat for migratory birds, annually during operation and during the first five years of decommissioning and every five years thereafter until the proponent has determined, in consultation with Indigenous groups and relevant authorities, that the performance indicators have been met;</p> <p>4.7.3 monitor barn swallow (<i>Hirundo rustica</i>) nesting activity and use of the artificial nesting structures referred to in condition 4.3 annually during the first three years following the installation of the nesting structures and at times barn swallow (<i>Hirundo rustica</i>) may be present in the project development area; and</p> <p>4.7.4 monitor collisions between vehicles associated with the Designated Project and migratory birds within the project development area during all phases of the Designated Project.</p>	<p>The plan to address condition 4.7 is presented in the BMMP (GGM 2022), which has been developed based on consultation with Indigenous groups.</p> <p>Results for applicable monitoring are presented in the 2024 Biodiversity Federal Follow Up Monitoring Annual Report, which includes information on mitigation measures put in place for active nests found during surveys.</p>	<p>A draft Migratory Birds Follow-Up Plan was sent to Indigenous groups and the MNRF for review/comment in October 2019 and regulators in July 2020. Comments received were responded to and discussed in meetings. Revisions based on the consultation are included in the Appendices of the BMMP (GGM 2022).</p>
5.1	<p>Develop, prior to construction and in consultation with Indigenous groups, measures to mitigate emissions of dust generated by the Designated Project, including dust from vehicles associated with the Designated Project on roads located within the project development area and dust generated during the transport of historical tailings, that take into account the standards and criteria set out in the Canadian Council of Ministers of the Environment's Canadian Ambient Air Quality Standards and Ontario's Ambient Air Quality Criteria. The Proponent shall submit these measures to the Agency before implementing them. The Proponent shall implement these measures during construction, operation and the first five years of decommissioning.</p>	<p>Measures to mitigate emissions of dust developed as part of the Air Quality Management and Monitoring Plan (AQMMP) (GGM 2020e) were sent to Indigenous groups for review/comment in October 2019 and regulators in July 2020.</p>	<p>n/a</p>

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5.2	Proponent shall install prior to operation, and use during ore crushing and transfer, crushers with dust collection systems.	Dust collection systems were installed on crushers prior to ore crushing and transfer commencing in the 2024 reporting period.	n/a
5.3	<p>Develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures as it pertains to the adverse environmental effects on the health of Indigenous Peoples of changes to air quality. As part of the follow-up program, the Proponent shall:</p> <p>5.3.1 identify, as part of the development of the follow-up program, monitoring locations for air contaminants within areas used by Indigenous groups for traditional purposes or within areas representative of air quality in areas used by Indigenous groups for traditional purposes;</p> <p>5.3.2 monitor, during construction, operation and the first five years of decommissioning, total suspended particulates, particulate matter (PM10), fine particulate matter (PM2.5) and nitrogen dioxide at the monitoring locations identified pursuant to condition 5.3.1, using as benchmarks the standards and criteria set out in the Canadian Council of Ministers of the Environment's Canadian Ambient Air Quality Standards and Ontario's Ambient Air Quality Criteria. The Proponent shall monitor total suspended particulates, fine particulate matter (PM2.5) and nitrogen dioxide at least monthly and shall monitor particulate matter (PM10) in real-time;</p> <p>5.3.3 monitor, at least annually during construction and for the first two years of operation, airborne benzene and benzo(a)pyrene at the monitoring locations identified pursuant to condition 5.3.1. The Proponent shall determine, in consultation with Indigenous groups and relevant authorities and based on the results of the monitoring, if additional monitoring is required after the first two years of operation and at what frequency this additional monitoring shall occur; and</p> <p>5.3.4 monitor, during construction and for the first two years of operation, silt content on roads within the project development area. The Proponent shall determine, in consultation with Indigenous groups and relevant authorities and based on the results of the monitoring, if additional monitoring is required after the first two years of operation and at what frequency this additional monitoring shall occur.</p>	The AQMMP (GGM 2020e) was developed to validate the EIS and effectiveness of the mitigation measures as it pertains to the potential for adverse environmental effects on the health of Indigenous Peoples of changes to air quality. Monitoring per the plan occurred in the reporting period and results are presented in the 2024 Indigenous Peoples Health Risk Assessment Federal Follow Up Monitoring Annual Report.	<p>A draft AQMMP was sent to Indigenous groups and the MECP for review/comment in October 2019 and ECCC in July 2020. Indigenous Peoples Health Risk Assessment Follow-up Plan sent to Indigenous groups for review/comment in January 2020. Comments received were responded to and discussed in meetings. Revisions based on the consultation were made in final version of the AQMMP (GGM 2020e) and the Indigenous Peoples Health Risk Assessment Follow-up Plan (GGM 2020b). Consultation with Indigenous groups and relevant authorities to determine whether additional monitoring is required will occur after the first two years of operation.</p>
5.4	<p>Develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the adverse environmental effects on the health of Indigenous Peoples of changes in concentrations of contaminants in water and fish. As part of the implementation of the follow-up program, the Proponent shall:</p> <p>5.4.1 monitor, at least quarterly during construction and the first five years of operation, mercury in the Southwest Arm Tributary, using as a benchmark a concentration of 0.04 micrograms per litre. The Proponent shall determine, in consultation with Indigenous groups and relevant authorities and based on the results of the monitoring, if additional monitoring is required after the first five years of operation and at what frequency this additional monitoring shall occur; and</p> <p>5.4.2 monitor, at least quarterly during construction and the first five years of operation, methylmercury in the Southwest Arm Tributary, using as a benchmark a concentration of 0.0001 micrograms per litre. The Proponent shall determine, in consultation with Indigenous groups and relevant authorities and based on the results of the monitoring, if additional monitoring is required after the first five years of operation and at what frequency this additional monitoring shall occur.</p>	The Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan was completed in 2021 and addresses condition 5.4. The information presented in Fish and Fish Habitat Federal EIS Follow-Up Monitoring Reports will be carried forward, where necessary, and assessed in the subsequent Indigenous Peoples Health Risk Assessment Follow-up Plan Reports. Monitoring per the Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan and Indigenous Peoples Health Risk Assessment Follow-up Plan occurred in the reporting period and results are presented in the 2024 Indigenous Peoples Health Risk Assessment Federal Follow Up Monitoring Annual Report and the 2024 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Annual Report.	Consultation on proposed mitigation measures and methods as they pertain to adverse environmental effects on fish and fish habitat caused by changes in water quality in Kenogamis Lake, Mosher Lake and the Southwest Arm Tributary took place prior to the current monitoring period. Comments were incorporated into the Fish and Fish Habitat Federal EIS Follow-up Monitoring Plan, which was finalized in 2021 and included a follow-up program to assess the predictions of the EIS and the effectiveness of mitigation measures that pertain to potential effects on the health of Indigenous Peoples of changes in concentrations of contaminants in water and fish.
5.5	Develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures as it pertains to the adverse environmental effects on the health of Indigenous Peoples of changes in concentrations of contaminants in country foods caused by the Designated Project. The Proponent shall implement the follow-up program	The Indigenous Peoples Health Risk Assessment Follow-up Plan was finalized on January 3, 2020. The draft Program was sent to Indigenous groups for review/comment in 2019. Monitoring required by condition 5.5 is required during the Mine operation	Indigenous Peoples Health Risk Assessment Follow-up Plan sent to Indigenous groups for review/comment in January 2020. Comments received were responded to and

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	<p>during all phases of the Designated Project. As part of the development of the follow-up program, the Proponent shall identify, in consultation with Indigenous groups and relevant authorities, species of vegetation, fish and wildlife that shall be monitored and shall determine, in consultation with Indigenous groups and relevant authorities, the sampling and analytical methodology that shall be applied for the monitoring of each species, including how samples will be collected. As part of the implementation of the follow-up program, the Proponent shall:</p> <p>5.5.1 monitor, at least every two years, during the first six years of operation, mercury, methylmercury and arsenic concentrations in walleye {Sander vitreus} tissue according to the methodology determined pursuant to condition 5.5. The Proponent shall determine, in consultation with Indigenous groups and relevant authorities and based on the results of the monitoring, if additional monitoring is required after the first six years of operation and at what frequency this additional monitoring shall occur; and</p> <p>5.5.2 monitor, at least every two years, during the first six years of operation, concentrations of metals, including mercury and arsenic, in small mammals according to the methodology determined pursuant to condition 5.5. The Proponent shall determine, in consultation with Indigenous groups and relevant authorities and based on the results of the monitoring, if additional monitoring is required after the first six years of operation and at what frequency this additional monitoring shall occur.</p>	<p>phase and operation did not commence during the reporting period.</p>	<p>discussed in meetings. The plan was finalized on November 2, 2020.</p>
5.6	<p>Participate in any regional initiative that is established for the analysis of contaminants in moose (Alces alces) tissue in the region, should there be any such initiative(s) during construction or operation of the Designated Project.</p>	<p>N/A: There was no initiative that established for the analysis of contaminants in moose tissue in the region during the reporting period GGM was aware of.</p>	<p>n/a</p>
5.7	<p>Develop, in consultation with Indigenous groups and relevant authorities, a Community Relations Management Plan to share the results of the follow-up programs referred to in conditions 5.3, 5.4 and 5.5 with Indigenous groups and relevant authorities, including any potential health risks, in plain language, and the modified or additional mitigation measures developed and implemented by the Proponent pursuant to condition 2.7. The Proponent shall develop the Community Relations Management Plan prior to construction and shall implement and maintain it up to date during the periods of time that the follow-up programs referred to in conditions 5.3, 5.4 and 5.5 are implemented.</p>	<p>Draft Communications Plan was developed and sent to Indigenous groups for review/comment in 2019. Comments received were responded to and discussed in meetings. Any required revisions based on the consultation were made in final version of the Communications Plan submitted to IAAC in 2020. The Plan is reviewed and updated ongoing as required, and provided to Indigenous group representatives for review.</p>	<p>Refer to summary of activities undertaken to comply with the condition.</p>
6.1	<p>Establish, in consultation with Indigenous groups and prior to undertaking construction activities that will restrict access to the Southwest Arm of Kenogamisis Lake, alternate unrestricted access to the Southwest Arm of Kenogamisis Lake and shall maintain that alternate access during all phases of the Designated Project, to the extent that such access is safe.</p>	<p>The East Access Road was identified on the site plan and consulted on with Indigenous groups in 2019. This alternate road was constructed in 2022 and remains open to public access.</p>	<p>Refer to summary of activities undertaken to comply with the condition.</p>
6.2	<p>Maintain unrestricted access along Goldfield Road during all phases of the Designated Project and to the Goldfield Creek diversion channel starting when the Proponent has completed the progressive reclamation referred to in condition 4.2 and until the end of decommissioning, to the extent that such access is safe.</p>	<p>Access to Goldfield Road was unrestricted during the reporting period. Remedial works in the Goldfield Creek Diversion Channel area commenced during the reporting period and are ongoing.</p>	<p>n/a</p>
6.3	<p>Only conduct blasting activities between 10:00 am and 4:00 pm and shall not conduct blasting on statutory holidays and on days of cultural importance that the Proponent shall identify in consultation with Indigenous groups, unless required for safety reasons or unless the Proponent has advised Indigenous groups pursuant to condition 6.4.2 of any update to the blasting schedule.</p>	<p>Compliance with condition 6.3 was maintained with a few minor exceptions where blasts were required to occur slightly outside of the 10-4pm blasting window. The public was notified of the update to the schedule prior to the blasts occurring. During the 2024 reporting period, GGM implemented a new notification system to alert subscribers of the blast schedule.</p>	<p>n/a</p>

