

Baffinland Iron Mines Corporation

Mary River Project

2021 QIKIQTANI INUIT ASSOCIATION (QIA) AND NUNAVUT WATER BOARD (NWB) ANNUAL REPORT FOR OPERATIONS

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Date	Rev.	Prepared By	Reviewed and Approved By

TABLE 0: REPORT SUBMISSION SUMMARY

Year of Annual Report	2021
Annual Report Submission Date:	March 31, 2022
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2021 QIKIQTANI INUIT ASSOCIATION (QIA) AND NUNAVUT WATER BOARD (NWB) ANNUAL REPORT FOR OPERATIONS

EXECUTIVE SUMMARY

This report to the Qikiqtani Inuit Association (QIA) and the Nunavut Water Board (NWB) has been prepared to summarize the 2021 Mary River Project (the Project) activities and monitoring conducted under Baffinland Iron Mines Corporation's (Baffinland) Type 'A' Water Licence - 2AM-MRY1325 – Amendment No. 1 (Type 'A' Water Licence) and the Commercial Lease No. Q13C301 (Commercial Lease) between the QIA and Baffinland. A separate annual report has been prepared for the QIA and NWB to summarize the 2021 exploration and geotechnical activities conducted for the Mary River Project within the scope of Baffinland's Type 'B' Water Licence - 2BE-MRY2131 (Type 'B' Water Licence) and Commercial Lease, and a separate report for the QIA and NWB to summarize the 2021 exploration activities conducted for the Ege Bay Exploration Program within the scope of Baffinland's Type 'B' Water Licence 2BE-EQE1926 and Land Use Licence QL2-1910.

At Baffinland, the safety and wellbeing of our employees, contractors and the North Baffin communities remains our highest priority, while ensuring the continuity of our business during these evolving and challenging times. Baffinland has robust Emergency and Crisis Management Plans, which include an infectious disease component. Our response to COVID-19 not only includes industry leading health and safety measures, but also additional community support to help relieve some of the strain arising from this global pandemic. Together with its employees, Baffinland has taken strides to support North Baffin communities throughout the pandemic.

At the start of 2021, Baffinland's Nunavummiut employees continued to remain in their home communities with compensation to help protect themselves and their communities. This arrangement was first implemented in April 2020 when employees were put on standby pay rates with full group benefits. In April 2021 due to an outbreak of the Delta COVID-19 variant at the site, operations were temporarily suspended for a period of three weeks. During this shut down environmental monitoring programs were considered essential and continued to operate. This shut down led to decreased mining operations as described below. Throughout 2021, Baffinland continued to work with the Government of Nunavut and Nunavut Public Health on risk based initiatives, which led to Nunavummiut employees beginning their return to work in July of 2021. The timing of this allowed for Inuit researchers from local communities to participate in several of the summer environmental monitoring programs, when possible. Unfortunately, in December 2021, it was determined that due to the highly contagious Omicron variant, Nunavummiut employees would return home with paid-leave. Baffinland is pleased to report that as of March 2022, our Nunavummiut-based employees are re-transitioning back to site. For more information on Baffinland's COVID-19 response, please visit www.baffinland.com/sustainability/health-and-safety/

During 2021, mining operations continued at Deposit No. 1 and a total of total of 5.53 Mt of ore was transported by ore haul trucks along the Tote Road from the Mine Site and stockpiled at the Milne Port. During the 2021 shipping season a total of 5.6 Mt of ore was shipped from the Project's Milne Port to

international markets. In 2021, marine ore shipments involved 73 individual ore carrier vessel voyages. The shipping season was constrained in 2021 due to the implementation of a provisional Narwhal Adaptive Management Response Plan, which delayed the start of the shipping season and ultimately limited the volume of ore that could be shipped.

Mining operations along with development of Project infrastructure continued throughout 2021. A description of the key Project activities executed under the Type 'A' Water Licence and the Commercial Lease are presented below by Project area.

Mine Site

At the Mine Site, key Project activities included:

- Mining of Deposit No. 1 and the crushing and stockpiling of ore at the KM 106 Run of Mine Facility and the Mine Site Crusher Facility;
- Continued deposition of non-hazardous wastes at the Mine Site Non-Hazardous Waste Landfill Facility (Landfill Facility);
- Continued deposition of waste rock generated by Project operations at the Waste Rock Facility;
- Maintenance of site surface water drainage infrastructure (i.e. culverts) to address sedimentation concerns and improve surface water drainage;
- Continued implementation of the Ore Crusher Pad Regrading Strategy to prevent the pooling of water on and around the Crusher Facility pad and installation of a pumping system to transfer collected emergency ditch water to Crusher Facility Pond MS-06;
- Continued operation of dedicated water treatment plant at the Waste Rock Facility Pond to ensure effluent water quality compliance;
- Installation of additional dustfall monitoring locations; and
- Construction of a surface water management dam (MS-11) at KM 104.5

Tote Road

Along the Tote Road, key Project activities included:

- The transportation of ore using ore haul trucks from the Mine Site to Milne Port for stockpiling;
- Trucking of fuel and other supplies from Milne Port to the Mine Site to support Project operations and development;
- Continued maintenance of the Tote Road to improve surface water drainage and address safety and operational concerns, including works proposed in the Tote Road Earthworks Execution Plan (TREET) and select implementation of the Hatch (2013) design;
- Implementation of preventative and corrective measures (i.e. check dams, silt fences, excavating culverts of snow and ice, etc.) to address sedimentation concerns during high flow periods;
- On-going progressive reclamation of priority historic borrow sources;
- Continued development of the Km 97 Borrow Source to support road maintenance; and,

- The continued application of dust suppression treatment under the commercial name DUST/BLOKR®.

Milne Port

At Milne Port, key Project activities included:

- Continued stockpiling of ore at the Milne Port Ore Stockpile Facility prior to and following the 2021 shipping season;
- Marine shipment of ore to international markets via the Milne Port shiploader and ore carrier vessels;
- The continued application of a dust suppression on the Milne Port ore stockpiles under the commercial name DusTreat®.
- Extraction of aggregates from the Q1 Quarry; and
- Multiple sealifts, including the backhaul of equipment and waste to Southern Canada and the delivery of fuel, equipment, consumables and materials to support continued Project operations and development.

Waste Rock Facility Management

During 2021, Baffinland continued to characterize Deposit No. 1 waste rock generated by Project operations and optimize waste rock deposition and management strategies to address outstanding concerns identified at the Waste Rock Facility (WRF) regarding acid rock drainage and metal leaching. Baffinland continued to conduct geochemical testing of waste rock to expand the analytical dataset, and monitor temperatures within the WRF to confirm the management strategy ensured that frozen conditions could be achieved and maintained within the waste rock pile.

Thermal monitoring in 2021 continued to demonstrate the WRF is frozen with the exception of a shallow seasonal active layer. Monitoring of water quality from the WRF demonstrated neutral pH conditions throughout the summer season, and generally did not require treatment with the WRF Water Treatment Plant to meet the applicable Water Licence and MDMER discharge criteria. No seepage was identified from the facility indicating that remedial works were effective to mitigate the uncontrolled release first identified in 2017.

Baffinland will continue to monitor the conditions at the WRF to ensure effective management results in achievement of the ultimate closure objectives for the facility. Future updates to the Phase 1 Waste Rock Management Plan will assess the monitoring data collected to date to determine if waste segregation criteria and placement strategies remain valid or if updates are required.

Key Modifications to Project Infrastructure

Approved modifications implemented at the Project in 2021 included:

- Modification No.13 – Mine Site water management infrastructure

Spills

During 2021, fourteen (14) spills were reported to the Northwest Territories-Nunavut (NT-NU) Spill Line, CIRNAC and QIA by the Project. This is a similar frequency as 2020. In addition to the original spill report submitted within 24 hours of each spill event in 2021, a detailed follow-up report was submitted within thirty (30) days of each reported spill. Baffinland continued to investigate the basic causes of all spills that occurred on site in 2021 so that effective long-term corrective actions could be implemented to reduce the frequency of spills at Project sites.

Water Use and Freshwater Monitoring

Under the authorization of the Type 'A' Water Licence, freshwater was withdrawn during 2021 to sustain three (3) key activities at the Project: potable water supply (domestic), dust suppression, and other industrial purposes. During 2021, total daily water volume withdrawal limits for dust suppression purposes were exceeded two (2) times at approved Project water sources. This is a 94% decrease and a significant improvement over 2020, when thirty-one (31) exceedances occurred, and is attributed to improved controls for tracking daily water use at the individual water sources with respect to the daily limits.

Throughout 2021, Baffinland continued to implement the Surveillance Network Program (SNP) outlined in Schedule I of the Type 'A' Water Licence, analyzing effluents (i.e. treated sewage, treated oily water) discharged to the receiving environment and monitoring surface water quality within specific Project areas (i.e. surface water runoff downstream of Project areas). Based on a review of 2021 SNP results reported to the NWB, CIRNAC and the QIA, exceedances of applicable discharge criteria in 2021 involved mainly surface water runoff and effluents with elevated total suspended solids (TSS) levels. In each case, appropriate control measures were implemented to restore TSS levels below applicable discharge criteria. Baffinland continues to assess and implement the appropriate corrective and mitigation measures to address ongoing sedimentation concerns at the Project.

In addition to the SNP, ongoing environmental monitoring and effects studies, including the Project's Aquatic Effects Monitoring Plan (AEMP) and Tote Road Monitoring Program (TRMP) were conducted during 2021 in accordance with the commitments made in the ERP, and the Final Environmental Impact Statement (FEIS) approved under the Project Certificate.

Community Consultations and Engagement

With some easing of travel restrictions in 2021, Baffinland implemented a hybrid approach to community engagement activities in the five (5) North Baffin communities and Iqaluit, with some events and meetings being held in-person and others relying on video and telephone conference. Baffinland also continued to

maintain a presence on social media and local radio as a means to ensure that information about the Project is accessible to a wide audience. Although Baffinland acknowledges that in-person engagement is preferred, the hybrid model has proven effective in ensuring that effective lines of communication remained in place between community representatives and other stakeholders and Baffinland throughout the Pandemic.

As travel restrictions and public health orders continually evolved, Baffinland frequently evaluated what methods of engagement were most effective, while still maintaining individual and community health and safety as the top priority. This adaptive approach to engagement is predicted to continue as the COVID-19 Pandemic and associated public health orders evolve throughout 2022.

Summary of Plans for 2022

The 2022 Work Plan was prepared and provided by Baffinland to relevant parties on November 1, 2021 as required under Section 6.1 of the Commercial Lease and under Part J, Item 3 of the Type 'A' Water Licence, for the purposes of an Annual Security Review for activities undertaken on an annual basis.

The 2022 Work Plan described the planned development and operation of the mine, ore crushing and land transportation, stockpiling and marine shipment of ore, and the continued development and construction of infrastructure required at Milne Port, the Tote Road, and the Mine Site. Baffinland is continuing to implement the Water Management Plan for the Mine Site following approvals of Modification no. 13 by the Nunavut Water Board.

The Project's Phase 2 Expansion Proposal continues to advance through a joint assessment administered by the Nunavut Impact Review Board (NIRB) and NWB. Baffinland's application to amend Water Licence No. 2AM-1325 is ongoing and will continue to work collaboratively with all parties to fully resolve outstanding issues in advance of the Pre-Hearing Conference and Public Hearing. Project environmental monitoring programs prescribed by the Project Certificate, water licences, authorizations, management plans and environmental effects monitoring plans will continue through 2022.

RAPPORT ANNUEL DES OPÉRATIONS 2021 DE L'ASSOCIATION INUITE QIKIQTANI (AIQ) ET DE L'OFFICE DES EAUX DU NUNAVUT (OEN)

RÉSUMÉ

Le présent rapport adressé à la Qikiqtani Inuit Association (QIA) et à l'Office des eaux du Nunavut (OEN) a été rédigé dans le but de présenter un résumé des activités et des contrôles du projet de la rivière Mary de 2021 (le projet), effectués dans le cadre de la modification n° 1 du permis d'utilisation des eaux de type « A » n° 2AM-MRY1325 (permis d'utilisation des eaux de type « A ») de Baffinland Iron Mines Corporation (Baffinland), et du bail commercial n° Q13C301 (Bail commercial) entre la QIA et Baffinland. Un rapport annuel distinct a été préparé pour la QIA et l'OEN dans le but de résumer les activités d'exploration et de géotechnique menées en 2021 pour le projet de la rivière Mary dans le cadre de la portée du permis d'utilisation des eaux de type « B » n° 2BE-MRY2131 (permis d'utilisation des eaux de type « B ») et du bail commercial, et un rapport distinct pour la QIA et l'OEN résumant les activités d'exploration menées en 2021 pour le programme d'exploration de la baie d'Eqe dans le cadre de la portée du permis d'utilisation des eaux de type « B » n° 2BE-EQE1926 et du permis d'utilisation des terres n° QL2-1910 de Baffinland.

Chez Baffinland, la sécurité et le bien-être de nos employés, des entrepreneurs et des collectivités du nord de l'île de Baffin demeurent notre plus grande priorité, tout en assurant la continuité de nos activités en ces temps changeants et difficiles. Baffinland dispose de solides plans de gestion des urgences et des crises qui comprennent un volet sur les maladies infectieuses. Notre réponse à la COVID-19 comprend non seulement des mesures de santé et de sécurité de premier plan dans l'industrie, mais également un soutien communautaire supplémentaire pour aider à soulager une partie des pressions découlant de cette pandémie mondiale. Baffinland, avec ses employés, a pris des mesures pour soutenir les collectivités du nord de l'île Baffin tout au long de la pandémie.

Au début de l'année 2021, les employés Nunavummiut de Baffinland ont continué de rester dans leur collectivité d'origine avec une rémunération pour les aider à se protéger et à protéger leurs collectivités. Cet arrangement a été mis en œuvre pour la première fois en avril 2020, lorsque les employés ont été soumis à des taux de rémunération de réserve assortis d'avantages sociaux collectifs complets. En avril 2021, à la suite de l'apparition du variant Delta de la COVID-19 sur le site, les opérations ont été suspendues provisoirement pour une période de trois semaines. Pendant cet arrêt des opérations, les programmes de surveillance environnementale étaient considérés comme essentiels et se sont poursuivis. Cet arrêt des opérations a entraîné une diminution des opérations minières comme décrite ci-dessous. Tout au long de l'année 2021, Baffinland a continué de travailler avec le gouvernement du Nunavut et le ministère de la Santé publique du Nunavut à des initiatives axées sur le risque, ce qui a conduit les employés Nunavummiut à amorcer leur retour au travail en juillet 2021. Le choix du moment a permis aux chercheurs inuits des collectivités locales de participer à plusieurs programmes de surveillance environnementale d'été, dans la mesure du possible. Malheureusement, en décembre 2021, il a été décidé qu'en raison du variant Omicron fortement contagieux, les employés Nunavummiut

retourneraient chez eux avec un congé payé. Baffinland a le plaisir d'annoncer qu'à compter du mois de mars 2022, nos employés Nunavummiut sont de retour sur le site. Pour des renseignements supplémentaires concernant la réponse de Baffinland à la COVID-19, veuillez vous rendre sur le site www.baffinland.com/sustainability/health-and-safety/

En 2021, les opérations minières se sont poursuivies au Gisement n° 1, et un total de 5,53 millions de tonnes de minerai a été transporté par des camions de transport de minerai le long du chemin d'approvisionnement depuis le site minier et stocké au Port de Milne. Pendant la saison de navigation de 2021, un total de 5,6 millions de tonnes de minerai a été expédié du Port de Milne du projet vers les marchés internationaux. En 2021, les expéditions de minerai ont nécessité 73 voyages individuels de navires de transport de minerai. La saison de navigation a été limitée en 2021 en raison de la mise en œuvre d'un plan d'intervention provisoire pour la gestion adaptative du narval, qui a retardé le début de la saison de navigation et a eu pour effet de limiter le volume de minerai pouvant être expédié.

Les opérations minières et le développement de l'infrastructure du projet se sont poursuivis tout au long de 2021. Une description des principales activités liées au projet, réalisées dans le cadre du permis d'utilisation des eaux de type « A » et du bail commercial, est fournie ci-dessous par zone de projet.

Site minier

Au site minier, les activités principales du Projet incluaient :

- l'exploitation du Gisement n° 1 ainsi que le broyage et le stockage du minerai à l'installation d'exploitation de la mine au KM 106 et à l'installation de concassage du site minier;
- le dépôt continu de déchets non dangereux sur le site d'enfouissement de déchets non dangereux du site minier (installation d'enfouissement);
- le dépôt continu de stériles générés par les opérations du projet à l'installation de stockage des stériles;
- l'entretien d'une infrastructure de drainage des eaux de surface (c.-à-d. ponceaux) pour répondre aux préoccupations relatives à la sédimentation, et pour améliorer le drainage des eaux de surface;
- la poursuite de la mise en œuvre de la stratégie de reclassement du concasseur à minerai afin d'éviter l'accumulation d'eau sur ou autour de l'installation de concassage et installation d'un système de pompage pour transférer les eaux collectées du fossé d'urgence vers le bassin MS-06 de l'installation de concassage;
- la poursuite de l'exploitation de l'usine de traitement des eaux dédiée au bassin de l'installation de stockage des stériles pour assurer la conformité de la qualité de l'eau des effluents;
- l'installation d'emplacements supplémentaires pour la surveillance des retombées de poussières; et

- construction d'une digue de retenue pour la gestion des eaux de surface (MS-11) au KM 104,5.

Chemin d'approvisionnement

Le long du chemin d'approvisionnement, les activités principales du Projet incluaient :

- le transport du minerai par camion depuis le site minier au Port de Milne pour y être stocké;
- le transport par camion de carburant et de diverses fournitures depuis le Port de Milne au site minier afin de soutenir les opérations et le développement du Projet;
- la poursuite de l'entretien du chemin d'approvisionnement pour améliorer le drainage des eaux de surface et pour répondre aux préoccupations en matière de sécurité et d'exploitation, notamment les travaux proposés dans le cadre du plan d'exécution des travaux de terrassement du chemin d'approvisionnement (TREEP) et la mise en œuvre sélective de la conception Hatch (2013);
- la mise en œuvre de mesures préventives et correctives (c.-à-d. vérification des digues de retenue, des clôtures anti-érosion, l'excavation de la neige et de la glace des ponceaux, etc.) pour répondre aux préoccupations concernant la sédimentation pendant les périodes de haut débit;
- la remise en état progressive et continue des sources d'emprunt historiques prioritaires;
- le développement continu de la source d'emprunt au KM 97 pour soutenir l'entretien de la route; et
- l'application continue du traitement antipoussière sous le nom commercial DUST/BLOKR®.

Port de Milne

Au Port de Milne, les activités principales du Projet incluaient :

- la poursuite du stockage de minerai dans l'installation de stockage au Port de Milne avant et après la saison de navigation de 2021;
- l'expédition maritime du minerai vers les marchés internationaux à l'aide de chargeur de navire du Port de Milne et par minéraliers;
- l'application continue du traitement antipoussière des piles de stockage de minerai au Port de Milne sous le nom commercial DusTreat®;
- l'extraction d'agrégats de la carrière Q1; et
- de nombreuses activités de transport maritime, notamment le retour de l'équipement et des déchets vers le Sud du Canada et la livraison de carburant, d'équipement, de consommables et de matériaux pour soutenir la poursuite des opérations et du développement du projet.

Gestion de l'installation des stériles

En 2021, Baffinland a poursuivi la caractérisation du Gisement n° 1 de stériles générés par les opérations du projet et l'optimisation des stratégies de dépôt et de gestion des stériles afin de répondre aux préoccupations non résolues relevées à l'installation de stockage des stériles (WRF) concernant le drainage rocheux acide et la lixiviation des métaux. Baffinland a continué à effectuer des essais géochimiques sur les stériles pour élargir l'ensemble de données analytiques, et à surveiller les températures à l'intérieur de la WRF afin de confirmer que la stratégie de gestion garantissait que les conditions de gel pouvaient être atteintes et maintenues au sein de la pile de stériles.

La surveillance thermique en 2021 a continué à démontrer que l'installation de stockage des stériles est gelée, à l'exception d'une couche active saisonnière peu profonde. La surveillance de la qualité de l'eau à partir de l'installation de stockage des stériles a démontré des conditions de pH neutre tout au long de la saison estivale et n'a généralement pas nécessité de traitement par l'usine de traitement de l'eau de l'installation de stockage des stériles pour satisfaire aux critères applicables de permis d'utilisation des eaux et de rejet du REMMMD (*Règlement sur les effluents des mines de métaux et des mines de diamants*). Aucun suintement n'a été décelé à partir de l'installation, indiquant l'efficacité des travaux d'assainissement pour atténuer les rejets non contrôlés identifiés pour la première fois en 2017.

Baffinland continuera de surveiller les conditions à la WRF pour garantir des résultats de gestion efficaces dans l'atteinte des objectifs finaux de clôture de l'installation. Les futures mises à jour du plan de gestion des stériles de la phase 1 évalueront les données de surveillance recueillies à ce jour afin de déterminer si les critères de séparation des déchets et les stratégies de placement sont toujours valables ou si des mises à jour sont nécessaires.

Modifications clés à l'infrastructure du projet

Les modifications approuvées mises en œuvre sur le projet en 2021 comprenaient :

- Modification n° 13 – Infrastructure de gestion des eaux du site minier

Déversements

En 2021, quatorze (14) déversements ont été signalés par le projet à la Northwest Territories-Nunavut (NT-NU) Spill Line, les RCAANC et la QIA. Il s'agit d'une fréquence semblable à celle notée en 2020. Outre le rapport original des déversements présenté dans les 24 heures suivant chaque déversement en 2021, un rapport de suivi détaillé a été présenté dans les trente (30) jours après chaque déversement signalé. Baffinland a continué d'enquêter sur les causes fondamentales de tous les déversements qui se sont produits sur le site en 2021, de sorte que des mesures correctives efficaces à long terme puissent être mises en œuvre pour réduire la fréquence des déversements sur les sites du projet.

Consommation d'eau et surveillance de l'eau douce

En vertu de l'autorisation du permis d'utilisation des eaux de type « A », l'eau douce a été prélevée en 2021 pour soutenir trois (3) activités essentielles du projet : l'approvisionnement en eau potable

(domestique), la suppression de la poussière et d'autres objectifs industriels. En 2021, les limites de prélèvement du volume d'eau total quotidien à des fins de suppression de la poussière ont été dépassées à deux (2) reprises aux sources d'eau approuvées pour le projet. Cela représente une réduction de 94 % et une amélioration sensible par rapport à 2020, où trente-et-un (31) dépassements des limites ont eu lieu. Cela est attribué à l'amélioration des contrôles de suivi de l'utilisation quotidienne de l'eau aux sources d'eau individuelles par rapport aux limites quotidiennes.

Tout au long de l'année 2021, Baffinland a continué à mettre en œuvre le programme du réseau de surveillance (SNP) décrit à l'Annexe I du permis d'utilisation des eaux de type « A », en analysant les effluents (c.-à-d. les eaux d'égout traitées, les eaux huileuses traitées) déversés dans l'environnement récepteur et en surveillant la qualité des eaux de surface dans certaines zones du projet (c.-à-d. le ruissellement des eaux de surface en aval des zones du projet). D'après un examen des résultats du SNP de 2021 présentés à l'OEN, aux RCAANC et à la QIA, les dépassements des critères de rejet applicables en 2021 concernaient principalement le ruissellement des eaux de surface et les effluents présentant des niveaux élevés de total des solides en suspension (TSS). Dans chaque cas, des mesures de contrôle appropriées ont été mises en œuvre pour rétablir les niveaux de TSS en deçà des critères de rejet applicables. Baffinland continue d'évaluer et de mettre en œuvre les mesures d'atténuation et correctives appropriées pour répondre aux préoccupations actuelles en matière de sédimentation dans le cadre du projet.

Outre le SNP, une surveillance environnementale continue et des études sur les effets, notamment le Programme de surveillance des répercussions sur le milieu aquatique (AEMP) et le programme de surveillance du chemin d'approvisionnement (TRMP) du projet ont été entrepris en 2021 conformément aux engagements pris dans le cadre de l'EGRA, et de l'énoncé des incidences environnementales final (EIEF) qui a été approuvé aux termes du certificat de projet.

Consultations et engagement communautaires

Étant donné un certain assouplissement des restrictions de voyage en 2021, Baffinland a mis en œuvre une approche hybride pour les activités d'engagement communautaire dans les 5 collectivités du Nord-de-l'île-de-Baffin et à Iqaluit, certains événements et réunions se déroulant en personne et d'autres reposant sur la vidéoconférence et la téléconférence. Baffinland a également maintenu sa présence sur les médias sociaux et la radio locale comme moyen de s'assurer que les informations sur le projet sont accessibles à un large public. Baffinland reconnaît que la participation en personne est préférable, malgré tout, le modèle hybride s'est avéré efficace pour garantir le maintien de voies de communication entre les représentants des collectivités et autres parties intéressées et Baffinland tout au long de la pandémie.

À mesure que les restrictions de voyage et les ordonnances de santé publique évoluaient, Baffinland a fréquemment évalué quelles méthodes de participation s'avéraient les plus efficaces, tout en maintenant la santé et la sécurité des personnes et des collectivités comme priorité absolue. Cette approche adaptative à la participation devrait se poursuivre à mesure que la pandémie de COVID-19 et les ordonnances de santé publique connexes évoluent tout au long de 2022.

Résumé des plans pour 2022

Le plan de travail pour 2022 a été préparé, puis distribué par Baffinland aux parties intéressées le 1^{er} novembre 2021, conformément à la section 6.1 du bail commercial et de la partie J, article 3 du permis d'utilisation des eaux de type « A », en vue d'un examen annuel de la sécurité des activités entreprises sur une base annuelle.

Le plan de travail de 2022 décrit le développement et l'exploitation prévus pour la mine, le concassage de minerai et le transport terrestre, le stockage et l'expédition maritime de minerai et la poursuite du développement et de la construction des infrastructures nécessaires au Port de Milne, sur le chemin d'approvisionnement et sur le site minier. Baffinland continue de mettre en œuvre le plan de gestion des eaux pour le site minier à la suite de l'approbation de la modification n° 13 par l'Office des eaux du Nunavut.

La proposition d'expansion de la phase 2 du projet continue de progresser à travers une évaluation conjointe administrée par la CNER et l'OEN. La demande de Baffinland visant à modifier le permis d'utilisation des eaux n° 2AM-1325 est en cours et Baffinland continuera de travailler en collaboration avec toutes les parties pour résoudre entièrement les questions en suspens avant la conférence préparatoire et l'audience publique. Les programmes de surveillance environnementale du projet conformément au certificat de projet, les permis d'utilisation des eaux, les autorisations, les plans de gestion et les plans de suivi des effets sur l'environnement se poursuivront en 2022.

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ABBREVIATIONS

ABA.....	Acid Base Accounting
AEMP.....	Aquatic Effects Monitoring Plan
AG.....	Acid Generating
ALS.....	ALS Canada Ltd.
ARD.....	Acid Rock Drainage
Baffinland.....	Baffinland Iron Mines Corporation
BOD.....	Biochemical Oxygen Demand
CCME.....	Canadian Council of Ministers of the Environment
CEQG.....	Canadian Environmental Quality Guidelines
CF.....	Crusher Facility
CIRNAC.....	Crown Indigenous Relations and Northern Affairs Canada
Commercial Lease.....	Commercial Lease No. Q13C301
CREMP.....	Core Receiving Environment Monitoring Program
CWS.....	Canadian-wide Standards
DAF.....	Dissolved Air Flotation
DFO.....	Department of Fisheries and Ocean
ECCC.....	Environment and Climate Change Canada
EEM.....	Environmental Effects Monitoring
ERP.....	Early Revenue Phase
ERp.....	Emergency Response Plan
FDP.....	Final Discharge Point
FEIS.....	Final Environmental Impact Statement
FIGQ.....	Federal Interim Groundwater Quality Guidelines
GN.....	Government of Nunavut
Golder.....	Golder Associates Ltd.
HWB.....	Hazardous Waste Berms
IOL.....	Inuit Owned Land
Landfill Facility.....	Mine Site Non-Hazardous Waste Landfill Facility
LDL.....	Lowest Detection Limit
LOA.....	Letters of Advice
LTWMP.....	Long Term Water Management Plan
MBR.....	Membrane Bioreactor
MDMER.....	Metal and Diamond Mining Effluent Regulations
ML.....	Metal Leaching
mL.....	Milliliter
mg/L.....	Milligrams per Liter
Mt.....	Million Tonnes

Mtpa.....	Million Tonnes Per Annum
NaOH.....	Sodium Hydroxide Solution
NIRB.....	Nunavut Impact Review Board
Non-AG.....	Non-Potentially Acid Generating
NPR.....	Neutralization Potential Ratio
NT-NU.....	Northwest Territories-Nunavut
NWB.....	Nunavut Water Board
OEN.....	Options Exercise Notice
OPEP.....	Oil Pollution Emergency Plan
OPPP.....	Oil Pollution Prevention Plan
OWTS.....	Oily Water Treatment System
PAG.....	Potentially Acid Generating
PWSP.....	Polishing Waste Stabilization Pond
QA.....	Quality Assurance
QC.....	Quality Control
QE.....	Qikiqtaaluk Environmental
QIA.....	Qikiqtani Inuit Association
ROM.....	Run of Mine
Rpd.....	Relative Percent Difference
SCP.....	Spill Contingency Plan
SRM.....	Standard Reference Material
SNP.....	Surveillance Network Program
STP.....	Sewage Treatment Plants
TCLP.....	Toxicity Characteristic Leaching Procedure
TDGA.....	Transportation of Dangerous Goods Act
TDS.....	Total Dissolved Solids
the Mine Site.....	Mary River Mine Site
the Port Site.....	Milne Port Facility
the Project.....	Mary River Project
Tote Road.....	Milne Inlet Tote Road
TOG.....	Total Oil and Grease
TRMP.....	Tote Road Monitoring Program
TRAN.....	Tote Road Adjustment Notice
TREEP.....	Tote Road Earthworks Execution Plan
TSS.....	Total Suspended Solids
Type 'A' Water Licence.....	Type 'A' Water Licence - 2AM-MRY1325 – Amendment No. 1
Type 'B' Water Licence.....	Type 'B' Water Licence - 2BE-MRY2131
VEC.....	Valued Ecosystems Components
WRF.....	Waste Rock Facility

WSCC.....Workers' Safety & Compensation Commission
WTP.....Water Treatment Plant

1 INTRODUCTION

1.1 PURPOSE AND SCOPE

This report to the Qikiqtani Inuit Association (QIA) and the Nunavut Water Board (NWB) has been prepared to summarize the 2021 Mary River Project (the Project) activities and monitoring conducted under Baffinland Iron Mines Corporation's (Baffinland) Type 'A' Water Licence - 2AM-MRY1325 – Amendment No. 1 (Type 'A' Water Licence), the Commercial Lease No. Q13C301 (Commercial Lease) between the QIA and Baffinland, and Crown Land leases for the Tote Road (N2020Q0011) and Bruce Head (N2020J0010). All annual reporting requirements for the Commercial Lease, except a summary of the exploration and drilling activities conducted in 2021, are included within this report. A separate annual report has been prepared for the QIA and NWB to summarize the 2021 exploration and geotechnical activities conducted within the scope of Baffinland's Type 'B' Water Licence - 2BE-MRY2131 (Type 'B' Water Licence) and Commercial Lease, as well as the QIA Land Use Licence QL2-2012 and Crown Land Use Permit for Steensby Inlet (N2020C0009). Concordance tables referencing where in this report the annual reporting requirements outlined in the Commercial Lease and Type 'A' Water Licence have been met are presented in Appendix A.

The Type 'A' Water Licence includes provisions for sampling programs that involve recording data related to the volume of water extracted for any purpose, testing of effluents (e.g., treated sewage effluents) discharged to the environment, and monitoring water quality within specific Project areas (e.g., surface discharge downstream of Project infrastructure, stormwater from containment structures, etc.). These data are summarized and referenced in the completed NWB Annual Report Forms, included as Appendix B, and are described in greater detail in the subsequent sections.

Figures 1 and 2 present the locations of the key areas associated with the Project where activities in 2021 were undertaken. These areas included Milne Port (Figure 3), the Milne Inlet Tote Road (Tote Road; Figure 4) and the Mary River Mine Site (Mine Site; Figure 5). Accommodations at the Mid-Rail Camp and Steensby Port, as shown in Figures 6 and 7, respectively, remained closed and unoccupied during 2021. The Bruce Head camp, shown in Figure 8, was occupied throughout 2021 in support of the marine monitoring studies conducted in Milne Inlet and along the shipping route. See Appendix D – Photo Journals for detailed photos of various site activities and infrastructure.

1.2 REGULATORY FRAMEWORK

Although the key regulatory and legal documents that relate to this report are the Commercial Lease and the Type 'A' Water Licence, this report is presented in the context of other applicable regulatory authorizations and schedules for the Project. A list of the key regulatory permits, approvals and authorizations that allowed for the work to be completed at the Project in 2021 is presented in Table 1.1.

1.3 COVID-19 SUMMARY

In response to the COVID-19 Pandemic, additional precautions were applied to the 2021 Environmental Monitoring Programs. Baffinland and its consultants implemented comprehensive safety plans and protocols to minimize the risk of COVID-19 exposure to their employees and communities. To protect communities in Nunavut from COVID-19, Baffinland requested that all Nunavummiut remain home on paid leave during the first half of 2021. When easing of public health restrictions allowed, Nunavummiut returned to work in late summer 2021, but were sent home again in December due to the presence of the Omicron variant.

To minimize risk of exposure to employees and contractors traveling to Mary River, pre flight COVID-19 testing and screening for symptoms was implemented for all inbound personnel as a prerequisite for site access. Baffinland protocols, established in consultation with federal and territorial public health experts included: preventive measures such as physical distancing, proper hand washing, frequent sanitizing, and mask use during travel and on site at Mary River. Baffinland and its consultants implemented comprehensive safety plans and protocols to minimize the risk of COVID-19 exposure to their employees and local communities.

Baffinland has also implemented a COVID-19 testing facility on site to test all employees and contractors at Mary River. Additionally, the staff undergo daily health screenings to monitor for any symptoms of COVID-19; if any symptoms are experienced, these staff members did not conduct field work. If testing yields positive results or if symptoms develop while on-site, Public Health is contacted and the employee is immediately quarantined until medically cleared.

With the extensive precautions and protocols in place by Baffinland, the risk of COVID-19 exposure to Nunavut communities was minimized, and the environmental monitoring programs were completed with minimal risk. Maintaining a continuous monitoring program in all survey years is critical to detect any effects and trends of the Mary River Project on the environment, to ensure a statistically strong dataset, and to comply with conditions outlined in the Water Licence and Commercial Lease.

2 PROJECT ACTIVITIES, MODIFICATIONS AND INFRASTRUCTURE CHANGES

2.1 OVERVIEW OF PROJECT

The Mary River iron ore deposit on North Baffin Island is considered to be one of the largest and highest quality iron ore open pit deposits in the world. The Project currently comprises an operating open pit iron ore mine and deep water port (Milne Port) that is operated by Baffinland and jointly owned by ArcelorMittal and Nunavut Iron Ore.

The Project is located in the Qikiqtani Region of Nunavut on northern Baffin Island (Figure 1). The current mine operation is expected to last for more than 20 years, with the ability for the operation to last for generations if it is allowed to expand to include other deposits which have been identified. This represents a potential multi-generational opportunity for resource-driven socio-economic development in the North Baffin region. The Project is an open pit iron ore mine located in the Qikiqtani Region of Nunavut on northern Baffin Island, approximately 160 kilometers south-southwest of the nearest community of Pond Inlet (Mittimatalik) and 1,000 kilometers north-northwest of the territorial capital of Iqaluit (Figure 1).

The Project has gone through a number of important milestones prior to operating at the 2021 approved production rate of 6 Mtpa. Baffinland's initial proposal consisted of mining iron ore from the reserve at Deposit No. 1 at a production rate of 18 Mtpa (with operational flexibility) and using a port south of the mine in Steensby Inlet, serviced by an approximately 160 km southern railway to transport the ore to market (i.e., Southern Transportation Corridor; Figure 1). The NIRB issued Project Certificate No. 005 for this proposal on December 28, 2012.

From 2013 to 2014, in response to changing iron ore market price conditions, Baffinland prepared an alternative development approach, the ERP, supported by an addendum to the FEIS for the Mary River Mine. The Project Certificate was subsequently amended to include the mining of an additional 4.2 Mtpa of ore to be hauled on the existing Milne Inlet Tote Road (Tote Road) north to a port at Milne Inlet (Milne Port). In 2018 and 2020, the Project Certificate (PC) was amended following approval of the Production Increase Proposal (PIP) and PIP Extension Request, allowing for up to 6 Mtpa to be transported and shipped through Milne Port until the end of 2021.

In parallel to the operation of the mine, Baffinland also developed the Phase 2 Proposal, which has been in the regulatory review process since 2015. While there have been revisions to the Phase 2 Proposal since its inception, the current Phase 2 proposal outlines an increase in output from Milne Port Facility (Milne Port), from the originally approved 4.2 Mtpa to 12 Mtpa supported by the construction of a new railway running largely parallel to the existing Tote Road within the Northern Transportation Corridor. Should this be approved, the total mine production approved would include up to 30 Mtpa, with 12 Mtpa being transported via the North Railway to Milne Port and 18 Mtpa via the South Railway to Steensby Port.

During the ERP phase, the Project includes three (3) primary components (Figure 2):

- Mary River Mine Site (the Mine Site);
- Milne Inlet Tote Road (the Tote Road); and

- Milne Port facility (the Port Site).

Operational activities include:

- Ore extraction;
- Ore processing via crushing;
- Transportation of the ore from the Mine Site to Milne Port via the Tote Road;
- Loading and shipping of ore from Milne Port;
- Stakeholder and Inuit community engagement; and
- Environmental monitoring and reporting.

During 2021 (the seventh (7) shipping season), mining operations at Deposit No. 1 resulted in a total of 5.3 million tonnes (Mt) of ore crushed, which was a decrease from the 6.0 Mt crushed in 2020. A total of 5.3 Mt of ore was transported by ore haul trucks along the Tote Road and stockpiled at Milne Port. Between July 24 to October 31, a total of 5.6 Mt of ore was shipped from the Milne Port to international markets. The shipments included ore mined, transported and stockpiled after the 2020 shipping season ended. In 2021, marine ore shipments involved 73 individual ore carrier vessel round trip voyages during the shipping season. An additional vessel was called to Milne Port, but not loaded due to timing constraints at the end of the shipping season.

In addition to the primary components of the current operation, the Approved Project includes construction, operation, closure and post-closure activities associated with the following proposed Project components:

- A 150 Km South Railway from the Mine Site to a new port facility at Steensby Inlet (Figure 7);
- Steensby Port, which will operate year-round; and
- Year-round shipping along the Southern Shipping Route (Foxe Basin - Hudson Strait).

2.2 SUMMARY OF 2021 PROJECT ACTIVITIES

The Project activities undertaken in 2021 were conducted at Milne Port, the Mine Site and along the Tote Road. No Project activities were undertaken related to the development of the South Railway or at Steensby Port in 2021, with the exception of studies to update baseline information on fish and fish habitat along the South Railway and at Steensby Port.

Operation activities in 2021 included:

- The continued development and construction of Project infrastructure required at Milne Port and the Mine Site, and along the Tote Road;
- Development and operation of the mine at Deposit No. 1, including the crushing, trucking, stockpiling and shipping of ore to international markets;
- Continued year-round operation of camp facilities at the Mine Site and Milne Port, and seasonal operation of the Bruce Head camp for marine monitoring programs, which included the use of water and deposition of waste as authorized under existing permits;

- At Milne Port, vessels carrying fuel, equipment and supplies for activities at the Mine Site and Milne Port arrived during the shipping season;
- Material, fuel and supplies required for construction and operational activities were transported from Milne Port to the Mine Site year-round via the Tote Road;
- Operation of the aerodrome at the Mine Site, which supported year round passenger and freight service by aircraft to/from local communities, Iqaluit and southern Canada;
- Operation of helicopter and fixed wing aircraft to service regional exploration and environmental monitoring studies, and other general Project activities;
- Care and maintenance of the inactive Steensby Port camp;
- Continued progressive reclamation of areas of current and past use;
- Remediation of historic borrow pits along the Tote Road;
- Construction of new surface water management infrastructure at KM 105,
- Construction of a landfarm for impacted soil and snow adjacent to the landfill at the mine site;
- Expansion of the Waste Rock Facility and associated water management infrastructure ditching (refer to Appendix C.1 for the Construction Summary Report);
- Construction of a laydown at KM110.5 and the start of construction of a new maintenance building located on the laydown;
- Expansion of the Mine Site helicopter landing pad on previously disturbed area at the Mine Site Weatherhaven;
- Expansion of a laydown located near the site services building to enable parking of heavy equipment;
- Completion of environmental studies and monitoring programs identified in the Final Environmental Impact Statement (FEIS), FEIS Addendum and Type 'A' Water Licence; and
- Continued engineering and environmental studies to support future phases of the Project (i.e. Phase 2 Expansion).

As required by the Commercial Lease and Type 'A' Water Licence, Baffinland submitted to the Nunavut Water Board (NWB), Qikiqtani Inuit Association (QIA) and Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) a 2022 Work Plan on November 1, 2021. Table 2.1 reconciles the activities, construction and infrastructure changes completed in 2021 to the works proposed in 2021 Work Plan.

2.3 MODIFICATIONS

2.3.1 Modification Applications Summary

During 2021, one modification application was submitted to the NWB, under the Section G of the Type 'A' Water Licence. Table 2.2 summarizes the modification applications submitted to date and their current approvals status.

2.3.2 Modifications Implemented

The following subsections outline the construction works completed during 2021 and the current status of the Project's modifications approved by the NWB.

2.3.2.1 Modification No. 7 – 2018 Work Plan and 2018 Work Plan Addendum

All works outlined in this modification have been completed, with the exception of construction on the mine haul road widening, Milne Port effluent discharge point relocation and the Milne Port marine fuel manifold building relocation and was on-going in 2021.

2.3.2.2 Modification No.10 – Mine Site Upgrades

Expansion of the Mine Site Non-Hazardous Waste Landfill Facility (Landfill Facility) was initiated in 2018 and involved the construction of and deposition of waste at the Landfill Facility's second waste cell (Cell No. 2). In 2021, construction began on a section of the Mine Site Landfarm facility (MS-05).

2.3.2.3 Modification No.11 – Installation of an Incineration Unit at Milne Port's 380-Person Camp

Following approval, Baffinland installed one (1) new incinerator to support the 380-Person Camp infrastructure at Milne Port. Prior to operating the unit, the incinerator was subject to stack testing to confirm emissions standards were being met immediately following commissioning of the unit, consistent with Project Certificate Condition No. 12. Due to the results of the initial stack testing, Baffinland has not commissioned the 380-Person Camp Incineration Unit. Baffinland will complete additional stack testing to confirm emissions standards are being met prior to operation. A Construction Summary Report will be completed and submitted following the commissioning of the unit.

2.3.2.4 Modification No.12 – Milne Port Ore Stockpile #1 and Water Management Expansion

The further expansion of Stockpile #1 at Milne Port was initiated in 2019 following approval of the modification request. Note that construction is divided into two (2) stages, where the second stage is dependant on receipt of a fisheries act authorization from DFO. Construction of the first stage was completed in 2021. The second stage is planned to proceed on approval from DFO.

2.3.2.5 Modification No.13 – Mine Site Water Management

The Long Term Water Management Plan (LTWMP) for the Mine Site was developed with Knight Piésold in 2021 to address erosion and sedimentation at the Mine Site. In 2021, construction of the MS-11 Surface Water Management Pond began, as part of the first phase of the implementation of the Long Term Water Management Plan at the Mine Site, and is ongoing into 2022.

2.4 OTHER CONSTRUCTION ACTIVITIES

Other construction activities completed in 2021, not outlined in Sections 2.1 and 2.2, focused around the ongoing maintenance and repair of existing Project infrastructure, including roads, laydowns and surface water management infrastructure; such as drainage ditches, culverts and free-span bridges.

There was no construction work at fish-bearing stream crossings along the Tote Road in 2021 (See Appendix C.3 for monitoring work at fish bearing stream crossings along Tote Road). Future Tote Road improvements/realignments required in support of on-going operations and future expansion projects will continue to follow the original Hatch 2013 drawings and the TREP. Baffinland will work with Department of Fisheries and Ocean (DFO) as necessary to ensure planned modifications to fish bearing crossings are in compliance of the *Fisheries Act*.

2.5 INBOUND AND OUTBOUND SHIPMENTS TO AND FROM THE PROJECT

Equipment, materials, consumables and fuel required for the operation and continued development of the Project were transported to Milne Port via marine shipments between July and October, 2021. In 2021 inbound marine shipments included:

- Four (4) cargo sealifts to Milne Port delivering equipment, materials, and consumables; and
- Fuel shipments to Milne Port to the Milne Port Bulk Fuel Storage Facility via floating-hose transfer;

Equipment, materials, consumables and fuel received by the Project at Milne Port during 2021 are summarized in Table 2.4 and listed in Appendix E.4. Once at the Project, received equipment, materials, consumables and fuel were either stored at Milne Port or transported to the Mine Site via the Tote Road.

Equipment and materials not required by Project operations, including non-hazardous and hazardous wastes generated by Project activities, were shipped off site from Milne Port via marine shipments between July and October 2021.

Equipment, materials, and wastes shipped off the Project in 2021 are summarized in Table 2.3 and listed in Appendix E.4. All wastes backhauled in 2021 were unloaded at the Port of Valleyfield, Quebec and subsequently transported to licensed, waste disposal facilities in Quebec. No wastes were backhauled to communities in Nunavut for disposal. Details on the wastes backhauled and disposed in 2021, including shipping manifests and the waste disposal facilities utilized, are outlined in Appendix E.1.

3 MINING AND EXPLORATION ACTIVITIES

3.1 EXPLORATION AND GEOTECHNICAL DRILLING ACTIVITIES

For details on the 2021 exploration and geotechnical activities conducted within the scope of Baffinland's Type 'B' Water Licence and Commercial Lease, please refer to Baffinland's 2021 QIA & NWB Annual Report for Exploration and Geotechnical Activities. Additionally, exploration activities for the Ege Bay Exploration Program are captured in the 2021 QIA & NWB Annual Report for the Ege Bay Exploration.

3.2 MINING ACTIVITIES

During 2021, mining operations at Deposit No. 1 continued to advance. A total of 5.3 Mt of ore produced by mining operations at the Mine Site was transported by ore haul trucks along the Tote Road and stockpiled at Milne Port for marine shipment to international market during the open-water shipping season.

Monthly and annual quantities of ore generated by the Project during 2021 are provided in Table 3.1.

3.3 SHIPPING ACTIVITIES

During the 2021 shipping season, a total of 5.6 Mt of ore was shipped from the Project's Milne Port to international markets. This required a total of seventy-three (73) individual ore carrier voyages. An additional vessel was called to Milne Port, but not loaded due to timing constraints at the end of the shipping season. Following the shipping season, ore continued to be stockpiled at Milne Port for subsequent shipment to markets in 2023.

Monthly and annual quantities of ore shipped to international markets from the Project's Milne Port during 2021 are provided in Table 3.2.

3.4 SPECIFIED SUBSTANCES EXTRACTED FROM QUARRIES AND BORROW SOURCES

During 2021, Baffinland operated multiple quarries and borrow sources to support Project road maintenance and infrastructure construction. Quarries and borrow sources in operation during 2021 included the Q1 Quarry at Milne Port and the KM 97 Borrow Source near the Mine Site. As per the requirements of the Commercial Lease (Part 6.4, item d) iv) and Type 'A' Water Licence (Schedule B, Item (g), x), Tables 3.3 and 3.4 provide quantities of each specified substance removed by quarter, calendar year and annual reporting period (October 1, 2020 to September 30, 2021), broken down by individual quarry and borrow source. It should be noted that while specified substances were crushed and removed from the Q1 quarry 2021, there were no blasting activities to support this extraction, as blasting had been completed in 2019. Aggregate from the blasting activities in 2019 was stored in the quarries for use in 2020 and 2021.

4 WATER USE

During 2021, water was withdrawn from approved sources and used at Milne Port, the Mine Site and along the Tote Road for Project activities under the authorization of the Type 'A' Licence. Water volumes used to support 2021 exploration and geotechnical drilling activities was withdrawn under the authorization of the Type 'B' Water Licence and has been provided to the NWB and QIA in a separate annual report titled 2021 QIA and NWB Annual Report for Exploration and Geotechnical Activities.

Under the authorization of the Type 'A' Water Licence, freshwater was withdrawn and used by the Project during 2021 to sustain three (3) key activities: potable water supply for camp use, dust suppression and other industrial purposes. See Appendix E.5.5 – Fresh Water Supply, Sewage, and Wastewater Management Plan (FWSSWMP). The following subsections describe water use at the Project during 2021.

4.1 QUANTITIES OF FRESHWATER USED FOR DOMESTIC AND INDUSTRIAL PURPOSES

Camp Lake (MS-MRY-1) was used to supply the Mine Site with freshwater for domestic and industrial purposes. Water was withdrawn from Camp Lake using a wet well jetty structure positioned 30 metres from shore. Potable water (domestic) was transported from the jetty to water storage tanks located at the Mine Site's Potable Water Treatment Systems (Mine Site Complex, Sailiivik Camp) using heat traced water pipelines and/or water trucks. Water required for industrial purposes at the Mine Site was withdrawn and transported from the Camp Lake jetty using water trucks or other equipment (i.e. fire trucks).

KM 32 Lake (MP-MRY-3) was used to supply Milne Port with freshwater for domestic and industrial purposes. Water was withdrawn and transported from KM 32 Lake to Milne Port using water trucks. Potable water (domestic) was pumped from water trucks into water storage tanks located at Milne Port's Potable Water Treatment Systems (Port Site Complex, Milne Port 380-person Camp).

Water volumes withdrawn from approved water sources were monitored and documented using flow meters and/or flow extrapolation in accordance with the Type 'A' Water Licence (Part I, Item 9). Total volumes of water withdrawn and used for domestic and industrial purposes were monitored for compliance with the maximum daily withdrawal limits stipulated by the Type 'A' Water Licence (Part E, Item 4; Table 3).

Approved water source locations used for Project sites in 2021 are detailed in Table 4.1 and presented in Figure 4, and Tables 4.2 and 4.3 present the daily, monthly, and annual volumes of freshwater withdrawn from approved water sources on Inuit-Owned Lands (IOL) during 2021. As Steensby Port and Mid-Rail camps were not operated in 2021, water was not withdrawn and/or used at these Project sites in 2021. There were no exceedances of the daily withdrawal limits for domestic and industrial water uses in 2021.

4.2 QUANTITIES OF FRESHWATER USED FOR DUST SUPPRESSION

Water was withdrawn from the approved water sources along the Tote Road, outlined in Table 2-3 of the Type 'A' Water Licence, using water trucks and applied to Project roads for dust suppression purposes.

Daily, monthly and annual water volumes withdrawn from these approved water sources during 2021 for dust suppression purposes are outlined in Tables 4.2 and 4.3.

As identified in Table 4.3, total daily water volume withdrawal limits for dust suppression purposes were exceeded two (2) times at approved Project water sources in 2021, including; one (1) exceedance at Muriel Lake, and one (1) exceedance at KM 32 Lake. This is 94% decrease and a significant improvement over 2020, when thirty-one (31) exceedances of the daily water volume for dust suppression use exceeded the dust suppression daily withdrawal limits, and is attributed to improved controls for tracking daily water use at the individual water sources with respect to the daily limits. In 2020, a third party consultant reviewed the dust suppression water withdrawals to assess the effects of the daily water withdrawal exceedances on instantaneous flows of streams and lake outflows at several locations, including at KM 32 Lake, using estimated mean monthly and 10-year low flows, and concluded that the exceedances in 2020 were not environmentally significant and are not expected to adversely affect stream flows, lake flows, fish, or fish habitat (Knight Piésold, 2021). Water withdrawal exceedances of daily limits in 2021 were of significantly less volume when compared to the 2020 exceedances.

Both of the exceedances which occurred in 2021 resulted from a water use accounting issue which occurred because the water use limits are daily limits and do not correspond with operator work shifts which occur over two (2) partial days.

Corrective actions that Baffinland has taken to prevent similar incidents from re-occurring include installing signs at dust suppression water sources that indicate the daily water use limits in numbers of truckloads per day, and implementing an improved water truck operator log that indicates when the maximum daily volume of water has been collected from each source based on the number of water truck loads filled. Waterproof storage systems were installed at each water source in 2021 to house daily water use logs, which enabled the use of a common log sheet for all operators and improved tracking between different trucks using the same source on the same day.

Baffinland is committed to continue to improving controls for tracking source specific daily water withdrawal limits as necessary and maintaining effective record keeping practices for the approved dust suppression water sources.

4.3 QUANTITIES OF RECLAIMED AND RECYCLED WATER

Under the Type 'A' Water Licence (Part E, Item 5), freshwater was reclaimed and recycled throughout the Project and applied to roads for dust suppression purposes. A recycled water sample from MS-RW-01 on June 14, 2021 indicated elevated TSS concentrations that were greater than the Type 'A' Water Licence criteria for grab samples of 30 mg/L. Water use from this location occurred from June 5 to June 8 and did not resume following the observation of the elevated TSS concentrations. On June 9, 2021, a recycled water sample from MS-RW-02 also indicated elevated TSS concentrations that were greater than the applicable criteria for grab samples. Following receipt of the laboratory results on June 11, 2021 indicating the elevated TSS, recycled water use from the location was stopped and was not resumed in 2021. It should be noted that this water was applied directly to roadways for dust suppression efforts and did not

migrate to receiving water bodies. Baffinland is proposing to remove the TSS criteria requirement in its current application to amend the Type 'A' Water Licence for Phase 2 before the Nunavut Water Board. Recycled water location HR-CD-05 was not utilized as a source of water for dust suppression in 2021; therefore, no results for this location are reported in Table 7.5. Water quality monitoring for water recycled from Mine Site, Milne Port and Tote Road locations is provided in Tables 7.5.1 through 7.5.5. A summary of reclaimed and recycled water used during 2021 is provided in Table 4.3.

5 WASTE MANAGEMENT

5.1 WASTEWATER MANAGEMENT

Under the Type 'A' Water Licence, the Project generated domestic sewage, retained stormwater and runoff at containment areas and ore and waste rock management facilities, and discharged compliant effluents, treated and untreated, to receiving environments at Milne Port and the Mine Site during 2021. These activities are carried out via the FWSSWMP (Appendix E.5.5).

Steensby Port and the Mid-Rail camp remained closed in 2021 and as a result no wastewater was generated and/or discharged at these Project sites. Domestic sewage from the Bruce Head camp was transported to the Milne Port Sewage Treatment Plant for treatment and discharge.

Wastewater and effluents generated in 2021 were managed in accordance with the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (FWSSWMP; BAF-PH1-830-P16-0010).

5.1.1 Quantities of Sewage Effluent and Sludge from STPs and PWSPs

Throughout 2021, residual sewage sludge (sludge) and treated sewage effluents were generated at the Project's Sewage Treatment Plants (STPs), equipped with Membrane Bioreactor (MBR) technology. Sewage wastes generated by the Project in 2021 were treated and managed using the following facilities:

- Mine Site STP No. 1 (MS-01);
- Mine Site STP No. 2 (MS-01B);
- Mine Site Polishing Waste Stabilization Ponds (PWSPs; MS-MRY-04A, B, C);
- Milne Port STP (MP-01);
- Milne Port STP (MP-01B); and,
- Milne Port PWSP (MP-01A).

At the Mine Site, treated sewage effluent that met the applicable water quality discharge criteria stipulated in the Type 'A' Water Licence was either direct discharged via a dedicated pipeline (MS-01 and MS-01B) or transported by vacuum truck to the approved discharge location located near the Mary River.

At Milne Port, compliant treated sewage effluent from the Milne Port STP was either direct discharged via a dedicated pipeline (MP-01) or transported by vacuum truck to the approved discharge point near Milne Inlet. Compliant treated sewage effluent from Milne Port STP MP-01B, servicing the 380-person camp, was transported by vacuum truck to the approved discharge point.

As part of routine operation of the Project's STPs, dewatered sludge (cake) generated at the STPs was removed regularly and transported to site incinerators for disposal. Cake that could not be incinerated onsite during 2021 was shipped off site during the Milne Port backhaul sealift and disposed at a licensed waste disposal facility in Southern Canada.

During 2021, PWSPs at the Mine Site and Milne Port were utilized to store treated sewage effluent that did not meet the discharge criteria stipulated in the Type 'A' Water Licence. During upset conditions, when

untreated sewage was required to be removed from accommodation lift stations and/or Project STPs (during maintenance), sewage, inclusive of non-compliant effluent, and sludge were transported and discharged to PWSPs for temporary storage. In cases where the wastewater stored in the PWSPs required to be discharged, the wastewater was analysed, treated (if required) and discharged to the receiving environment, in accordance with the Type 'A' Water Licence, Part F, Items 17 & 18. During 2021, approximately 401 m³ of treated wastewater was discharged from the Milne Port PWSP (MP-01A) to the approved discharge point near Milne Inlet.

Daily, monthly and annual quantities of sewage effluent discharged from Project STPs and PWSPs to approved discharge locations are provided in Table 5.1. Table 5.2 also presents the quantities of sewage and sludge diverted to the PWSPs from accommodation facilities as well as the quantities of cake removed from Project STPs and incinerated or backhauled for off-site disposal.

Figures 3 and 5 show the locations of the Milne Port and Mine Site STPs, PWSPs and approved discharge points.

5.1.2 Quantities of Effluent from Containment Areas

During 2021, stormwater retained within containment areas associated with the Project's bulk fuel storage facilities and hazardous materials storage berms (HWB) was analysed in accordance with the Type 'A' Water Licence (Part F, Item 9), treated if required using the mobile Oily Water Treatment System (OWTS), and discharged to the receiving environment. Stormwater analysed and demonstrated to be compliant with the applicable water quality discharge criteria stipulated in the Type 'A' Water Licence was directly discharged to the receiving environment using pumps and non-rigid hose.

At Milne Port, the OWTS was operated intermittently from July to early September at the Landfarm Facility (MP-04) and the Contaminated Snow Containment Facility (MP-04A). Effluent was also discharged from Milne Port Fuel Storage Facility (MP-03) in July and August, which did not require OWTS treatment.

At the Mine Site, the OWTS was operated from July to early August at the Hazardous Waste Berm No. 7 (MS-MRY-06). A pre-discharge exploratory sample was taken on August 24th, 2021. The sample exceeded water license criteria for lead (0.001 mg/l / 0.00390 mg/l) and thus discharge did not resume. The result was mistakenly reported in the August 2021 Water License Monitoring Report; however it was confirmed that no discharge occurred and the water was recirculated for further treatment. Effluent was also discharged from Mine Site Bulk Fuel Storage Facility (MS-03B) in July and August, which did not require OWTS treatment. During 2021, a total of approximately 2458 m³ of stormwater was discharged from Project containment areas. Table 5.3 provides the daily, monthly and annual volumes of effluent discharged from Project containment areas at the Mine Site and Milne Port during 2021.

Figures 3 and 5 show the locations of the Milne Port and Mine Site containment areas associated with the bulk fuel storage facilities, hazardous materials storage berms, and Milne Port Landfarm and Contaminated Snow Containment Facility (MP-04 and MP-04A).

5.1.3 Quantities of Effluent from Surface Water Management Ponds

To manage and monitor stormwater retained by ore and waste rock management facilities, the following five (5) surface water management ponds have been established at the Project:

Mine Site

- Crusher Facility Pond (CF Pond; MS-06);
- Run-of-Mine (ROM) Ore Stockpile Facility (KM106 ROM Pond; MS-07);
- Waste Rock Facility Pond (WRF Pond; MS-08).

Milne Port

- Ore Stockpile - East Pond (MP-05);
- Ore Stockpile - West Pond (MP-06).

Stormwater retained by Project ore and waste rock management facilities at Milne Port and the Mine Site are directed to surface water management ponds by a network of berms and ditches established around the perimeter of each facility.

At the Mine Site, a total of approximately 207,950 m³ was actively discharged from the Waste Rock Facility (WRF) Pond (MS-08) through an approved Final Discharge Point (FDP) within the catchment of Mary River Tributary F (Figure 5) using pumps and rigid hose in 2021. Total volumes of approximately 3,636 m³ and 10,286 m³ was actively discharged from the Crusher Facility (CF) Pond (MS-06) and KM 106 ROM Pond (MS-07), respectively, in 2021. Effluent from MS-06 was discharged using a pump and a direct-discharge pipeline to the approved discharge location near the Mary River. Effluent from MS-07 was discharged using a portable pump and rigid and lay-flat hose to the approved discharge location, which is also near the Mary River.

At Milne Port, approximately 14,397 m³ (6,945 m³ at MP-05 and 7,452 m³ at MP-06) of effluent was actively discharged from the Milne Port Ore Stockpile Ponds to Milne Inlet during 2021. Effluent from MP-05 and MP-06 was discharged to Milne Inlet using pumps and non-rigid hose. Any storm water contained in Pond 3, which is located along the west perimeter of the Ore Pad, was pumped from Pond 3 to MP-06, where the water quality was monitored.

Table 5.4 provides the daily, monthly and annual quantities of effluent discharged from Project surface water management ponds during 2021. Inline flow meters and pumping rate extrapolation were used to monitor volumes discharged to the receiving environment.

Figures 3 and 5 show the locations of the surface water management ponds located at Milne Port and the Mine Site, respectively.

5.2 SOLID AND HAZARDOUS WASTE MANAGEMENT

During 2021, Project operations generated various waste types, including domestic, hazardous, and non-hazardous wastes. Waste types were managed as outlined in the Project's Waste Management Plan

(BAF-PH1-830-P16-0028) and Hazardous Materials and Hazardous Waste Management Plan Appendix E.5.4, (BAF-PH1-830-P16-0011), utilizing the following facilities at the Mine Site and Milne Port:

Mine Site

- Waste Management Building (includes incinerator);
- Hazardous waste and materials containment berms (includes MS-HWB-1 to MS-HWB-7) and polishing waste stabilization ponds (PWSP-MS-MRY-4A, B, C);
- Non-Hazardous Waste Landfill Facility; and,
- Open Burning Facility (near KM 98).

Milne Port

- Waste Management Building (includes incinerator);
- Hazardous waste and materials containment berms (includes MP-HWB-1 to MP-HWB-4) and polishing waste stabilization pond (PWSP-MP-01A);
- Milne Port Landfarm Facility (MP-04) (includes contaminated snow containment berm [MP-04A]); and,
- Open Burning Facility (near KM 2)

Locations of the Project waste management facilities listed above are detailed in Table 5.5 and presented in Figures 3 and 5. Steensby Port and the Mid-Rail Camp remained closed in 2021 and as a result no wastes were generated and/or managed at these Project sites. Domestic waste generated during activities at the Bruce Head Camp was transported to Milne Port waste management facilities for disposal.

In 2021, the groundwater monitoring program was expanded to include installation and monitoring of new shallow monitoring wells both up-gradient and down-gradient of the Mine Site Hazardous Waste Berms, and additional wells were installed at the Landfill Facility. For further information on the 2021 groundwater monitoring, refer to Section 7.7 and Appendix E.12.

The following subsections describe the waste management and disposal activities conducted at the Project during 2021.

5.2.1 Site Incinerators

In 2021, Mine Site and Milne Port incinerators were operated throughout the year to incinerate solid waste as per regulatory guidelines, including the Canadian-wide Standards (CWS), and the Project's Waste Management Plan (BAF-PH1-830-P16-0028). Refer to Section 9.4 for information pertaining to 2021 monitoring activities completed for incinerator bottom ash generated at the Project.

5.2.2 Open Burning

Open burning was conducted throughout 2021 as a method to dispose of untreated wood, cardboard, and paper products generated on site as per Baffinland's Open Burning of Untreated Wood, Cardboard and Paper Products Procedure (BAF-PH1-300-PRO-0001). Open-burning disposal reduces the volume of inert waste directed to Project incinerators and the Mine Site Non-Hazardous Landfill Facility (Landfill

Facility). Baffinland's open-burning authorization prohibits the burning of hazardous wastes, non-combustible materials, food waste, plastics, Styrofoam and/or treated wood products (i.e. plywood). To ensure removal of prohibited waste, secondary waste segregation was completed during the loading process at Project open burn facilities. Bottom ash generated from open burn activities is suitable to be deposited at the Project's Landfill Facility.

Open burning locations at Milne Port and the Mine Site are shown in Figures 3 and 5, respectively.

5.2.3 Mine Site Landfill Facility

In 2021, inert, non-combustible wastes (plastics, cement, used construction materials, scrap metal, pipes, glass, etc.) generated by Project activities were deposited at the Landfill Facility located at the Mine Site. Non-hazardous wastes, including ash from Project incinerators and open-burning activities, and non-hazardous waste that could not be salvaged or incinerated, were also deposited at the Landfill Facility. Disposal of domestic (food) waste, hazardous and biomedical materials at the Landfill Facility is prohibited. Visual inspections of the Landfill Facility were completed and documented regularly throughout 2021 to ensure operational compliance to the Project's Waste Management Plan (BAF-PH1-830-P16-0028). These inspections are part of the weekly inspections of structures designed to contain, withhold, divert or retain waters or wastes during periods of flow; conducted in accordance with the Type 'A' Water Licence (Part E, Item 11) and are completed with a focus on waste volume, composition and overall conformance to the Project's Waste Sorting Guidelines (BAF-PH1-300-P25-002). Any items requiring corrective actions identified during the weekly inspections are addressed and follow up actions implemented. Baffinland also continues to focus on ongoing employee training around waste management and continues to improve upon housekeeping and debris management across the Project.

A total of approximately 7,389 m³ of waste was deposited at the Landfill Facility in 2021. Table 5.6 provides the monthly and annual quantities of waste deposited at the Landfill Facility during 2021. Since the commissioning of the Landfill Facility, a total volume of approximately 81,363 m³ of non-hazardous waste has been deposited at the Landfill Facility.

5.2.4 Milne Port Landfarm Facility

The Milne Port Landfarm Facility (Landfarm Facility) consists of two geomembrane lined containment cells. The larger west cell is used as a landfarm for the stockpiling and biotreatment of soils contaminated by hydrocarbons from spills. The smaller east cell is used to contain hydrocarbon contaminated snow generated during winter operations. The east cell is also used as a repository for other sources of oily water at Milne Port and provides a practical location where oily water can be effectively treated at Milne Port using the OWTS.

During 2021, the OWTS was used to treat water at the Landfarm Facility. Prior to discharge, water retained in the Landfarm Facility (MP-04) and Contaminated Snow Containment Facility (MP-04A) was sampled to ensure compliance with the applicable discharge criteria stipulated in the Type 'A' Water Licence. Upon determining that the water met the applicable discharge criteria, water was discharged to the tundra

adjacent to the Landfarm Facility. Refer to Section 5.1.2 and Table 5.3 for volumes of water discharged from the Landfarm Facility in 2021.

In previous years, hydrocarbon contaminated soils generated from spills were placed and managed in the Landfarm Facility during summer months for remediation through natural microbiological and evaporative processes, where possible, however the Landfarm Facility reached capacity at the end of 2019. Throughout 2021, hydrocarbon contaminated soils generated from spills were securely packaged in Quatrex bags or sealed drums and stored in hazardous materials storage berms (HWB) at both the Mine Site and Milne Port for shipment off the Project and transport to licenced waste receiving facilities in Southern Canada. Baffinland has retained a third party consultant to develop a remediation research plan for hydrocarbon impacted soils at the Milne Port Landfarm Facility. Details of the remediation research plan will be provided in the 2022 QIA and NWB Annual Report for Operations. Construction began on the Mary River Landfarm in 2021, and it is expected to be operational in 2022 to manage hydrocarbon-contaminated soils generated from any spills. Table 5.7 provides the estimated monthly and annual quantities of soil and contaminated water deposited at the Milne Port Landfarm Facility during 2021.

5.2.5 Hazardous Waste Storage and 2021 Backhaul Sealift

During 2021, there were three (3) sealift backhaul events for Project waste. The backhaul sealift vessels departed Milne Port in August and September 2021 carrying non-hazardous and hazardous waste materials generated and stored on site by the Project since the previous sealift backhaul in 2020. Prior to the 2021 backhaul, non-hazardous and hazardous waste materials were collected, packaged, and manifested at Milne Port under the direction of Qikiqtaaluk Environmental (QE). The shipments of waste materials off the Project and transport to licenced waste receiving facilities in Southern Canada was conducted under the direction of QE. Appendix E.1 provides additional information pertaining to Baffinland's 2021 waste backhaul program, including inventories and shipping manifests identifying materials shipped off the Project in 2021 for disposal, treatment and/or recycling in Southern Canada. No Project wastes were transported and deposited in communities located in Nunavut during 2021. Appendix E.5.4 provides Baffinland's Hazardous Materials and Hazardous Waste Management Plan.