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
6.4	<p>Develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a Community Relations Management Plan to share information related to Designated Project activities and about the adverse environmental effects of the Designated Project with Indigenous groups. The Proponent shall implement and maintain the Community Relations Management Plan up-to date during all phases of the Designated Project. The Community Relations Management Plan shall include procedures, including timing and methods, for sharing information on the following:</p> <p>6.4.1 the location and timing of Designated Project activities that may permanently or temporarily affect navigation within the project development area and in the Southwest Arm of Kenogamisis lake, including the locations of the effluent discharge location and the freshwater intakes in Kenogamisis lake; and</p> <p>6.4.2 the dates and times of all regularly-scheduled blasting events to be conducted by the Proponent and how the Proponent will notify Indigenous groups of any update to the blasting schedule on a daily basis if the Proponent must conduct blasting activities before 10:00 am or after 4:00 pm or on a statutory holiday or day of cultural importance for Indigenous groups.</p>	Refer to condition 5.7 above.	Refer to condition 5.7 above.
6.5	<p>Develop, as part of the Community Relations Management Plan referred to in condition in 6.4 and in consultation with Indigenous groups, procedures for Indigenous groups to communicate to the Proponent their concerns about adverse environmental effects caused by the Designated Project related to access to and use of lands for traditional purposes, including navigation and consumption of country foods, and procedures for the Proponent to document and respond in a timely manner to the concerns received and demonstrate how issues have been addressed, including through the implementation of additional or modified mitigation measures. The Proponent shall implement these procedures during all phases of the Designated Project.</p>	Refer to condition 5.7 above.	Refer to condition 5.7 above.
6.6	<p>As part of the progressive reclamation referred to in condition 4.2, GGM shall:</p> <p>6.6.1 identify, prior to the start of progressive reclamation and in consultation with Indigenous groups and relevant authorities, species of importance to Indigenous Peoples (including medicinal, edible and ceremonial plants) to use for revegetation as part of the progressive reclamation to create harvesting opportunities; and</p> <p>6.6.2 develop, prior to the start of progressive reclamation and in consultation with Indigenous groups and relevant authorities, and implement, during all phases of the Designated Project, measures to manage the spread of invasive species. The Proponent shall submit these measures to the Agency before implementing them.</p>	A draft Revegetation Plan and draft Invasive Species Management Plans were developed and sent to Indigenous groups and the MNR for review/comment in 2019. Comments received were responded to and discussed in meetings. The Plans were finalized and sent to IAAC in December 2020 and appended to the final BMMP.	Refer to summary of activities undertaken to comply with the condition.
6.7	<p>Develop, prior to construction and in consultation with Indigenous groups, a protocol for receiving complaints related to the exposure to noise from the Designated Project. The Proponent shall submit the protocol to the Agency prior to construction and shall implement it during all phases of the Designated Project. The Proponent shall respond to any noise complaint(s) within 48 hours of the complaint being received and shall implement corrective actions, if required to reduce exposure to noise, in a timely manner.</p>	A draft Complaint (Feedback) Protocol developed and sent to Indigenous groups for review/comment in 2019. Comments received were responded to and discussed in meetings. Any required revisions based on the consultation were made and it was finalized and submitted to IAAC in 2020.	Refer to summary of activities undertaken to comply with the condition.
6.8	<p>Provide access to the project development area to Indigenous groups prior to construction, to the extent that such access is safe, to harvest traditional plants. In doing so, the Proponent shall:</p> <p>6.8.1 notify Indigenous groups at least 120 days in advance of vegetation clearing to allow Indigenous groups to harvest traditional plants within the project development area; and</p> <p>6.8.2 notify Indigenous groups and the Agency if the Proponent must prohibit access to the project development area to harvest traditional plants for safety reasons. The Proponent shall notify Indigenous groups at least 48 hours before access must be prohibited, unless access must be prohibited for emergency purposes.</p>	Opportunity to harvest was provided to Indigenous groups on September 5, 2019. Indigenous groups continue to be able to request to harvest traditional plants within the PDA at any time. There were no requests to harvest during the 2024 monitoring period.	n/a
6.9	<p>Develop, prior to construction and in consultation with Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to the adverse environmental effects of the Designated Project on the current use of lands and resources for traditional purposes, including access to the Southwest Arm of Kenogamisis Lake referred to in condition 6.1 and access along Goldfield Road and to the Goldfield Creek diversion channel referred to in condition 6.2. The Proponent shall implement the follow-up program during all phases of the Designated Project.</p>	Current Use of Lands and Resources for Traditional Purposes Follow-Up Plan was finalized in consultation with Indigenous groups in 2020. Revisions based on the consultation were incorporated into the final version (GGM 2020a).	Refer to summary of activities undertaken to comply with the condition.

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
7.1	<p>Develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a bald eagle (<i>Haliaeetus leucocephalus</i>) protection plan that takes into account Ontario's Management Plan for the Bald Eagle (<i>Haliaeetus leucocephalus</i>) in Ontario and Ontario's Bald Eagle Habitat Management Guidelines. The Proponent shall implement the protection plan during construction and operation. As part of the implementation of the protection plan, the Proponent shall:</p> <p>7.1.1 conduct, once prior to construction and annually until vegetation clearing is completed within the project development area, surveys of active bald eagle (<i>Haliaeetus leucocephalus</i>) nests within the project development area and within 800 meters of the project development area, and provide the results of the surveys to Indigenous groups, relevant authorities and the Agency no later than 60 days after the end of each survey; and</p> <p>7.1.2 develop, in consultation with Indigenous groups and relevant authorities, and implement measures to protect active nest(s) found pursuant to the surveys referred to in condition 7.1.1. At a minimum, these measures shall include restrictions on access and on Designated Project activities, including site preparation and vegetation clearing, that the Proponent may undertake from March 1 to August 31 within 400 metres of any active nest. The Proponent shall submit these measures to the Agency prior to implementing them, including the period(s) of time during which these measures will apply.</p>	<p>The draft Bald Eagle Protection Plan was developed and sent to Indigenous groups and the MNR for review/comment in 2019 and IAAC in 2020. Comments received were responded to and discussed in meetings. Revisions based on the consultation were incorporated into the final version, which is presented in Appendix G of the BMMP (GGM 2022).</p> <p>A bald eagle aerial survey was completed by GGM during the reporting period. The new eagle nest identified in 2023 was active in 2024, and a successful eaglet was observed throughout the summer and early fall. As the nest is within the PDA and within 200 m of some project activities, access to the road to the peninsula was restricted from May to August 31, 2024. During this time no vegetation clearing or large vehicle traffic was permitted, with access limited to non-disturbing activities (e.g., monthly surface water sampling and pipeline maintenance).</p>	Refer to summary of activities undertaken to comply with the condition.
8.1	Close mine shaft openings prior to any drawdown works to reduce the likelihood of little brown myotis (<i>Myotis lucifugus</i>) and northern myotis (<i>Myotis septentrionalis</i>) establishing bat hibernacula in underground workings.	Pumping occurred in Mosher #1 Shaft and openings were confirmed to be closed prior to drawdown.	n/a
9.1	Take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects.	Several management plans have been developed to prevent accidents and malfunctions (i.e., Spill Prevention and Contingency Plan, Erosion and Sediment Control Plan, Construction Environmental Management Plan, Emergency Response Plan, etc.). The Spill Prevention and Contingency Plan and Emergency Response Plan were updated in the 2024 monitoring period.	n/a
9.2	Prior to construction, consult with Indigenous groups and relevant authorities on the measures to be implemented to prevent accidents and malfunctions.	A draft Emergency Preparedness and Response Plan for Construction was developed and sent to Indigenous groups for review/comment in 2019. Comments received were responded to and discussed in meetings. Revisions based on the consultation were made in the final version of the Emergency Preparedness and Response Plan. The Emergency Response Plan for Construction was updated in the 2024 monitoring period for Operations (GGM 2024).	Refer to summary of activities undertaken to comply with the condition.
9.3	<p>Prior to construction and in consultation with Indigenous groups and relevant authorities, develop an accident and malfunction response plan in relation to the Designated Project. The accident and malfunction plan shall include:</p> <p>9.3.1 the types of accident and malfunction that may cause adverse environmental effects; and</p> <p>9.3.2 the measures to be implemented in response to each type of accident and malfunction referred to in condition 9.3.1 to mitigate any adverse environmental effect(s) caused by the accident or malfunction.</p>	Refer to condition 9.2 above.	Refer to condition 9.2 above.
9.4	<p>In the event of an accident or malfunction with the potential to cause adverse environmental effects, the Proponent shall immediately implement the measures appropriate to the accident or malfunction referred to in condition 9.3.2 and shall:</p> <p>9.4.1 notify, as soon as possible, Indigenous groups and relevant authorities of the accident or malfunction, and notify CEAA in writing no later than 24 hours following the accident or malfunction. For the notification to Indigenous groups and the Agency, the Proponent shall specify:</p> <p>9.4.1.1 the date the accident or malfunction occurred;</p> <p>9.4.1.2 a summary description of the accident or malfunction;</p> <p>9.4.1.3 a list of any substances potentially released into the environment as a result of the accident or malfunction.</p> <p>9.4.2 submit a written report to the Agency no later than 30 days after the day on which the accident or malfunction occurred. The written report shall include:</p>	There were 16 accidents or malfunctions (i.e., reportable spills) in the 2024 monitoring period. Reporting per condition 9.4 was completed for each incident to both IAAC and the EASS.	Refer to summary of activities undertaken to comply with the condition.