Hazardous waste materials backhauled off the Project in 2021 that are regulated by the Transportation of Dangerous Goods Act (TDGA) included (in alphabetical order):

- Empty bags and other contaminated debris of ammonium nitrate – UN 1942
- Waste diesel fuel - UN 1202
- Waste flammable aerosol cans - UN 1950
- Waste gasoline – UN 1203
- Waste wet lead-acid batteries – UN 2794
- Sodium hydroxide solution (NaOH) – UN 1824

Non-hazardous and hazardous waste materials backhauled off the Project in 2021 that were not regulated by the TDGA included (in alphabetical order):

- Antifreeze - coolant
- Broken glass
- Calcium chloride
- Empty contaminated drums
- Empty contaminated overpack drums
- Empty contaminated plastic totes
- Electronic waste (E-Waste)
- Empty lime bags
- Grease
- Hazardous ash
- Hydrated lime
- Hydrocarbon contaminated soil
- Hypochlorite solution
- Kitchen grease
- Mixed garbage, filtration cakes and berm liner debris
- Mixed laboratory waste
- Oily sludge
- Oily solids
- Oily water
- Oil filters
- Sewage liquid
- Water treatment solid residuals
- Rubber tubes
- Used tires

Hazardous waste and waste material generated after the 2021 backhaul sealift continues to be sorted and stored in designated waste storage areas at the Project as per Baffinland's Hazardous Materials and Hazardous Waste Management Plan Appendix E.5.4. Wastes that cannot be treated, recycled or disposed at the Project will be packaged and prepared for the next backhaul sealift in 2022.

5.3 WASTE ROCK MANAGEMENT

5.3.1 Mine Site Waste Rock Facility

Mining operations at Deposit No. 1 (Nuluujaak Pit) continued throughout 2021. A total of approximately 6.03 Mt of waste rock was generated during 2021. The waste rock generated at Deposit No. 1 was analytically tested based on operational testing protocols outlined in the Project's Phase 1 - Waste Rock Management Plan (BAF-PH1-830-P16-0029). Based on the analytical testing results, waste rock was classified as Potentially Acid Generating (PAG) or Non-Acid Generating (Non-AG) material. The 2021 results for the geochemical operational testing program are discussed in Section 9.6 and provided in Appendix E.6. All PAG waste rock generated from mining operations in 2021 was deposited at the WRF.

Table 5.8 presents the monthly and annual quantities of waste rock generated, deposited at the WRF and used for construction purposes.

6 REPORTED INCIDENTS

6.1 SPILLS

During 2021, fourteen (14) spills were reported to the Northwest Territories-Nunavut (NT-NU) Spill Report Line, CIRNAC and QIA by the Project, as presented in Table 6.1. Sediment, sewage (untreated) and oil (transmission fluid/hydraulic oil) were the most commonly spilled products reported with sediment accounting for three (3) spills, and sewage (untreated) and oil each accounting for two (2) spills in 2021. Unauthorized releases also occurred at three (3) facilities.

In addition to the original spill report submitted within 24 hours of each spill event in 2021, a detailed follow-up report was submitted within thirty (30) days of each reported spill. The follow-up reports included a description of the event, the immediate cause(s), corrective and preventative action(s), photos, and a map showing the location of the spill.

To further outline the corrective actions taken in 2021 and planned in future years to address the sediment releases reported during freshet 2021, Baffinland has submitted the 2021 Freshet Monitoring Report, provided as Appendix E.11.

All spills reported to the NT-NU Spill Line in 2021 are summarized in Table 6.2, including the clean-up details and corrective actions taken to ensure that the necessary equipment has been maintained as well as the necessary training provided to personnel. In addition, the 2021 spills are also presented in Figure 9. The follow-up spill reports and original spill reports are provided in Appendix E.8.3. Table 6.2 also highlights the spill's proximity to waterbodies in which eight (8) of the fourteen (14) reported spills occurred over 100 m away from a waterbody.

A general analysis of all spills that occurred across the Project in 2021 indicated that the most common causes for the spills were equipment failure (including component malfunction), followed by procedural issues (inadequate procedure or training). The analysis indicated the most common causes of reportable spills in 2021 were surface water management infrastructure deficiencies, equipment failure, and improper procedure. Baffinland continues to work to identify basic causes so that effective long-term corrective actions can be implemented. An incident investigation was conducted for all spills that were reported to the 24-hour NT-NU Spill Report Line, or other applicable reporting process, to assist in determining the root cause of a spill event and in identifying effective corrective actions.

A summary of initiatives undertaken by Baffinland to reduce the frequency of spills include:

- Mandatory spill reporting enforced at all levels in the organization;
- Improved preventive maintenance plans;
- Daily pre-operational checks of all equipment;
- Spill tray usage memos;
- Tool box meetings;
- Prescribed training sessions;

- Specific product handling and spill reduction plans.
- Construction began in 2021 on approved surface water management infrastructure outlined in the Long Term Water Management Plan (LTWMP), approved under Modification No. 13, to enable effective management of surface water at the Mine Site. The LTWMP will continue to be implemented in 2022.

To ensure Baffinland's emergency response teams have the skills needed to safely and effectively respond to marine spills, marine spill response training was provided by external consultants at Milne Inlet, prior to the 2021 fuel resupply. During the training, the Project's Emergency Response Plan (ERP; BAF-PH1-840-P16-0002), Spill Contingency Plan (SCP; BAF-PH1-830-P16-0036) and the Milne Inlet Oil Pollution Emergency Plan (OPEP; BAF-PH1-830-P16-0013) and Oil Pollution Prevention Plan (OPPP; BAF-PH1-830-P16-0058) were reviewed. During the practical deployment exercises, the responders were provided with the opportunity to learn and then practice skills by responding to marine spill scenarios using the Milne Port resident spill response equipment. The findings related to the annual training sessions continue to be used to inform revisions to the OPEP, ERP and SCP.

6.2 HEALTH & SAFETY INCIDENTS

Under the Mine Health and Safety Act, several health and safety incidents were reported by the Project during 2021. Details of the incidents are presented in Table 6.3. All incidents were reported to the Worker's Safety and Compensation Commission as required by the Mine Health and Safety Act. Moving forward, to ensure compliance with the requirements of the Commercial Lease, Baffinland will ensure reportable health & safety incidents, as defined in Section 6.2, a), vii of the Commercial Lease, are reported to the QIA in a timely manner following their occurrence in accordance with the Lease Operations Guide.

7 MONITORING

The following subsections discuss and summarize the results of the monitoring program outlined in Schedule I of the Type 'A' Water Licence, known as the Surveillance Network Program (SNP), as well as other relevant aquatic effects monitoring programs conducted at the Project in 2021.

It should be noted that several monitoring stations listed in Schedule I of the Type 'A' Water Licence were originally established during the Exploration Phase of the Project and have since become inactive as a result of continued development and infrastructure changes at the Project. An application to the NWB to discontinue and/or relocate these inactive monitoring stations, including MP-MRY-4, MP-MRY-4A, MP-MRY-7, MP-MRY-12, MS-MRY-09, MS-MRY-10 and MS-MRY-11, was provided in the 2018 Annual Report. These changes were accepted by NWB on September 10, 2020. In 2021, the NWB approved Modification No. 13, which included five (5) additional monitoring stations to be included in Schedule I of the Type 'A' Water Licence (MS-10, MS-11, MS-12, MS-13, MS-14). In 2021, Baffinland is proposing to create unique station IDs for existing infrastructure for one (1) station at Milne Port (MP-04A) and, at Mary River, Baffinland is proposing to create unique station IDs for existing infrastructure for two (2) stations (MS-MRY-04B and MS-MRY-04C), to update coordinates for existing infrastructure at one (1) station (MS-MRY-04A) and to discontinue monitoring station MS-MRY-10 as this water will ultimately now report to MS-11 which will be active in 2022. Baffinland also proposed a change in location for SNP station MS-MRY-13A in 2021; however, due to the ongoing construction of the Mine Site Landfarm Facility (MS-05), the field investigation to determine an appropriate location is ongoing and will be completed during summer 2022. Appendix E.13 includes an application of proposed 2022 changes to the SNP stations.

7.1 SEWAGE DISPOSAL

Sewage generated and managed by the Project in 2021 was managed as described in the Project's FWSSWMP (BAF-PH1-830-P16-0010) and in accordance with the Type 'A' Water Licence (Part F, Items 17- 19).

During 2021, sewage generated from Project sites was directed to the Project STPs located at Milne Port (MP-01, MP-01B) and the Mine Site (MS-01, MS-01B). Treated sewage effluent was discharged to Mary River (freshwater) and Milne Inlet (ocean) in accordance with the applicable effluent discharge criteria outlined in the Type 'A' Water Licence. Figures 3 and 5 show the locations of the Milne Port and Mine Site STPs, PWSPs and approved discharge points. In 2021, there were no exceedances of the effluent discharge criteria for treated sewage effluent generated by Project operations.

Table 5.1 provides the daily, monthly and annual quantities of treated sewage effluent discharged to the receiving environment in 2021. Table 7.2 (7.2.1, 7.2.3) and Table 7.3 (7.3.1, 7.3.2) provide the effluent quality monitoring results for treated sewage effluents discharged from Project STPs (MP-01, MP-01B and MS-01, MS-01B) to the receiving environment during 2021.

7.1.1 2021 Mine Site PWSP Effluent Discharge to Sheardown Lake NW

In 2021, adequate freeboard was maintained at Mine Site PWSPs and therefore no wastewater was discharged from the Mine Site PWSPs to Sheardown Lake NW in 2021. Baffinland continues to monitor PWSPs to ensure sufficient freeboard levels are maintained.

7.1.2 2021 Milne Port PWSP Effluent Discharge to Milne Inlet

In accordance with the PWSP Effluent Discharge Plan, provided in the Project's FWSSWMP (BAF-PH1-830-P16-0010), wastewater stored at the Milne Port PWSP (MP-01A) was discharged to Milne Inlet in August and September 2021.

During the August 26 to September 4, 2021 effluent discharge period, a Dissolved Air Flotation (DAF) water treatment system, consistent with the specifications described in the PWSP Effluent Discharge Plan, was used to treat and discharge effluent from the Milne Port PWSP (MP-01A) to Milne Inlet. During the discharge, a total volume of approximately 401 m³ of compliant effluent was discharged to Milne Inlet. During the discharge, field monitoring was conducted to ensure effluent discharged to Milne Inlet remained in compliance with applicable discharge criteria.

Table 5.1 provides the daily, monthly and annual quantities of effluent discharged from the Milne Port PWSP in 2021. Table 7.2.2 presents the water quality results for the 2021 discharge. There were no indicated exceedances of the applicable water quality discharge criteria during the 2021 discharge from external laboratory results or in field monitoring.

7.2 STORMWATER FROM CONTAINMENT AREAS

During 2021, stormwater retained within containment areas associated with the Project's bulk fuel storage facilities (MP-03, MS-03, MS-03B), hazardous materials storage berms (HWB) and Milne Port Landfarm Facility (MP-04/ MP-04A) was analysed in accordance with the Type 'A' Water Licence (Part F, Item 9), treated if required using the mobile OWTS, and discharged to the receiving environment.

Stormwater from the Milne Port Bulk Fuel Storage Facility (MP-03) was discharged to the Milne Inlet receiving environment using pumps and non-rigid hose on an intermittent basis during the July to August period. Stormwater discharge samples were collected and submitted to an external laboratory to be analysed and demonstrated to be compliant with the applicable water quality discharge criteria stipulated in the Type 'A' Water Licence. There was one (1) exceedance of the applicable discharge criteria for the concentration of total lead of 0.001 mg/L in a grab sample collected from the MP-03 stormwater discharge on July 9, 2021. The elevated concentration of total lead (0.00656 mg/L) are suspected to be the result of either sampling error or external laboratory error, as the concentrations of total lead in four (4) pre-discharge samples collected from MP-03 on June 26, 2021 were all below the discharge criteria of 0.001 mg/L and subsequent samples taken in August at MP-03 confirmed total lead levels below the applicable total lead criteria. Table 5.3 provides the daily, monthly and annual quantities of stormwater discharged from the Milne Port Bulk Fuel Storage Facility in 2021. Table 7.2.4 presents the water quality results for the 2021 stormwater discharge from MP-03. Aside from the total lead exceedance in the

July 9, 2021 sample, there were no other indicated exceedances of the applicable water quality discharge criteria during the 2021 discharge from MP-03 from external laboratory results or in field monitoring.

Stormwater from the Mine Site Bulk Fuel Storage Facility MS-03B was discharged to the Sheardown Lake receiving environment using pumps and non-rigid hoses on an intermittent basis. Stormwater was discharged from MS-03B in August. Stormwater discharge grab samples were collected from MS-03B and submitted to an external laboratory to be analysed and demonstrated to be compliant with the applicable water quality discharge criteria stipulated in the Type 'A' Water Licence. There was no stormwater discharge from Mine Site Bulk Fuel Storage Facility MS-03 in 2021. Throughout August, stormwater from MS-03 was transferred to Mine Site Hazardous Waste and Materials Containment Berm MS-HWB-07 in preparation for OWTS treatment and subsequent discharge, however, due to elevated total lead in a pre-discharge sample, the stormwater discharge did not occur. Monitoring and either treatment or backhaul for offsite treatment and disposal in Southern Canada of this stormwater, which is still contained in MS-HWB-07, is planned for 2022. Table 5.3 provides the daily, monthly and annual quantities of stormwater discharged from the Mine Site Bulk Fuel Storage Facilities in 2021. Table 7.3.3 presents the water quality results for the 2021 stormwater discharge from MS-03B. There were no indicated exceedances of the applicable water quality discharge criteria during the 2021 discharge from MS-03B from external laboratory results.

Treated water was discharged from the Milne Port Landfarm Facility (MP-04) to a ditch near Milne Inlet on an intermittent basis during the July to August period. Prior to discharge, the water from the landfarm facility was treated using a portable solids filter treatment system consisting of a 30 gal/min cartridge filter skid with 5-micron filter cartridges fed by a submersible pump. A treated water discharge sample was collected and submitted to an external laboratory to be analysed and demonstrated to be compliant with the applicable water quality discharge criteria stipulated in the Type 'A' Water Licence. There was one (1) exceedance of the applicable discharge criteria for the concentration of Total Suspended Solids (TSS) of 15 mg/L in a grab sample collected from the MP-04 discharge on July 12, 2021. Upon receiving the lab results of the elevated concentration of TSS (17.3 mg/L), discharge from the Milne Port Landfarm Facility was temporarily halted and was not resumed until it had been confirmed that the effluent's water quality was compliant with the monitoring station's water quality criteria. Baffinland continues to make the necessary adjustments to the OWTS at the Milne Port Landfarm Facility to ensure effluent discharged from the Milne Port Landfarm Facility is compliant with all applicable criteria. There were no other indicated exceedances of the applicable water quality discharge criteria during the 2021 discharge from MP-04 from external laboratory results or in field monitoring. Table 5.3 provides the daily, monthly and annual quantities of treated water discharged from the Milne Port Landfarm Facility in 2021 and Table 7.2.5 presents the water quality results for the 2021 water discharge from MP-04.

Treated water was discharged from the Milne Port Contaminated Snow Containment Berm (MP-04A) to a ditch near the Milne Inlet on an intermittent basis in August 2021. Prior to discharge, the water from the contaminated snow berm was treated using the mobile OWTS, coupled with polishing trains of metal removal media, to remove the organic constituents of 'oil and grease' and reduce monitored metals to

concentrations that are compliant with the acceptable discharge criteria, stipulated by the Type 'A' Water Licence. To monitor the performance of the OWTS in the field and ensure the removal of organics constituents from the influent, sampling and analyses were also conducted in the field on a daily basis utilizing a portable total oil and grease (TOG) analyser. A treated water discharge sample was collected and submitted to an external laboratory to be analysed and demonstrated to be compliant with the applicable water quality discharge criteria stipulated in the Type 'A' Water Licence. There were two (2) exceedances of the applicable discharge criteria for the concentration of total lead of 0.001 mg/L and for the concentration of TSS of 15 mg/L in grab samples collected on August 2 and August 20, respectively. Potential causes for the elevated concentrations of total lead (0.00403 mg/L) and TSS (19.8 mg/L) observed in August include sampling error, elevated turbidity in the containment berm due to high winds or rain that disturbed sediment in the berm, and/ or external laboratory error. Upon becoming aware of the elevated levels of total lead and TSS observed on August 2 and August 20, respectively, discharge of effluent from the Milne Port Snowdump Facility (MP-04A) was halted immediately. Effluent discharge was only reinitiated once it had been confirmed that the effluent's water quality was compliant with the monitoring station's water quality criteria. There were no other indicated exceedances of the applicable water quality discharge criteria during the 2021 discharge from MP-04A from external laboratory results or in field monitoring. Table 5.3 provides the daily, monthly and annual quantities of treated water discharged from the Milne Port Contaminated Snow Containment Berm in 2021 and Table 7.2.6 presents the water quality results for the 2021 treated water discharge from MP-04A.

Treated water was discharged from the Mine Site Hazardous Waste and Materials Containment Berm MS-HWB-07 to the adjacent tundra using pumps and non-rigid hose on an intermittent basis during the July to August period. Stormwater discharge samples were collected at the facility's effluent monitoring station (MS-MRY-6) and submitted to an external laboratory to be analysed and demonstrated to be compliant with the applicable water quality discharge criteria stipulated in the Type 'A' Water Licence. There were no indicated exceedances of the applicable water quality discharge criteria during the 2021 discharge from MS-MRY-6 from external laboratory results or in field monitoring. An exceedance of total lead was incorrectly reported in the monthly report to the NWB as having occurred during discharge at effluent monitoring station MS-MRY-6 on August 24, 2021; however, effluent discharge from MS-HWB-07 had ended on August 1, 2021 and no additional discharges occurred in 2021. Throughout August, water from MS-03 was transferred to MS-HWB-07 in preparation for OWTS treatment and subsequent discharge. The sample collected at MS-MRY-6 on August 24, 2021 was an exploratory pre-discharge sample from the berm which indicated elevated levels of total lead and, as a result, discharge from MS-HWB-07 did not resume in 2021. Prior to resumption of effluent discharge from MS-HWB-07 in 2022, Baffinland will confirm that effluent water quality is compliant with applicable water quality criteria. The August monthly effluent discharge sample at MS-MRY-6 was scheduled to be collected following the resumption of effluent discharge from MS-HWB-07; however, since effluent discharge from MS-HWB-07 did not resume in 2021, the monthly sample could not be collected during August 2021.

7.3 SURFACE WATER RUNOFF AND SEEPAGE

In accordance with the terms of the Type 'A' Water Licence (Part I), surface run-off/ seepage in facilities designed to contain, withhold, divert and retain water or wastes were monitored during periods of flow and after significant precipitation events. The monitoring locations and associated facilities at Milne Port and the Mine Site are presented in Figures 3 and 5, respectively, and in Table 7.1.

In accordance with the terms of the Type 'A' Water Licence, Schedule I, active monitoring stations were monitored during periods of flow for the required parameters to protect receiving waters from the identified potential contaminants. A summary of the monitoring stations and 2021 monitoring results is provided in the subsections below. Monitoring of surface water at select crossings along the Tote Road in accordance with the Project's Tote Road Monitoring Program (TRMP) was also conducted during 2021 and is summarized in Section 7.3.7 below.

7.3.1 Milne Port Ore Stockpile Facility

Monitoring stations MP-05 and MP-06 under Schedule I of the Type 'A' Water Licence represent the east and west surface water management ponds, respectively, that collect surface water runoff from the stockpile pad associated with the Milne Port Ore Stockpile Facility (refer to Figure 3). Surface water runoff from the pad is directed to the ponds by a network of ditches along the pad's perimeter.

During 2021, retained stormwater within both ponds (MP-05 and MP-06) was actively discharged to Milne Inlet using pumps and sections of non-rigid hose. During discharges, water quality monitoring of the effluent discharged was conducted to ensure compliance with the applicable discharge criteria outlined in the Type 'A' Water Licence. No exceedances of the applicable discharge criteria were observed during the discharges from both ponds (MP-05 and MP-06) in 2021.

Volumes of effluent discharged from the east (MP-05) and west (MP-06) ponds in 2021 are presented in Table 5.4. Water quality monitoring results for the 2021 discharges are provided in Tables 7.2.7 and 7.2.8.

A seepage event was identified at the Milne Port Ore Stockpile Facility west ore pad ditch while Ore Stockpile runoff water was being pump from Pond 3 to MP-06 via the perimeter ditch during routine water management activities. Modifications were subsequently implemented to the pond-to-pond transfer process configuration to ensure water is not routed through the west ore pad ditch until corrective actions are implemented to address the seepage. After review with the design engineers of this facility it was determined that a direct pond to pond transfer must occur and the west ditch cannot be utilized. The design engineers also confirmed that if the ditch is used for its intended purpose to passively direct runoff from the ore pad to MP-06, then there should not be any future seepage issues. Baffinland will monitor this area during Freshet 2022 to confirm it is functioning as designed and will continue to implement the re-configured direct pond-to-pond transfer via non-rigid hose and pumps, and the Ore Pad Regrading Strategy to prevent the pooling of water on and around the Ore Stockpile Facility pad.

The seepage event identified at the Milne Port west ore pad ditch was reported by Baffinland to relevant regulators and is documented in the NT-NU Spill Report 21-280. Copies of the original and follow-up spill

reports for the release are provided in Appendix E.8.3 and provide additional details on the release and the corrective actions taken by Baffinland.

7.3.2 Mine Site Landfill Facility

Monitoring stations MS-MRY-13A and MS-MRY-13B under Schedule I of the Type 'A' Water Licence represent the surface runoff sample locations downstream of the Landfill Facility at the Mine Site (refer to Figure 5). In 2021, surface water runoff from the Landfill Facility was initially sampled in May and continued to be sampled during flowing conditions until freeze-up in September.

During 2021, there were no exceedances of the applicable water quality criteria involving surface water runoff downstream of the Landfill Facility. Water quality monitoring results for MS-MRY-13A and MS-MRY-13B are presented in Tables 7.3.10 and 7.3.11.

Surface flow volumes continued to be monitored at MS-MRY-13A in 2021 using an existing weir and a pressure transducer logger installed in early June 2021. Daily surface flows at MS-MRY-13A during 2021 are presented in Appendix E.3. Similar to previous years, this monitoring station was observed to be dry for the latter period of the summer. Flows were consistent at the monitoring station downslope of this location, MS-MRY-13B. Field investigations will continue in 2022 to determine if relocation of MS-MRY-13A is possible.

Baffinland continued the groundwater monitoring program at the Landfill Facility in 2021. During September 2021, Baffinland installed shallow groundwater wells up-gradient and down-gradient of the Landfill Facility using drive point piezometers. Groundwater wells were established to the depth of permafrost (approx. 1.1 – 1.8 metres). Water samples were collected at monitoring well locations where groundwater was detected. For a complete discussion of the 2021 groundwater monitoring program at the Landfill Facility, refer to Section 7.7 and Appendix E.12 of this report.

7.3.3 Mine Site Waste Rock Facility

Monitoring station MS-08 under Schedule I of the Type 'A' Water Licence represents the surface water management pond (WRF Pond) that collects surface water runoff from the WRF's footprint. Surface water runoff from the WRF's footprint is directed to the WRF Pond by a network of ditches along the WRF's perimeter.

Baffinland continued to operate a dedicated Water Treatment Plant (WTP) at the WRF to treat surface water runoff retained by the WRF Pond when necessary in 2021. The WRF WTP was approved under Water Licence Modification No. 7 and uses a combination of coagulation, pH adjustment, precipitation, flocculation and filtration to ensure effluent discharged from the WRF Pond meets the applicable water quality effluent criteria stipulated by the Type 'A' Water Licence and Metal and Diamond Mining Effluent Regulations (MDMER). A full description of the WRF WTP treatment processes is provided in the Project's FWSSWMP (BAF-PH1-830-P16-0010).

During 2021, the water quality of the WRF Pond (MS-08) was found to be compliant with the applicable water quality effluent criteria stipulated by the Type 'A' Water Licence and MDMER. Beginning in June

2021, controlled discharges of effluent from the WRF Pond were conducted and resulted in no exceedances of the water licence water quality discharge criteria in 2021 observed in samples collected under Schedule I of the Type 'A' Water Licence. Additional effluent discharge sampling was completed to satisfy the requirements of the MDMER. The results of sampling completed to satisfy MDMER requirements are detailed in Baffinland's 2021 MDMER annual effluent monitoring report for the Mary River Mine Site in Appendix E.15.

Controlled effluent discharges from the WRF in 2021 involved pumping retained surface water runoff from the WRF Pond through the WRF WTP and releasing the treated effluent at an established discharge location located within the catchment of Mary River Tributary F.

During periods of effluent discharge, the water quality of effluent was monitored at various stages of the WRF WTP by dedicated water treatment operators to ensure the plant was operating as designed and that treatment processes were achieving the target effluent quality. The WRF WTP operators also monitored any direct discharge from the WRF Pond through the Final Discharge Point (FDP) to ensure the water quality was compliant with effluent discharge criteria. As outlined in the Project's FWSSWMP (BAF-PH1-830-P16-0010), in the event that water quality monitoring indicated that effluent no longer met the applicable water quality discharge criteria, discharge of effluent was halted and effluent was recirculated back to the WRF Pond until compliance with effluent discharge criteria was confirmed by additional water quality monitoring results.

Diversion structures constructed in 2021 following the observation of non-contact water entering the WRF continue to be routinely monitored to ensure non-contact water does not enter the facility. In 2021, an expansion of the WRF footprint and associated water management infrastructures (i.e. ditches) was completed; further details can be found in the Construction Summary Report in Appendix C.1.

Volumes and water quality results associated with the 2021 controlled effluent discharges from the WRF (MS-08) are provided in Table 5.4 and Table 7.3.6, respectively. Locations of the WRF effluent monitoring and discharge points are shown in Figure 5 and provided in Table 7.1.

7.3.4 Mine Site Crusher Facility

Monitoring station MS-06 under Schedule I of the Type 'A' Water Licence represents the surface water management pond (CF Pond) that collects surface water runoff from the Mine Site Crusher Facility's (Crusher Facility; CF) footprint. Surface water runoff from the CF's footprint continues to be directed to the CF Pond by a series of pumps and hoses, due to identified integrity issues with the perimeter ditch network.

Periodic controlled discharges of the treated effluent from the CF Pond occurred from May to early September. Controlled effluent discharges from the CF in 2021 involved pumping retained surface water runoff from the CF Pond through a direct-discharge pipeline shared with the Mine Site STPs and releasing the effluent at an approved discharge point near the Mary River (Figure 5). During periods of discharge, water quality monitoring was conducted to ensure compliance with the applicable water quality discharge

criteria outlined in the MDMER and the Type 'A' Water Licence. No exceedances of the applicable water quality discharge criteria were observed during the 2021 CF effluent discharges. The results of sampling completed to satisfy MDMER requirements are detailed in Baffinland's 2021 MDMER annual effluent monitoring report for the Mary River Mine Site in Appendix E.15. Volumes and water quality results associated with the 2021 controlled effluent discharges from the CF (MS-06) are provided in Table 5.4 and Table 7.3.4, respectively. Locations of the CF effluent monitoring and discharge points are shown in Figure 5 and provided in Table 7.1.

Interim contingency measures including diversion, containment structures and pumping strategies implemented in accordance with Part H Item 8 and 11 of the Type 'A' Water Licence and consistent with the Project's FWSSWMP (BAF-PH1-830-P16-0010) and MDMER Emergency Response Plan (BAF-PH1-830-P16-0047), remained in place in 2021 to manage water at the CF. The interim measures were implemented to address concerns regarding the integrity of the ditch network identified in 2019 and following the subsequent observation of seepage water in 2020 and 2021. The interim measures continue to be inspected on a regular basis and are functioning as intended to convey all water into MS-06. Baffinland will continue to implement the Ore Crusher Pad Regrading Strategy to prevent the pooling of water on and around the Crusher Facility pad. All contact water will continue to be captured and conveyed to the surface water management pond via the interim measures to prevent potential seepage to the tundra until construction of permanent corrective actions.

Water management measures for the CF are being addressed as part of the ongoing implementation of Baffinland's Long Term Water Management Plan (LTWMP). As part of the LTWMP, Baffinland plans to construct a new surface water management pond downstream of the Crusher Facility to collect runoff from a large portion of the mine infrastructure area including the existing Crusher Facility. The pond will be formed by constructing perimeter berms along the northwest (Tote Road) and southwest (proposed northern railway embankment) sides. The engineering design work is currently on hold while the NIRB review of the Phase 2 Proposal concludes, as the facility would interface with key Phase 2 infrastructure (railway) that must be considered. In accordance with the Type 'A' Water Licence, Part D, Baffinland will submit Issued for Construction drawings for any new structures designed to contain or divert water from the CF pad that were included in Modification No. 13.

The seepage event identified at the Crusher Facility in 2021 was reported by Baffinland to relevant regulators and is documented in the NT-NU Spill Report 21-322. Copies of the original and follow-up spill reports for the release are provided in Appendix E.8.3 and provide additional details on the release and the corrective actions taken by Baffinland.

7.3.5 KM 106 Run-of-Mine (ROM) Ore Stockpile Facility

Monitoring station MS-07 under Schedule I of the Type 'A' Water Licence represents the surface water management pond that collects surface water runoff from the Mine Site KM 106 Run of Mine (ROM) Ore Stockpile pad (KM 106 Ore Stockpile). Surface water runoff from the KM 106 Ore Stockpile is directed to the KM 106 Pond by a network of ditches along the KM 106 Ore Stockpile's perimeter, including a

temporary sump with pumps and hoses due to identified integrity issues with the perimeter ditch network in 2021.

Periodic controlled discharges of the treated effluent from the KM 106 Pond occurred during July and August 2021. Controlled discharges of the treated effluent from the KM 106 Pond in 2021 involved pumping retained surface water runoff from the KM 106 Pond through rigid and lay-flat hose and releasing the effluent at an approved discharge point near the Mary River (Figure 5). During periods of discharge, water quality monitoring was conducted to ensure compliance with the applicable water quality discharge criteria outlined in the MDMER and the Type 'A' Water Licence. No exceedances of the applicable water quality discharge criteria were observed during the 2021 KM 106 Pond effluent discharges. The results of sampling completed to satisfy MDMER requirements are detailed in Baffinland's 2021 MDMER annual effluent monitoring report for the Mary River Mine Site in Appendix E.15.

Volumes and water quality results associated with the 2021 controlled effluent discharges from the KM 106 ROM Ore Stockpile Facility (MS-07) are provided in Table 5.4 and Table 7.3.5, respectively. Locations of the KM 106 ROM Ore Stockpile Facility effluent monitoring and discharge points are shown in Figure 5 and provided in Table 7.1.

Interim ground work measures including temporary diversion swales and a sump, implemented in accordance with Part H Item 8 and 11 of the Type 'A' Water Licence and consistent with the Project's FWSSWMP (BAF-PH1-830-P16-0010) and MDMER Emergency Response Plan (BAF-PH1-830-P16-0047), were constructed in 2021 following the observation of seepage from the KM106 ROM Ore Stockpile Facility. The interim measures continue to be inspected on a regular basis and are functioning as designed to convey all seepage water into the KM106 Pond. Baffinland has retained a third party consulting firm to investigate the KM 106 diversion berm to determine appropriate corrective actions to ensure the berm functions as per design criteria. The preliminary remedial measures include additional grading be completed as a first course of action once the ground has sufficiently thawed to main positive surface drainage towards the surface water management pond. Regular inspections will continue to ensure all contact water will continue to be captured and conveyed to the surface water management pond.

The seepage event identified at the KM 106 Ore Stockpile Facility in 2021 was reported by Baffinland to relevant regulators and is documented in the NT-NU Spill Report 21-268. Copies of the original and follow-up spill reports for the release are provided in Appendix E.8.3 and provide additional details on the release and the corrective actions taken by Baffinland.

7.3.6 Deposit No. 1

Monitoring stations MS-MRY-09, MS-MRY-10, MS-MRY-11 and MP-MRY-12 under the original Schedule I of the Type 'A' Water Licence represent surface flow/ seepage monitoring locations associated with the 2008 Bulk Sample Program's Deposit No. 1 Pit and associated ore stockpiling/processing locations at the Mine Site and Milne Port. As a result of continued development and infrastructure changes at the Project, these monitoring stations had become inactive. The 2018 Annual Report included an application to the NWB to discontinue and/or relocate these monitoring stations to reflect current Project infrastructure.

On September 10, 2019, the NWB accepted the proposed changes, issuing the relocations of stations MS-MRY-09, MS-MRY-10 and removal of stations MS-MRY-11 and MP-MRY-12 in Table 13 Monitoring Program: Milne Port Site and Table 14 Monitoring Program: Mary River Mine Site within Schedule I. Water quality monitoring has since been occurring at the relocated MS-MRY-09 and MS-MRY-10 monitoring stations.

During 2021, there was one (1) exceedance of the applicable water quality criteria involving surface water runoff downstream of Deposit No. 1. At the surface water monitoring station MS-MRY-09, TSS was 16.1 mg/L on June 10, 2021, exceeding the monitoring station's total TSS grab sample criteria of 15 mg/L. The elevated levels of TSS in the grab sample is likely a result of conditions associated with annual freshet conditions, which typically occur from mid-May to end of June. Water quality monitoring results for MS-MRY-09 and MS-MRY-10 are presented in Table 7.3.8 and Table 7.3.9, respectively. Locations of the Deposit 1 monitoring stations are shown in Figure 5 and provided in Table 7.1. In 2022, Baffinland is proposing to discontinue monitoring station MS-MRY-10, as this water will ultimately now report to MS-11, which will be active in 2022.

7.3.7 Tote Road Monitoring Program

During 2021, monitoring was conducted along the Tote Road to monitor the quality of surface water flows at select water crossings (culverts, bridges) in accordance with the Tote Road Monitoring Program (TRMP). Water crossings monitored under the TRMP were selected to provide a geographically representative sample set of water crossings for each watershed intersected by the Tote Road (Phillips Creek, Ravn River, Mary River), as well as proximity to snow dump locations and locations of historical sedimentation events. During 2021, upstream and downstream water quality was monitored for pH, Total Suspended Solids (TSS), Total Dissolved Solids (TDS) and turbidity at twenty (20) locations along the Tote Road.