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
	<p>9.4.2.1 a detailed description of the accident or malfunction and of its adverse environmental effects and any associated potential health risks;</p> <p>9.4.2.2 a description of the measures that were taken by the Proponent to mitigate the adverse environmental effects caused by the accident or malfunction;</p> <p>9.4.2.3 any view(s) from Indigenous groups and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects, the associated potential health risks and the measures taken by the Proponent to mitigate these adverse environmental effects;</p> <p>9.4.2.4 a description of any residual adverse environmental effects and any modified or additional measures required by the Proponent to mitigate residual adverse environmental effects; and</p> <p>9.4.2.5 details concerning the implementation of the accident or malfunction response plan referred to in condition 9.3.</p> <p>9.4.3 submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction occurred that includes a description of changes made to avoid a subsequent occurrence of the accident or malfunction and of the modified or additional measure(s) implemented by the Proponent to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation, taking into account the information submitted in the written report pursuant to condition 9.4.2. The report shall include all additional views from Indigenous groups and advice from relevant authorities received by the Proponent since the views and advice referred to in condition.</p>		
9.5	<p>The Proponent shall develop a communication plan in consultation with Indigenous groups. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up to date during all phases of the Designated Project. The plan shall include:</p> <p>9.5.1 the types of accident and malfunction requiring the Proponent to notify the respective Indigenous groups;</p> <p>9.5.2 the manner by which Indigenous groups shall be notified by the Proponent of an accident or malfunction and of any opportunities for the Indigenous groups to assist in the response to the accident or malfunction; and</p> <p>9.5.3 the contact information of the representatives of the Proponent that the Indigenous groups may contact and of the representatives of the respective Indigenous groups to which the Proponent provides notification.</p>	Refer to condition 5.7 above.	Refer to condition 5.7 above.
10.1	Submit a schedule to CEAA for all conditions set out in the CEAA Decision Statement no later than 60 days prior to the start of construction. This schedule shall detail all activities planned to fulfill each condition set out in the Decision Statement and the commencement and estimated completion month(s) and year(s) for each of these activities.	Submitted to IAAC January 22, 2021.	n/a
10.2	Submit a schedule to CEAA outlining all activities required to carry out all phases of the Designated Project no later than 60 days prior to the start of construction. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities.	Submitted to IAAC January 22, 2021.	n/a
10.3	Submit to CEAA, in writing, an update to schedules referred to in conditions 10.1 and 10.2 every year no later than December 31, until completion of all activities referred to in each schedule.	Submitted to IAAC January 22, 2021. At the time of preparation of this report, there have been no updates to the schedule submitted for the 2021 monitoring period.	n/a
10.4	Provide revised schedules to CEAA if any change is made to the initial schedules referred to in conditions 10.1 and 10.2 or to any subsequent update(s) referred to in condition 10.3, upon revision of the schedules.	Submitted to IAAC January 22, 2021. At the time of preparation of this report, there have been no updates to the schedule submitted 2021 monitoring period.	n/a
10.5	Proponent shall provide Indigenous groups with the schedules referred to in conditions 10.1 and 10.2 and the updates or revisions to the initial schedules pursuant to condition 10.3 and 10.4 at the same time the Proponent provides these documents to CEAA.	GGM provides Indigenous groups progress updates on the construction schedule during each regularly scheduled EAS meeting.	Refer to summary of activities undertaken to comply with the condition.
11.1	Proponent shall maintain all records required to demonstrate compliance with the conditions set out in the CEAA Decision Statement. The Proponent shall retain the records and make them available to the Agency throughout construction and operation and for 25 years following the end of operation or until the end of decommissioning of the Designated Project, whichever comes first. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency.	Records required to demonstrate compliance with the conditions are maintained in GGM's document control system and can be made available upon request.	n/a

Condition Number	Condition Description	Activities Undertaken to Comply with Condition	If Decision Statement Prescribed Consultation, How Information Received from Consultation Was Considered
11.2	GGM shall retain all records referred to in condition 11.1 at a facility in Canada and shall provide the address of the facility to CEAA. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained and shall provide to the Agency the address of the new location.	<p>GGM has maintained records in GGM's electronic document control system and physically at:</p> <p>Greenstone Mine 7921 Highway 11 P.O. Bag 10 Geraldton, ON POT 1M0</p>	n/a
11.3	GGM shall notify CEAA of any change to the contact information of the Proponent included in the CEAA Decision Statement.	<p>Contact information for GGM is as follows:</p> <p>Braeden Connor, Environment and Social Responsibility Manager Mobile: 519-872-3991 David Newhook, General Manager Mobile: 905-617-1265</p> <p>Greenstone Mine 7921 Highway 11 P.O. Bag 10 Geraldton, ON POT 1M0</p>	n/a

2.2 Follow-up Programs (Condition 2.9.4)

Condition 2.9.4 states that the annual report must include the information referred to in Conditions 2.4 and 2.5 for each follow-up program. Conditions 2.4 and 2.5 are:

2.4 The Proponent shall, where a follow-up program is a requirement of a condition set out in this Decision Statement, determine, as part of the development of each follow-up program and in consultation with the party or parties being consulted during the development, the following information:

2.4.1 the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program;

2.4.2 the scope, content and frequency of reporting of the results of the follow-up program;

2.4.3 the levels of environmental change relative to baseline conditions that would require the Proponent to implement modified or additional mitigation measure(s), including instances where the Proponent may require Designated Project activities to be stopped; and

2.4.4 the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.4.3 have been reached or exceeded.

2.5 The Proponent shall maintain the information referred to in condition 2.4 during the implementation of each follow-up program in consultation with the party or parties being consulted during the development of each follow-up program.

Table 2-2 presents a list of the required follow-up programs and references how GGM has included the information required by Conditions 2.4 and 2.5.

Table 2-2: Follow-up Program Requirements (Condition 2.9.4)

Condition Requiring a Follow-up Program	Reference to Information Required as Per Condition 2.4 and 2.5
<p>3.15 The Proponent shall develop, prior to the start of blasting activities in or near water and in consultation with relevant authorities, a follow-up program to determine the effectiveness of the mitigation measures as it pertains to the adverse environmental effects of blasting on fish and fish habitat, including aquatic listed species at risk. The Proponent shall implement the follow-up program during blasting activities.</p>	<p>Follow-up program for monitoring of blasting was developed as part of NVMMP and was finalized in 2020. The NVMMP includes the methodology, location, frequency, timing, and duration of monitoring; the scope, content and frequency of reporting of the results of the follow-up program; when adaptive management is required; and the mitigation measures to be implemented as part of adaptive management.</p> <p>The NVMMP was implemented beginning in 2021 when blasting commenced, and through the 2024 reporting period.</p>
<p>3.16 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects on fish and fish habitat caused by changes in water quality in Kenogamisis Lake, Mosher Lake and the Southwest Arm Tributary. The Proponent shall implement the follow-up program during all phases of the Designated Project, including the environmental effects monitoring requirements set out in Schedule 5 of the <i>Metal and Diamond Mining Effluent Regulations</i>.</p>	<p>The Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan (GGM 2021a) includes the methodology, location, frequency, timing, and duration of monitoring; the scope, content and frequency of reporting of the results of the follow-up program; when adaptive management is required; and the mitigation measures to be implemented as adaptive management.</p> <p>This Plan includes a water quantity and quality monitoring components. The Fish and Fish Habitat Federal EIS Follow-Up Monitoring Annual Report was completed in December 2024. The sampling requirements identified in the Federal Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan differ from the requirements of the Environmental Effects Monitoring (EEM) requirements set out in Schedule 5 of the <i>Metal and Diamond Mining Effluent Regulations (MDMER)</i>. Both monitoring programs will be implemented, as required.</p>
<p>3.17 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures as it pertains to the adverse environmental effects on fish and fish habitat of from changes in groundwater quality caused by the Designated Project. The Proponent shall implement the follow-up program during all phases of the Designated Project</p>	<p>The Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan (GGM 2021a) includes the methodology, location, frequency, timing and duration of monitoring; the scope, content and frequency of reporting of the results of the follow-up program; when adaptive management is required; and the mitigation measures to be implemented as adaptive management.</p> <p>The Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan includes a groundwater quantity and quality monitoring component. The Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan was implemented in 2021.</p>
<p>4.6 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the use by migratory birds of surface water facilities in the project development area.</p>	<p>Regarding the use by migratory birds of surface water facilities in the project development area, Appendix E of the BMMP (GGM, 2022) includes the methodology, location, frequency, timing, and duration of monitoring; the scope, content and frequency of reporting of the results of the follow-up program; when adaptive management is required; and the mitigation measures to be implemented as adaptive management.</p>

Condition Requiring a Follow-up Program	Reference to Information Required as Per Condition 2.4 and 2.5
<p>4.7 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures to avoid harm to migratory birds, their eggs and nests, including the mitigation measures used to comply with conditions 4.1 to 4.5. As part of the development of the follow-up program, the Proponent shall identify performance indicators that shall be used by the Proponent to evaluate the effectiveness of the progressive reclamation referred to in condition 4.2. The Proponent shall implement the follow-up program during all phases of the Designated Project.</p>	<p>Measures to avoid harm to migratory birds, their eggs and nests are included in Appendix J of the BMMP (GGM 2022), which includes the methodology, location, frequency, timing, and duration of monitoring; the scope, content and frequency of reporting of the results of the follow-up program; when adaptive management is required, and the mitigation measures to be implemented as adaptive management.</p> <p>Implementation of the BMMP, with respect to condition 4.7, commenced in 2021, and continues, in association with tree clearing and site preparation.</p>
<p>5.3 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures as it pertains to the adverse environmental effects on the health of Indigenous Peoples of changes to air quality.</p>	<p>The AQMMP (GGM 2020e) includes the methodology, location, frequency, timing and duration of monitoring; the scope, content and frequency of reporting of the results of the follow-up program, when adaptive management is required, and the mitigation measures to be implemented as adaptive management. The Indigenous Peoples Health Risk Assessment Follow-up Plan explains how monitoring results will be compared to predictions in the EIS.</p>
<p>5.4 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to the adverse environmental effects on the health of Indigenous Peoples of changes in concentrations of contaminants in water and fish.</p>	<p>The Indigenous Peoples Health Risk Assessment and Follow-up Plan (2020) explains how monitoring results will be compared to predictions in the EA and includes the methodology, location, frequency, timing, and duration of monitoring; the scope, content and frequency of reporting of the results of the follow-up program, when adaptive management is required, and the mitigation measures to be implemented as adaptive management.</p> <p>The Indigenous Peoples Health Risk Assessment Follow-up Plan (GGM 2020b) provides a data evaluation approach applicable to reviewing and evaluating collected environmental data with respect to monitoring the potential for the Mine to affect the health of Indigenous Peoples. Details regarding sampling locations, sampling frequency, and analytical methods for monitoring surface water and fish tissue in accordance with condition 5.4 are provided in the Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan (GGM 2021a).</p>

Condition Requiring a Follow-up Program	Reference to Information Required as Per Condition 2.4 and 2.5
<p>5.5 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures as it pertains to the adverse environmental effects on the health of Indigenous Peoples of changes in concentrations of contaminants in country foods caused by the Designated Project. The Proponent shall implement the follow-up program during all phases of the Designated Project. As part of the development of the follow-up program, the Proponent shall identify, in consultation with Indigenous groups and relevant authorities, species of vegetation, fish and wildlife that shall be monitored and shall determine, in consultation with Indigenous groups and relevant authorities, the sampling and analytical methodology that shall be applied for the monitoring of each species, including how samples will be collected.</p>	<p>The Indigenous Peoples Health Risk Assessment Follow-up Plan (GGM 2020b) includes the methodology, location, frequency, timing, and duration of monitoring; the scope, content and frequency of reporting of the results of the follow-up program; when adaptive management is required; and the mitigation measures to be implemented as adaptive management.</p> <p>The Indigenous Peoples Health Risk Assessment Follow-up Plan (GGM 2020b) provides a data evaluation approach applicable to reviewing and evaluating collected environmental data with respect to monitoring the potential for the Mine to affect the health of Indigenous Peoples. This plan did not provide specific details with respect to how environmental data would be collected. Rather, details regarding environmental monitoring were deferred to applicable environmental monitoring plans. Details regarding sampling locations, sampling frequency, and analytical methods for monitoring fish tissue in accordance with Condition 5.5 are provided in the Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan (GGM 2021a).</p> <p>With respect to monitoring of vegetation and wildlife per Condition 5.5 of the Decision Statement, the Indigenous Peoples Health Risk Assessment Follow-up Plan (GGM 2020b) deferred to the Biodiversity Management and Monitoring Plan. However, the most recent version of the BMMP (GGM 2022) does not currently include a sampling plan to collect small mammals and terrestrial vegetation. Therefore, an update to the Biodiversity Management and Monitoring Plan is undergoing an update to describe this country food sampling that will be completed every two years, during the first six years of operation, described in Conditions 5.5.1 and 5.5.2 of the Decision Statement.</p>
<p>6.9 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to the adverse environmental effects of the Designated Project on the current use of lands and resources for traditional purposes, including access to the Southwest Arm of Kenogamisis Lake referred to in condition 6.1 and access along Goldfield Road and to the Goldfield Creek diversion channel referred to in condition 6.2. The Proponent shall implement the follow-up program during all phases of the Designated Project.</p>	<p>Current Use of Lands and Resources for Traditional Purposes Follow-up Plan was developed in 2020 and includes the methodology and location of monitoring and the scope, content and frequency of reporting of the results of the follow-up program.</p>

2.3 Results of Follow-up Programs (Condition 2.9.5)

Follow-up programs that were undertaken during the reporting period and whose results are required to be reported on under Condition 2.9.5 are:

- Fish and Fish Habitat Follow-up Plan (Conditions 3.15, 3.16, 3.17, 5.4)
- Biodiversity Management and Monitoring Plan (Conditions 4.6 and 4.7)
- Indigenous Peoples Health Risk Assessment Follow-up Plan (Conditions 5.3, 5.4, 5.5)
- Current Use of Lands and Resources for Traditional Purposes Follow-up Plan (Condition 6.9)

The following paragraphs provide a summary of monitoring results for the above conditions. Further details are provided in the respective reports that are referenced.

2.3.1 Fish and Fish Habitat Federal EIS Follow-up Monitoring Report

A Fish and Fish Habitat Federal EIS Follow-up Monitoring Plan (GGM 2021a) was prepared to address federal Conditions of Approval related to monitoring potential effects of the Project on fish and fish habitat (conditions 3.14, 3.15, 3.16, 3.17, 3.2, 5.4, and 5.5.1). The results of the 2024 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Annual Report are summarized below.

2.3.1.1 Condition 3.14 – Erosion and Sediment Control

As per the requirements of condition 3.14 of the federal EIS Decision Statement, GGM has developed and implemented measures to control erosion and sedimentation in the Project Development Area (PDA) (GGM 2020b). Work that occurred in and around water during the 2024 monitoring period was limited to the construction of the new temporary bypass channel.

The Erosion and Sediment Control Plan (ESCP) (GGM 2020b) was implemented to mitigate potential effects of erosion and sedimentation on fish and fish habitat. Erosion and sediment control (ESC) measures are presented in the ESCP and include the following main components:

- Completing work in and around fish habitat during the appropriate timing window (no in-water work April 1 to June 20) to avoid spawning times and times when eggs and juvenile fish may be more susceptible to potential effects of increased turbidity and sedimentation.
- Limiting the area of ground disturbance and vegetation clearing
- Reducing the duration of in-water work
- Use of silt fencing, straw bales, fiber mats, filter bags, silt curtains, turbidity data loggers and other ESC tools to reduce erosion and sedimentation
- Revegetation of disturbed areas.

Erosion and sediment controls were regularly inspected to verify the effectiveness of the mitigation measures. Management practices were implemented to protect the environment, and to determine whether new management strategies and/or mitigation measures were required. The following activities were undertaken as part of the regular erosion and sediment control monitoring:

- Work sites were inspected and monitored periodically for compliance with the ESCP (GGM 2020b).
- Earthworks were inspected to look for evidence of erosion and sedimentation and corrective measures were taken as necessary.
- Where required, work activities were stopped, and potential erosion and sediment control issues were addressed.
- Silt fence barriers were inspected routinely and following rainfall events.
- Silt fence was repaired or replaced if it was not functioning as intended.
- Stand-by material of prefabricated silt fence barrier was maintained on the construction site and was available for rapid deployment.
- Erosion control structures were reinforced when significant rainfall events were forecasted.

Additional ESC measures were implemented as part of adaptive management related to the GFC diversion channel and included:

- Weekly ESC inspections of the GFC diversion channel during non-frozen ground conditions.
- Installation of silt curtains downstream of the realigned GFC channel with guidance from Department of Fisheries and Oceans Canada (DFO).
- Installation of two ESC berms within the GFC diversion channel, one located upgradient of SWP1 and a second located upgradient of the Lahti's Road crossing.
- Construction of a temporary bypass channel which diverts flow from GFC diversion channel through the temporary bypass channel to the Southwest Arm Tributary (SWAT) until such time the GFC diversion channel is remediated.