The objective of the program is to identify potential project-related impacts to surface water as a result of operation and maintenance of the Tote Road throughout freshet and the remainder of the flowing water season, by comparing upstream of the Tote Road concentrations to downstream of the Tote Road concentrations at defined distances and sampling intervals. In screening the data to determine if the Project infrastructure has resulted in a change to the surface water quality, a potential Project related change is defined as a greater than 50 mg/L increase in TSS concentrations in the downstream sample when upstream concentrations are less than 250 mg/L. When concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in TSS concentrations in the downstream sample.

In 2021, a total of 310 samples were collected for water quality under the TRMP. Based on the water quality monitoring completed in 2021 under the TRMP, there were six (6) sampling events (CV-001-DS on May 26, BG-24-DS on June 8, CV-093-DS on June 9, CV-115-DS on June 1, CV-112-DS on June 1, and CV-154-A-DS on June 1) when there was a greater than 50 mg/L increase in TSS concentrations between the downstream sample and the upstream sample. There were no sampling events in which an increase of 20% or more occurred in the downstream sample when TSS concentrations were greater than 250 mg/L

in the upstream sample. All of the sampling events that had a downstream TSS concentration greater than the screening criteria occurred during the May 26 to June 9, 2021 period when freshet conditions resulted in elevated sediment loading into the affected watercourses over a short period of time, and suggest the potential for Project related change in water quality. Following this period, all results demonstrated that there were no Project related changes to water quality as a result of the operation of the Tote Road. The September sampling event identified all water crossings to be either dry or frozen; thus there are no 2021 September monthly water samples. Field investigations of the affected culvert crossings were completed and erosion and sediment control measures were subsequently implemented where possible, consistent with the Surface Water and Aquatic Ecosystem Management Plan (SWAEMP; BAF-PH1-830-P16-0026). Riprap was placed at the inlets and outlets of culvert embankments at culvert crossings CV-115 and CV-093 to slow runoff water prior to the water entering the streams. A plan is being developed to complete permanent corrective actions at the remaining identified culvert crossings and embankments in 2022; pending further engagement with DFO and any additional authorizations that may be required.

Locations where the screening criteria was exceeded and the potential for Project related changes to water quality were identified will be reviewed as part of the freshet preparedness planning process, to ensure that previously identified issues can be addressed in a timely and effective manner during freshet 2022, and confirm if Project related changes persist at these locations. Prior to the start of freshet 2022, excess snow along the Tote Road will be removed and relocated to approved snow stockpile locations to reduce the amount of surface water runoff from snowmelt as described in the Snow Management Plan Appendix E.5.1. Additional excess snow around the inlets and outlets of select culvert locations will be removed to further reduce the volume of snowmelt and subsequent amount of overland flow present to mobilize sediment, and steam will be applied to culverts as necessary to remove ice and snow blockages to ensure the effective movement of water during freshet conditions.

The TRMP is included as Appendix D of the Project's Roads Management Plan (BAF-PH1-830-P16-0023). Water quality results for the 2021 TRMP monitoring are presented in Table 7.10.1 to 7.10.20.

The TSS exceedances identified at the six (6) Tote Road water crossings (CV-001, CV-154-A, CV-112, CV-115, BG-24 and CV-093) were reported by Baffinland to relevant regulators and is documented in the NT-NU Spill Report 21-247. Copies of the original and follow-up spill reports for the release are provided in Appendix E.8.3 and provide additional details on the release and the corrective actions taken by Baffinland.

7.3.8 Snow Stockpile Monitoring

In accordance with the terms of Type 'A' Water Licence (Part F, Item 26), surface runoff water from snow stockpiles was monitored at active snow stockpile locations on the Project Mine Site and Tote Road in 2021. Monitoring of snowmelt at Milne Port is captured by existing monitoring stations under the SNP program. Grab samples were taken at each active location weekly during periods of flow and submitted to an external lab for analysis.

Snow stockpile monitoring at the Mine Site resulted in four (4) sampling events that resulted in TSS concentrations that were greater than the Type 'A' Water Licence criteria for grab samples of 30 mg/L, out of a total of seventeen (17) sampling events. There was one (1) exceedance at MS-SN-01 on June 1, one (1) exceedance at MS-SN-02 on May 25, and two (2) exceedances at MS-SN-03 on June 9 and June 14, 2021. After review of the location of sampling at MS-SN-01 throughout 2021, it was determined that the water quality results for the month of June are not representative of the receiving water body. Samples were collected directly downslope of the snow stockpile from a small runoff channel, rather than from the receiving water body and the designated sample location, which prevented proper sampling technique and collection of a representative sample. Training programs in 2022 will ensure all staff are monitoring MS-SN-01 at the designated location to enable collection of representative samples.

Snow stockpile monitoring along the Tote Road resulted in sixteen (16) sampling events that resulted in TSS concentrations that were greater than the Type 'A' Water Licence criteria for grab samples of 30 mg/L, out of a total of eighteen (18) sampling events at six (6) sample locations. The snow stockpile at KM 92 was not used in 2021, therefore there are no sample events at monitoring station TR-SN-05. Following the observance of high TSS at TR-SN-01, TR-SN-02, TR-SN-03, TR-SN-06 and TR-SN-07 on June 5, full suite samples (Group 8) were collected on June 7, which also indicated TSS concentrations above the applicable criterion for TSS. It is suspected that the high TSS from five (5) of the sixteen (16) grab sample exceedances (TR-SN-01 and TR-SN-02 on June 5, TR-SN-02 and TR-SN-03 on June 13, and TR-SN-02 on June 29) is not representative of the actual water quality as there was limited water flow that prevented the collection of representative samples during these sampling events. Additionally, current sampling locations do not have consistent flow throughout the entire monitoring period due to source of the flow at these locations originating from only certain locations of the snow stockpile, therefore a comprehensive dataset is not able to be collected. Sampling locations for Tote Road snow stockpile sampling will be re-evaluated prior to sampling in 2022 to ensure sample locations enable collection of water quality samples that are representative of snow stockpile runoff to downstream receiving water systems.

Snow stockpile monitoring occurs in late May and June, when the stockpiles are actively melting and freshet conditions resulted in elevated sediment loading from the snow stockpile areas to the downslope runoff sampling locations over a short period of time. Erosion and sedimentation control measures, such as coir logs and silt fences, were installed and maintained where necessary in accordance with Baffinland's SWAEMP (BAF-PH1-830-P16-0026) to mitigate sediment impacts in the runoff water from the snow stockpile areas. Water quality results for the 2021 snow stockpile monitoring locations are presented in Table 7.4.1 to Table 7.4.9.

7.4 SURFACE WATER RUNOFF DOWNSTREAM OF PROJECT AREAS AND QUARRIES

In accordance to the terms of Type 'A' Water Licence (Part I, Item 25), surface runoff and/or discharge was monitored at stations established downstream of construction and operation areas at Milne Port and the Mine Site. Similar to 2020, managing surface water drainage at the Project during freshet remained a challenge and resulted in several sedimentation events and incidents where surface water flows downstream of Project areas exceeded the applicable discharge criterion for TSS. However, prompt

implementation of sedimentation mitigation measures, outlined in the Project's SWAEMP (BAF-PH1-830-P16-0026), proved effective in controlling the mobilization of sediments and returning TSS levels to below the applicable TSS criterion stipulated by the Type 'A' Water Licence at these locations.

In accordance to the terms of the Type 'A' Water Licence (Part I, Item 23), runoff and/or discharge water quality monitoring from construction and operation areas was conducted during 2021. During 2021, there were three (3) incidents where water samples collected downstream of project areas exceeded the applicable grab sample criterion of 30 mg/L for TSS. Two (2) grab sample exceedances occurred on May 9, 2021 at water quality monitoring stations MS-C-D and MS-C-E, and one (1) exceedance occurred on August 22, 2021 at water quality monitoring station MS-C-F. Additionally, there were four (4) incidents where the samples exceeded the permitted monthly average TSS criteria of 15 mg/L. Two (2) monthly average TSS exceedances occurred in May 2021 at MS-C-D and MS-C-E, and two (2) exceedances occurred in August and September 2021 at MS-C-F.

The two (2) TSS exceedances on May 9, 2021 at Mine Site surface discharge monitoring stations MS-C-D and MS-C-E are believed to be the result of conditions associated with annual freshet conditions, which typically occur from mid-May to June 30. In preparation for freshet and in response to sediment concerns and/or exceedances, corrective and mitigative actions were implemented across the Project site as necessary in accordance with Baffinland's SWAEMP (BAF-PH1-820-P16-0026). The elevated grab samples at MS-C-D and MS-C-E contributed to the exceedances of the monthly average concentrations for TSS, which occurred in May 2021. As part of the Mine Site LTWMP new water management measures include construction of a SDLT-1 Pond to collect runoff from this area and water would be temporarily retained in a pond to allow for sufficient setting of solids to address elevated TSS issues.

MS-C-F is a surface water monitoring station located at the base of Deposit No. 1 and is positioned north of the Mine Site Mobile Maintenance Pad and Mine Haul Road. Surface flows from MS-C-F discharge northwest through a drainage route that is also monitored by surface monitoring stations MS-C-A and MS-C-B. Elevated TSS levels observed in August 22, 2021 were attributed to large rainfall events and upstream runoff from the Mine Haul Road. In response to elevated TSS levels, corrective actions were implemented to settle out sediment from the runoff, including the installation of additional sedimentation controls upstream of the MS-C-F monitoring station along the Mine Haul Road. TSS concentrations at MS-C-A and MS-C-B during August were observed to range between non-detect (<2.0 mg/L) and a maximum of 3.4 mg/L, confirming minimal impact from MS-C-F surface water runoff. TSS levels observed in the subsequent samples taken at MS-C-F on September 2 and 7, 2021 were below the grab sample criterion for TSS, indicating that the elevated TSS levels observed in August were transitory and that corrective actions taken were effective at reducing TSS levels below the applicable criteria.

Elevated TSS levels (26.7 mg/L) on September 2, 2021, which were below the applicable grab sample criterion, contributed to the September exceedance of the TSS monthly average criteria. The elevated TSS levels that were observed at MS-C-F were do to large rainfall events and upstream runoff from dam construction activities near the Mine Haul Road. In response to elevated TSS levels, corrective actions were implemented to settle out sediment from the runoff, including the repair and readjustment of the

existing sedimentation controls upstream of the MS-C-F monitoring station below the Mine Haul Road. The dam is part of the infrastructure which is being constructed as part of the Mine Site LTWMP to provide settling capacity for TSS. TSS concentrations at MS-C-A and MS-C-B during September were observed to range between non-detect (<2.0 mg/L) and a maximum of 3.7 mg/L, confirming minimal impact from MS-C-F surface water flows and that the elevated TSS levels observed on September 2, 2021 were transitory and corrective actions taken were effective at reducing TSS levels below the applicable criteria. In addition to the exceedances outlined above, a full suite sample (Group 8) was not collected at Mine Site surface water monitoring stations MS-C-C and MS-C-D during June 2021. The full suite sample collected at the downstream monitoring location MS-C-E on June 13 was compliant with all applicable water quality criteria, suggesting compliant water quality at upstream MS-C-C and MS-C-D locations. In addition, full suite samples were collected at both MS-C-C and MS-C-D on July 4, 2021 and were compliant with all applicable water quality criteria.

During 2021, there were nine (9) incidents where water samples collected downstream of quarry locations exceeded the applicable grab sample criterion of 30 mg/L for TSS. Three (3) grab sample exceedances occurred on May 26, June 7 and August 11, 2021 at MQ-C-B downstream of the QMR2 Quarry, and six (6) exceedances occurred on June 8, June 15, June 24, June 29, July 13 and August 24, 2021 at MP-Q1-02 downstream of the MP-Q1 Quarry. Additionally, there were eight (8) incidents where the permitted monthly average TSS criteria of 15mg/L was exceeded. Four (4) of the exceedances of the monthly average TSS criteria occurred in May, June, August and October 2021 at MQ-C-B and four (4) of the exceedances of the monthly average TSS criteria occurred in June, July, August and October, 2021 at MP-Q1-02.

The two (2) exceedances on May 26 and June 7, 2021 at MQ-C-B are believed to be a result of high flows and rapid snowmelt conditions associated with annual freshet conditions which typically occur from mid-May to June 30. In preparation for freshet and in response to sediment concerns and/or exceedances, corrective and mitigative actions were implemented across the Project as necessary in accordance with Baffinland's SWAEMP (BAF-PH1-830-P16-0026). Silt fencing and sand bags were deployed at MQ-C-B in response to the elevated TSS observed during the June 7 sampling event. Elevated TSS levels observed on August 11, 2021 at MQ-C-B were attributed to large rainfall events coupled with dewatering activities at the QMR2 Quarry. In response to the elevated TSS levels, corrective actions were implemented to modify the dewatering activities at the QMR2 Quarry to allow for suspended sediments to settle out before reaching surface water drainage routes near the QMR2 Quarry. TSS levels observed in the subsequent samples taken at MQ-C-B on August 17 and 22, 2021 were non-detect (<2.0 mg/L), indicating that the elevated TSS levels observed on August 11, 2021 were transitory and that the corrective actions taken were effective at reducing TSS levels below the applicable criteria. Elevated levels of TSS in the grab samples contributed to the exceedances of the monthly average concentrations for TSS at MQ-C-B in May, June and August 2021. Elevated TSS levels below the applicable grab sample criterion were observed on October 4, 2021 at MQ-C-B and were attributed to recent rainfall events. In combination with frozen conditions which allowed for only one sample to be collected in October 2021 at MQ-C-B, this contributed

to the monitoring station's elevated monthly average TSS levels and limited the implementation of effective sediment mitigation measures.

MP-Q1-02 is a monitoring station located within the drainage ditch that collects surface water runoff from the Q1 Quarry and is not located within a natural waterbody. Surface flows from the drainage ditch discharge north of the Q1 Quarry onto the tundra. In response to the elevated TSS levels within the drainage ditch in June mitigative actions were implemented including the placement of crushed stone at problematic areas on the quarry pad and the installation of sandbags and spring berms within the ditch system, to reduce the amount of sediment available for mobilization and settle sediments from the runoff. Under the Type 'A' Water Licence, Milne Port surface water monitoring station MP-C-H is used to monitor water quality in the nearest receiving waterbody. TSS concentrations at MP-C-H during all sampling events in 2021 were observed to vary between non-detect (<2.0 mg/L) and 3.2 mg/L, confirming minimal impact from MP-Q1-02 surface water runoff. TSS levels observed in subsequent samples from MP-Q1-02 in July and September indicated that the elevated TSS levels observed on July 13 and on August 24 were transitory and that mitigative measures were effective at reducing TSS levels below the applicable criteria. Elevated levels of TSS in the grab samples resulted in the monthly average exceedances for TSS observed in June, July and August. Frozen conditions allowed for only one sample to be collected in October 2021 at MP-Q1-02, contributing to the monitoring's station elevated monthly average TSS levels and limiting the implementation of effective sediment mitigation measures.

Acute toxicity testing was also performed at surface runoff and/or discharge locations downstream of active quarries Q1 at Milne Port and QMR2 at the Mine Site during 2021. During 2021, all acute toxicity samples collected downstream of active quarries (Q1 and QMR2) were demonstrated to be non-acutely toxic. Monthly acute toxicity (Group 3) samples were not collected at surface water monitoring stations downstream of the Q1 and QMR2 Quarries in October 2021. The monthly acute toxicity samples were not collected at these monitoring stations during sampling conducted on October 4 and October 6 at the Mine Site and Milne Port, respectively, and then could not be collected during the remainder of the month due to frozen conditions. Corrective actions have been implemented to ensure parameters that are required to be sampled monthly are included in the first sample set collected that month.

2021 water quality monitoring results for stations MP-Q1-01, and MP-Q1-02 representing surface water runoff from developed quarries at Milne Port are provided in Table 7.2.13 and Table 7.2.14, respectively, and are compared to the applicable water quality discharge criteria. 2021 water quality monitoring for Mary River stations MQ-C-A, MQ-C-B, and MQ-C-D representing surface water runoff from developed quarries are provided in Table 7.3.20, 7.3.21 and 7.3.22, respectively, and are compared to the applicable water quality discharge criteria. Monitoring locations downstream of developed quarries are presented in Figures 3 and 5, and in Table 7.1.

Daily surface flow volumes were measured at or near most of the surface water monitoring locations in 2021 and are detailed in Appendix E.3.

To address the 2021 sedimentation events and on-going sedimentation concerns at the Project, Baffinland continued to implement corrective and mitigation measures, including initiatives outlined in the Sedimentation Mitigation Action Plan (Golder, 2016a), Dust Mitigation Action Plan (Golder, 2016b) and Tote Road Earthworks Execution Plan (TREP; Golder, 2017). Corrective actions and mitigation measures implemented to address sedimentation concerns at the Project in 2021 during freshet are fully discussed in the 2021 Freshet Monitoring Report provided in Appendix E.11. The reader is referred to the Project's SWAEMP (BAF-PH1-830-P16-0026) for the best management practices and mitigation measures implemented at the Project to manage and mitigate the impacts of sedimentation and erosion on receiving waterbodies, aquatic ecosystems, fish and fish habitat.

In addition to the above, Baffinland developed the Mine Site LTWMP submitted under Modification No. 13 and has proposed various measures and facilities to address erosion and sedimentation effects at the Mine Site. The LTWMP will be developed in a phased approach to manage surface water and sedimentation impacted runoff identified through ongoing monitoring at the Project. The areas targeted include the Mary River, Sheardown and Camp Lake catchment areas. In accordance with the Type 'A' Water Licence, Part D, detailed design and Issued for Construction drawings will be submitted to the NWB prior to construction. The implementation of this plan is a direct result of adaptive management and regulator feedback to date and due to the scale of the planned work the detailed engineering and construction earthworks will require significant time and effort.

7.5 NATURAL SEDIMENTATION EVENTS

During 2021, natural sedimentation surveys were conducted in various locations across Baffin Island. Targeted flights were completed on June 12 and July 16, 2021. During these flights, previously known source locations of natural sedimentation were observed and conditions documented. Additionally, environmental staff continually monitored for natural sedimentation events while implementing other monitoring programs.

On June 11, 2021, a natural sedimentation event was observed at an undisturbed watercourse north of Milne Port. The watercourse, labelled MP-NS-04, was observed to be turbid thus upstream and downstream water quality samples were collected. Analysis of the water samples indicated that upstream and downstream TSS concentrations were 33.3 mg/L and 8,090 mg/L, respectively. The source of the sedimentation was documented with photographs and was not related to Project activities or infrastructure. Additional details of the event are provided in Figure 11, including a photo, coordinates and a figure showing the location of MP-NS-04. During the July 16 survey, no observations of natural sedimentation were noted at the locations monitored or along the flight route and therefore no samples were collected. Water quality monitoring analytical results for TSS for natural sedimentation sampling are presented in Table 7.9.

7.6 AQUATIC EFFECTS MONITORING PLAN (AEMP)

The Aquatic Effects Monitoring Plan (AEMP) describes how monitoring of the aquatic environment will be undertaken at the Project. The AEMP was identified as a follow-up monitoring program in Baffinland's

Final Environmental Impact Statement (FEIS; Baffinland, 2012) and is prescribed by the Type 'A' Water Licence. The AEMP, specifically, is a monitoring program designed to:

- Detect the short-term and long-term effects of the Project's activities on the surrounding aquatic environment;
- Evaluate the accuracy of impact predictions;
- Assess the effectiveness of planned mitigation measures; and
- Identify additional mitigation measures to avert or reduce unforeseen environmental effects.

The AEMP focuses on the key potential impacts to freshwater environment valued ecosystems components (VECs), as identified in the Final Environmental Impact Statement and Addendum for the Early Revenue Phase (ERP). The freshwater VECs include water quantity, sediment quality, and freshwater biota and fish habitat. The AEMP has been structured to serve as an overarching 'umbrella' that conceptually provides an opportunity to integrate results of individually monitored but related aquatic monitoring programs, and includes the evaluation of Project related influences on chemical and biological conditions at mine-exposed waterbodies.

The following are the component studies that comprise the AEMP. The 2021 study reports are provided in Appendix E.9:

- Core Receiving Environment Monitoring Program (CREMP), provides a basis for the evaluation of any mine-related influences on water quality, sediment quality and/or biota (including phytoplankton, benthic invertebrates and/or fish) within aquatic environments located near the Mine Site. The 2021 study report is provided as Appendix E.9.1.
- Multiple low level action items were recommended in the 2021 CREMP report. This included continuing benthic invertebrate monitoring at CLT1 upper main stem, harmonizing the lake sediment quality and benthic invertebrate monitoring stations at Camp Lake, continuing water quality monitoring at Sheardown Lake Tributaries 9 and 12, and establishing new AEMP benchmarks for sediment quality.
- Lake Sedimentation Monitoring Program evaluates baseline and Project-influenced lake sedimentation rates at Sheardown Lake NW. The 2021 study report is provided as Appendix E.9.2. Unfortunately, lake sedimentation samples from the 2020 to 2021 ice-cover period were lost in transit to the laboratory and not able to be located prior to preparation of this report. Therefore, only the 2021 open-water period data were able to be presented and discussed in this report. Corrective actions have been put in place to ensure the responsibilities of various stakeholders involved in the sample shipment process are understood to prevent recurrence of lost samples.
- Hydrometric Monitoring Program assesses flow in several streams and rivers near Project sites and supports the AEMP. The 2021 study report is provided in Appendix E.9.3.
- Dustfall Monitoring Program evaluates total dustfall deposition in proximity to the Tote Road, Milne Port and Mine Site. The 2021 results are discussed in the 2021 Terrestrial Annual Monitoring

Report (EDI, 2022) and the 2021 Annual Report to the Nunavut Impact Review Board (Baffinland, 2022).

- Stream Diversion Barrier Study was an initial study evaluating the potential for fish barriers under natural conditions and due to Project-related stream diversions. This study has been deferred due to the low impact anticipated by the reduced footprint of the WRF during the Early Revenue Phase of the Project.

On November 8 and 9, 2017, Baffinland chaired the 2017 Freshwater Workshop in Iqaluit, Nunavut with regulators and stakeholders (ECCC, CIRNAC, Government of Nunavut (GN), NWB, QIA) to discuss the Project's freshwater monitoring programs and the proposed changes to the Project's Core Receiving Environment Monitoring (CREMP), included in Revision 2 of the AEMP; submitted to regulators in April 2016. Taking into account discussions and feedback received at the 2017 Freshwater Workshop, Baffinland resubmitted a modified Revision 2 of the AEMP in July 2020 to regulators and stakeholders through the Phase 2 Proposal water licence amendment, for review and approval. Additionally, in 2021 Baffinland submitted an updated application package through the water licence amendment process to various regulatory agencies for technical review and comment. Baffinland subsequently hosted a workshop in February 2022 to discuss any remaining outstanding technical comments. Baffinland has since updated the AEMP incorporating feedback from various regulators and QIA and has included this submission in Appendix E.5.3.

7.7 2021 GROUNDWATER MONITORING PROGRAM

Baffinland continued to conduct groundwater monitoring at the Project in 2021. Groundwater consultants, specialized in Arctic environments, were retained again in 2021 to further assess the current program and provide additional recommendations. The consultants completed a desktop review of available groundwater monitoring data, as well as available data regarding lithology and hydrogeology in the area of the Mary River Project, to further assess and identify any trends in groundwater quality, groundwater flow, and any discernable information about the condition of subsurface and stratigraphy of the investigated area. Following this review, the consultants made recommendations on the implementation of the groundwater monitoring program for 2021 and subsequently executed the recommendations during the 2021 field season and completed the groundwater monitoring program. The 2021 monitoring program was expanded to include the installation of additional temporary shallow monitoring wells around the Mine Site Hazardous Waste Berms to establish background conditions and assess down-gradient groundwater quality. The groundwater monitoring program was completed using the same methodology as in previous years and involved establishing shallow groundwater wells up-gradient and down-gradient of the Landfill Facility and Mine Site Hazardous Waste Berms using drive-point piezometers and collecting water samples near the depth of the active layer (approximately 1.1 to 1.8 metres) during 2021. The expanded program involved sampling six (6) monitoring wells at the Mine Site Hazardous Waste Berm area; two (2) of which were up-gradient of the berms, and five (5) monitoring wells at the Landfill Facility; two (2) of which were up-gradient of the facility. Two (2) additional monitoring wells were installed at the Mine Site Hazardous Waste Berm area, however, samples could not be

collected from these monitoring wells due to insufficient amount of water for sample collection and frozen conditions, respectively. Two (2) additional monitoring wells were also installed at the Landfill Facility, however, ground water could not be brought to surface for sample collection from these two locations. Additionally, one (1) monitoring well at the Landfill Facility was dry at the time of sampling.

Water quality was compared to the Federal Interim Groundwater Quality (FIGQ) Guidelines, for reference. These guidelines are based on a critical review and evaluation of existing approaches used by other jurisdictions in Canada and in other countries and were developed as an interim measure until Canadian Environmental Quality Guidelines (CEQGs) for groundwater are available. Water quality results for groundwater samples collected during the 2021 program demonstrated potential impacts in wells down gradient of the landfill that were limited to the immediate vicinity of the facility. Parameters with elevated concentrations relative to the FIGQ Guidelines included; chloride, sulphate, and dissolved metals parameters including boron, cadmium, copper, lead, nickel, and uranium. The presence of elevated dissolved copper in reference (up gradient) locations, suggests that copper may be naturally occurring; however, this will need to be confirmed with future monitoring. At the Mine Site Hazardous Waste Berm area; dissolved copper and nickel were greater than their respective FIGQ Guideline at one or more drive-point piezometers during the 2021 monitoring program, including at the reference locations. All PAH parameters were reported below their respective FIGQ Guidelines with the exception of naphthalene which was reported above the FIGQ Guideline at MS-HWB-GW7. Further sampling will be conducted in 2022 to evaluate potential PHC impacts. On-going monitoring is required to gain a better understanding of natural groundwater chemistry and any impacts at the Project site. As additional monitoring is conducted in future years, Baffinland will be able to better characterize natural groundwater chemistry at the Project and identify any trends, including potential impacts from Project activities or infrastructure. For additional details on the 2021 groundwater monitoring program, refer to Appendix E.12 of this report.

Baffinland will continue the groundwater monitoring program in 2022, and will continue to retain consultants to execute the program which will be implemented based on the assessment and recommendations from the 2021 groundwater monitoring report. In 2022, Baffinland plans to evaluate the implementation of further expansion of the program to gain a better understanding of natural groundwater chemistry and potential project related effects at additional Project sites. Due to the challenges associated with sampling methodologies for groundwater data collection in a permafrost environment and the challenges in interpreting this data, further statistical trend analysis is recommended to evaluate the significance of changes in water quality between up-gradient and down-gradient monitoring locations as additional water quality data is collected in future years. Given the challenges associated with sampling methodologies for groundwater collection in a permafrost environment and the challenges in interpretation this data, however, long-term trends may not be identified even with an expanded dataset. Despite these operational challenges, Baffinland is committed to continuing to expand the groundwater monitoring program in 2022 to gain a better understanding of natural groundwater chemistry at the Project site, including the evaluation of additional Project areas where monitoring is warranted.

7.8 QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC)

Water quality samples collected in 2021 as required by Schedule I of the Type 'A' Water Licence are presented in Table 7.2 and Table 7.3. Samples collected for analysis in 2021 followed the general recommendations presented in the Quality Assurance (QA) and Quality Control (QC) Guidelines for use by Class A Licensees in meeting SNP Requirements and for Submission of a QA/QC Plan (CIRNAC, 1996).

Field QA/QC procedures adopted by the Project are described in detail in the Project's Surface Water Sampling Program - Quality Assurance and Quality Control Plan (QA/QC) Plan Appendix E.5.2; BAF-PH1-830-P16-0001). Field QA/QC samples include the collection of field duplicates and the use of field and travel blanks. Of the 430 discrete sets of Type 'A' Water Licence regulatory samples collected in 2021, field QA/QC samples (47 duplicates, 12 field blanks and 21 travel blanks) comprised 18.6 % of the total samples collected. This satisfied the minimum 10% QA/QC sampling requirement stipulated in the QA/QC Plan. Baffinland will continue to adhere to the water sampling protocols outlined in the QA/QC Plan, including the 10% QA/QC sampling requirement, to ensure the collection of representative water quality data at the Project.

The results and interpretation of the QA/QC program are presented in Table 7.6 and 7.7. The results for the field QA/QC program are mostly acceptable, however, there was some variations observed in field duplicates. There were six (6) samples that had relative percent differences (RPD) greater than 30% and where the reported value was greater than 5 times the lowest detection limits (LDL). This was a decrease from 2020 where there were sixteen (16) instances where the RPD was greater than 30% and where the reported value was greater than 5 times the lowest detection limits (LDL). A summary of these duplicates is presented in Table 7.8. In addition, a total of twenty-seven (27) parameters in the field and travel blanks with result values greater than their respective parameter LDL were identified in 2021, however all were within five (5) times the value of their respective LDLs, with the exception of magnesium in field blank MS-0802 on July 8, and total dissolved solids in field blank MS-C-G02 on June 28. Poor quality distilled water and/ or laboratory analytical error is a likely explanation for these elevated parameter values.

To ensure the continued collection of representative, accurate and reliable water quality data at the Project, Baffinland will continue to require all personnel involved with water quality sampling to be experienced and fully trained in the Project's QA/QC procedures and processes outlined in the Project's QA/QC Plan.

Laboratory analyses of water samples were carried out by accredited analytical laboratories during 2021. A laboratory operated by ALS Environmental located in Waterloo, Ontario and run by ALS Canada Ltd. (ALS) performed the majority of sample analyses in 2021. An on-site accredited field laboratory, located at the Mine Site and also operated by ALS, performed select analyses in 2021 (i.e. pH, TSS, Total Dissolved Solids [TDS], turbidity), reducing logistical costs while providing timely results.

ALS adheres to a designated QA/QC Management System, which includes documentation and document control, staff training and internal audits. The practices exceed accreditation requirements for high confidence in data reliability utilising:

- Calibration verification standards and drift control standards;
- Surrogate standards and internal standards;
- Replicate analyses and blanks on submitted samples;
- Standard reference materials (SRM's) and matrix spikes; and,
- Standards Data Quality objectives, established for each QC sample, based on a combination of reference method objectives, customer requirements and historical test method performance.

The laboratory QA/QC data is reported in individual analytical certificates.

8 RECLAMATION, CLOSURE AND FINANCIAL SECURITY

8.1 PROGRESSIVE AND FINAL RECLAMATION

In 2019, evaluation of the condition of the Tote Road by Tetra Tech led to the implementation of a 2020 action plan to address the historic borrow sources on the Tote Road (Appendix C.4). While the remaining activities are planned for completion in 2022, throughout 2021, many progressive reclamation activities were completed according to the action plan including the following:

- Completion of reclamation works on the Tote Road, specifically near KM 49 using material available on the east side of the roadway from the previous road alignment.
- Completion of reclamation works for slope stabilization at KM 29.1, to reduce hill slope degradation using fill located in the area.
- Completion of reclamation works on the Tote Road, specifically near KM 16.9 using material available at KM 13 from the previous road alignment.
- Completion of reclamation works on the Tote Road, specifically near KM 15 using material available at KM 13 from the previous road alignment.
- Completion of reclamation works for slope stabilization and shaping at KM 9.7, to reduce and the hill slope degradation and to stabilize the embankment on the east side.
- Completion of reclamation works, regrading and bulk fill of material at KM 7.2.
- Continued implementation of a long term multi-year plan to address localized areas of permafrost degradation associated with the current borrow areas, including the borrow areas near KM 97. Borrowing in the KM 97 areas has led to thawing of the underlying permafrost soils, which has caused a considerable increase in ponded water, and as a result there is settlement from thaw of both the ground ice in the soil matrix and the thaw of ice wedges. To address the permafrost degradation, a reclamation plan for the historical KM 97 borrow areas was developed by Baffinland and is outlined in Appendix B of the Borrow Source Management Plan – KM 97 (BAF-PH1-830-P16-0032). During 2021, Baffinland continued the reclamation efforts by executing significant dewatering of the Km 97 borrow areas to reduce permafrost degradation. Works outlined in the reclamation plan are expected to continue in 2022.
- Demobilization and backhaul of equipment and supplies not required for near term activities, including the current inventory of hazardous waste and other materials by means of sealifts from Milne Port.
- On-going management of hydrocarbon impacted soils at the Milne Port Landfarm Facility generated from historical decommissioning efforts and ongoing operations.

A summary of the reclamation works listed above and their implications on financial security held by both the QIA and the Crown (CIRNAC) for the Project are presented in Table 8.1.

8.2 CURRENT RESTORATION LIABILITY

During 2021, a total of \$ 7,628,500 CAD of additional security was posted with the QIA, and \$1,197,000 of additional security with CIRNAC for activities outlined in the 2021 Work Plan. This also reflects the outcome of the arbitration with QIA regarding the 2019 Work Plan. Closure and reclamation security posted for Project activities as of December 31, 2021 is summarized in Table 8.2

9 PLANS, REPORTS AND STUDIES

9.1 SUMMARY OF STUDIES REQUESTED BY THE NUNAVUT WATER BOARD

In 2021, studies were not requested by the NWB.

9.2 REVISIONS TO PLANS, REPORTS AND MANUALS

Management and monitoring plans that have been updated since the submission of 2020 QIA & NWB Annual Report for Operations can be accessed on Baffinland's Document Portal located on the Baffinland corporate website. Refer to Table 9.1 and Appendix E.5 for the updated management plans included with the annual report submission.

9.3 SUMMARY OF FUEL STORAGE

During 2021, bulk fuel storage and dispensing facilities located at the Mine Site and Milne Port were used to support Project activities, including diesel electric power generation and building heat, light and heavy vehicle and equipment operation, fixed-wing aircraft and helicopter flights, and shiploader operations.

At the end of 2021, the Milne Port Bulk Fuel Storage Facility included the following:

- three (3) 12 mL Arctic Diesel field-fabricated tanks;
- one (1) 13 mL Arctic Diesel field-fabricated tank;
- two (2) 5 mL Arctic Diesel field-fabricated tanks;
- one (1) 3 mL Arctic Diesel field-fabricated tank; and
- four (4) 0.75 mL Jet-A1 pre-fabricated tanks.

All tanks are vertical single wall steel construction and designed to API 650 specifications. Fuel inventories at the Milne Port Bulk Fuel Storage Facility on December 31, 2021 consisted of 30.76 mL of Arctic Diesel and 2.16 mL Jet-A1. No significant modifications to the fuel management infrastructure at Milne Port were completed in 2021.

At the end of 2021, the Mine Site bulk fuel storage and dispensing facilities included the following:

- Mine Site bulk diesel fuel facilities:
 - one (1) 15 ML Arctic Diesel field-fabricated tank; and,
 - four (4) 0.5 ML Arctic Diesel pre-fabricated tanks.
- Mine Site Aerodrome Bulk Jet-A1 fuel facility:
 - two (2) 50,000 L Jet-A1 steel tanks.

The bulk fuel storage facilities at the Mine Site are equipped with lined secondary containment berms, engineered to comply with the Canadian Council of Ministers of the Environment (CCME) "Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products" (2015). Fuel inventories at the Mine Site on December 31, 2021 consisted of 16.04 mL of Arctic Diesel at the Mine Site

Bulk Fuel Storage Facility and 109,935 L of Jet-A1 at the Mine Site Aerodrome. No significant modifications to the fuel management infrastructure at the Mine Site were completed in 2021.

During 2021, the Milne Port Bulk Fuel Storage Facility was resupplied by fuel tanker vessels during the open-water shipping season via ship-to-shore floating hose fuel transfers. Throughout the year, fuel at the Mine Site Bulk Fuel Storage Facility and Mine Site Aerodrome were resupplied by bulk fuel tanker trucks transporting fuel from Milne Port via the Tote Road. The remaining fuel requirements needed for the various aspects of the Project during 2021 were supplied using day tanks and 205 L drums.

As described in the 2021 QIA and NWB Annual Report for Exploration and Geotechnical Activities, drummed fuel was used mainly to support on site helicopters involved with exploration and environmental field studies in 2021. As of December 31, 2021, there were 844 drums (205 L) or 173,020 L of fuel (624 drums or 127,920 L of Arctic Diesel and 220 drums or 45,100 L of Jet-A1) stored at Steensby Port, 1520 drums (205 L) or 311,600 L of fuel (1,281 drums or 262,605 L of Jet-A1 and 239 drums or 48,995 L of gasoline) at the Mine Site, 336 drums (205 L) or 68,880 L of fuel (12 drums (205 L) or 2,460 L of Jet-A1 and 324 drums (205 L) or 66,420 L of gasoline) at Milne Port, and 7 drums (205 L) or 1,435 L of fuel (five (5) drums of diesel and 2 drums of gasoline) at Bruce Head. No fuel was stored at the Mid-Rail camp in 2021.

It is Baffinland's practice to construct and operate its fuel storage/dispensing facilities in accordance with applicable guidelines and regulations such as the CCME "Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products" (2015), Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (Canadian Environmental Protection Act, 1999 SOR/2008-197 June 12, 2008) and the National Fire Code of Canada. To protect receiving waters, it is Baffinland's practice to store drummed fuel, petroleum based wastes, and other potentially hazardous products within lined containment areas whenever possible. Engineered lined containment areas are in place at the Mine Site, Milne Port, Steensby Port and Mid-Rail camp for the storage of drummed fuel and hazardous products and wastes (See Baffinland's Hazardous Materials and Hazardous Waste Management Plan in Appendix E.5.4)

Part D, Item 18 in the Type 'A' Water Licence requires that Baffinland shall ensure the proper function of earthworks associated with facilities at the Mine Site and Milne Port such as the bulk fuel storage and ancillary fuel facilities. Bi-annual geotechnical inspections are required to be performed by a geotechnical engineer registered in Nunavut. To fulfil the requirement, geotechnical inspections of Project sites were conducted in June and September 2021. Reports for the geotechnical inspections, which include Baffinland's plan for implementing the identified recommendations, were submitted to the NWB within 60 days of each inspection. Copies of the 2021 geotechnical inspection reports are provided in Appendix C.2.

9.4 RESULTS OF CHEMICAL ANALYSIS OF INCINERATOR BOTTOM ASH

To confirm that Project incinerators at the Mine Site and Milne Port were operating as designed (per manufacturer's specifications), routine process monitoring was completed throughout 2021. This

included monitoring the temperature in the primary chamber, secondary chamber and stack, as well as burn times, system pressure and fuel level.

Prior to disposal at the Mine Site Landfill Facility, residual bottom ash generated from the site incinerators was tested using Toxicity Characteristic Leaching Procedure (TCLP) analysis. TCLP testing of residual bottom ash was conducted to ensure compliance with the Type 'A' Water Licence (Part F, Item 7) and confirm that disposal of residual bottom ash at the Landfill Facility will not generate leachate at concentrations above the applicable water quality criteria. In comparing the TCLP analytical results for the 2021 composite ash samples with the applicable environmental guidelines for non-hazardous solid waste (Government of Nunavut, 2011), all ash samples were below the threshold values for monitored parameters with the exception of one (1) ash sample from Milne Port on March 2, 2021 which was above the applicable criteria of 5 mg/L for lead. The ash was subsequently placed into Quatrex bags and resampled; four (4) confirmatory samples were collected and showed compliant results. In 2021, a total volume of 83.08 m³ of compliant incinerator ash was disposed in the Landfill Facility, including 41.81 m³ generated from the Mine Site incinerator and 41.27 m³ generated from the Milne Port incinerator as presented in Table E.2.2 and Table E.2.3, respectively. Summary tables detailing the disposal method for ash generated by Project incinerators and analytical results screened for the applicable waste criteria in 2021, are provided in Appendix E.2.

Baffinland will continue to conduct routine sampling of residual bottom ash generated by Project incinerators as described above to ensure ash disposed in the Landfill Facility is compliant with the established applicable environmental guidelines. Ash identified by TCLP analysis to exceed the established threshold values will be segregated, packaged and shipped offsite to Southern Canada for proper disposal at a licensed waste facility.

9.5 SUMMARY OF GEOCHEMICAL ANALYSIS FOR OPERATED QUARRIES

In 2021 there were no additional geochemical analyses completed for quarry sites at the Project, as there were no blasting activities conducted.

All materials utilized from the Project quarries for construction in 2021 were blasted in 2019, therefore there was no borehole drilling and analysis of borehole samples. All results for materials used in 2021 were previously reported in both the 2019 and 2020 Annual Report for Operations.

As no additional sampling was completed in 2021 at Project quarries, further evaluation of the potential for Acid Rock Drainage and Metal Leaching (ARD/ML) was not completed. In 2022, Baffinland will continue to monitor and evaluate any new geochemical data collected at Project quarries should blasting activities resume, in an effort to refine and expand the available dataset and assess the potential for ARD/ML from Project quarries. Water quality monitoring downstream of Project quarries in 2021 continued to demonstrate neutral pH conditions.

9.6 WASTE ROCK STUDIES AND OPERATIONAL TESTING RESULTS

Throughout 2021, Baffinland continued to characterize Deposit No. 1 waste rock generated by mining operations and optimize waste rock deposition and management strategies to address outstanding concerns identified at the WRF during 2017 and 2018. Waste rock monitoring and management activities completed in 2021 included:

- Continued annual QA/QC sampling on the WRF;
- Continuous operational geochemical and paste pH testing of waste rock generated by mining operations at Deposit No. 1;
- Monitoring of water quality and seepage from the WRF;
- Continual monitoring of the eight (8) installed thermistor series at varying depths and locations throughout the WRF to characterize the thermal conditions of the Facility; and,
- Continued optimization of the Project's near-term waste rock deposition and management strategies, and of the Phase 1 Waste Rock Management Plan – BAF-PH1-830-P16-0029, which is introducing the application of new methods of analysing for waste materials.

Details on the various programs are outlined in the following sections.

9.6.1 WRF QA/QC Program

QA/QC sampling was conducted at the WRF in 2021 in accordance with the Phase 1 Waste Rock Management Plan (BAF-PH1-830-P16-0029). This sampling program was implemented to verify that Non-Potentially Acid Generating (Non-AG) and PAG material placement within the dump limits was being adhered to during mining operations. The results and distribution of sampling are presented in Table 9.2 and Figure 10, respectively. Eight of the 12 samples collected targeted areas where NAG had been deposited during 2021 mining operations, specifically, samples WRD21-2234, WRD21-2342, WRD21-2396, WRD21-2288, WRD21-2378, WRD21-2270, WRD21-2252, and WRD21-2306. Test results confirmed these 8 samples to be NAG, with all samples yielding < 0.2% sulphur and paste pH values > 6. Four samples were collected from areas where PAG was deposited during 2021 mining operations, specifically samples WRD21-2324, WRD21-2360, WRD21-11, WRD21-12. Test results for these 4 samples yielded similar results to the former with < 0.2% sulphur and paste pH values > 6. The absence of a distinct PAG signature in these areas is likely to be the result of the sampling intersecting a deposited NAG encapsulation layer that is atop of the PAG layer. The sampling program was carried out in Winter 2021 which aligns with the timing of PAG encapsulation during the winter months outlined in the disposition strategy guidelines. The results of the QAQC sampling program support adherence to the Plan with respect to material placement at the WRF.

9.6.2 Geochemistry Monitoring Program

Operational testing of waste rock generated by mining operations at Deposit No. 1 continued to be conducted throughout 2021 to inform the management and deposition of PAG and Non-AG waste rock at the Project. The testing methods employed are outlined in the Project's Life-of-Mine Waste Rock

Management Plan (BAF-PH1-830-P16-0031) and Phase 1 Waste Rock Management Plan (BAF-PH1-830-P16-0029) and involve the on-site sampling and analysis of blast hole cuttings for total sulphur content and paste pH on all samples. Additional supporting Acid Base Accounting (ABA) parameters, such as the Neutralization Potential Ratio (NPR), were also analyzed on select samples. The operational testing results provide the basis for determining the appropriate waste rock classification between PAG and Non-AG. Waste rock analyzed to have a paste pH value great than 6 and a sulphur concentration less than 0.20% was classified as Non-AG material while waste rock analyzed to have either a paste pH value less than 6 or a sulphur concentration greater than 0.20% was classified as PAG material. All PAG waste rock generated in 2021 was deposited at the WRF in accordance with the Phase 1 Waste Rock Management Plan, the Interim Waste Rock Management Plan, and the WRF QA/QC program. The 2021 operational testing results for waste rock material generated in 2021 are provided in Appendix Table E.6.1 through E.6.3. In addition to operational testing, select blasthole samples of both PAG and NAG material were submitted for ABA (Acid Base Accounting) and SFE (Shake Flask Extraction) testing off-site, with purpose to develop a comprehensive geochemical database for the WRF.

9.6.3 Water Quality Monitoring Program

As part of the ongoing monitoring at the WRF to expand the data set for future updates to water quality models required for the Phase 1 Waste Rock Management Plan, water quality monitoring was conducted at the east and west ditches where they inflow to the WRF Pond, as well as sampling of drainage/seepage at the perimeter toe of the WRF pile (Figure 10). Samples were collected throughout the summer of 2021, and were dependent on the presence of sufficient flow of water to be collected.

Samples of ditch inflows to the WRF pond are presented in Appendix Table E.6.4 and E.6.5 A total of twenty-one (21) samples were collected between June 21, 2021 and September 5, 2021 from the ditch inflows. Water quality of runoff from the WRF reporting to the WRF Pond demonstrated neutral pH conditions through the entire 2021 season with the exception of three (3) inflow samples from the east ditch which had a pH below 6.

Samples of the drainage/seepage along the toe of the WRF are presented in Appendix Table E.6.6 A total of sixty-nine (69) samples were collected between July 5, 2021 and August 16, 2021. Generally, water quality demonstrated neutral pH conditions, with the exception of twelve (12) samples below a pH of 6 at seven (7) locations.

Overall, results of the water quality monitoring continue to show that runoff from the WRF generally demonstrate neutral pH. This suggests that revisions to the Phase 1 Waste Rock Management Plan and associated waste rock management practices may be having a positive effect in mitigating the occurrence of ARD/ML observed in 2017 at the WRF. While results indicate localized, low pH conditions at a limited number of sampling locations, this is consistent with the management strategy and the potential for the reaction of the seasonal active layer prior to freeze back. A detailed assessment of this water quality dataset and any future water quality data collected under this program will be completed prior to the next update to the Phase 1 Waste Rock Management Plan and any supporting water quality modelling.

9.6.4 Thermal Monitoring Program

As part of the ongoing waste rock geochemical evaluation program, eight (8) thermistor series at varying depths and locations throughout the WRF were installed from 2018 to 2019 to characterize the thermal conditions of the WRF. Real-time thermal data has continued to be acquired from these instruments in 2021. Data collected from the thermistors indicates that the WRF is still frozen at depth, with a seasonal active layer, and is demonstrating that the placement of waste rock is promoting the aggradation of permafrost, consistent with the long term management and closure objectives of the WRF.

9.7 RECLAMATION RESEARCH

Reclamation research work completed in 2021 includes the continuation and expansion of the re-vegetation program initiated in 2019. Environmental Dynamics Inc. was on site in summer 2021 and continued studies related to reclamation along the tote road. The findings of their visit are summarized in the report provided in Appendix E.10.

10 REGULATORY INSPECTIONS AND COMPLIANCE

10.1 REGULATORY INSPECTIONS

Throughout 2021, Baffinland hosted numerous inspections and audits from CIRNAC, QIA, and Nunavut Impact Review Board (NIRB), as well as the Workers' Safety & Compensation Commission (WSCC) Mines Inspector. Due to the on-going COVID-19 Pandemic, site visits were completed physically on site, and virtually for NIRB. A visit from ECCC was scheduled but was postponed due to unforeseen reasons. Table 12.2 summarizes the 2021 site visits to the Project by the various agencies in 2021. Appendix E.8.1 and E.8.215 includes inspection findings and recommendations by the agencies, Baffinland's response, and resolution actions for convenient tracking of inspection comments.

10.1.1 CIRNAC Inspections

CIRNAC Water Resources Officers conducted one (1) inspection of the Project in 2021. The date of the inspections is as follows:

- September 16-17

Inspection results were conveyed during close-out meetings at the Project and documented in a Water Licence Inspection Report distributed to Baffinland following the inspection. The 2021 CIRNAC Water Licence Inspection Report and Baffinland's responses are provided in Appendix E.8.1.

10.1.2 QIA Inspections

The QIA conducted two (2) inspections of the Project in 2021 under the Commercial Lease. The date of the inspections are as follows:

- July 17 to 19
- October 17 to 20

In addition to the inspection, the QIA conducted one (1) environmental audit from September 28 to October 2, 2021.

The findings from the inspection and audit were conveyed during the close-out meetings and documented in subsequent reports and correspondence. The QIA inspection reports along with Baffinland's responses are provided in Appendix E.8.2.

10.1.3 ECCC Inspections

ECCC Enforcement Officers did not conduct any inspections in 2021.

10.1.4 Workers' Safety and Compensation Commission (WSCC) Mine Inspections and Visits

The Workers' Safety & Compensation Commission (WSCC) conducted (1) inspection of the Project through an in-person visit from October 6th through 7th, 2021. Prior planned visits had been postponed due to COVID-19 protocols. The main focus of the inspection was the annual geotechnical review of the site mine and quarries.

No unidentified or unmanaged geotechnical worker safety hazards were noted during the review and inspection of the Mary River Waste Rock Facility and QMR2.

Deficiencies identified at the Open Pit, Milne Port Quarry Q1 and Mary River Waste Rock Facility were captured in the WSCC Consultant's report and distributed to Baffinland management and the Baffinland Occupational Health & Safety (OHS) Committee. The 2021 directives that resulted from the visit were reviewed by the management team and responses were sent to the Mines Inspector within a timely manner.

10.2 REGULATORY ENFORCEMENT ACTIONS

During 2021, there were no enforcement actions issued to the Project by federal or territorial regulators.

11 AMENDMENTS – PENDING AND COMPLETED

11.1 TYPE 'A' WATER LICENCE

The Nunavut Water Board (NWB) review process for the amendment to Baffinland's Type 'A' Water License required for the Phase 2 Proposal was paused through 2020 following its submission to amend the Type 'A' Water Licence on August 16, 2018, in parallel with the NIRB review process. Since this time, Baffinland submitted on May 5, 2019 updated documentation to the NWB for the Phase 2 Proposal, including updated monitoring and management plans, as well as issued for construction drawings. Further updated documentation was submitted to the NWB for the Phase 2 Proposal on September 17, 2021, and an in-person Technical Meeting was held in Iqaluit on November 12, 2021.

Baffinland looks forward to completion of the regulatory review process for Phase 2 and the Type 'A' Water Licence amendment through 2022 with the aim of continuing to stabilize the Mary River Project and to deliver associated benefits.

11.2 COMMERCIAL LEASE

11.2.1 Options Exercise Notices

Under Section 3 of the Commercial Lease, the Options Exercise Notice (OEN) process allows Baffinland to propose amendments to the limits and classifications of Inuit-Owned Lands captured under the Commercial Lease. In 2021, Baffinland did not submit any Options Exercise Notices to the QIA for review and approval.

11.2.2 Tote Road Adjustment Notices

The Tote Road Reconciliation Agreement between Baffinland and the QIA requires that Baffinland submit for QIA's review and approval a "Tote Road Adjustment Notice" (TRAN) for significant upgrades and realignments of the Tote Road. As the approval of the Roads Management Plan from QIA is still pending, no TRANs were approved by the QIA during 2021.

12 PUBLIC CONSULTATIONS

Baffinland continued to make changes to its engagement approach in 2021 due to the COVID-19 Pandemic. Travel restrictions and increased focus on community and employee health and safety moved many engagements from in person to online (teleconference/videoconference) formats. While these types of engagements are not ideal from an Inuit cultural or relationship building perspective they have proven successful in ensuring that stakeholders and community representatives have been able to continue dialogue with Baffinland throughout the Pandemic. In response, Baffinland increased use of social media and local radio as a means to ensure that information about the Company and its activities have been shared with wider audiences.

As travel restrictions and public health orders are continually evolving, Baffinland continually evaluates what methods of engagement will inform an effective approach while ensuring that individual and community health and safety remains the foremost priority. This continual evaluation and adaptive approach to engagement is predicted to continue until the COVID-19 Pandemic and related public health orders and advice allow for in person engagements to once again be the most used engagement technique. The list of meetings held, including teleconferences, and visits to Project sites for 2021 are presented in Tables 12.1 and 12.2.

13 SUMMARY OF PROJECT PLANS FOR 2022

The 2022 Work Plan was prepared and provided by Baffinland to relevant parties on November 1, 2021 as required under Section 6.1 of the Commercial Lease and under Part J, Item 3 of the Type 'A' Water Licence, for the purposes of an Annual Security Review for activities undertaken on an annual basis.

The 2022 Work Plan described the planned development and operation of the mine, ore crushing and land transportation, stockpiling and marine shipment of ore, and the continued development and construction of infrastructure required at Milne Port, the Tote Road, and the Mine Site.

The continued operation and development of the Project as described in the 2022 Work Plan will require a 2022 sealift. It is expected that sealifts carrying fuel, equipment and supplies for use at the Mine Site and Milne Port will occur during the open-water season (July to October) in 2022. Material, fuel and supplies required for operations and construction activities will be transported to the Mine Site year round via the Tote Road.

The Project's Phase 2 Proposal continues to proceed through the review and approvals process facilitated by the NIRB and NWB.

Project environmental monitoring programs prescribed by the Project Certificate, water licences, authorizations, management plans and environmental effects monitoring plans will continue through 2022.

Operation of Steensby Port and the Mid-Rail camp to support operational activities are not anticipated to be required during 2021. The Bruce Head camp is expected to be operation in 2022 to support wildlife monitoring programs during the shipping season.

14 REFERENCES

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- Knight Piésold Ltd., 2021. Technical Memorandum: Review of 2020 Dust Suppression Water Withdrawals, Mary River Project. Prepared by Knight Piésold Ltd. for Baffinland Iron Mines Corporation. Reference No. NB102-00181/65-A.01. April 23, 2021.

TABLES

Table 2.1: Summary of Project Activities, Modifications and Infrastructure Changes - 2021

Work Plan Item No.	Property Section	Land Use Area	ID (Area m ²)	Approximate Location (UTM NAD83 Zone 17W)		Description	Annual Work Plan Comparison	Supporting Documentation
				Easting	Northing			
2021-1-A	Mine Site	Impact Area	500 m	561233	7913234	Installation of power distribution cabling at the Mine Site and Milne Port facilities, including; a) Mary River Powerhouse to Dyno Nobel explosives facility (500 m) b) Mary River E-House 3 to KM 104 laydown (300 m) c) Milne Port 'Steensby Camp' power line (100 m)	Not constructed in 2021, deferred to 2022.	N/A
2021-1-B	Mine Site	Impact Area	300 m	561547	7913358		Not constructed in 2021, deferred to 2022.	N/A
2021-1-C	Milne Port	Impact Area	100 m	-	-		Installation completed.	N/A
2021-2	Milne Port	Impact Area	1,127 m ²	503630	7975847	Construction of new warehouse facility (seacan tent structure) on laydown LP2 x 1127 m ²	Not constructed in 2021, deferred to 2022.	N/A
2021-3	Milne Port	Impact Area	208 m ²	503313	7976579	Construction of offices and workshops at the stockpile and shiploader (x 208 m ²)	Not constructed in 2021, deferred to 2022.	N/A
2021-4	Mine Site	Impact Area	400 m ²	560270	7913787	Construction of new offices and trailers at the OHT Laydown, and expansion of the OHT laydown (400 m ²)	Cancelled	N/A
2021-5-A	Mine Site	Impact Area	Aerodrome - 100 m ²	559146	7914254	Construction of one (1) quonset hut structure at the aerodrome, and one (1) quonset hut structure adjacent to the Milne Port Fire Hall for emergency equipment storage. (assumed each 100 m ²)	Construction in progress.	N/A
2021-5-B	Milne Port	Impact Area	Milne Port - 100 m ²	503795	7975987		Not constructed in 2021, deferred to 2022.	N/A
2021-6	Mine Site	Impact Area	1,020 m ²	561491	7913203	Construction of concrete pad apron exterior to the HD Shop. Total footprint of 1,020 m ² .	Construction completed	N/A
2021-7	Mine Site	Impact Area	-	563241	7915503	Additional maintenance facilities at the KM110 laydown to support maintenance of Deposit 1 equipment. Facilities include two heated structures for mobile equipment storage (60 m ² and 120 m ²), a concrete pad for tire maintenance (60 m ²), and welding shop (540 m ²).	Construction in progress.	N/A
2021-8	Milne Port	Impact Area	1,250 m ²	503420	7975343	New thaw and wash bay facility for mobile vehicle maintenance. Footprint of 1,250 m ² .	Not constructed in 2021, deferred to 2022.	N/A
2021-9	Milne Port	Impact Area	540 m ²	503506	7976186	Warehouse/parts staging area facility upgrades, including a new seacan tent building with a footprint of 540 m ² .	Construction in progress.	N/A
2021-10	Mine Site	Impact Area	-	560965	7912392	Development of Landfill Cell #4	Not constructed in 2021, deferred to 2022.	N/A
2021-11	Mine Site	Impact Area	1,127 m ²	559601	7914033	Construction of seacan tent structure at the aerodrome for freight and equipment sorting and storage (1127 m ²)	Construction in progress.	N/A
2021-12	Mine Site	Impact Area	-	560832	7913305	Relocation of the Mine Site Complex (MSC) sewage treatment plant to be in line with the Sailiivik Camp sewage treatment plant.	Not constructed in 2021, deferred to 2022.	N/A
2021-13	Milne Port	Impact Area	-	504126	7976464	Desalination Plant	Not constructed in 2021, deferred to 2022.	N/A
2021-14-A	Mine Site	Impact Area	-	562938	7914430	Modification to roadways within the ultimate pit limit of Deposit 1, including pit perimeter road and expansion of the cross cut road. All ground disturbance and road construction within the ultimate Deposit 1 pit limits.	Construction in progress.	N/A
2021-14-B	Mine Site	Impact Area	-	563497	7914454		Construction in progress.	N/A
2021-15-A	Mine Site	Impact Area	104 to MSC - 19,424 m ²	561706	7913312	Expansion of the area east of the Mine Site workshops and crushing area for improved traffic management - 104 to MSC (19,424 m ²), 104.5 to Crusher (18,308 m ²).	Construction in progress.	N/A
2021-15-B	Mine Site	Impact Area	104.5 to Crusher - 18,308 m ²	562191	7912874		Construction in progress.	N/A
2021-16	Mine Site	Impact Area	5,243 m ²	561406	7913479	Expansion of MSC laydown for vehicle parking (5,243 m ²).	Not constructed in 2021, deferred to 2022.	N/A
2021-17-A	Mine Site	Impact Area	KM 106 - 4,843 m ²	563838	7913688	Construction of three (3) laydown areas for road aggregate storage on the mine haul road 106 Km (4,843 m ²), 107 Km (2,159 m ²), 108 Km (3,703 m ²).	Not constructed in 2021, deferred to 2022.	N/A
2021-17-B	Mine Site	Impact Area	KM 107 - 2,159 m ²	564237	7914037		Not constructed in 2021, deferred to 2022.	N/A
2021-17-C	Mine Site	Impact Area	KM 108 - 3,703 m ²	564377	7914863		Installation completed.	N/A
2021-18	Mine Site	Impact Area	265,000 m ²	563132	7915782	WRF Expansion to approved footprint (265,000 m ²)	Construction completed.	N/A
2021-19	Mine Site	Impact Area	20,000 m ²	564180	7915574	Explosives plant secondary storage location TBD (20,000m ² - laydown grade and recontour)	Not constructed in 2021, deferred to 2022.	N/A

Table 2.1: Summary of Project Activities, Modifications and Infrastructure Changes - 2021

Work Plan Item No.	Property Section	Land Use Area	ID (Area m ²)	Approximate Location (UTM NAD83 Zone 17W)		Description	Annual Work Plan Comparison	Supporting Documentation
				Easting	Northing			
2020-1	Mine Site	Impact Area	250 m	561121	7913348	Installation of fuel line and associated piping between the mine site fuel storage areas and gensets.	Construction completed.	N/A
2020-2	Mine Site	Impact Area	-	560631	7913321	Installation of a mine dry facility at the Sailiivik Camp.	Not constructed in 2021, deferred to 2022.	N/A
2020-3-A	Mine Site	Impact Area	-	558420	7914780	Installation of two (2) new waste incineration units; one (1) at the Mine Site, one (1) at Milne Port	Not constructed in 2021, deferred to 2022.	N/A
2020-3-B	Milne Port	Impact Area	-	503774	7975973		Not constructed in 2021, deferred to 2022.	
2020-4	Mine Site	Impact Area	3,000 m ²	563228	7916744	Expansion of the Waste Rock Facility Water Treatment Plant to include an additional geotube settling containment area. Total footprint of new lined area is 3,000 m ³ .	Not constructed in 2021, deferred to 2022.	N/A
2020-5	Mine Site	Impact Area	3,500 m	563348	7915730	Installation of a hard line for transfer of water from Deposit 1 to the Waste Rock Facility sedimentation pond. Hard line will replace current use of layflat hose. Total length of line is 3,500 m.	Installation completed.	
2020-6	Mine Site	Impact Area	10,000 m ²	564028	7915529	Construction of a sedimentation pond at the Mine Haul Road to manage surface water runoff. Pond will be lined and have an approximate footprint of 10,000 m ² .	Construction in progress.	N/A
2020-7	Mine Site	Impact Area	-	563192	7914428	Implementation of a water management plan for Deposit 1, including berms and ditching to manage surface water.	Construction in progress.	N/A
2020-8-A	Mine Site	Impact Area	72 m ²	561467	7913209	Construction of a waste containment cells exterior to workshop facilities, for temporary storage of materials prior to longer term storage in the Hazardous Waste Berms and eventual backhaul. HD Shop - 72 m2 MR Shop - 120 m2 Wash Bay - 120 m2 110 Laydown - 144 m2	Not constructed in 2021, deferred to 2022.	N/A
2020-8-B	Mine Site	Impact Area	120 m ²	5612525	7913295		Not constructed in 2021, deferred to 2022.	N/A
2020-8-C	Mine Site	Impact Area	120 m ²	561645	7913213		Not constructed in 2021, deferred to 2022.	N/A
2020-8-D	Mine Site	Impact Area	144 m ²	563454	7915177		Not constructed in 2021, deferred to 2022.	N/A
2020-10	Mine Site	Impact Area	3,200 m ²	559584	7914047	Expansion of the warehouse laydown area for additional storage of seacans and equipment. Total area of 3,200 m ² .	Not constructed in 2021, deferred to 2022.	N/A
2020-11	Mine Site	Impact Area	600 M	559330	7914137	Installation of permanent lighting for port and logistics. Total of 600 m of electrical cabling.	Construction in progress.	N/A
2020-13	Northern Transportation Corridor	Impact Area	-	-	-	Continued work to repair and replace culverts along the Tote Road, including those with identified fish passage issues. All culverts will be repaired or replaced to the 2013 Hatch design.	Construction in progress.	N/A
2020-14-A	Northern Transportation Corridor	Impact Area	KM 26	518576	7959689	Addition of washroom facilities/refuge stations at KM26 and KM80 IT Towers.	Not constructed in 2021, deferred to 2022.	N/A
2020-14-B	Northern Transportation Corridor	Impact Area	KM 80	542130	7922308		Not constructed in 2021, deferred to 2022.	N/A
2019-3-A	Tote Road	Impact Area	KM 8	506250	7971100	Grade adjustments at KM8 and KM97 to improve safety and drainage. No new culvert installations required.	Grade adjustments at KM8 and KM97 were not completed in 2021 as TRAN process is yet to be finalized with QIA.	N/A
2019-3-B	Tote Road	Impact Area	KM 97	554750	7914750			
2019-6	Milne Port	Impact Area	155,000 m ²	502984	7975763	Expansion of the Milne Port Ore Stockpile and water management facilities to optimize stockpiling and shiploading operations, resulting in additional 140,000 m2 of stockpile area and 15,000 m2 lined sedimentation pond.	Milne Ore Stockpile expansion initiated in 2019 following approval of a modification request. Earthworks yet to be completed and will be ongoing in 2022.	Modification Request No. 12
2019-7	Milne Port	Impact Area	6,000 m ²	503109	7974938	Construction of berm and linear steel support structure on laydown LP3 for receipt and storage of stacker/reclaimer equipment. Berm dimensions are 200m x 30m x 2m, constructed on existing disturbed area.	Not constructed in 2021, deferred to 2022.	N/A
2019-8	Milne Port	Impact Area	4,180 m ²	503590	7976033	Construction of new polishing waste stabilization pond (PWSP) at 380 Person camp to manage off-spec effluent from the 380p camp waste water treatment plant	Not constructed in 2021, deferred to 2022.	N/A

Table 2.1: Summary of Project Activities, Modifications and Infrastructure Changes - 2021

Work Plan Item No.	Property Section	Land Use Area	ID (Area m ²)	Approximate Location (UTM NAD83 Zone 17W)		Description	Annual Work Plan Comparison	Supporting Documentation
				Easting	Northing			
2019-9	Milne Port	Impact Area	2,700 m ²	503779	7975481	New contaminated water/snow containment pond adjacent to existing pond at Milne Port	Not constructed in 2021, deferred to 2022.	N/A
2019-11-A	Milne Port	Impact Area	360 m ²	558503	7914691	Construction of new hazardous waste berm at the Mine site and at Milne Port. Decommissioning of select existing berms to consolidate waste management.	Not constructed in 2021, deferred to 2022.	N/A
2019-11-B	Mine Site	Impact Area	360 m ²	503874	7976251		Not constructed in 2021, deferred to 2022.	
2019-12	Mine Site	Impact Area	91,000 m ²	564007	7914015	Laydown area for parking and equipment storage at Km 107.5.	Not constructed in 2021, deferred to 2022.	N/A
2019-13	Mine Site	Impact Area	180,000 m ²	563181	7915590	New KM110.5 Laydown for additional equipment storage and maintenance shop installation	Installation completed.	N/A
2019-14	Mine Site	Impact Area	1,500 m ²	563181	7915590	Heated maintenance shop for pit equipment at Km 110.5 Laydown. Tent structure with lined floor. Footprint is approximately 1,500 m ² .	Construction in progress.	N/A
2019-15	Mine Site	Impact Area	-	558150	7914500	Decommissioning and repurposing of Weatherhaven structures for storage and workspace.	Construction in progress.	N/A
2019-16	Mine Site	Impact Area	12,000 m ²	560450	7913450	Expansion of the 800 person camp pad to the north by approximately 12,000 m ² to accommodate additional support offices and buildings.	Not constructed in 2021, deferred to 2022.	N/A
2019-17	Mine Site	Impact Area	925 m ²	560450	7913450	Addition of offices/trailers/buildings at the 800p Camp. Total footprint is 925 m ² , including approximately 500 m ² for a new fire hall and emergency response building.	Not constructed in 2021, deferred to 2022.	N/A
2019-18	Mine Site	Impact Area	9,000 m ²	561111	7912328	Construction of a landfarm at the Mine Site landfill facility, with an estimated footprint of 9,000 m ² . Disturbed area included in 2018 Addendum, new lined area requires security allocation.	Construction in progress.	N/A
2019-20	Mine Site	Impact Area	-	561080	7913446	Construction of one (1) arctic diesel fuel tank (Tk6) with 15ML capacity, and associated fuel piping. The fuel tank will be constructed on a pad within the existing Mine Site fuel storage facility.	Not constructed in 2021, deferred to 2022.	N/A
2019-23	Mine Site	Impact Area	133,400 m ²	563431	7913284	Construction of a Run of Mine (ROM) Stockpile at KM 106 (previously KM107) (76,600 m ²) and sedimentation pond (10,600 m ² disturbed, 7,500 m ² lined).	Construction completed.	N/A
2019-25	Milne Port	Impact Area	4,400 m ²	503422	7976389	Installation of East Sedimentation Pond Expansion (2a) approved with Modification No. 9, but for which security has not been allocated.	Not constructed in 2021, deferred to 2022.	N/A
2018-A1	Mine Site	Impact Area	-	563904	7914560	Construction of the Mine Haul Road Cross Cut, and widening of the existing Mine Haul Road for safety purposes and to permit larger truck traffic	Construction in progress.	N/A
2018-27	Milne Port	Impact Area	-	504119	7976483	Relocation of effluent discharge point to barge offload area	Not constructed in 2021, deferred to 2022.	N/A
2018-28	Milne Port	Impact Area	-	504122	7976491	Marine manifold building relocation - moving from current location north of fuel tank farm to upgraded freight dock location	Not constructed in 2021, deferred to 2022.	N/A

Table 2.2: Type 'A' Water Licence Modifications Summary and Approvals Status

Modification No. ^a	Description of Modification	Approvals Status
1	Expansion of the Mine Site Crusher Facility's footprint to increase ore stockpile capacity.	Approved by the NWB on May 26, 2017 (Motion No. 2017-A1-007).
2	Expansion of the Milne Port Bulk Fuel Storage Facility's fuel capacity by installing three additional fuel tanks (0.75 ML, 3 ML and 15 ML) within the Facility's existing secondary containment berm.	Approval for the construction and installation of the 0.75 ML and 3 ML tanks issued by the NWB on September 14, 2017 (Motion No. 2017-10-02). ^a
3a	Construction of a surface water diversion ditch around the 380-Person Camp pad, as per CIRNAC Inspection Direction issued to Baffinland on June 9, 2017.	Approved by the NWB on September 8, 2017 (Motion No. 2017-10-01).
3b	Construction of a new 380-Person Camp and associated support infrastructure to upgrade and expand accommodations at Milne Port.	Approved by the NWB on January 18, 2019 (Motion No. 2018-A1-024).
4	Construction of a new 800-Person Camp and associated support infrastructure to upgrade and expand accommodations at the Mine Site.	Approved by the NWB on September 20, 2017 (Motion No. 2017-10-03).
5	Expansion of the Mine Site Crusher Facility Pond to accommodate the Facility's previous pad expansion (Modification No. 1).	Approved by the NWB on August 16, 2018 (Motion No. 2018-A1-013).
6	Construction of a new 280-Person Camp and associated support infrastructure to upgrade and expand accommodations at Milne Port, install an additional 15 ML fuel tank at the Milne Port Bulk Fuel Storage Facility and implement upgrades to the Tote Road to address road safety and operational concerns.	Not approved by the NWB. Application withdrawn by Baffinland on December 15, 2018.
7	Construction of new infrastructure at the Mine Site and Milne Port, included in the 2018 Work Plan and 2018 Work Plan Addendum, to improve site water management and operational capabilities. Key activities within the application included the Waste Rock Facility Water Treatment Plant, Mine Haul Road upgrades, the addition of new Milne Port laydowns, and new maintenance shops at the Mine Site and Milne Port.	Approved by the NWB on August 10, 2018 (Motion No. 2018-A1-010).
8	Expansion of the Waste Rock Facility to address operational requirements and concerns identified in 2017 regarding the Facility's Pond.	Approved by the NWB on September 12, 2018 (Motion No. 2018-A1-015).
9	Expansion of the Milne Port Ore Stockpile Facility's footprint and associated surface water management ponds.	Approved by the NWB on September 5, 2018 (Motion No. 2018-A1-014).
10	Upgrades to Mine Site infrastructure, including the installation of a direct effluent discharge line from the new 800-Person Camp (Sailiivik Camp) STP and the expansion of the Landfill Facility.	Approved by the NWB on October 16, 2018 (Motion No. 2018-13- P4-03).
11	Installation of an Incineration Unit at Milne Port's 380-Person Camp	Approved by the NWB on April 3, 2019.
12	Milne Port Ore Stockpile #1 and Water Management Expansion	Approved by the NWB on August 2, 2019 (Motion No. 2019-A1-005).
13	Construction of water management structures at the Mine Site including sedimentation ponds and conveyance/ diversion ditches and berms.	Approved by the NWB on August 16, 2021. (Motion No. 2021-A1-04).