2.3.1.2 Condition 3.2 and 3.15 - Use of Explosives in or Near Water

This section describes measures implemented in the 2024 monitoring period to mitigate potential adverse effects on fish and fish habitat from the use of explosives near water and to satisfy federal condition 3.2 and 3.15 of the EIS. The Noise and Vibration Monitoring and Management Plan (NVMMP) (GGM 2020c) identifies an overpressure threshold of 50 kPa in water and a vibration threshold of 13mm/sec (in substrate). Two vibration exceedances were noted at FH02 on May 16 and May 18, 2024, during the April 1 to June 20 spawning period. There were no overpressure threshold exceedances in the 2024 monitoring period.

Total charge and maximum charge per hole were within typical range for blast activities at the mine on May 16 and May 18, 2024. Subsequent conversations with mine engineers noted that some product was lost to an underground void (i.e., underground drift) on May 16, resulting in less confinement of the drill holes. This anomaly may have affected vibrations as measured at FH02 on these dates. Subsequent to these vibration exceedances, hole separation during detonation was checked and found to be within acceptable standards.

2.3.1.3 Condition 3.16 – Surface Water Quality

The following section describes the measures carried out to satisfy federal condition 3.16 of the EIS approval by presenting surface water quality monitoring completed by GGM to support the identified mitigation measures to reduce adverse effects on fish and fish habitat. This follow-up program describes the results of the October 2023 through September 2024 water quality in Kenogamisis Lake, Mosher Lake, and the SWAT (condition 3.16).

Twenty-six (26) surface water quality monitoring stations were sampled during 2023/2024. The surface water quality monitoring locations were monitored monthly, when it was safe to do so, to assess seasonal fluctuations in water quality. Data from monthly monitoring was used to monitor potential trends in surface water quality and to evaluate whether fluctuations in quality were due to natural variability or from a Mine related effect.

During the routine monthly sampling, surface water samples were collected as grab samples and were submitted to an accredited laboratory for analysis. Temperature and DO water column profile sampling was also completed quarterly (February, June, August, October) at eight surface water monitoring locations.

Surface water quality data was collected for the required parameters monthly at the 26 monitoring stations from October 2023 to September 2024 with some exceptions. In November 2023, stations 8, 17, 38, 52, 54, 55, and 56 were the only stations sampled. The other stations were not sampled due to unsafe ice conditions and access issues. In December 2023, stations 8, 17, 20, 20A, 22A, 25, 38, 39, 40, 52, 54, 55, and 56 were the only stations sampled. The other stations were not sampled due to unsafe ice conditions or access issues.

As written in the Fish and Fish Habitat Follow-up Monitoring Plan (GGM 2021a), two trigger thresholds for surface water quality were defined, each with a varying level of sensitivity and associated level of response.

- Surface water quality Trigger Threshold 1 is defined as three consecutive monthly parameter concentration exceedances above the seasonal 95th percentile baseline concentration AND five times the detection limit. For stations and indicator parameters where the 95th percentile is less than the predicted surface water quality concentrations from the EIS/EA, Trigger Threshold 1 is defined as 10% above the predicted surface water quality concentration from the EIS/EA for the surface water feature at a given monitoring station AND five times the detection limit.

- Surface water quality Trigger Threshold 2 is defined as a confirmed exceedance of Trigger Threshold 1 and a statistically significant upward trend for a given indicator parameter, or for stations that have a statistically significant upward trend for baseline data, an increase in the magnitude of the trend compared to baseline.

Data from monthly monitoring was used to monitor potential trends in surface water quality and to evaluate whether fluctuations in quality were due to natural variability or from a Project related effect. In summary, surface water quality Trigger 1 and Trigger 2 exceedances were documented in the 2024 monitoring period, and the triggers were assessed as per the Adaptive Management Plan.

Surface water quality data collected in the 2024 monitoring period for the 10 stations and parameters were compared to the seasonal site-specific surface water quality trigger thresholds. The following presents a summary of the Trigger Threshold 1 and Trigger Threshold 2 exceedances documented during the 2024 monitoring period and the results of the associated response plan.

Station 25:

Trigger Threshold 1 exceedance of phosphorus and arsenic occurred in October 2023. Resampling of both parameters were not completed in November 2023 due to unsafe ice conditions. Sampling for the parameters was conducted in December 2023 and was below the seasonal 95th percentile baseline concentration and five times the analytical detection limit. Therefore, Trigger Threshold 1 was not confirmed, and no further action was required.

Trigger Threshold 1 exceedance of methylmercury occurred in August 2024. Resampling of the parameter was completed in September 2024, which also exceeded the seasonal 95th percentile baseline concentration and five times the detection limit. Therefore, exceedance of Trigger Threshold 1 for methylmercury was confirmed in September 2024. Trigger Threshold 2 evaluation was completed and concluded that there was a statistically significant upward trend for methylmercury at station 25 and therefore Trigger Threshold 2 was exceeded. Methylmercury exceedances above the 95th percentile baseline concentration and five times the detection limit had been predicted in the EIS/EA Amendment. The predicted methylmercury concentrations were below the Canadian Water Quality Guidelines for the Protection of Aquatic Life (CWQG-FAL) guideline by the Canadian Council of Ministers of the Environment (CCME). An investigation report for the Trigger Threshold 2 exceedance is being prepared and will be released once complete.

Trigger Threshold 1 exceedance for uranium occurred in February 2024. Resampling of the parameter was completed in March 2024, which also exceeded the seasonal 95th percentile baseline concentration and five times the detection limit. Therefore, exceedance of Trigger Threshold 1 for uranium was confirmed in March 2024. Trigger Threshold 2 evaluation was completed and concluded that there was a statistically significant upward trend for uranium at station 25 and therefore, Trigger Threshold 2 was exceeded. Uranium at station 25 continued to exceed the 95th percentile baseline concentration and five times the detection limit in April, May and June 2024. An investigation report regarding uranium at Station 25 was completed in May 2024 and is attached to the 2024 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report. Station 25 was one of the two stations addressed in the investigation report. Station 39 was the other station, as explained later in the present report. The increased concentration of uranium concentrations at station 25 are consistent with predictions in the EIS/EA and is due to the diversion of flow from GFC and groundwater discharge to the GFC diversion channel, both of which have higher uranium concentration than the baseline uranium concentrations in the headwaters of the SWAT. As noted in the May 2024 Trigger Threshold 2 investigation report, the concentration of uranium in the SWAT is predicted to increase from an average baseline concentration of 0.065 µg/L to a predicted concentration at the end of operation of 1.064 µg/L which is less than the PWQO. Recommendations in the May 2024 Trigger Threshold 2 investigation report were to revise Trigger Threshold 1 to 1.17 µg/L, which is the predicted concentration of uranium in the SWAT (1.06 µg/L) plus 10% to account for the natural and new sources of uranium to the SWAT. GGM intends to submit the recommended revised Trigger Threshold 1 criteria for uranium at stations located in the SWAT/GFC diversion to IAAC and Ontario Ministry of Environment, Conservation, and Parks (MECP) for approval after consultation on the proposed change is complete. Until such time, uranium at station 39 will continue to be evaluated per the existing criteria in the Plan. The proposed Trigger Threshold 2 for uranium at station 25 is less than the PWQO of 5 µg/L.

Station 39:

Trigger Threshold 1 exceedance of cobalt occurred in May 2024. Resampling of cobalt occurred in June 2024 and the concentrations did not exceed the seasonal 95th percentile baseline concentration and five times the detection limit. Therefore, Trigger Threshold 1 exceedance was not confirmed, resulting in no further action being required. Trigger Threshold 1 exceedance of cobalt occurred again in September 2024. Resampling of cobalt in October 2024 will determine whether the occurrence of Trigger Threshold 1 exceedance is confirmed.

As detailed in the 2023 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Annual Report, Trigger Threshold 1 and 2 exceedances of uranium at Station 39 occurred in March 2023, which was during the 2023 monitoring period (October 1, 2022 through September 30, 2023). Uranium concentration at Station 39 stayed above the 95th percentile baseline concentration and five times the detection limit from October 2023 through September 2024 in the 2024 monitoring period. Since March 2023, two investigation reports were prepared. The first report was submitted in May 2023, and attached to the 2023 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report. Due to persistent exceedances of uranium at Station 39, the second report was prepared and submitted in May 2024, which is also included in the 2024 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report. As pointed out previously, the May 2024 investigation report addressed uranium exceedances in both stations 25 and 39. The investigation aimed to determine if there was an additional source or cause for the increased uranium concentrations at the two stations including Station 39. It was concluded that the uranium concentration exceedances were related to the additional mass load from the diversion of GFC and groundwater discharge to the GFC diversion channel. In the EIS/EA, the concentration of uranium was predicted to increase throughout the mine operations but predicted to remain below the PWQO. As detailed previously for station 25, recommendations in the May 2024 Trigger Threshold 2 investigation report were to revise Trigger Threshold 1 to 1.17 µg/L, which is the predicted concentration of uranium in the SWAT (1.06 µg/L) plus 10% to account for the natural and new sources of uranium to the SWAT. GGM intends to submit the recommended revised Trigger Threshold 1 criteria for uranium at stations located in the SWAT/GFC diversion to MECP for approval after consultation on the proposed change is complete. Until such time, uranium at station 39 will continue to be evaluated per the existing criteria in the Plan. The proposed Trigger Threshold 2 for uranium at station 39 is less than the PWQO of 5 µg/L.

Station 52:

Trigger Threshold 1 exceedance of iron occurred in December 2023. Resampling of iron occurred in January 2024 and iron concentrations did not exceed the seasonal 95th percentile baseline concentration and five times the detection limit. Therefore, Trigger Threshold 1 exceedance was not confirmed, resulting in no further action being required.