Notes
^a As defined by the Nunavut Water Board (NWB).

Table 2.3: Equipment and Materials Shipped off the Property - 2021

Property Section	Equipment/ Material Item	Owner	Annual Amount of Equipment and Material (metric tonnes) ^e	Annual Revenue Tonnes ^f
Project-Wide	Non-Hazardous Waste Materials ^{a,b,c,d}	Baffinland	0	0
Project-Wide	Hazardous Waste Materials ^{a,c,d}	Baffinland	2,770.7	2,770.7
Project-Wide	Miscellaneous Equipment and Materials	Baffinland & Third Party	10,381.3	10,381.3
TOTAL			13,152.0	13,152.0

Notes

^a Assumes tare weight of a 20' shipping container to be 2.3 metric tonnes.

^b Assumes tare weight of a 40' shipping container to be 3.75 metric tonnes.

^c Assumes external volume of a 20' shipping container to be 38.5 m³.

^d Assumes external volume of a 40' shipping container to be 77 m³.

^e Includes weight of shipping containers/materials.

^f A revenue tonne is a shipping term describing the measurement on which the shipment is freighted. If cargo is rated as weight or measure, whichever produces the highest revenue will be considered the revenue ton. Weights are based on metric tonnes and measures are based on cubic meters.

Table 2.4: Equipment and Materials Shipped to and Stored on the Property - 2021

Property Section	Equipment/Material Item	Owner	Annual Amount of Equipment and Material (metric tonnes) ^f	Annual Revenue Tonnes ^g
Project-Wide	Arctic Diesel ^a	Baffinland	41,600	41,600
Project-Wide	Jet-A1 ^b	Baffinland	2,412	2,412
Project-Wide	Pre-Packaged Explosives ^{c,d}	Explosives Contractor	0	0
Project-Wide	Explosives ^e	Explosives Contractor	9,900	9,900
Project-Wide	Food Stuffs	Baffinland	918	5,243
Project-Wide	Miscellaneous Equipment and Materials	Baffinland & Third Party	1,584	1,584
TOTAL			56,414	60,739

Notes

^a Assumes a density for Arctic Diesel of 0.832 kg/L.

^b Assumes a density of Jet-A1 of 0.804 kg/L.

^c Includes detonators and other explosives accessories.

^d Assumes external volume of a 20' shipping container to be 38.5 m³.

^e Includes ammonia nitrate prill as well as materials required for on site explosives/emulsion manufacturing.

^f Includes weight of shipping containers/materials.

^g A revenue tonne is a shipping term describing the measurement on which the shipment is freighted. If cargo is rated as weight or measure, whichever produces the highest revenue will be considered the revenue ton. Weights are based on metric tonnes and measures are based on cubic meters.

Table 3.1: Monthly and Annual Quantities of Ore Generated by the Project - 2021

Month	Quantity of Ore Generated (Wet Metric Tonnes)		
	Lump	BHL ¹	Fines
January	60,364	104,285	398,425
February	88,782	39,514	252,232
March	151,218	-	342,604
April	69,816	90,765	378,839
May	13,377	8,772	58,111
June	99,088	55,921	416,419
July	192,793	-	378,049
August	60,397	7,375	459,394
September	140,615	2,330	449,633
October	64,892	-	272,580
November	139,560	-	244,740
December	74,854	-	360,659
SUB-TOTAL	1,155,756	308,962	4,011,686
TOTAL	5,476,403		

Notes

¹ BHL = Baffinland Hematite Lump.

Table 3.2: Monthly and Annual Quantities of Ore Shipped by the Project - 2021

Month	Lump Shipped (Wet Metric Tonnes)		BHL ¹ Shipped (Wet Metric Tonnes)		Fines Shipped (Wet Metric Tonnes)		Total Shipped (Wet Metric Tonnes)	
	Milne Inlet	Steensby Inlet	Milne Inlet	Steensby Inlet	Milne Inlet	Steensby Inlet	Milne Inlet	Steensby Inlet
January	-	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-	-
July	0	-	0	-	358,742	-	358,742	-
August	761,336	-	0	-	1,552,106	-	2,313,442	-
September	273,997	-	495,516	-	1,058,407	-	1,827,920	-
October	238,381	-	0	-	872,410	-	1,110,791	-
November	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	-
SUB-TOTAL	1,273,714	0	495,516	0	3,841,665	0	5,610,895	0
TOTAL	1,273,714		495,516		3,841,665		5,610,895	

Notes
¹ BHL = Baffinland Hematite Lump.

Table 3.3: Quantities of Specified Substances Removed from Borrows and Quarries (BCMs) by Quarter and Calendar Year - 2021

Quarter	Quarry - QMR2			Survey Dates		Notes
	Rock	Unconsolidated Material	Organics	Start	End	
Jan-March 2021	-	-	-	January 1, 2021	March 31, 2021	No activity in the quarry.
April-June 2021	-	-	-	April 1, 2021	June 30, 2021	No activity in the quarry.
July-Sept 2021	-	-	-	July 1, 2021	September 30, 2021	No activity in the quarry.
Oct-Dec 2021	-	-	-	October 1, 2021	December 31, 2021	No activity in the quarry.
TOTAL	0	0	0			

Quarter	Quarry - Q01			Survey Dates		Notes
	Rock	Unconsolidated Material	Organics	Start	End	
Jan-March 2021	-	-	-	January 1, 2021	March 31, 2021	No activity in the quarry.
April-June 2021	94,050	-	-	April 1, 2021	June 30, 2021	Survey performed with RTK drone.
July-Sept 2021	96,350	-	-	July 1, 2021	September 30, 2021	Survey performed with RTK drone.
Oct-Dec 2021	38,457	-	-	October 1, 2021	December 31, 2021	Survey performed with RTK drone.
TOTAL	228,857	0	0			

Quarter	Borrow Source - Km 97			Survey Dates		Notes
	Rock	Unconsolidated Material	Organics	Start	End	
Jan-March 2021	-	-	-	January 1, 2021	March 31, 2021	No activity in the borrow source.
April-June 2021	-	3,931	-	April 1, 2021	June 30, 2021	Survey performed with RTK drone.
July-Sept 2021	-	20,570	-	July 1, 2021	September 30, 2021	Survey performed with RTK drone.
Oct-Dec 2021	-	1,813	-	October 1, 2021	December 31, 2021	Survey performed with GPS.
TOTAL	0	26,314	0			

Notes

BCM - Banked Cubic Metres.

Table 3.4: Quantities of Specified Substances Removed from Borrows and Quarries (BCMs) October 1, 2020 to September 30, 2021 Reporting Period

Specified Substances	Quarry - QMR2	Quarry - Q01	Borrow Source - Km 97	Total - All Quarry and Borrow Sources
Rock	0	190,400	0	190,400
Unconsolidated Material	0	0	24,501	24,501
Organics	0	0	0	0
TOTAL	0	190,400	24,501	214,901

Notes

Annual volumes calculated using the following equation:

Annual Volume Removed (Oct. 1, 2020 to Sept. 30, 2021) = 2020 Q4 + 2021 Q1 + 2021 Q2 + 2021 Q3.

BCM - Banked Cubic Metres.

Table 4.1: Annual Volumes of Water Used for Project Activities on Inuit-Owned and Crowns Lands by Source - 2021

Property Section	Water Source ID	Water Source Location (UTM NAD83 Zone 17W)		Annual Volume Used (m ³) ^a	Percent of Total Annual Volume Used (%)
		Easting	Northing		
Mine Site	Camp Lake (MS-MRY-1) ^b	557793	7914684	51,479	59.5%
Milne Inlet	Phillips Creek (MP-MRY-2)	514503	7964579	0	0.0%
Milne Inlet	Km 32 Lake (MP-MRY-3) ^c	521547	7953735	27,767	32.1%
Tote Road	CV128 (Km 17)	513568	7965904	1,423	1.6%
Tote Road	CV099 (Km 37)	521862	7948844	0	0.0%
Tote Road	Katiktok Lake (Km 52 - 58)	527492	7930716	0	0.0%
Tote Road	BG50 (Km 62)	529302	7926860	1,393	1.6%
Tote Road	BG32 (Km 78)	540738	7921595	151	0.2%
Tote Road	CV217 (Km 80)	542323	7922178	1,120	1.3%
Tote Road	Muriel Lake	542343	7922224	3,089	3.6%
Tote Road	BG17 (Km 90)	550715	7917654	0	0.0%
Tote Road	CV233 (Km 97)	555712	7914680	121	0.1%
TOTAL				86,543	100%

Notes

^a Refer to Tables 4.2 and 4.3 for the 2021 daily and monthly volumes withdrawn by water source.

^b Includes all volumes withdrawn from Camp Lake during 2021 for domestic, industrial and dust suppression purposes.

^c Includes all volumes withdrawn from Km 32 Lake during 2021 for domestic, industrial and dust suppression purposes.

Table 4.2 Daily, Monthly, and Annual Volumes of Water Used for Domestic and Industrial Purposes on Inuit-Owned Land and Crown Lands - 2021

Day	January						February						March					
	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL
	D	I		D	I		D	I		D	I		D	I				
1	133.5	7.7	141	68.5	0.0	69	112.1	7.6	120	32.3	0.0	32	137.4	3.4	141	45.2	0.0	45
2	113.2	0.0	113	70.4	1.0	71	87.8	8.4	96	50.0	0.0	50	102.1	35.8	138	49.3	1.0	50
3	109.0	21.4	130	64.2	7.0	71	77.9	15.5	93	37.3	0.0	37	142.5	8.6	151	47.1	0.0	47
4	122.7	14.4	137	58.7	11.0	70	78.2	17.0	95	28.5	0.0	28	119.9	0.0	120	43.2	0.0	43
5	118.4	4.3	123	57.6	22.0	80	123.9	10.7	135	25.3	0.0	25	115.6	8.6	124	50.1	0.0	50
6	102.2	17.7	120	76.5	0.0	77	148.9	1.7	151	52.1	0.0	52	119.2	16.2	135	37.3	0.0	37
7	155.7	0.0	156	47.0	0.0	47	89.8	1.7	92	62.3	0.0	62	95.2	2.6	98	54.3	1.0	55
8	118.8	0.0	119	83.7	0.0	84	113.2	0.0	113	41.8	0.0	42	130.6	4.3	135	41.7	0.0	42
9	150.6	8.1	159	50.0	0.0	50	119.4	0.0	119	55.7	2.0	58	122.7	13.8	136	51.6	0.0	52
10	122.1	17.5	140	46.1	0.0	46	92.7	6.9	100	44.1	0.0	44	134.1	16.8	151	53.5	0.0	53
11	115.4	0.0	115	57.2	0.0	57	81.7	0.0	82	44.5	0.0	45	157.8	6.9	165	51.6	0.0	52
12	133.8	17.5	151	53.3	2.0	55	131.6	3.4	135	43.5	0.0	43	143.9	9.5	153	43.2	0.0	43
13	121.8	11.2	133	55.6	0.0	56	101.3	0.0	101	52.0	0.0	52	107.6	27.3	135	36.3	0.0	36
14	128.7	10.6	139	68.1	0.0	68	89.4	0.0	89	51.8	0.0	52	121.9	27.2	149	54.9	0.0	55
15	89.8	4.4	94	75.8	0.0	76	124.7	9.7	134	36.7	0.0	37	123.0	20.8	144	30.5	0.0	31
16	135.4	4.3	140	75.3	0.0	75	106.3	15.1	121	40.2	0.0	40	106.0	43.0	149	40.3	1.0	41
17	108.2	4.3	113	48.4	1.0	49	107.3	4.3	112	48.5	0.0	48	143.9	26.7	171	45.0	1.0	46
18	125.4	1.7	127	57.5	0.0	58	129.3	0.0	129	63.3	0.0	63	114.0	17.1	131	40.0	0.0	40
19	108.2	0.0	108	55.0	0.0	55	89.6	24.7	114	36.7	0.0	37	127.1	7.7	135	44.9	0.0	45
20	112.9	12.7	126	67.0	0.0	67	156.6	0.0	157	38.0	0.0	38	54.6	14.2	69	54.6	0.0	55
21	100.4	5.4	106	61.2	0.0	61	137.4	9.2	147	49.3	0.0	49	129.6	16.8	146	45.9	0.0	46
22	106.2	0.0	106	69.0	0.0	69	150.2	5.2	155	43.7	0.0	44	107.6	5.2	113	43.5	6.0	50
23	123.0	18.1	141	57.4	0.0	57	157.0	16.8	174	43.6	2.0	46	155.2	10.5	166	57.7	0.0	58
24	94.1	0.0	94	72.9	0.0	73	111.5	17.3	129	45.9	0.0	46	133.5	6.0	139	37.1	0.0	37
25	110.3	15.5	126	66.9	0.0	67	104.1	13.7	118	48.9	0.0	49	117.7	24.3	142	63.6	0.0	64
26	103.5	18.5	122	68.3	0.0	68	148.1	0.0	148	42.3	0.0	42	133.0	0.0	133	35.9	0.0	36
27	121.6	4.3	126	53.0	0.0	53	154.8	4.3	159	46.8	0.0	47	135.0	5.2	140	47.5	0.0	48
28	103.0	6.0	109	95.6	0.0	96	153.8	0.0	154	47.6	0.0	48	108.3	20.1	128	50.4	0.0	50
29	104.4	0.0	104	68.8	0.0	69	-	-	-	-	-	-	121.1	0.0	121	44.6	0.0	45
30	137.5	6.0	143	48.6	0.0	49	-	-	-	-	-	-	134.0	11.2	145	46.4	0.0	46
31	98.9	17.6	117	54.5	0.0	54	-	-	-	-	-	-	133.6	0.0	134	45.5	0.0	46
TOTAL	3,629	249	3,878	1,952	44	1,996	3,278	193	3,472	1,253	4	1,257	3,828	410	4,238	1,433	10	1,443

Notes:

All volumes in cubic metres (m³).

MS-MRY-1 - Camp Lake; MP-MRY-3 - Km 32 Lake.

D - Domestic/Camp Purposes; I - Industrial Purposes.

Bold and highlighted values indicate daily volumes that exceeded the source, use specific daily withdrawal limit stipulated by Table 3 of the Type 'A' Water Licence.

Table 4.2 Daily, Monthly, and Annual Volumes of Water Used for Domestic and Industrial Purposes on Inuit-Owned Land and Crown Lands - 2021

Day	April						May						June					
	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL
	D	I		D	I		D	I		D	I		D	I				
1	111.9	12.9	125	68.5	0.0	69	94.2	33.2	127	45.6	0.0	46	123.9	7.7	132	78.4	6.0	84
2	129.3	8.6	138	43.2	2.0	45	106.5	24.2	131	47.6	4.0	52	101.3	6.0	107	69.1	6.0	75
3	150.0	8.6	159	47.0	0.0	47	134.2	23.3	157	34.6	8.0	43	86.6	8.6	95	62.5	0.0	63
4	152.9	8.6	161	37.6	0.0	38	118.6	27.0	146	55.5	4.0	60	87.1	5.2	92	78.6	0.0	79
5	194.7	8.6	203	45.1	0.0	45	111.0	20.8	132	36.0	8.0	44	93.8	14.9	109	37.0	0.0	37
6	172.8	8.6	181	37.5	0.0	38	171.7	22.8	194	54.1	0.0	54	130.0	10.3	140	72.8	6.0	79
7	118.4	20.0	138	45.1	0.0	45	102.5	22.6	125	99.0	0.0	99	109.0	0.0	109	81.2	0.0	81
8	131.9	17.8	150	49.7	0.0	50	116.6	31.6	148	63.5	4.0	68	106.2	25.4	132	59.9	0.0	60
9	138.0	24.4	162	33.4	0.0	33	99.8	0.0	100	83.1	4.0	87	136.2	0.0	136	56.7	1.5	58
10	114.5	8.6	123	37.3	0.0	37	90.5	23.9	114	81.1	6.0	87	133.5	7.7	141	70.0	0.0	70
11	155.8	36.9	193	47.3	0.0	47	135.8	0.0	136	61.5	0.0	62	121.6	5.2	127	77.1	0.0	77
12	118.8	28.2	147	47.9	0.0	48	99.5	0.0	99	55.7	0.0	56	119.4	2.2	122	69.0	0.0	69
13	145.6	28.9	175	52.4	1.0	53	59.8	0.0	60	57.1	0.0	57	87.3	0.9	88	77.3	0.0	77
14	141.4	18.4	160	45.9	0.0	46	70.9	0.0	71	37.7	0.0	38	129.7	7.7	137	68.5	0.0	68
15	135.7	31.3	167	54.6	0.0	55	69.8	4.3	74	32.4	0.0	32	121.1	4.3	125	65.0	6.0	71
16	129.6	23.6	153	32.4	2.0	34	64.6	20.3	85	52.3	0.0	52	139.4	8.6	148	73.9	0.0	74
17	137.1	68.6	206	54.0	0.0	54	99.3	18.7	118	48.6	0.0	49	112.8	0.0	113	90.0	0.0	90
18	128.3	52.2	181	50.2	2.0	52	70.1	0.0	70	37.0	0.0	37	118.4	0.0	118	74.9	0.0	75
19	132.5	57.6	190	42.8	0.0	43	52.0	0.0	52	27.4	0.0	27	154.6	0.0	155	66.5	0.0	67
20	157.9	36.6	194	44.2	0.0	44	101.0	0.0	101	30.0	0.0	30	165.5	0.0	166	58.3	0.0	58
21	141.3	47.9	189	47.2	1.0	48	68.1	0.0	68	38.9	0.0	39	124.3	18.1	142	53.0	1.5	55
22	171.6	49.2	221	59.3	0.0	59	66.6	4.3	71	48.1	0.0	48	111.5	6.9	118	82.5	0.0	82
23	103.5	65.6	169	34.2	2.0	36	58.4	0.0	58	49.5	0.0	50	140.7	4.3	145	54.1	0.0	54
24	139.5	75.2	215	56.1	0.0	56	60.4	13.5	74	42.1	7.0	49	126.3	12.2	138	57.9	0.0	58
25	124.3	50.9	175	53.9	0.0	54	94.1	0.0	94	36.7	5.0	42	112.5	0.0	113	42.5	0.0	43
26	156.6	44.2	201	34.2	0.0	34	60.3	0.0	60	32.3	6.0	38	136.0	1.7	138	38.5	0.0	38
27	124.8	40.7	166	49.6	0.0	50	57.1	0.0	57	92.6	0.0	93	135.4	4.3	140	51.7	0.0	52
28	129.4	32.3	162	36.9	0.0	37	65.4	0.0	65	72.0	12.0	84	146.9	6.0	153	39.5	6.0	46
29	139.3	40.7	180	55.4	0.0	55	75.1	0.0	75	37.8	6.0	44	131.1	34.3	165	47.2	0.0	47
30	140.6	4.3	145	29.9	0.0	30	110.5	0.0	110	80.1	6.0	86	111.8	17.3	129	64.0	0.0	64
31	-	-	-	-	-	-	111.9	0.0	112	44.2	0.0	44	-	-	-	-	-	-
TOTAL	4,168	960	5,128	1,373	10	1,383	2,796	290	3,086	1,614	80	1,694	3,654	220	3,874	1,918	33	1,951

Notes:

All volumes in cubic metres (m³).

MS-MRY-1 - Camp Lake; MP-MRY-3 - Km 32 Lake.

D - Domestic/Camp Purposes; I - Industrial Purposes.

Bold and highlighted values indicate daily volumes that exceeded the source, use specific daily withdrawal limit stipulated by Table 3 of the Type 'A' Water Licence.

Table 4.2 Daily, Monthly, and Annual Volumes of Water Used for Domestic and Industrial Purposes on Inuit-Owned Land and Crown Lands - 2021

Day	July						August						September					
	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL
	D	I		D	I		D	I		D	I		D	I		D	I	
1	132.8	20.3	153	46.8	2.0	49	201.6	10.3	212	87.6	1.0	89	111.9	0.0	112	84.9	0.0	85
2	128.3	53.0	181	55.4	0.0	55	143.8	6.9	151	43.2	0.0	43	148.3	6.9	155	82.6	0.0	83
3	133.1	16.6	150	48.4	2.0	50	178.3	5.2	183	62.6	0.0	63	128.8	0.0	129	94.9	0.0	95
4	142.1	6.0	148	64.9	0.0	65	163.9	0.0	164	89.2	0.0	89	133.0	8.6	142	99.4	1.5	101
5	112.0	1.0	113	38.2	13.3	51	168.7	4.3	173	45.5	0.0	46	133.8	8.6	142	92.6	1.5	94
6	166.3	4.7	171	69.6	4.0	74	177.2	4.3	182	95.3	0.0	95	166.1	5.2	171	93.4	0.0	93
7	129.1	6.0	135	59.6	2.0	62	203.5	4.3	208	73.6	0.0	74	160.3	0.0	160	107.4	0.0	107
8	174.7	7.7	182	56.1	2.0	58	177.9	6.0	184	59.4	0.0	59	182.0	0.0	182	96.2	0.0	96
9	144.2	4.3	149	58.8	0.0	59	188.3	4.3	193	68.2	0.0	68	170.1	6.5	177	135.4	0.0	135
10	161.6	4.3	166	47.5	0.0	48	185.6	4.7	190	52.3	0.0	52	115.0	0.0	115	117.7	0.0	118
11	140.2	4.3	144	40.6	0.0	41	179.5	6.0	186	94.3	0.0	94	162.2	7.7	170	67.7	0.0	68
12	161.3	8.6	170	58.0	1.0	59	53.8	4.7	58	39.4	0.0	39	144.3	9.5	154	128.0	0.0	128
13	176.9	4.3	181	49.1	0.0	49	179.1	5.6	185	54.4	0.0	54	168.1	3.4	172	117.5	6.0	123
14	153.7	0.0	154	63.4	0.0	63	175.8	3.4	179	53.4	0.0	53	140.3	4.3	145	137.9	0.0	138
15	192.3	8.6	201	22.6	0.0	23	141.3	4.3	146	95.2	0.0	95	144.2	0.0	144	96.3	0.0	96
16	158.5	0.0	158	52.8	0.0	53	128.0	4.3	132	68.4	0.0	68	159.3	8.6	168	91.5	0.0	92
17	200.0	0.0	200	74.0	1.5	75	168.0	4.7	173	41.5	0.0	42	131.8	6.5	138	100.6	0.0	101
18	169.3	3.3	173	78.0	6.0	84	134.9	0.0	135	85.7	1.0	87	139.6	0.0	140	87.5	0.0	88
19	148.8	0.0	149	70.9	6.0	77	150.2	0.0	150	96.1	0.0	96	163.9	6.0	170	67.0	0.0	67
20	142.6	3.4	146	66.4	0.0	66	124.8	4.3	129	124.3	0.0	124	127.5	5.2	133	142.5	0.0	142
21	155.1	0.0	155	50.9	6.0	57	151.2	1.7	153	84.3	0.0	84	174.0	2.6	177	96.8	0.0	97
22	160.6	2.6	163	58.6	6.0	65	138.7	0.0	139	94.7	0.0	95	146.4	4.3	151	98.1	0.0	98
23	139.6	0.0	140	57.9	0.0	58	159.8	6.9	167	89.5	0.0	90	198.5	4.3	203	84.2	0.0	84
24	159.8	0.0	160	41.7	0.0	42	147.4	6.0	153	99.6	0.0	100	137.5	4.3	142	114.9	0.0	115
25	137.4	0.0	137	65.7	0.0	66	131.6	4.3	136	92.8	0.0	93	154.3	6.0	160	76.6	0.0	77
26	112.4	12.9	125	57.1	0.0	57	127.7	4.3	132	104.5	1.0	106	164.8	4.3	169	137.2	0.0	137
27	140.5	0.0	140	64.5	0.0	65	141.4	0.0	141	89.1	0.0	89	178.5	12.0	191	108.0	6.0	114
28	130.4	0.0	130	88.4	0.0	88	145.4	0.0	145	52.7	0.0	53	129.8	10.3	140	82.1	0.0	82
29	159.4	0.0	159	74.6	0.0	75	143.8	0.0	144	114.9	0.0	115	153.2	0.0	153	117.6	0.0	118
30	160.2	6.9	167	63.4	0.0	63	139.7	0.0	140	97.8	0.0	98	139.6	8.6	148	119.6	0.0	120
31	135.3	0.0	135	76.9	0.0	77	176.8	0.0	177	115.3	0.0	115	-	-	-	-	-	-
TOTAL	4,658	179	4,837	1,821	52	1,873	4,828	111	4,939	2,465	3	2,468	4,507	144	4,651	3,076	15	3,091

Notes:

All volumes in cubic metres (m³).

MS-MRY-1 - Camp Lake; MP-MRY-3 - Km 32 Lake.

D - Domestic/Camp Purposes; I - Industrial Purposes.

Bold and highlighted values indicate daily volumes that exceeded the source, use specific daily withdrawal limit stipulated by Table 3 of the Type 'A' Water Licence.

Table 4.2 Daily, Monthly, and Annual Volumes of Water Used for Domestic and Industrial Purposes on Inuit-Owned Land and Crown Lands - 2021

Day	October						November						December					
	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL	MS-MRY-1		TOTAL	MP-MRY-3		TOTAL
	D	I		D	I		D	I		D	I		D	I				
1	147.0	0.0	147	108.2	0.0	108	134.6	3.4	138	65.7	0.0	66	158.6	9.9	168	71.8	0.0	72
2	141.1	12.9	154	88.2	6.0	94	164.6	5.2	170	128.0	0.0	128	138.7	0.0	139	92.9	0.0	93
3	159.8	10.3	170	75.9	0.0	76	154.0	4.3	158	78.3	0.0	78	158.6	3.0	162	79.8	0.0	80
4	158.6	9.5	168	124.5	0.0	124	154.8	0.0	155	108.0	0.0	108	150.0	0.0	150	76.3	0.0	76
5	163.1	7.7	171	85.2	0.0	85	123.0	6.0	129	58.0	0.0	58	133.6	11.6	145	83.6	0.0	84
6	146.2	0.0	146	156.7	0.0	157	145.9	6.0	152	90.8	0.0	91	149.3	3.9	153	81.1	0.0	81
7	131.0	8.6	140	55.4	0.0	55	128.5	9.5	138	69.8	0.0	70	159.0	10.3	169	84.0	0.0	84
8	142.9	10.3	153	124.2	0.0	124	142.7	6.0	149	74.2	0.0	74	165.4	3.9	169	78.6	0.0	79
9	123.7	0.0	124	103.7	0.0	104	163.1	4.3	167	95.4	0.0	95	144.8	5.2	150	98.6	0.0	99
10	151.3	0.0	151	90.2	1.5	92	140.0	12.0	152	55.5	0.0	55	126.8	0.0	127	89.1	0.0	89
11	128.1	12.9	141	127.1	0.0	127	180.2	6.9	187	100.6	0.0	101	174.1	0.0	174	73.7	0.0	74
12	105.5	0.0	106	86.6	0.0	87	153.3	4.3	158	103.6	0.0	104	148.0	10.3	158	87.9	0.0	88
13	126.5	0.0	127	84.8	0.0	85	146.1	8.6	155	56.9	0.0	57	156.9	5.2	162	65.9	0.0	66
14	108.5	0.0	109	79.1	0.0	79	134.4	4.3	139	85.5	0.0	85	138.2	6.9	145	75.3	0.0	75
15	132.7	2.2	135	93.2	0.0	93	141.2	12.0	153	99.5	0.0	99	148.1	0.0	148	79.2	0.0	79
16	117.9	14.6	132	81.6	1.5	83	146.3	10.3	157	88.1	0.0	88	128.6	4.3	133	69.8	0.0	70
17	125.3	3.4	129	106.8	0.0	107	139.8	8.6	148	76.2	0.0	76	105.5	8.6	114	81.3	0.0	81
18	133.9	0.0	134	93.7	0.0	94	143.6	3.4	147	61.4	0.0	61	157.2	6.9	164	51.6	0.0	52
19	150.6	8.6	159	83.8	6.0	90	145.5	5.2	151	79.5	0.0	80	116.9	6.5	123	75.0	0.0	75
20	147.1	0.0	147	62.4	0.0	62	143.5	4.3	148	45.1	0.0	45	131.3	10.8	142	97.7	0.0	98
21	168.1	3.4	172	98.0	0.0	98	125.9	4.7	131	85.6	0.0	86	109.6	0.0	110	74.5	0.0	74
22	137.1	0.0	137	93.1	6.0	99	147.8	5.2	153	100.4	0.0	100	142.0	4.3	146	72.2	0.0	72
23	111.5	6.5	118	99.7	0.0	100	143.3	4.3	148	104.3	0.0	104	123.4	6.5	130	54.9	0.0	55
24	117.6	5.2	123	61.0	0.0	61	146.5	5.6	152	105.2	0.0	105	123.9	4.3	128	111.7	0.0	112
25	131.3	7.7	139	88.2	0.0	88	123.9	6.0	130	114.6	0.0	115	133.9	4.3	138	82.0	0.0	82
26	146.8	10.3	157	108.7	0.0	109	158.4	7.3	166	64.7	0.0	65	111.9	6.5	118	64.1	0.0	64
27	143.5	0.0	143	114.3	0.0	114	153.4	0.0	153	66.8	0.0	67	114.6	4.7	119	71.3	0.0	71
28	135.5	4.3	140	99.0	0.0	99	152.9	10.8	164	81.2	0.0	81	126.0	6.0	132	63.6	0.0	64
29	139.4	4.3	144	70.0	0.0	70	181.8	6.9	189	104.8	0.0	105	139.2	0.0	139	68.9	0.0	69
30	137.9	4.7	143	46.3	0.0	46	158.5	4.7	163	78.0	0.0	78	141.8	0.0	142	74.0	0.0	74
31	133.4	6.0	139	130.3	0.0	130	-	-	-	-	-	-	77.4	5.6	83	60.4	0.0	60
TOTAL	4,243	154	4,397	2,920	21	2,941	4,417	180	4,597	2,526	0	2,526	4,234	149	4,383	2,391	0	2,391

Notes:

All volumes in cubic metres (m³).

MS-MRY-1 - Camp Lake; MP-MRY-3 - Km 32 Lake.

D - Domestic/Camp Purposes; I - Industrial Purposes.

Bold and highlighted values indicate daily volumes that exceeded the source, use specific daily withdrawal limit stipulated by Table 3 of the Type 'A' Water Licence.

Table 4.3: Daily, Monthly, and Annual Volumes of Water Used for Dust Suppression Purposes on Inuit-Owned and Crown Lands - 2021

Date ^a									Recycled Water ^c					
	CV128 (Km 17)	Km 32 Lake	BG50 (Km 62)	BG32 (Km 78)	CV217 (Km 80)	Muriel Lake (Km 81)	CV233 (Tom River Km 97)	Daily Total	KM 97 Borrow Pond (TR-BP-01)	KM 57 Borrow Pond (TR-BP-02)	Q1 Quarry (MP-Q1-P1)	Flight Ops Pond (MS-RW-01)	Warehouse Pond (MS-RW-02)	Q1 Ditch
Daily Limit (m ³)	579.5	364	150	120	130	212	135	1,500	N/A	N/A	N/A	N/A	N/A	N/A
29-May-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30-May-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31-May-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-Jun-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-Jun-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03-Jun-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04-Jun-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05-Jun-21	0	0	0	0	0	0	0	0	0	0	0	91	0	0
06-Jun-21	0	0	0	0	0	0	0	0	0	0	0	303	0	0
07-Jun-21	0	0	0	0	0	0	0	0	0	0	0	333	212	0
08-Jun-21	0	0	0	0	0	0	0	0	0	0	0	61	363	0
09-Jun-21	0	0	0	0	0	0	0	0	0	0	0	0	454	0
10-Jun-21	0	0	0	0	0	0	0	0	0	0	0	0	485	0
11-Jun-21	0	0	0	0	0	61	0	61	0	0	0	0	61	0
12-Jun-21	0	0	0	0	0	151	0	151	212	0	0	0	0	0
13-Jun-21	0	0	0	0	0	242	0	242	424	0	0	0	0	0
14-Jun-21	0	0	0	0	0	61	0	61	363	0	0	0	0	0
15-Jun-21	0	0	0	0	0	61	0	61	363	0	0	0	0	0
16-Jun-21	0	0	0	0	0	0	0	0	242	0	0	0	0	0
17-Jun-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Jun-21	0	0	30	0	61	0	0	91	30	0	0	0	0	0
19-Jun-21	0	0	0	0	61	0	0	61	182	0	0	0	0	0
20-Jun-21	0	0	61	0	30	121	0	212	303	0	0	0	0	0
21-Jun-21	0	0	0	0	0	30	0	30	333	0	0	0	0	0
22-Jun-21	0	0	0	0	0	0	0	0	30	0	0	0	0	0
23-Jun-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24-Jun-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Jun-21	0	0	30	0	30	121	0	182	182	0	0	0	0	0
26-Jun-21	61	61	0	0	0	0	0	121	121	0	61	0	0	0

Notes:

All volumes in cubic metres (m³).

^a No volumes withdrawn during dates not listed.

^b Dust suppression water sources as shown in Table 2-3 of the Type 'A' Water Licence.

^c Pooling road runoff along length of the Tote Road.

Bold and highlighted values indicate daily volumes that exceeded the source specific daily withdrawal limit stipulated by Table 2.4 of the Type 'A' Water Licence.

Table 4.3: Daily, Monthly, and Annual Volumes of Water Used for Dust Suppression Purposes on Inuit-Owned and Crown Lands - 2021

Date ^a									Recycled Water ^c					
	CV128 (Km 17)	Km 32 Lake	BG50 (Km 62)	BG32 (Km 78)	CV217 (Km 80)	Muriel Lake (Km 81)	CV233 (Tom River Km 97)	Daily Total	KM 97 Borrow Pond (TR-BP-01)	KM 57 Borrow Pond (TR-BP-02)	Q1 Quarry (MP-Q1-P1)	Flight Ops Pond (MS-RW-01)	Warehouse Pond (MS-RW-02)	Q1 Ditch
Daily Limit (m ³)	579.5	364	150	120	130	212	135	1,500	N/A	N/A	N/A	N/A	N/A	N/A
27-Jun-21	0	0	91	0	91	91	0	273	333	61	15	0	0	0
28-Jun-21	30	61	30	61	121	61	0	363	182	0	61	0	0	0
29-Jun-21	0	30	121	61	91	121	0	424	363	30	61	0	0	0
30-Jun-21	0	30	30	0	0	0	0	61	30	0	0	0	0	0
01-Jul-21	0	0	121	30	121	0	0	273	121	30	0	0	0	0
02-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07-Jul-21	0	0	0	0	0	0	0	0	303	0	0	0	0	0
08-Jul-21	0	0	0	0	0	0	0	0	333	0	0	0	0	0
09-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-Jul-21	0	0	0	0	0	0	0	0	91	0	0	0	0	0
11-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-Jul-21	0	0	0	0	0	0	0	0	30	0	0	0	0	0
13-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16-Jul-21	0	0	0	0	0	61	0	61	151	0	0	0	0	0
17-Jul-21	0	0	30	0	0	182	0	212	273	0	0	0	0	0
18-Jul-21	0	0	61	0	0	182	0	242	363	151	0	0	0	0
19-Jul-21	0	0	0	0	0	91	0	91	242	61	0	0	0	0
20-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Jul-21	0	0	30	0	0	0	0	30	0	30	0	0	0	0
23-Jul-21	0	61	0	0	0	30	0	91	182	30	0	0	0	0
24-Jul-21	0	0	0	0	0	151	0	151	273	0	0	0	0	0
25-Jul-21	0	0	0	0	0	0	0	0	182	0	0	0	0	0

Notes:

All volumes in cubic metres (m³).

^a No volumes withdrawn during dates not listed.

^b Dust suppression water sources as shown in Table 2-3 of the Type 'A' Water Licence.

^c Pooling road runoff along length of the Tote Road.

Bold and highlighted values indicate daily volumes that exceeded the source specific daily withdrawal limit stipulated by Table 2.4 of the Type 'A' Water Licence.

Table 4.3: Daily, Monthly, and Annual Volumes of Water Used for Dust Suppression Purposes on Inuit-Owned and Crown Lands - 2021

Date ^a									Recycled Water ^c					
	CV128 (Km 17)	Km 32 Lake	BG50 (Km 62)	BG32 (Km 78)	CV217 (Km 80)	Muriel Lake (Km 81)	CV233 (Tom River Km 97)	Daily Total	KM 97 Borrow Pond (TR-BP-01)	KM 57 Borrow Pond (TR-BP-02)	Q1 Quarry (MP-Q1-P1)	Flight Ops Pond (MS-RW-01)	Warehouse Pond (MS-RW-02)	Q1 Ditch
Daily Limit (m ³)	579.5	364	150	120	130	212	135	1,500	N/A	N/A	N/A	N/A	N/A	N/A
26-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30-Jul-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31-Jul-21	0	91	30	0	0	61	0	182	30	121	0	0	0	0
01-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05-Aug-21	121	30	0	0	0	91	0	242	121	91	0	0	0	0
06-Aug-21	212	182	91	0	30	91	0	606	151	121	121	0	0	0
07-Aug-21	182	242	61	0	0	61	0	545	212	242	61	0	0	61
08-Aug-21	91	121	0	0	0	0	0	212	0	30	0	0	0	30
09-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13-Aug-21	91	30	0	0	0	0	0	121	0	0	0	0	0	0
14-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Aug-21	91	30	0	0	0	0	0	121	0	0	0	0	0	0
19-Aug-21	121	121	0	0	0	0	0	242	0	61	0	0	0	0
20-Aug-21	30	0	61	0	0	182	0	273	303	91	0	0	0	0
21-Aug-21	0	0	0	0	0	0	0	0	0	61	0	0	0	0
22-Aug-21	0	30	30	0	61	182	0	303	0	30	0	0	0	0
23-Aug-21	0	0	61	0	0	91	0	151	61	0	0	0	0	0

Notes:

All volumes in cubic metres (m³).

^a No volumes withdrawn during dates not listed.

^b Dust suppression water sources as shown in Table 2-3 of the Type 'A' Water Licence.

^c Pooling road runoff along length of the Tote Road.

Bold and highlighted values indicate daily volumes that exceeded the source specific daily withdrawal limit stipulated by Table 2.4 of the Type 'A' Water Licence.

Table 4.3: Daily, Monthly, and Annual Volumes of Water Used for Dust Suppression Purposes on Inuit-Owned and Crown Lands - 2021

Date ^a									Recycled Water ^c					
	CV128 (Km 17)	Km 32 Lake	BG50 (Km 62)	BG32 (Km 78)	CV217 (Km 80)	Muriel Lake (Km 81)	CV233 (Tom River Km 97)	Daily Total	KM 97 Borrow Pond (TR-BP-01)	KM 57 Borrow Pond (TR-BP-02)	Q1 Quarry (MP-Q1-P1)	Flight Ops Pond (MS-RW-01)	Warehouse Pond (MS-RW-02)	Q1 Ditch
Daily Limit (m ³)	579.5	364	150	120	130	212	135	1,500	N/A	N/A	N/A	N/A	N/A	N/A
24-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Aug-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26-Aug-21	121	0	0	0	0	0	0	121	0	0	0	0	0	0
27-Aug-21	151	212	61	0	61	121	0	606	0	91	0	0	0	0
28-Aug-21	121	273	121	0	121	151	0	787	0	212	0	0	0	0
29-Aug-21	0	333	61	0	121	91	0	606	121	151	0	0	0	0
30-Aug-21	0	424	91	0	61	61	121	757	212	151	0	0	0	0
31-Aug-21	0	303	91	0	30	91	0	515	303	212	0	0	0	0
1-Sep-21	0	91	0	0	30	0	0	121	0	0	0	0	0	0
2-Sep-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-Sep-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-Sep-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-Sep-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Sep-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-Sep-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Totals														
May 2021	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June 2021	91	182	394	121	485	1,120	0	2,392	3,695	91	197	787	1,575	0
July 2021	0	151	273	30	121	757	0	1,332	2,574	424	0	0	0	0
August 2021	1,332	2,332	727	0	485	1,211	121	6,208	1,484	1,544	182	0	0	91
September 2021	0	91	0	0	30	0	0	121	0	0	0	0	0	0
Annual Totals	1,423	2,756	1,393	151	1,120	3,089	121	10,054	7,753	2,059	379	787	1,575	91

Notes:

All volumes in cubic metres (m³).

^a No volumes withdrawn during dates not listed.

^b Dust suppression water sources as shown in Table 2-3 of the Type 'A' Water Licence.

^c Pooling road runoff along length of the Tote Road.

Bold and highlighted values indicate daily volumes that exceeded the source specific daily withdrawal limit stipulated by Table 2.4 of the Type 'A' Water Licence.

Table 5.1: Daily and Monthly Quantities - Sewage Management - 2021

Day	Treated Sewage Effluent														
	January					February					March				
	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c
1	33.0	111.6	47.0	0.0	0.0	33.0	56.3	26.0	14.0	0.0	32.0	119.2	24.0	18.4	0.0
2	31.0	78.8	45.0	0.0	0.0	32.0	67.1	24.0	21.5	0.0	32.0	100.2	24.0	18.4	0.0
3	34.0	89.0	42.0	0.0	0.0	37.0	64.5	17.0	15.2	0.0	8.0	110.0	31.0	20.0	0.0
4	27.0	89.5	39.0	0.0	0.0	31.0	58.9	21.0	20.6	0.0	22.0	111.5	27.0	20.4	0.0
5	26.0	98.0	43.0	0.0	0.0	31.0	87.0	24.0	13.5	0.0	35.0	84.2	26.0	15.8	0.0
6	27.0	98.2	46.0	0.0	0.0	34.0	71.6	22.0	14.8	0.0	36.0	82.1	26.0	19.3	0.0
7	29.0	90.5	47.0	0.0	0.0	35.0	72.3	19.0	21.8	0.0	36.0	86.7	15.0	18.5	0.0
8	27.0	97.3	45.0	0.0	0.0	36.0	67.2	28.0	24.0	0.0	32.0	87.8	27.0	20.5	0.0
9	32.0	108.7	29.0	0.0	0.0	36.0	67.2	25.0	18.4	0.0	36.0	91.4	28.0	19.8	0.0
10	25.0	100.1	41.0	0.0	0.0	36.0	64.3	22.0	19.3	0.0	36.0	111.6	16.0	20.5	0.0
11	16.0	112.2	40.0	0.0	0.0	36.0	67.0	23.0	17.8	0.0	36.0	120.7	21.0	28.9	0.0
12	21.0	114.3	33.0	0.0	0.0	34.0	80.6	24.0	13.8	0.0	32.0	116.5	26.0	25.7	0.0
13	32.0	81.6	34.0	0.0	0.0	27.0	92.4	25.0	25.5	0.0	28.0	102.3	24.0	19.8	0.0
14	35.0	110.7	30.0	0.0	0.0	22.0	77.5	23.0	26.1	0.0	36.0	89.0	20.0	19.4	0.0
15	35.0	85.9	58.0	0.0	0.0	30.0	74.0	17.0	11.5	0.0	27.0	81.2	18.0	18.5	0.0
16	24.0	92.1	48.0	0.0	0.0	30.0	79.0	22.0	16.3	0.0	28.0	86.0	21.0	20.3	0.0
17	29.0	84.7	32.0	0.0	0.0	16.0	99.0	26.0	20.6	0.0	23.0	88.0	23.0	18.2	0.0
18	32.0	83.3	41.0	0.0	0.0	24.0	88.5	30.0	20.0	0.0	22.0	101.9	26.0	25.7	0.0
19	35.0	70.0	41.0	0.0	0.0	34.0	75.1	27.0	16.1	0.0	23.0	85.0	22.0	20.0	0.0
20	27.0	90.0	46.0	0.0	0.0	36.0	102.8	22.0	18.6	0.0	29.0	97.5	20.0	22.4	0.0
21	30.0	70.6	46.0	0.0	0.0	36.0	107.5	20.0	16.2	0.0	25.0	91.6	21.0	19.1	0.0
22	34.0	60.0	43.0	0.0	0.0	33.0	110.8	22.0	16.2	0.0	24.0	85.5	22.0	20.9	0.0
23	34.0	75.4	39.0	0.0	0.0	35.0	112.0	24.0	16.4	0.0	26.0	91.4	20.0	23.8	0.0
24	35.0	72.7	45.0	0.0	0.0	29.0	100.8	24.0	17.0	0.0	19.0	122.2	22.0	29.5	0.0
25	36.0	77.8	44.0	0.0	0.0	31.0	89.6	24.0	18.2	0.0	31.0	111.9	27.0	23.9	0.0
26	36.0	83.3	48.0	0.0	0.0	30.0	106.7	21.0	18.7	0.0	31.0	109.6	27.0	23.7	0.0
27	35.0	86.4	53.0	0.0	0.0	26.0	136.3	24.0	17.8	0.0	25.0	116.4	22.0	18.9	0.0
28	34.0	72.6	55.0	10.2	0.0	32.0	124.1	24.0	16.5	0.0	21.0	117.8	20.0	14.4	0.0
29	34.0	75.9	58.0	14.4	0.0	-	-	-	-	-	28.0	100.4	24.0	19.1	0.0
30	34.0	78.7	27.0	28.6	0.0	-	-	-	-	-	27.0	109.9	28.0	16.2	0.0
31	34.0	80.0	24.0	18.4	0.0	-	-	-	-	-	30.0	118.4	25.0	28.8	0.0
Monthly Total	953.0	2,719.9	1,309.0	71.5	0.0	882.0	2,400.1	650.0	506.5	0.0	876.0	3,127.9	723.0	648.6	0.0

Notes:

All volumes in cubic metres (m³).

^a Compliant treated effluent from MS-01 and MS-01B (Mine Site STPs) discharged to approved location near the Mary River.

^b Compliant treated effluent from MP-01 and MP-01B (Milne Port STPs) discharged to approved location near Milne Inlet.

^c Compliant treated effluent from MP-01A (Milne Port PWSP) discharged to approved location near Milne Inlet.

Table 5.1: Daily and Monthly Quantities - Sewage Management - 2021

Day	Treated Sewage Effluent														
	April					May					June				
	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c
1	26.0	99.1	31.0	21.8	0.0	31.0	98.8	20.0	14.5	0.0	27.0	91.3	22.0	14.8	0.0
2	27.0	108.5	24.0	22.5	0.0	31.0	89.9	18.0	19.2	0.0	20.0	87.2	23.0	15.5	0.0
3	21.0	113.6	22.0	23.4	0.0	31.0	87.0	17.0	24.2	0.0	19.0	85.2	27.0	22.2	0.0
4	21.0	116.4	22.0	22.6	0.0	29.0	99.3	19.0	21.9	0.0	22.0	79.1	26.0	16.8	0.0
5	36.0	124.4	22.0	18.6	0.0	23.0	99.6	26.0	15.8	0.0	20.0	71.1	15.0	14.5	0.0
6	31.0	124.6	23.0	18.4	0.0	24.0	109.1	25.0	21.2	0.0	25.0	89.7	21.0	15.8	0.0
7	30.0	120.4	24.0	20.9	0.0	33.0	93.0	23.0	18.0	0.0	20.0	91.1	19.0	15.7	0.0
8	30.0	116.3	23.0	19.0	0.0	23.0	97.3	22.0	18.2	0.0	20.0	97.7	21.0	19.8	0.0
9	36.0	104.1	23.0	28.6	0.0	27.0	87.6	22.0	26.7	0.0	28.0	100.0	14.0	19.1	0.0
10	27.0	104.4	23.0	18.9	0.0	29.0	83.1	22.0	16.3	0.0	24.0	93.8	20.0	19.6	0.0
11	27.0	123.0	22.0	19.5	0.0	24.0	88.8	24.0	16.3	0.0	27.0	95.0	22.0	20.1	0.0
12	30.0	109.6	24.0	19.9	0.0	27.0	83.7	22.0	11.7	0.0	27.0	87.7	19.0	19.9	0.0
13	35.0	106.1	25.0	21.8	0.0	22.0	48.1	25.0	12.6	0.0	31.0	83.3	18.0	21.7	0.0
14	35.0	109.2	26.0	21.0	0.0	22.0	37.8	25.0	9.0	0.0	29.0	92.3	20.0	18.9	0.0
15	29.0	110.2	26.0	19.2	0.0	26.0	69.7	20.0	12.2	0.0	24.0	102.3	21.0	21.1	0.0
16	21.0	106.3	26.0	20.2	0.0	13.0	63.6	14.0	15.0	0.0	23.0	97.2	23.0	24.3	0.0
17	37.0	112.2	23.0	20.9	0.0	21.0	64.9	16.0	6.8	0.0	31.0	97.4	22.0	26.8	0.0
18	36.0	116.5	20.0	19.1	0.0	21.0	51.6	17.0	6.3	0.0	32.0	109.4	24.0	22.1	0.0
19	26.0	115.8	19.0	20.1	0.0	14.0	46.9	20.0	10.2	0.0	30.0	102.1	20.0	21.2	0.0
20	24.0	112.4	18.0	20.6	0.0	15.0	54.5	16.0	4.7	0.0	31.0	99.3	20.0	15.6	0.0
21	32.0	108.7	27.0	21.9	0.0	2.0	51.7	14.0	6.4	0.0	27.0	98.0	22.0	22.2	0.0
22	29.0	113.0	23.0	22.0	0.0	17.0	49.7	19.0	9.9	0.0	31.0	103.6	23.0	20.6	0.0
23	36.0	77.1	21.0	21.9	0.0	14.0	53.2	20.0	10.4	0.0	32.0	99.9	22.0	28.1	0.0
24	35.0	102.0	20.0	24.6	0.0	21.0	32.7	18.0	5.6	0.0	23.0	95.9	25.0	22.6	0.0
25	24.0	104.1	21.0	16.7	0.0	10.0	52.7	13.0	4.3	0.0	22.0	102.7	25.0	21.3	0.0
26	20.0	112.6	25.0	31.7	0.0	12.0	53.2	24.0	8.2	0.0	32.0	109.1	13.0	21.4	0.0
27	30.0	85.9	19.0	22.1	0.0	11.0	56.9	33.0	16.8	0.0	29.0	107.3	23.0	23.2	0.0
28	29.0	91.6	19.0	18.5	0.0	12.0	58.6	20.0	12.9	0.0	32.0	112.8	25.0	18.8	0.0
29	27.0	110.1	19.0	29.1	0.0	16.0	59.0	16.0	13.3	0.0	21.0	109.5	25.0	13.8	0.0
30	35.0	93.8	20.0	22.7	0.0	21.0	79.7	18.0	9.6	0.0	17.0	108.2	20.0	21.6	0.0
31	-	-	-	-	-	25.0	90.8	25.0	13.5	0.0	-	-	-	-	-
Monthly Total	882.0	3,252.0	680.0	648.1	0.0	647.0	2,192.5	633.0	411.6	0.0	776.0	2,899.2	640.0	599.0	0.0

Notes:

All volumes in cubic metres (m³).

^a Compliant treated effluent from MS-01 and MS-01B (Mine Site STPs) discharged to approved location near the Mary River.

^b Compliant treated effluent from MP-01 and MP-01B (Milne Port STPs) discharged to approved location near Milne Inlet.

^c Compliant treated effluent from MP-01A (Milne Port PWSP) discharged to approved location near Milne Inlet.

Table 5.1: Daily and Monthly Quantities - Sewage Management - 2021

Day	Treated Sewage Effluent														
	July					August					September				
	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c
1	22.0	118.1	22.0	31.3	0.0	40.0	117.7	25.0	40.4	0.0	44.0	94.6	25.0	36.8	30.9
2	31.0	116.3	21.0	21.6	0.0	41.0	113.1	26.0	37.4	0.0	44.0	90.6	29.0	32.4	47.9
3	31.0	101.9	25.0	13.9	0.0	38.0	109.8	27.0	35.3	0.0	31.0	89.7	26.0	28.5	45.4
4	22.0	97.7	23.0	26.1	0.0	36.0	103.1	33.0	37.4	0.0	41.0	102.1	25.0	32.5	47.6
5	22.0	113.4	22.0	19.3	0.0	34.0	95.5	34.0	30.6	0.0	44.0	102.0	27.0	31.1	0.0
6	28.0	112.7	24.0	28.1	0.0	34.0	104.2	30.0	36.9	0.0	42.0	110.6	27.0	30.1	0.0
7	32.0	129.7	23.0	16.2	0.0	59.0	122.4	25.0	33.0	0.0	40.0	135.1	27.0	34.5	0.0
8	30.0	125.0	25.0	28.4	0.0	38.0	112.8	25.0	39.2	0.0	40.0	110.0	24.0	36.0	0.0
9	29.0	121.4	25.0	19.6	0.0	53.0	125.8	26.0	31.5	0.0	41.0	105.3	33.0	40.1	0.0
10	30.0	125.6	25.0	16.4	0.0	48.0	105.5	32.0	35.5	0.0	41.0	115.7	33.0	38.6	0.0
11	28.0	127.6	23.0	32.9	0.0	36.0	111.3	26.0	36.7	0.0	42.0	104.9	26.0	39.7	0.0
12	23.0	135.4	22.0	17.6	0.0	44.0	103.2	29.0	36.5	0.0	43.0	108.8	37.0	34.5	0.0
13	32.0	130.0	21.0	28.7	0.0	41.0	109.4	25.0	29.7	0.0	43.0	114.0	33.0	29.5	0.0
14	32.0	126.5	26.0	25.6	0.0	49.0	113.2	26.0	36.9	0.0	42.0	119.2	25.0	35.4	0.0
15	32.0	141.6	27.0	35.1	0.0	38.0	86.5	30.0	37.6	0.0	37.0	116.8	24.0	37.8	0.0
16	32.0	119.8	26.0	23.9	0.0	39.0	98.0	31.0	34.6	0.0	32.0	106.6	31.0	42.2	0.0
17	30.0	136.0	25.0	32.1	0.0	26.0	90.0	27.0	32.4	0.0	37.0	96.4	30.0	41.1	0.0
18	32.0	139.8	25.0	25.6	0.0	21.0	98.9	31.0	31.8	0.0	44.0	93.3	26.0	31.7	0.0
19	31.0	132.5	25.0	32.5	0.0	26.0	108.1	31.0	46.0	0.0	29.0	96.9	29.0	35.9	0.0
20	32.0	114.4	28.0	33.7	0.0	41.0	96.5	29.0	35.4	0.0	28.0	106.6	29.0	33.1	0.0
21	33.0	104.2	30.0	26.6	0.0	40.0	108.1	26.0	24.9	0.0	27.0	99.8	30.0	32.8	0.0
22	31.0	107.9	28.0	23.5	0.0	33.0	103.7	22.0	29.5	0.0	37.0	99.6	27.0	34.3	0.0
23	33.0	101.0	31.0	34.8	0.0	41.0	72.4	25.0	33.7	0.0	45.0	136.3	30.0	33.8	0.0
24	34.0	106.4	29.0	23.3	0.0	39.0	93.9	24.0	35.1	0.0	35.0	121.6	30.0	33.3	0.0
25	34.0	97.7	27.0	30.1	0.0	41.0	97.9	25.0	25.4	0.0	33.0	105.8	28.0	30.0	0.0
26	34.0	99.4	23.0	30.3	0.0	41.0	84.3	26.0	32.0	20.8	37.0	107.4	28.0	40.0	0.0
27	36.0	103.2	26.0	30.9	0.0	41.0	88.3	29.0	33.8	34.6	20.0	126.6	30.0	30.7	0.0
28	33.0	112.1	27.0	28.3	0.0	39.0	93.6	27.0	31.8	39.9	37.0	121.5	29.0	32.6	0.0
29	37.0	111.8	30.0	36.8	0.0	42.0	106.7	26.0	37.5	44.5	36.0	112.2	30.0	40.2	0.0
30	37.0	109.4	31.0	33.7	0.0	44.0	110.7	25.0	24.1	45.5	32.0	109.9	31.0	43.9	0.0
31	36.0	108.3	28.0	38.2	0.0	44.0	98.4	24.0	29.6	44.2	-	-	-	-	-
Monthly Total	959.0	3,626.8	793.0	845.0	0.0	1,227.0	3,183.0	847.0	1,051.9	229.5	1,124.0	3,259.9	859.0	1,053.1	171.8

Notes:

All volumes in cubic metres (m³).

^a Compliant treated effluent from MS-01 and MS-01B (Mine Site STPs) discharged to approved location near the Mary River.

^b Compliant treated effluent from MP-01 and MP-01B (Milne Port STPs) discharged to approved location near Milne Inlet.

^c Compliant treated effluent from MP-01A (Milne Port PWSP) discharged to approved location near Milne Inlet.

Table 5.1: Daily and Monthly Quantities - Sewage Management - 2021

Day	Treated Sewage Effluent														
	October					November					December				
	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c
1	34.0	112.2	31.0	34.0	0.0	17.0	117.5	21.0	28.1	0.0	49.0	133.4	28.0	26.6	0.0
2	34.0	122.6	26.0	31.6	0.0	32.0	132.9	25.0	29.0	0.0	37.0	122.0	27.0	22.2	0.0
3	33.0	77.0	26.0	37.1	0.0	28.0	124.0	25.0	31.8	0.0	33.0	111.6	34.0	22.6	0.0
4	35.0	80.8	22.0	31.7	0.0	28.0	120.9	29.0	26.6	0.0	37.0	117.8	27.0	26.0	0.0
5	38.0	83.7	51.0	32.8	0.0	31.0	114.8	26.0	31.6	0.0	32.0	118.2	24.0	30.6	0.0
6	38.0	67.2	54.0	33.4	0.0	35.0	90.4	23.0	26.0	0.0	38.0	118.6	31.0	33.2	0.0
7	35.0	67.2	38.0	32.3	0.0	40.0	106.7	24.0	30.9	0.0	38.0	115.7	27.0	23.9	0.0
8	40.0	73.9	28.0	28.6	0.0	37.0	109.4	24.0	18.3	0.0	38.0	112.0	25.0	24.4	0.0
9	43.0	91.5	29.0	24.0	0.0	37.0	98.3	24.0	22.9	0.0	27.0	113.3	29.0	26.5	0.0
10	30.0	92.7	29.0	24.7	0.0	38.0	111.2	26.0	24.7	0.0	29.0	114.1	30.0	23.2	0.0
11	29.0	103.0	25.0	24.5	0.0	39.0	110.5	28.0	32.3	0.0	31.0	128.7	25.0	32.2	0.0
12	37.0	98.6	25.0	38.1	0.0	38.0	116.2	32.0	22.9	0.0	23.0	125.2	23.0	25.2	0.0
13	37.0	104.2	27.0	24.7	0.0	41.0	108.2	26.0	21.8	0.0	25.0	132.8	26.0	19.3	0.0
14	37.0	98.6	28.0	34.5	0.0	43.0	112.0	24.0	26.3	0.0	31.0	103.4	24.0	26.3	0.0
15	36.0	86.4	25.0	31.0	0.0	37.0	102.9	24.0	18.1	0.0	37.0	120.8	19.0	29.1	0.0
16	34.0	83.7	28.0	32.0	0.0	42.0	106.3	24.0	26.6	0.0	41.0	73.9	27.0	20.2	0.0
17	30.0	91.9	26.0	25.3	0.0	39.0	115.9	25.0	27.5	0.0	39.0	80.1	27.0	25.3	0.0
18	36.0	101.1	31.0	33.6	0.0	26.0	111.5	29.0	29.8	0.0	34.0	98.3	30.0	12.1	0.0
19	36.0	96.7	26.0	36.6	0.0	25.0	113.6	28.0	19.7	0.0	37.0	102.3	26.0	21.9	0.0
20	35.0	115.2	27.0	34.7	0.0	43.0	108.4	27.0	31.9	0.0	31.0	126.5	26.0	17.5	0.0
21	36.0	123.4	37.0	24.2	0.0	44.0	112.3	21.0	20.0	0.0	29.0	128.6	29.0	31.6	0.0
22	34.0	112.2	33.0	32.3	0.0	29.0	99.8	25.0	23.9	0.0	15.0	118.6	26.0	22.1	0.0
23	47.0	108.7	25.0	34.1	0.0	37.0	107.9	24.0	29.6	0.0	18.0	127.0	26.0	28.5	0.0
24	34.0	101.3	24.0	35.0	0.0	35.0	127.9	26.0	31.0	0.0	11.0	120.4	18.0	16.8	0.0
25	31.0	105.0	29.0	37.9	0.0	35.0	116.6	29.0	30.5	0.0	33.0	124.9	28.0	21.3	0.0
26	36.0	110.2	29.0	24.2	0.0	35.0	121.6	28.0	26.6	0.0	21.0	124.1	25.0	15.1	0.0
27	20.0	110.6	34.0	30.5	0.0	44.0	124.9	28.0	25.5	0.0	18.0	122.5	23.0	17.8	0.0
28	35.0	96.0	36.0	48.0	0.0	37.0	133.3	28.0	21.1	0.0	29.0	104.2	22.0	13.4	0.0
29	37.0	94.4	38.0	43.0	0.0	39.0	131.5	27.0	22.2	0.0	15.0	110.5	23.0	18.8	0.0
30	32.0	123.7	30.0	20.1	0.0	40.0	122.9	27.0	15.9	0.0	38.0	110.6	22.0	15.1	0.0
31	21.0	111.0	23.0	31.2	0.0	-	-	-	-	-	37.0	109.6	25.0	13.5	0.0
Monthly Total	1,070.0	3,044.7	940.0	985.4	0.0	1,071.0	3,430.3	777.0	773.1	0.0	951.0	3,569.7	802.0	702.2	0.0

2021	Treated Sewage Effluent				
	MS-01 ^a	MS-01B ^a	MP-01 ^b	MP-01B ^b	MP-01A ^c
Annual Total	11,418	36,706	9,653	8,296	401

Notes:

All volumes in cubic metres (m³).

^a Compliant treated effluent from MS-01 and MS-01B (Mine Site STPs) discharged to approved location near the Mary River.

^b Compliant treated effluent from MP-01 and MP-01B (Milne Port STPs) discharged to approved location near Milne Inlet.

^c Compliant treated effluent from MP-01A (Milne Port PWSP) discharged to approved location near Milne Inlet.

Table 5.2: Monthly and Annual Quantities - Sewage Sludge Management - 2021

Month	Sludge Cake from MS-01 STP ^a	Sludge Cake from MS-01B STP ^a	Sludge from MS-01 STP to PWSPs ^b	Sludge from MS-01B STP to PWSPs ^c	Sludge from Mine Site Lift Stations to PWSPs ^d	Sludge Cake from MP-01 STP ^a	Sludge Cake from MP-01B STP ^a	Sludge from MP-01 STP to PWSP (m ³) ^e	Sludge from MP-01B STP to PWSP (m ³) ^f	Sludge from Milne Port Lift Stations to PWSP ^g
January	10.2	22.5	0.0	0.0	0.0	7.7	0.0	2.5	0.0	6.8
February	10.9	11.0	0.0	0.0	0.0	5.9	5.0	2.5	0.0	0.0
March	9.2	14.4	0.0	0.0	0.0	4.8	9.0	3.0	0.0	4.3
April	13.4	20.5	0.0	0.0	16.0	9.1	7.0	1.0	0.0	8.5
May	9.2	19.5	0.0	0.0	0.0	6.7	16.0	1.0	0.0	5.7
June	8.1	12.8	4.0	2.0	0.0	9.9	6.0	0.5	0.0	4.3
July	10.5	16.8	0.0	0.0	0.0	7.8	6.0	1.0	0.0	0.0
August	16.4	24.0	2.0	0.0	0.0	8.8	10.0	1.0	0.0	0.0
September	13.2	27.5	0.0	0.0	0.0	9.7	19.5	3.0	10.0	2.8
October	11.3	19.6	0.0	0.0	12.0	9.2	10.0	3.0	0.0	25.6
November	10.1	23.4	0.0	0.0	0.0	10.2	29.0	0.0	0.2	5.7
December	12.7	24.9	0.0	0.0	0.0	6.7	22.0	0.0	0.0	5.7
TOTAL	135.2	236.9	6.0	2.0	28.0	96.5	139.5	18.5	10.2	69.4

Notes:

All volumes in cubic metres (m³).

^a Sludge generated by STPs pressed into cake and disposed using site incinerators or backhauled for off-site disposal.

^b Sewage sludge removed from MS-01 STP to Mine Site PWSP.

^c Sewage sludge removed from MS-01B STP to Mine Site PWSP.

^d Sewage sludge removed from Mine Site lift stations to Mine Site PWSP.

^e Sewage sludge removed from MP-01 STP to Milne Port PWSP.

^f Sewage sludge removed from MP-01B STP to Milne Port PWSP.

^g Sewage sludge removed from Milne Port lift stations to Milne Port PWSP.