Stations 4, 8, 20A, 24, 26, 49, 53:

There were no recorded Trigger Threshold 1 or 2 exceedances during the period of October 2023 to September 2024.

2.3.1.4 Condition 3.17 Groundwater

A summary of monitoring during the 2024 reporting period that was undertaken to address federal condition 3.17 of the federal EIS approval, which relates to mitigating and monitoring potential adverse effects on fish and fish habitat with respect to groundwater, is provided in the following paragraphs.

The groundwater monitoring summary presented below includes the fall 2023, spring 2024 and summer 2024 monitoring events. The fall 2024 monitoring event did not begin until after the 2024 monitoring period.

Between September 12, 2023, and December 4, 2023, 13 monitoring wells were installed as part of the Plan, as follows:

- MW26-OB1-23 and MW26-OB2-23 were installed to monitor for potential effects of seepage from WRSA B and/or Ore Stockpile prior to discharge to Southwest Arm. These wells are referred to as Proposed Well MW-O in the Plan.
- MW27-BR-23 and MW28-BR-23 were installed to monitor for potential effects of WRSA B and the construction and demolition landfill. These wells are referred to as Proposed Wells MW-P and MW-Q in the Plan.
- MW31-OB-23 and MW32-OB-23 were installed to monitor groundwater levels surrounding the MacLeod High Tailings (MHT) seepage collection system. These wells were referred to as Proposed Wells MW-H and MW-I in the Plan.
- Six monitoring wells were overprinted by mine infrastructure (96-03, 96-12b, 96-14b, MW5-OB-13, MW7-BR-13, and BH14-01) and replaced (23-03, 23-12B, 23-14B, MW5-OB2-23, MW7-BR-23, and BH23-01, respectively).
- MW23-04 was installed as a replacement well for MW16-04. MW16-04 could not be accessed due to construction activities adjacent to the well location.

There were three main groundwater monitoring components:

1. Pumped Volume Monitoring
2. Water Level Monitoring
3. Water Quality Monitoring

Pumped Volume Monitoring

The following list provides a summary of the pumped volume monitoring locations for the 2024 monitoring period:

- Historical Shafts – MacLeod No.1 Shaft/Mosher No. 1 Shaft pumping consistently,
- Open Pit – No pumping occurred,
- Aggregate Pit T2 - Dewatering occurred in September 2024.
- Process Plant Construction Dewatering – No construction dewatering of groundwater or surface water occurred in the area of the process plant,
- MHT seepage collection system – Collection occurred consistently.

During this reporting period, only the historical shaft and aggregate pit T2 pumping required groundwater trigger threshold review. Pumping from the historical underground workings began on August 5, 2022. The original Plan indicated pumping of the historical underground workings would be via Hardrock No. 2 Shaft and Mosher No. 1 Shaft. Based on detailed design, pumping from MacLeod No. 1 Shaft instead of Hardrock No. 2 Shaft was predicted to be more efficient at limiting groundwater inflow to the starter pit. Therefore, pumping of the historical underground workings in the 2024 monitoring period was completed via MacLeod No. 1 Shaft.

Pumping from MacLeod No. 1 Shaft occurred consistently throughout the monitoring period. Quarterly average pumped volumes from MacLeod No. 1 Shaft were below the trigger threshold of 14,860 m³/day. There was no exceedance of groundwater quantity trigger threshold during this monitoring period.

Dewatering for aggregate pit T2 occurred in September 2024. Quarterly average pumped volumes from the dewatering pumps were below the trigger threshold of 569 m³/day. There was no exceedance of groundwater quantity trigger threshold during this monitoring period.

Groundwater Level Monitoring

Of the five trigger thresholds for groundwater quantity described in the Plan, one trigger threshold is related to groundwater level and three trigger thresholds are related to horizontal hydraulic gradients. The thresholds are related to dewatering of mine features (open pit, aggregate pits, historical underground workings) and/or infrastructure such as the MHT seepage collection system and GFC diversion. During the reporting period, there were no exceedances of the groundwater level and horizontal hydraulic gradient trigger thresholds for groundwater quantity as defined in the Federal Fish and Fish Habitat Federal EIS Follow-Up Monitoring Plan (GGM 2021a).

Groundwater Quality Monitoring

Groundwater quality monitoring is to be completed in the spring, summer and fall at select locations. This reporting period covers water quality sampling results from fall 2023, spring 2024, and summer 2024.

During this reporting period, the Process Plant, WRSA A, WRSA B/Ore Stockpile, WRSA C, and the TMF required groundwater quality trigger threshold review. Trigger threshold 1 is defined as a statistically significant upward trend for a given indicator parameter or for stations that have a statistically significant upward trend in the baseline data, an increase in the magnitude of the trend compared to baseline. Trigger threshold 2 is defined as an exceedance of trigger threshold 1 and an exceedance of predicted source concentrations for the mine component located upgradient of the trigger threshold monitoring well location (i.e. TMF, WRSA, Ore Stockpile, etc.) as defined in the EIS/EA or exceeding the APV, whichever concentration is lower. Summaries of the trigger threshold 1 (and trigger threshold 2, if applicable) evaluation are presented below.

Process Plant Area

Over 90% of the samples collected to evaluation trigger thresholds associated with the process plant area resulted in non-detect results. Given the high percentage of non-detect results, no trends could be determined. No groundwater quality trigger thresholds were exceeded in this reporting period.

WRSA A

Groundwater quality downgradient of WRSA A is monitored at MW03-BR-18, MW03-OB-18, MW19-BR-21, MW19-OB-21, MW3-BR-13, and MW3-OB-13. No groundwater quality trigger thresholds were exceeded at WRSA A in this reporting period.

WRSA B/Ore Stockpile

Groundwater quality trigger threshold 1 was exceeded for arsenic at MW22-OB-21 following the summer 2024 monitoring event. The cause of the trigger threshold 1 exceedance could be determined, and a trigger threshold 2 evaluation was completed. Trigger threshold 2 for arsenic at MW22-OB-21 is defined as an exceedance of trigger threshold 1 and an exceedance of the predicted source concentration for WRSA B. The concentration of arsenic in MW22-OB-21 for the summer 2024 sampling event did not exceed the trigger threshold 2, thus no exceedances of groundwater quality trigger threshold 2 were noted at WRSA B in this reporting period.

WRSA C

Groundwater quality trigger threshold 1 was exceeded for uranium in MW6-OB-13 and sulfate in MW21-BR-21 in the spring 2024. These trigger threshold 1 exceedances were repeated in Summer 2024 with an additional trigger threshold 1 exceedance for iron and uranium in MW21-BR-21 noted. The cause of the trigger threshold 1 exceedances could not be determined for uranium and sulfate, and trigger threshold 2 evaluations were completed with the results as follows:

- The concentration of uranium at MW6-OB-13 in the spring and summer sampling events did not exceed the trigger threshold 2 concentration.
- The concentration of sulphate at MW21-BR-21 for the spring and summer sampling events did not exceed the trigger threshold 2 concentration.
- The concentration of uranium at MW21-BR-21 for the summer sampling event did not exceed the trigger threshold 2 concentration.

The concentrations of iron at MW21-BR-21 are under review. The baseline concentrations of iron range from 31 µg/L to 5,800 µg/L with an average of 1,904 µg/L for 5 data points. Post baseline concentrations of iron range from 868 µg/L to 14,300 µg/L with an average of 10,542 µg/L for four samples. Three of the four samples collected after the baseline monitoring period were analyzed by BV whereas the fourth post baseline sample was analyzed by ALS. The baseline samples were analyzed by Testmark and ALS. The concentration of iron is highly variable for baseline and post baseline, often changing an order of magnitude (at times two orders of magnitude) from one sample event to the next. Although highly variable, the trend for iron concentrations at MW21-BR-21 appears to be consistently increasing and therefore further evaluation as to potential source of the trend in iron will be considered. Resampling is underway and will be used to confirm the trigger threshold 1 exceedance and if a trigger threshold 2 evaluation is required and will be reported once the data is available. In the meantime, monitoring is to continue as per the Plan.

TMF

Groundwater quality trigger threshold 1 was exceeded for cobalt in DP-C in the summer evaluation period. A trigger threshold 1 investigation was completed which included collection of a confirmation sample in September 2024. Laboratory results provided a concentration for cobalt of approximately one order of magnitude lower than the concentration from the summer sampling event. Considering the confirmation sample concentration, there is no trend for cobalt concentrations at DP-C and Trigger Threshold 1 is not exceeded.

2.3.1.5 Condition 5.4 (water) - Concentration of Mercury and Methylmercury in Water

The realignment of Goldfield Creek facilitates siting of the TMF and to offset for potential effects on fish and fish habitat. Goldfield Creek was diverted into the existing SWAT, which increased flow in the SWAT and result in an increase of the permanently inundated area by approximately 15 ha. The management and monitoring measures identified in this section deal specifically with potential effects related to changes in mercury concentrations and methylmercury generation in the GFC diversion and inundated areas associated with SWP 4 and SWP 5 upstream of the grade control structures.

Surface water quality at Stations 25, 39 and 52 were monitored monthly in 2023/2024 and was assessed for potential changes to mercury and methylmercury as a result of the GFC diversion and associated inundated areas. Monthly monitoring data were used to conduct trend analysis of mercury and methylmercury to differentiate whether observed fluctuations are due to natural/seasonal sample variation, or if they may indicate a mine-related effect. Sampling at station 39 for mercury and methylmercury could not be conducted in November 2023 due to unsafe ice conditions and access issues.

Generally, the concentration of mercury and methylmercury remained less than the seasonal 95th percentile concentration with no overall trend in the data except at station 25 for methyl mercury. At station 25, the concentration of methyl mercury was greater than the seasonal 95th percentile concentration for June, July, August, and September resulting in an exceedance of Trigger Threshold 1 and implementation of the Trigger Threshold 1 action plan. As a result, a Trigger Threshold 2 exceedance for methyl mercury at station 25 was identified in September 2024. The Trigger Threshold 2 action plan is being implemented and an investigation into the exceedance is being completed. The outcome of the investigation will be reported once complete. Concentrations of methyl mercury were predicted to increase within the SWAT due to inundation of 15 ha of land related to the construction of grade control structures within the SWAT. The investigation will evaluate whether the concentrations of methyl mercury at station 25 are consistent with that predicted in the EIS/EA.

During the 2024 monitoring period, methylmercury concentrations at stations 25, 39, and 52 were below the Canadian Water Quality Guidelines for the Protection of Aquatic Life (CWQG-FAL).

2.3.1.6 Condition 5.4 (fish) - Fish Tissue Monitoring in the SWAT

The management and monitoring requirements of condition 5.4 deal specifically with potential effects related to changes in mercury and methylmercury concentrations in the realigned section of Goldfield Creek. The realignment of Goldfield Creek was completed to facilitate siting of the TMF and offset potential effects on fish and fish habitat. During 2021 and 2022, the new channel and diversion pond was constructed, and flow was diverted from the old Goldfield Creek channel into the newly constructed Goldfield Diversion Pond (GFDP) in November 2022. Flow entered the new channel from the GFDP outlet in mid-January 2023. At that time, water flowed into the new Goldfield Creek channel and then through what was previously referred to as the SWAT. The increased flow into the SWAT has resulted in the permanent inundation of approximately 15 ha of wetland habitat that was occasionally inundated under baseline conditions. During spring freshet in 2023, portions of the new channel destabilized and eroded, resulting in the transport of sediment downstream.

Post freshet in 2023, turbidity in the GFC diversion channel and downstream areas essentially returned to baseline conditions, but the GFC diversion channel was unstable and considered prone to further erosion during high flow events. To avoid further erosion, especially during the 2024 spring freshet, GGM constructed a temporary bypass channel to divert flow around the section of Goldfield Creek diversion channel that required reconstruction. This temporary bypass channel was constructed in winter 2024. Flow was diverted from GFC diversion channel to the temporary bypass channel in March 2024 and remained in operation through the balance of the 2024 monitoring period. This temporary bypass channel conveyed water from the GFDP, around the isolated Goldfield Creek Diversion Channel, and into Southwest Pond 3. This resulted in a new flow path upstream of this fish tissue Study Area. Potential influences of this activity on this current study are accounted for by sampling water, sediment and biota upstream and downstream of the temporary bypass channel.

The purpose of the fish tissue sampling was to monitor the potential changes in the concentration of total mercury and methylmercury in fish tissue, and if changes were observed, to determine whether there was an adverse effect on fish health or an increased risk to human and wildlife consumers.

A before-after control-impact (BACI) study design was initiated to examine potential changes in mercury and methylmercury concentrations in fish tissue along the Goldfield Creek realignment. Approved methods for the BACI study are presented in the Plan (GGM 2021a). Required data collection was completed during the 2024 monitoring period, which involved boat electrofishing between June 5, 2024, and June 10, 2024, to collect age 1 Yellow Perch from various sampling areas. South Magnet Lake is the reference area for Area 3, while Area 1B in Gamsby Lake is the reference area for Area 5. The collection methods used in the 2024 monitoring period were consistent with previous baseline data collection methods to allow for meaningful data comparison (Stantec 2020).

Age 1 Yellow Perch tissue from exposure areas had higher concentrations of total mercury and methylmercury relative to reference areas prior to and after the inundation of new wetland habitat. After the Goldfield Creek realignment, total mercury and methylmercury concentrations in exposure area fish tissue from 2023 and 2024 were typically higher than those from reference area fish, which was consistent with patterns observed years prior to the inundation. A notable increase (relative to previous years and other sampling years) in total mercury and methylmercury concentrations of age 1 Yellow Perch tissue from Area 3 was observed. Observed increases in mercury and methylmercury concentrations in fish tissue from inundated areas (SWP4 and SWP5) were anticipated (Stantec 2017). It is also expected that these increases will be temporary (peaking in years 1 and 2 post flow diversion) and eventually return to concentrations more similar to those observed in baseline fish tissue studies. Results from the reference areas also demonstrate natural temporal variability of total mercury and methylmercury concentrations in fish tissues. Mercury in young-of-the-year Yellow Perch has been previously found to vary across years and waterbodies with water-level fluctuations strongly influencing mercury concentrations in tissue (Sorensen et al. 2005). Monitoring should continue as planned in 2025, to further establish temporal patterns in both the reference and exposure sampling areas.

2.3.1.7 Condition 5.5.1 - Fish Tissue Monitoring in Kenogamisis Lake

The management and monitoring measures described in this section deal specifically with Condition 5.5.1 of the federal EIS Decision Statement which identifies the requirement to:

*“monitor, at least every two years, during the first six years of operation, mercury, methylmercury and arsenic concentrations in Walleye (*Sander vitreus*) tissue according to the methodology determined pursuant to condition 5.5. The Proponent shall determine, in consultation with Indigenous groups and relevant authorities and based on the results of the monitoring, if additional monitoring is required after the first six years of operation and at what frequency this additional monitoring shall occur”.*

Mercury, methylmercury and arsenic concentrations in Walleye were measured in 2023 and reported on in the previous Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report.

2.3.2 Biodiversity Federal Follow-Up Monitoring Annual Report

Conditions of Approval (conditions 4 and 7) related to monitoring potential effects of the Project on biodiversity are addressed in the BMMP (GGM 2022). A 2024 monitoring period report was submitted to IAAC under separate cover to address conditions 4 and 7, and their sub conditions, collectively.

Condition 4.1 – Migratory Bird Nest Surveys

GGM continued to prioritize vegetation clearing outside of the nesting season when the Mine schedule allowed. Bird nest surveys were completed prior to vegetation disturbance during the nesting season window to allow for certain Mine activities to progress. Majority of the bird nest surveys completed confirmed the absence of active nests, apart from three bird nest surveys in July 2024, which resulted in the discovery of two active bird nests and two potentially active bird nests. Each of the discovered active, or potentially active, had a buffer established and marked off and the applicable department notified of the protected area. Disturbance of the vegetation within the established buffers was avoided, or was postponed until after the nesting season window ended, and nests were confirmed inactive.

Condition 4.6 – Migratory Bird Presence in Water Containment Facilities

Vegetation growth and migratory bird use around surface water containment facilities (e.g. B1 pond, TMF etc.) was monitored in the 2024 monitoring period. As per GGM policy, employees and contractors continued to be instructed to report sightings of wildlife. Waterfowl were observed consistently utilizing the Tailings Management Facility in the 2024 monitoring period. There were no consistent observations of waterfowl in any other water collection ponds on site. As per Appendix E of the BMMP, corrective actions identified in the BMMP will be implemented if wildlife use monitoring records consistent observations of waterfowl use over a one-month period. In the 2024 monitoring period, waterfowl was consistently observed in the TMF. In response to these results, GGM has procured auditory deterrents (i.e. propane bangers) and visual deterrents (i.e. predator decoys). The deterrents were tested out in the 2024 monitoring period to confirm operational and will be installed for immediate use at the start of the 2025 open water season. Monitoring will continue in the 2025 monitoring period to monitor vegetation growth and wildlife use, and success of implemented mitigation measures.

Condition 4.3 and 4.7.3 – Barn Swallows

Barn swallows (*Hirundo rustica*) were a threatened species at the time of approval, however were reclassified in January 2023 on the Species at Risk in Ontario List (Ontario Regulation 230/08) as a special concern species. Despite the change in status of Barn Swallow, GGM honoured previous commitments for compensation and monitoring.

The Barn Swallow habitat compensation structure was monitored during the 2024 nesting season. There was no evidence of use of the structure by Barn Swallows or other bird or bat species in 2024. As the required monitoring period per condition 4.3 (three years) has been fulfilled, the program is complete and will no longer be implemented. Barn Swallows were observed nesting in the new MTO building in 2024 and it is anticipated they will continue to use the new building as habitat. Opportunistic monitoring of barn swallows elsewhere on site also confirmed two other nests established and utilized in the process plant area.

Conditions 4.5 and 4.7.4 – Speed Limits

Speed limits along the site access roads are limited to 50 km/hr, and 15km/hr around the process plant area. Haul roads are restricted to a speed limit of 60km/hr. These limits are below the 65 km/hr requirement of Condition 4.5. All employees and contractors are trained on speed limits during site orientation, and limits are posted around site as a reminder. There were no collisions associated with the Mine in the 2024 monitoring period between vehicles and migratory birds.

Condition 7.1.1 and 7.1.2 – Bald Eagles

As vegetation clearing is not yet complete for Mine development, GGM was required to complete an annual survey of Bald Eagle nests either within the PDA or within 800m of the PDA, per Condition 7.1.1 in the 2024 monitoring period. More details on the 2024 monitoring can be found in the 2024 Raptor Nest Survey Report submitted in 2024 per Condition 7.1.1 (HP-GGM-EV-136-1013).

An aerial raptor nest survey was conducted in February 2024 by the MNR and GGM conducted additional targeted ground based observation surveys of eagle nests E-487, E-623, and E-622 in May and June 2024. The GGM ground based survey confirmed the presence of nests E-487, E-622, and E-623. Routine wildlife monitoring documented the first reported sightings of eagles in the vicinity of the Mine on March 4, 2024. There continued to be reported sightings of eagles in the spring, throughout March, April and June in the vicinity of the Mine. Nest E-623 was confirmed active and successful in 2024 with the observation of an eaglet in June through September 2024.

Nest E-487 is approximately 650 m south of the tailing management facility. Nest E-622 is greater than 800 m from project infrastructure. Nest E-623 is within the PDA near the Effluent Treatment Plant Discharge location into Kenogamisis Lake and is greater than 600m from the current active mining areas (e.g. ore stockpiles). Construction mitigation recommendations are outlined in Appendix G.2.1 of the BMMP (GGM 2022), which were applicable for these eagle nests.

2.3.3 Indigenous Peoples Health Risk Assessment Federal Follow-up Monitoring Annual Report

To satisfy EIS conditions 5.3, 5.4 and 5.5, The Indigenous Peoples Health Risk Assessment Follow-up Plan was developed (2020), reviewed by Indigenous communities, then submitted and accepted by IAAC. The purpose of the Indigenous Peoples Health Risk Assessment Follow-up Plan is to verify the accuracy of the assumptions relied on in the EIS as it pertains to the potential for adverse environmental effects of the Mine on the health of Indigenous People. As such, this program involves a comparison of measured concentrations of contaminants of potential concern (COPCs) in environmental media (e.g., air, surface water, and country foods) collected during various phases of the Mine to the COPC concentrations in those media that were relied on to predict exposure (and risk) in the human health risk assessment (HHRA) submitted as a component of the EIS. The purpose of this comparison is to determine whether the conclusions of the HHRA remain applicable or if further evaluation of potential for adverse environmental effects on the health of Indigenous People is required.

For the 2024 monitoring period, the data collected relevant to this program included air quality and surface water monitoring. The monitoring data reviewed in for the 2024 monitoring report generally support the conclusions of the HHRA. However, a review of methyl-mercury concentrations in surface water in the SWAT, as presented in the 2024 Fish and Fish Habitat Federal EIS Follow-Up Monitoring Report, has triggered an investigation aimed at evaluating whether the concentrations of methyl-mercury at Station 25 are consistent with those predicted in the EIS/EA. If the concentrations at Station 25 are found to have increased beyond the predicted levels, this will trigger further evaluation of potential effects on Indigenous Health and whether adaptive management is required.

2.3.4 Current Use of Lands and Resources for Traditional Purposes Federal Follow-up Monitoring Annual Report

As specified in condition 6.1 of the federal Decision Statement, GGM has included a public access road from Highway 11 along the east side of the PDA to maintain access to the Southwest Arm of Kenogamisis Lake. This EA commitment outcome was documented in the Outcome of Detailed Engineering Design Optimization Report (2019). The Optimization Report was circulated to Indigenous groups and no concerns were identified.

As specified in condition 6.2 of the federal Decision Statement, GGM ensures there is unrestricted access along Goldfield Road during all phases of the Designated Project and to the Goldfield Creek diversion channel starting when the Proponent has completed progressive reclamation referred to in condition 4.2 and until the end of decommissioning, to the extent that such access is safe. Goldfield Road is located outside of the PDA and no effects on Goldfield Road access have occurred as a result of the Project.

For the Goldfield Creek diversion channel, the main access point of Lahti's Road is closed during construction and operation due to safety reasons (EIS/EA, Chapter 16). Lahti's Road was closed during the reporting period. Signage was posted by GGM around the perimeter of the PDA, including the shoreline of Kenogamis Lake, to alert local land and resource users of the presence of the Project. At Closure, Lahti's Road is planned to be re-opened to public traffic up to the point of the Goldfield Creek diversion (Closure Plan, Section 9.7 and 11.1). GGM will work with EASs to determine more precisely when Lahti's Road will be re-opened.

2.4 Adaptive Management (Condition 2.9.6)

Implementation of the follow-up programs will remain generally unchanged in the upcoming monitoring year, with exception of proposed changes as follows:

Groundwater Level Monitoring

The following changes to the groundwater level monitoring program are recommended:

- Table 2-8 of the Plan included MHT seepage collection drain monitoring locations 96-03, 96-04, 96-09A1, 96-09A2, 96-09A3, 96-09A4, 96-11A1, 96-11A2, 96-12A, 96-12B, 96-14B, MW07-18, MW08-18, MW09-18, MW-H, MW-I, MW-J, and/or MW-K. The phrasing "and/or" was included to show that the list of wells is an example of wells that may be used to determine the inward horizontal hydraulic gradient as required, not a list of wells that must be used. The inward hydraulic gradient towards the MHT seepage collection system was assessed in 2024 using wells 96-03, 96-04, 96-09A1, 96-09A2, 96-09A3, 96-09A4, 96-11A1, 96-11A2, 96-12A, 96-12B (replaced by 23-12B), 96-14B, MW07-18, MW08-18, MW09-18, MW31-OB-23 (MW-H), and MW31-OB-23 (MW-I). These 16 locations are sufficient to assess the groundwater quantity trigger threshold associated with the MHT seepage collection drain, thus MW-J and MW-K are no longer scheduled for installation and will be removed from the monitoring program.
- The need to replace 96-12B and/or 96-14B with respect to groundwater quantity Trigger Threshold 4 should be part of the evaluation. Up to four new monitoring wells (MW-H, MW-I, MW-J, and MW-K) will be installed once construction of the north berm and Highway 11 realignment is complete due to issues with access and risk of new monitoring wells being damaged during construction.
- Installation of replacement monitoring well for MWS-14-06 with monitoring to be continued according to the Plan.
- Removal of DP6-14D, DP6-14S, 96-05, 96-06, 96-15A3, BH14-05, BH14-09, BH14-10, EP137, MW16-BR-14, MW16-OB-14, G5-OB1-14, G5-OB2-14, MW11-BR-14, and MW11-OB-14 from monitoring program. As indicated in the Plan, these monitoring wells were overprinted by mine infrastructure and monitoring is no longer required.

Groundwater Quality Monitoring

The following changes to the groundwater quality monitoring program are recommended:

- Installation of a replacement monitoring well for MWS-14-06 with monitoring to be continued according to the Plan.
- Removal of G5-OB1-14, G5-OB2-14, MW11-BR-14, MW11-OB-14, and Seep 11 from the monitoring program. As indicated by the Plan, these monitoring wells were overprinted by mine infrastructure and monitoring is no longer required.

Use of Explosives Near Water

No overpressure exceedances were identified for the 2024 monitoring period. However, vibration from blasting exceeded 13mm/sec two times in this monitoring period at locations that could affect fish habitat, including fish eggs and larvae. Monitoring during subsequent blasting events indicated that adjusted blast locations and blast charges did not result in additional vibration exceedances during the spawning period. GGM will continue to monitor blasting activities and implement the adaptive management plan to mitigate potential effects on fish and fish habitat. GGM continues to receive event summary reports from the hydrophone monitoring platform that summarizes overpressure and vibration results immediately after blasts, to allow real-time investigation, follow-up and corrective action implementation as appropriate.

Mercury and Methylmercury in Water

There were no Trigger Threshold 1 and 2 exceedances for mercury at stations 25, 39, and 52 during the 2024 monitoring period. Methylmercury did not exceed Trigger Thresholds 1 and 2 at stations 39 and 52 in the 2024 monitoring period. In the same period, Trigger Thresholds 1 and 2 were exceeded for methylmercury at station 25, which is being addressed in an investigation report that is underway. Therefore, there is no adaptive management recommended at this time.

Fish Tissue

Changes to the adaptive management plan related to monitoring fish tissue are not recommended at this time. GGM will continue to implement the fish tissue monitoring program as planned with sampling for Walleye tissue in 2025 and 2027. After the first 6 years of post-construction monitoring (2023, 2025, 2027), the need for continued fish tissue monitoring as outlined in the Plan will be reassessed. Additional fish tissue monitoring may be required if triggered by the findings of the surface water adaptive management plan, and if:

- Ongoing fish tissue monitoring plans do not adequately monitor changes where the surface water quality Trigger Threshold 2 is exceeded.
- A biologically significant change (statistically significant difference, i.e., increase in fish tissue THg or MeHg concentration with a CES \geq 25%) has the potential to adversely affect

fish health or the usability of fish by human or wildlife consumers (i.e., exceeds guidelines), and

- The biologically significant change is likely caused by Mine activities.

Additional fish tissue studies may also be required to determine the magnitude and extent of changes to tissue mercury and methylmercury, and if fish tissue monitoring activities demonstrate an effect on fish tissue in two consecutive fish tissue studies that are conducted as part of routine monitoring. The scope of additional fish tissue monitoring, if required, will be based on the area where water quality mercury exceedances may occur and will include reference area sampling. If contaminant levels in fish tissue are below Canadian Council of Ministers of the Environment (2000) guideline levels and/or MECP (Nilima et al. 2017) guidelines and water quality levels are no longer in exceedance of regulatory requirements, then no further monitoring would be required.

Migratory Bird Presence in Water Containment Facilities

Waterfowl were observed consistently utilizing the Tailings Management Facility in the 2024 monitoring period. As per Appendix E of the BMMP, corrective actions identified in the BMMP will be implemented if wildlife use monitoring records consistent observations of waterfowl use over a one-month period. In the 2024 monitoring period, waterfowl was consistently observed in the TMF. In response to these results, GGM has procured auditory deterrents (i.e. propane bangers) and visual deterrents (i.e. predator decoys). The deterrents were tested out in the 2024 monitoring period to confirm operational and will be installed for immediate use at the start of the 2025 open water season. Monitoring will continue in the 2025 monitoring period to monitor vegetation growth and wildlife use, and success of implemented mitigation measures.

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