Table 5.3: Daily, Monthly, and Annual Quantities of Discharge Stormwater - Containment Areas - 2021

Day	July			August					September
	MS-MRY-6 ^a	MP-03 ^b	MP-04 ^c	MS-03B ^d	MS-MRY-6 ^a	MP-03 ^b	MP-04 ^c	MP-04A ^c	MP-04 ^c
1	0	0.0	0.0	0.0	58.4	0.0	0.0	0.0	14.4
2	0	0.0	0.0	0.0	0.0	0.0	0.0	20.4	26.5
3	0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	24.6
4	0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	25.0
5	0	0.0	0.0	0.0	0.0	0.0	0.0	20.1	0.0
6	0	0.0	0.0	0.0	0.0	0.0	0.0	22.3	0.0
7	0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	0.0
8	0	0.0	0.0	50.8	0.0	0.0	0.0	21.2	0.0
9	0	98.9	0.0	111.1	0.0	0.0	0.0	17.0	0.0
10	0	116.6	0.0	247.5	0.0	0.0	0.0	0.0	0.0
11	0	88.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0	118.8	0.2	16.2	0.0	0.0	0.0	0.0	0.0
13	0	168.2	0.0	59.0	0.0	0.0	0.0	0.0	0.0
14	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0	0.0	1.3	99.5	0.0	0.0	0.0	0.0	0.0
16	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0	0.0	12.4	16.4	0.0	0.0	0.0	0.0	0.0
18	0	0.0	0.0	30.7	0.0	0.0	0.0	0.0	0.0
19	0	0.0	0.0	56.1	0.0	0.0	0.0	0.0	0.0
20	0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0
21	0	0.0	79.0	0.0	0.0	0.0	0.0	10.2	0.0
22	18.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	51.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	49.0	0.0	0.0	0.0	0.0	222.5	0.0	0.0	0.0
25	29.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	41.5	0.0	0.0	0.0	0.0	0.0	20.8	0.0	0.0
27	39.5	0.0	0.0	0.0	0.0	115.7	6.4	0.0	0.0
28	42.4	0.0	0.0	0.0	0.0	53.4	0.0	0.0	0.0
29	5.2	0.0	0.0	0.0	0.0	0.0	26.9	0.0	0.0
30	0	0.0	0.0	0.0	0.0	0.0	26.1	0.0	0.0
31	0	0.0	0.0	0.0	0.0	0.0	29.1	0.0	-
Sub-Total	277.8	591.3	93.0	687.4	58.4	391.5	109.4	159.0	90.5
Monthly Total	962			1,406					91

2021	MS-MRY-6 ^a	MS-03B ^d	MP-03 ^b	MP-04 ^c	MP-04A ^c	MS Total	MP Total
Annual Total	336	687	983	293	159	1,024	1,435

Notes:

All volumes in cubic metres (m³).

^a Effluent from MS-MRY-6 (Exploration Camp Bulk Fuel Storage Facility) discharged to adjacent tundra.

^b Effluent from MP-03 (Milne Port Bulk Fuel Storage Facility) discharged to ditch near Milne Inlet.

^c Effluent from MP-04 (Milne Port Soil Landfarm) and MP-04A (Milne Port Contaminated Snow Pond) discharged to adjacent tundra.

^d Effluent from MS-03B (Mine Site Bulk Fuel Storage Facility) discharged to adjacent tundra near Sheardown Lake NW.

Table 5.4: Daily, Monthly, and Annual Quantities of Discharge Stormwater - Surface Water Management Ponds - 2021

Day	May	June			July					August				
	MS-06 ^b	MS-06 ^b	MS-08 ^a	MP-05 ^c	MS-06 ^b	MS-07 ^d	MS-08 ^a	MP-05 ^c	MP-06 ^c	MS-06 ^b	MS-07 ^d	MS-08 ^a	MP-05 ^c	MP-06 ^c
1	0.0	93.0	0.0	0.0	0.0	0.0	5,094.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	4,066.0	88.3	0.0	0.0	0.0	882.0	664.8	711.8
3	0.0	0.0	0.0	0.0	0.0	0.0	4,774.6	0.0	0.0	0.0	0.0	2,527.0	0.0	0.0
4	0.0	95.0	0.0	0.0	0.0	0.0	4,674.1	0.0	0.0	5.8	0.0	3,024.0	0.0	0.0
5	0.0	116.2	0.0	0.0	0.0	0.0	4,567.9	94.4	18.7	0.0	0.0	3,628.0	0.0	0.0
6	0.0	64.9	0.0	0.0	0.0	0.0	4,441.3	566.8	705.8	0.0	0.0	3,738.0	0.0	0.0
7	0.0	74.1	0.0	0.0	0.0	0.0	4,631.3	47.5	7.8	0.0	0.0	3,108.0	0.0	0.0
8	0.0	182.6	0.0	0.0	4.1	1,314.5	4,405.9	0.0	0.0	29.4	0.0	858.0	1,102.1	609.5
9	0.0	149.1	0.0	0.0	0.0	2,207.7	8,112.1	0.0	0.0	0.0	0.0	2,564.0	3.4	0.0
10	0.0	176.6	0.0	0.0	0.0	719.5	0.0	0.0	0.0	0.0	0.0	3,142.0	0.0	0.0
11	0.0	165.0	0.0	0.0	0.0	0.0	1,540.6	0.0	0.0	0.0	0.0	3,903.0	0.0	0.0
12	0.0	156.2	0.0	0.0	0.0	0.0	521.2	0.0	0.0	25.6	0.0	3,137.0	0.0	0.0
13	0.0	170.4	0.0	0.0	0.0	0.0	3,780.9	0.0	0.0	22.8	0.0	3,888.0	0.0	0.0
14	0.0	166.6	0.0	0.0	0.0	0.0	3,376.7	0.0	0.0	47.0	0.0	3,976.0	0.0	0.0
15	0.0	163.6	0.0	0.0	0.0	0.0	1,457.5	0.0	0.0	32.3	0.0	4,010.0	0.0	0.0
16	0.0	171.5	0.0	0.0	0.0	0.0	3,741.5	0.0	0.0	27.9	1,102.5	4,029.0	0.0	0.0
17	0.0	179.5	0.0	0.0	0.0	0.0	3,429.1	0.0	0.0	54.0	2,520.0	3,576.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	3,211.5	0.0	0.0	0.0	472.5	4,170.0	0.0	0.0
19	0.0	40.1	0.0	0.0	0.0	0.0	3,763.2	0.0	0.0	0.0	0.0	4,015.0	0.0	0.0
20	0.0	24.5	0.0	0.0	0.0	0.0	3,851.0	0.0	0.0	0.0	0.0	4,360.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	4,422.0	943.9	534.6	0.0	0.0	2,692.0	0.0	0.0
22	0.0	41.6	0.0	0.0	0.0	0.0	2,167.0	0.0	0.0	0.0	0.0	3,407.0	0.0	0.0
23	0.0	6.7	151.0	0.0	0.0	0.0	1,757.0	0.0	0.0	38.4	0.0	1,419.0	0.0	0.0
24	0.0	104.8	111.0	637.1	0.0	0.0	1,443.0	0.0	0.0	7.1	0.0	792.0	997.6	0.0
25	0.0	49.8	2,867.0	485.5	0.0	0.0	3,342.0	0.0	0.0	0.0	0.0	797.0	161.8	0.0
26	0.0	15.9	3,117.3	19.2	0.0	0.0	2,511.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	43.7	5,762.6	119.6	0.0	0.0	3,414.0	0.0	0.0	96.4	0.0	1,103.0	299.9	515.2
28	0.0	45.1	4,038.5	0.0	0.0	0.0	3,272.0	0.0	0.0	88.8	267.2	3,310.0	114.2	732.6
29	0.0	54.0	4,376.4	0.0	0.0	0.0	720.0	0.0	0.0	96.4	1,035.4	3,506.0	0.0	129.4
30	0.0	0.0	4,749.2	3.9	0.0	0.0	227.0	0.0	0.0	99.3	646.9	2,836.0	0.0	1,472.2
31	93.0	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3,664.0	0.0	357.0
Sub-Total	93	2,550	25,173	1,265	4	4,242	96,716	1,741	1,267	671	6,044	86,061	3,344	4,528
Monthly Total	93	28,988			103,970					100,648				

2021	MS-08 ^a	MS-07 ^a	MS-06 ^b	MP-05 ^c	MP-06 ^c	MS Total	MP Total	Combined Total
Annual Total	207,950	10,286	3,636	6,945	7,452	221,872	14,397	236,268

Notes:

All volumes in cubic meters (m³).

^a Effluent from MS-08 (Mine Site Waste Rock Facility Pond) was treated using a water treatment plant and discharged to the catchment of Mary River Tributary F.

^b Effluent from MS-06 (Crusher Facility Pond) was discharged at a location near the Mary River.

^c Effluent from MP-05 and MP-06 (East and West Milne Port Ore Stockpile Ponds) was discharged to Milne Inlet.

^d Effluent from MS-07 (KM106 ROM Ore Stockpile Pond) was discharged at a location near the Mary River.

Table 5.4: Daily, Monthly, and Annual Quantities of Discharge Stormwater - Surface Water Management Ponds - 2021

Day	September			October
	MS-06 ^b	MP-05 ^c	MP-06 ^c	MP-06 ^c
1	47.1	0.0	127.9	0.0
2	72.7	0.0	759.6	0.0
3	78.3	0.0	0.0	0.0
4	61.7	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0
7	0.0	0.0	0.0	0.0
8	0.0	101.1	0.0	0.0
9	0.0	0.0	0.0	0.0
10	57.2	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0
20	0.0	493.6	0.0	0.0
21	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	769.7
25	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0
31	-	-	-	0.0
Sub-Total	317	595	887	770
Monthly Total	1,799			770

Notes:

All volumes in cubic meters (m³).

^a Effluent from MS-08 (Mine Site Waste Rock Facility Pond) was treated using a water treatment plant and discharged to the catchment of Mary River Tributary F.

^b Effluent from MS-06 (Crusher Facility Pond) was discharged at a location near the Mary River.

^c Effluent from MP-05 and MP-06 (East and West Milne Port Ore Stockpile Ponds) was discharged to Milne Inlet.

^d Effluent from MS-07 (KM106 ROM Ore Stockpile Pond) was discharged at a location near the Mary River.

Table 5.5: Locations of Temporary and Permanent Storage Areas for Wastes - 2021

Description	Location (UTM NAD83 Zone 17 W)		Location	
	Easting	Northing	Latitude	Longitude
Milne Port				
MP-HWB-1	503869	7976308	71° 53' 12.4"	80° 53' 18.6"
MP-HWB-2	503730	7975972	71° 53' 01.6"	80° 53' 33.1"
MP-HWB-3	503543	7975959	71° 53' 01.2"	80° 53' 52.5"
MP-HWB-4	503569	7975954	71° 53' 01.0"	80° 53' 49.8"
Milne Port Landfarm Facility (MP-04; including Contaminated Snow Containment Berm; MP-04A)	503751	7975570	71° 52' 48.6"	80° 53' 30.9"
Milne Port Polishing Waste Stabilization Pond (PWSP - MP-01A)	503625	7976015	71° 53' 03.0"	80° 53' 44.0"
Milne Port Open Burn Location	504455	7973669	71° 51' 47.2"	80° 52' 18.4"
Milne Port Waste Management Building	503760	7976014	71° 53' 02.9"	80° 53' 30.0"
Mine Site				
MS-HWB-1	558170	7914598	71° 19' 35.5"	79° 22' 19.2"
MS-HWB-2	558200	7914585	71° 19' 35.1"	79° 22' 16.2"
MS-HWB-3	558283	7914563	71° 19' 34.3"	79° 22' 08.0"
MS-HWB-4	558295	7914551	71° 19' 33.9"	79° 22' 06.8"
MS-HWB-5	558161	7914580	71° 19' 34.9"	79° 22' 20.1"
MS-HWB-6	558512	7914710	71° 19' 38.8"	79° 21' 44.5"
MS-HWB-7	558284	7914449	71° 19' 30.6"	79° 22' 08.1"
Mine Site Landfarm Facility (MS-05)	560819	7912715	71° 18' 32.4"	79° 17' 57.8"
Mine Site Non-Hazardous Waste Landfill Facility	560879	7912513	71° 18' 25.9"	79° 17' 51.8"
Mine Site Polishing Waste Stabilization Ponds (PWSP - MS-MRY-4A, 4B, 4C)	558470	7914237	71° 19' 23.6"	79° 21' 50"
Mine Site Open Burn Location	556815	7915193	71° 19' 55.9"	79° 24' 34.1"
Mine Site Waste Management Building	558430	7914773	71° 19' 40.9"	79° 21' 52.6"
Mid-Rail				
Temporary hazardous waste and barrel fuel storage area	595660	7876369	70° 58' 19"	78° 22' 13"
Steensby Port				
Temporary hazardous waste and barrel fuel storage area	594679	7800514	70° 17' 35"	78° 29' 01"

Note:

Refer to Figures 3, 5, 6 and 7 for locations of waste storage areas at Milne Port, the Mine Site, Mid-Rail Camp and Steensby Port.

Table 5.6: Monthly and Annual Quantities of Waste Deposited - Landfill Facility - 2021

Quarter	Month	Volume of Waste Deposited in Landfill	Comments
Q1	January	706	Quarterly survey conducted on March 31, 2021.
	February	706	
	March	706	
Q2	April	152	Quarterly survey conducted on June 30, 2021.
	May	152	
	June	152	
Q3	July	407	Quarterly survey conducted on September 30, 2021.
	August	407	
	September	407	
Q4	October	1,198	Quarterly survey conducted on December 31, 2021.
	November	1,198	
	December	1,198	
TOTAL (BCMs)		7,389	

Notes:

All volumes in BCMS.

BCMs - banked cubic metres.

Table 5.7: Monthly and Annual Quantities of Hydrocarbon Impacted Soil, Water, and Snow Deposited - Milne Port Landfarm Facility - 2021

Quarter	Month	Soil Deposited in Landfarm (m ³)	Water Deposited in Contaminated Snow Containment Berm (m ³)	Comments
Q1	January	0	16	-
	February	0	13	-
	March	0	0	-
Q2	April	0	22	-
	May	0	8	-
	June	0	0	-
Q3	July	0	0	-
	August	0	0	-
	September	0	0	-
Q4	October	0	26	-
	November	0	27	-
	December	0	27	-
TOTAL		0	139	-

Notes:

There was no contaminated soil deposited in the landfarm in 2021, all contaminated soil was shipped offsite.

Table 5.8: Monthly and Annual Quantities - Deposit No. 1 Waste Rock Management - 2021

Month	Total Non-AG Waste Rock Used for Construction Purposes	Total Non-AG Waste Rock Deposited in Waste Rock Facility	Total PAG Waste Rock Deposited in Waste Rock Facility	Total Waste Rock Generated
January	15,591	439,882	7,864	463,337
February	850	305,618	50,570	357,039
March	10,269	550,260	41,374	601,904
April	6,198	257,263	8,351	271,812
May	17,850	184,071	358	202,279
June	138,142	376,722	2,862	517,726
July	150,818	513,762	50,736	715,316
August	59,037	469,361	72,682	601,080
September	12,864	642,687	22,483	678,034
October	807	282,369	753	283,929
November	4,972	529,493	123,387	657,853
December	16,713	497,151	170,025	683,889
TOTAL	434,111	5,048,641	551,445	6,034,197

Notes:

All quantities in wet metric tonnes.

Non-AG - Non-Acid Generating Waste Rock, PAG - Potentially Acid Generating Waste Rock.

Table 6.1: Summary of Unauthorized Discharge by Area and Product - 2021

Product ²	Number of 2021 Reported Spills by Location		
	Mine Site	Tote Road	Milne Port
Diesel Exhaust Fluid (DEF)	0	0	1
Arctic Diesel (P50)	0	1	0
Jet A Fuel	0	0	1
Gasoline	0	0	0
Glycol ¹	1	0	0
Sediment	2	1	0
Sewage (Untreated)	1	0	1
Oil (Transmission Fluid/Hydraulic Oil)	2	0	0
Sub-Total	6	2	3
ANNUAL TOTAL	11		

Note

¹ Release on January 22, 2021 at Mine Site classified as glycol but includes 0.967 m³ glycol and 0.247 m³ hydraulic fluid.

² Unauthorized release at three (3) facilities (Mine Site KM106 ROM Ore Stockpile Facility, and Crusher Pad Facility; Milne Port Ore Stockpile Facility not included in product table).

Table 6.2: List of Reported Spills and Unauthorized Discharges - 2021

Date	NT-NU Spill Reporting Number	Quantity (m ³)	Material Spilled	Approximate Location (UTM NAD83 Zone 17W)		Project Area	Specific Location	Proximity to Water Body	Occurred within a Engineered Lined Facility?	Clean-up Details	Corrective Actions
				Easting	Northing						
22-Jan-21	2021-021	0.967/0.247	Glycol/Hydraulic Oil	563295	7913059	Mine Site	KM 105.4 Mine Haul Road (MHR)	>100 m	No	Mobile equipment was used to scrape contaminated gravel and roadbed material from the affected area. The contaminated material was placed in sealed containers in the Hazardous Waste Berm (HWB) to be transported for offsite disposal.	Braking systems on the remainder of the 793 fleet were inspected to verify that all systems were operating properly prior to the trucks resuming haulage on the MHR. Additional actions were implemented to improve road maintenance on the MHR for haulage including: smoothing out peak gradients at locations where the mine haul truck lost control, and implementing a scheduled road survey review to identify and remediate peak gradient variances along the MHR.
23-Jan-21	2021-022	2	Sewage	560599	7913409	Mine Site	Sailiivik Complex Between E Wing and F Wing	90 m	No	Contaminated snow and ground was collected using a skid steer and shovels and placed in sealed containment in the HWB to be transported for offsite disposal.	Scheduling of daily checks of all lift stations was implemented, snow was removed from lift station covers to provide access for inspections, and warning labels on all lift station electrical panels were installed advising personnel not to open the electrical panels without an electrician present.
16-Mar-21	2021-099	1	Sewage	503827	7975954	Milne Port	Port Site Complex (PSC) Waste Water Treatment Plant (WWTP)	100 m	No	A skid-steer was used to scrape the released sewage from the frozen ground and place it into Quatex bags for storage in the HWB to be transported for offsite disposal.	The fastening mechanisms on the Vacuum Truck were inspected to verify that they were functioning properly, and pins were subsequently installed on the fastening mechanisms of the Vacuum Truck as a secondary guard to prevent the primary locking mechanism from releasing. A Standard Operating Procedure (SOP) for Vacuum Truck operations, which instructs operators to remain at the discharge area and to continuously monitor hoses and fittings during sewage transfers was developed. All Site Services Vacuum Truck operators were trained in the Vacuum Truck operating procedures described in the SOP.
2-May-21	2021-146	Unquantified	Sediment-laden Water	557805	7914795	Mine Site	Camp Lake and Sheardown Lake	0 m	No	Implemented sedimentation mitigation measures including silt fences, coir logs and sand bags, in areas around the CLT, SDLT and LDFG outfalls and upstream tributaries to slow the flow and settle sediments prior to the water entering the streams. Water diversion and pumping strategies were also implemented to reduce potential erosion and sedimentation.	In preparation for freshet, permanent erosion and sediment control measures were reinforced and maintained as needed, including berm reinforcement upslope of the SDLT outfall and riprap armouring of the ditch at CLT upstream tributary BG-01, to stabilize the bank and reduce erosion. Excess snow was relocated from areas around the Camp Lake Settling Ponds, including from up-gradient runoff check dams, to reduce the amount of surface water runoff from snowmelt. Additional excess snow around the inlets and outlets of select culvert locations was removed, including at the CLT, SDLT and LDFG water crossings, and relocated to approved snow stockpile locations, to further reduce the volume of snowmelt and subsequent amount of overland flow present to mobilize sediment. The development and implementation of the long-term surface water management plan is ongoing with support from a third party consultant.
6-May-21	2021-164	Unquantified	Sediment-laden Water	561018	7912968	Mine Site	Sheardown Lake	0 m	No		
26-May-21	21-247	Unquantified	Sediment-laden Water	NA	NA	Tote Road	Six (6) Downstream Culvert Crossings along Tote Road	0 m	No	Field investigations of the affected culvert crossings were completed. Erosion and sediment control measures were subsequently implemented where possible. Culverts CV-115 and CV-093 have had riprap placed at the inlet and outlet culvert embankments to slow runoff water flow and settle sediments prior to the water entering the streams.	Permanent erosion and sediment control measures were implemented in 2020 including a culvert replacement at KM58 to improve water flow, and the construction of turbidity check dams at KM33 to reduce runoff water flow and sediment transport. Prior to the start of freshet, excess snow along the Tote Road was removed and relocated to approved snow stockpile locations to reduce the amount of surface water runoff from snowmelt. Additional excess snow around the inlets and outlets of select culvert locations was removed to further reduce the volume of snowmelt and subsequent amount of overland flow present to mobilize sediment. Steam was applied to culverts as necessary to remove ice and snow blockages to ensure the effective movement of water during freshet conditions. A plan is being developed for Road Maintenance work to complete the permanent corrective actions at the remaining identified culverts and embankments in 2022; additional permitting may be required. Routine freshet preparation activities and maintenance of ESC measures will be performed prior to freshet 2022 as necessary to reduce snow and ensure effective operation of ESC measures.

Table 6.2: List of Reported Spills and Unauthorized Discharges - 2021

Date	NT-NU Spill Reporting Number	Quantity (m ³)	Material Spilled	Approximate Location (UTM NAD83 Zone 17W)		Project Area	Specific Location	Proximity to Water Body	Occurred within a Engineered Lined Facility?	Clean-up Details	Corrective Actions
				Easting	Northing						
28-Jun-21	21-268	Unquantified	Contact Water	563431	7913131	Mine Site	KM106 Run of Mine (ROM) Ore Stockpile Facility	300 m	No	Temporary diversion swales and a diversion berm/sump system were constructed to capture the seepage. Seepage water intercepted by the diversion swales was diverted to the KM106 ROM Ore Stockpile Facility Pond (MS-07). Seepage water collected in the sump was pumped to MS-07.	A third party consultant was retained to investigate the seepage. Interim contingency measures remain in place to manage water at the KM106 ROM Ore Stockpile Facility. All contact water will continue to be diverted/captured and conveyed to the surface water management pond via the interim measures until permanent corrective actions are implemented. The interim contingency measures continue to be inspected on a regular basis and are functioning as intended to convey all water to MS-07.
2-Jul-21	21-280	6.3	Contact Water	502957	7976179	Milne Port	West Ore Pad Ditch	200 m	No	The pump transferring water through the west ore pad ditch was shut off, preventing further release. Modifications were implemented to the pond-to-pond transfer process configuration to ensure water is not routed through the west ore pad ditch until corrective actions are implemented to address the seepage. A temporary diversion berm was constructed to prevent runoff water from the ore pad from reporting to the ditch.	Ore pad runoff water will be redirected to surface water management ponds until the ditch is repaired. The temporary diversion berm is inspected on a regular basis to ensure it is functioning as intended and diverting water away from the affected ditch and to surface water management ponds.
27-Jul-21	21-349	1	Hydraulic Oil	559448	7914059	Mine Site	Warehouse Laydown	100 m	No	Absorbent pads and booms were used to contain free product. Spilled material and pooled water was removed from the area with a vacuum truck. Contaminated ground was subsequently collected from the affected area with an excavator and placed in sealed containers within the HWB to be transported for offsite disposal.	Staging of hazardous waste areas to remove other obstacles in vicinity. If required the use of a spotter must be present when picking up hazardous items from the warehouse.
27-Jul-21	21-322	Unquantified	Contact Water	561496	7912981	Mine Site	Crusher Facility	> 1km	No	At the time of the seepage event, the contingency plan previously established to manage water at the Crusher Facility until remediation of the compromised ditch system is completed was in place. The contingency plan involves monitoring contact water, capturing contact water runoff with a diversion berm and active pumping of contact water from the pad directly to the MS-06 pond. An additional collection sump was constructed to capture the newly identified seepage.	Interim contingency measures remain in place to manage water at the Crusher Facility. All contact water will continue to be captured and conveyed to the surface water management pond via the interim measures to prevent potential seepage to the tundra until construction of permanent corrective actions. The interim contingency measures continue to be inspected on a regular basis and are functioning as intended to convey all water into MS-06. Water management measures for the Crusher Facility are being addressed as part of the ongoing implementation of Baffinland's Long Term Water Management Plan. Baffinland continues to implement the Ore Crusher pad Regrading Strategy to prevent the pooling of water on and around the Crusher Facility pad.
9-Aug-21	21-338	0.8	Diesel Exhaust Fluid	503524	7976139	Milne Port	Warehouse Laydown	> 100 m	No	A berm was constructed and absorbent materials deployed to contain the spilled material. Contaminated gravel was collected from the affected area using mobile equipment and placed in sealed containers within the HWB to be transported for offsite disposal.	A procedure was created for loading and offloading trailers and the use of spotters. Spotter training and competency was reviewed to ensure crews are trained and instructed to maintain a line of sight on the cargo being offloaded, including repositioning as necessary. All crews involved in loading and offloading trailers and spotting will review the new procedure, and spotter competency assessments will be completed on all spotters.
30-Sep-21	21-421	0.145	Transmission Fluid	562357	7912893	Mine Site	KM104.5 Dam Construction Site	> 60 m	No	Absorbent pads were deployed to remove visible product that was ponding on the ground surface. Contaminated material on the ground surface was removed with a shovel and placed into a drum. The remaining contaminated material was removed with a track-hoe and placed into Quatrex bags. All contaminated product was subsequently transferred to the HWB to be transported for offsite disposal.	The amount and size of material being pushed by the D6T Dozer was minimized when access road development resumed to ensure avoidance of large rocks or other large objects that could potentially damage the dozer undercarriage. Subsequently, a larger D8 Dozer was obtained for pushing rocks and materials to provide greater clearance during road development activities in this area.

Table 6.2: List of Reported Spills and Unauthorized Discharges - 2021

Date	NT-NU Spill Reporting Number	Quantity (m ³)	Material Spilled	Approximate Location (UTM NAD83 Zone 17W)		Project Area	Specific Location	Proximity to Water Body	Occurred within a Engineered Lined Facility?	Clean-up Details	Corrective Actions
				Easting	Northing						
2-Oct-21	21-423	0.005	Diesel Fuel	521761	7949510	Tote Road	Tote Road KM37	> 90	No	Containment was situated beneath the fuel cap to prevent further release and absorbent materials were applied to contain the spilled diesel fuel. A berm was subsequently constructed within the drainage ditch from road aggregate material to prevent migration of diesel fuel from the drainage ditch. Contaminated water was hydro-vacuumed from the affected area of the drainage ditch and deposited in containment for treatment onsite. Contaminated gravel was collected from the affected area using mobile equipment and placed in sealed containers within the HWB to be transported for offsite disposal.	Extra delineators were added to the road shoulder along this section to increase attention to the inner corner for northbound traffic. Routine maintenance of the delineators is completed as necessary to ensure continued effectiveness.
4-Nov-21	2021-465	0.205	Jet-A Fuel	504008	7976180	Milne Port	B1 Pad	> 100	No	Absorbent materials were deployed to contain the spilled material and remove product from the frozen ground surface. Contaminated snow was subsequently removed from the affected area using mobile equipment and deposited in the Contaminated Snow Containment Facility for treatment onsite. Used absorbent materials were collected and placed in a Quatrex bag within the HWB to be transported offsite for disposal.	A procedure is in place for loading and offloading trailers and the use of spotters. Spotter training and competency was reviewed following this incident to ensure all crews are trained and instructed to maintain a line of sight on the cargo being loaded or offloaded, including repositioning as necessary. All crews involved in loading and offloading trailers and spotting are required to review the procedure, and spotter competency assessments are conducted on all spotters.

Table 6.3: List of Reported Health & Safety Incidents - 2021

Incident Report Description	Incident Type	Date of Incident
Skid Steer SKD009 Fire	Dangerous Occurrence	1-Jan-21
345 Excavator upset	Dangerous Occurrence	22-Jan-21
MHT021 loss of control	Dangerous Occurrence	22-Jan-21
Injured thumb on left hand	Injury- MAI ¹	24-Feb-21
Left wrist injury	Injury- LTI ²	8-Mar-21
Hotbox electrical box fire	Dangerous Occurrence	23-Mar-21
Lube truck FLT010 Fire in Cab	Dangerous Occurrence	23-Apr-21
Left ankle injury	Injury- MAI ¹	25-Apr-21
Left elbow injury ³	Injury- MAI ¹	26-Apr-21
Cut finger on right hand	Injury- MAI ¹	29-May-21
988 Loader contacts OHT pup trailer	Dangerous Occurrence	9-Jul-21
Right ankle injury	Injury- MAI ¹	11-Jul-21
Cut thumb on right hand	Injury- MAI ¹	17-Jul-21
Right ankle injury ³	Injury- LTI ²	10-Aug-21
OHT020 engine compartment fire	Dangerous Occurrence	11-Aug-21
Injured finger on left hand	Injury- MAI ¹	13-Aug-21
Cut finger on right hand	Injury- MAI ¹	2-Sep-21
OHT021 drove into the ditch	Dangerous Occurrence	2-Oct-21
Cut finger on right hand	Injury- MAI ¹	5-Oct-21
745 haul truck caught fire	Dangerous Occurrence	18-Oct-21
OHT019 drives into ditch	Dangerous Occurrence	22-Oct-21
OHT050 drive tire fire	Dangerous Occurrence	13-Nov-21
Injured thumb on right hand	Injury- LTI ²	28-Nov-21
Snowmobile engine compartment fire	Dangerous Occurrence	21-Dec-21

Notes:

¹ Medical Aid Incident.

² Loss Time Incident.

³ Covered under scope of Type B 2BE-MRY2131 Water Licence.

Table 7.1: Water Quality Monitoring Locations - 2021

Monitoring Program	Monitoring Station	Description	Location (UTM NAD83 Zone 17 W)		Location		Status in 2021
			Easting	Northing	Latitude	Longitude	
Milne Port							
SNP	MP-01	Milne Port Sewage Treatment Plant (STP)	530810	7975970	71° 52' 56.3" N	-80° 06' 44.3" W	Active
SNP	MP-01A	Milne Port Polishing Waste Stabilization Pond (PWSP)	503625	7976015	71° 53' 02.9" N	-80° 53' 43.9" W	Active
SNP	MP-01B	Milne Port 380 Person Sewage Treatment Plant (STP)	503375	7975184	71° 52' 36.1" N	-80° 54' 10.0" W	Active
SNP	MP-02	Milne Port Maintenance Shop (Oily Water)	503785	7976209	71° 53' 09.2" N	-80° 53' 27.3" W	Inactive ²
SNP	MP-03	Milne Port Bulk Fuel Storage Facility (Stormwater)	503638	7976272	71° 53' 11.2" N	-80° 53' 42.5" W	Active
SNP	MP-04	Milne Port Landfarm Facility	503710	7975574	71° 52' 48.7" N	-80° 53' 35.2" W	Active
SNP	MP-04A	Milne Port Landfarm Facility (Contaminated Snow Containment Berm)	503862	7975482	71° 52' 45.7" N	-80° 53' 19.4" W	Active
SNP	MP-05	Milne Port Ore Stockpile Facility - East Surface Water Management Pond	503469	7976383	71° 53' 14.8" N	-80° 54' 00.0" W	Active
SNP	MP-06	Milne Port Ore Stockpile Facility - West Surface Water Management Pond	503125	7976364	71° 53' 14.2" N	-80° 54' 35.7" W	Active
SNP	MP-C-A	Surface Water Drainage Downstream of Milne Port Infrastructure	503214	7976483	71° 53' 18.1" N	-80° 54' 26.5" W	Inactive ²
SNP	MP-C-B		502836	7975732	71° 52' 53.8" N	-80° 55' 05.8" W	Active
SNP	MP-C-K		502979	7975333	71° 52' 41.0" N	-80° 54' 51.0" W	Active
SNP	MP-C-C		503436	7975427	71° 52' 44.0" N	-80° 54' 03.6" W	Inactive ²
SNP	MP-C-D		503651	7976363	71° 53' 14.2" N	-80° 53' 41.2" W	Inactive ²
SNP	MP-C-E		503736	7976346	71° 53' 13.6" N	-80° 53' 32.3" W	Inactive ²
SNP	MP-C-F		503922	7976304	71° 53' 12.2" N	-80° 53' 13.1" W	Inactive ²
SNP	MP-C-H		504114	7976417	71° 53' 15.9" N	-80° 52' 53.1" W	Active
SNP	MP-C-J		502940	7974760	71° 52' 22.5" N	-80° 54' 55.2" W	Active
SNP	MP-MRY-2		Fresh Water Intake at Phillips Creek	514503	7964579	71° 46' 52.3" N	-80° 35' 03.7" W
SNP	MP-MRY-3	Fresh Water Intake at Km 32 Lake	521547	7953735	71° 41' 00.4" N	-80° 23' 08.5" W	Active
SNP	MP-Q1-01	Surface Water Drainage Downstream of the Q1 Quarry	503839	7974467	71° 52' 13.0" N	-80° 53' 22.0" W	Active
SNP	MP-Q1-02		503828	7975396	71° 52' 42.9" N	-80° 53' 23.0" W	Active
Recycled Water	MP-Q1-P1	Milne Port Q1 Quarry Recycled Water for Dust Suppression	503822	7974661	71° 52' 19.3" N	-80° 53' 23.8" W	Active
Mine Site							
SNP	MQ-C-A	Surface Water Drainage Downstream of QMR2 Quarry	559489	7914408	71° 19' 28.2" N	-79° 20' 06.9" W	Active
SNP	MQ-C-B		560076	7913888	71° 19' 10.9" N	-79° 19' 09.2" W	Active
SNP	MQ-C-D		559422	7914223	71° 19' 22.3" N	-79° 20' 14.1" W	Active
SNP	MQ-C-E		563351	7912902	71° 18' 36.0" N	-79° 13' 42.5" W	Inactive ²
SNP	MS-01	Mine Site Sewage Treatment Plant No. 1	561322	7913257	71° 18' 49.4" N	-79° 17' 05.6" W	Active
SNP	MS-01A	Mine Site Polishing Waste Stabilization Pond (PWSP)	-	-	-	-	Not Constructed ³
SNP	MS-01B	Mine Site Sewage Treatment Plant No. 2	560794	7913235	71° 18' 49.1" N	-79° 17' 58.8" W	Active
SNP	MS-02	Mine Site Mobile Maintenance Buildings (Meltwater)	561638	7913222	71° 18' 48.0" N	-79° 16' 33.9" W	Not Constructed ³
SNP	MS-03	Mine Site Bulk Fuel Storage Facility (Stormwater)	561258	7913304	71° 18' 51.0" N	-79° 17' 11.9" W	Active

Notes:

¹ Exploration Phase infrastructure decommissioned.

² No surface water flows at location in 2021.

³ Not constructed.

⁴ Tote Road Water Crossings CV-154-A and CV-072-C are replacements for CV-162 and CV-071, respectively, that were originally listed in the Roads Management Plan (BAF-PH1-830-P16-0023), that are still representative of the appropriate watershed.

SNP - Surveillance Network Program ; TRMP - Tote Road Monitoring Program ; SSPM - Snow Stockpile Program Monitoring

Table 7.1: Water Quality Monitoring Locations - 2021

Monitoring Program	Monitoring Station	Description	Location (UTM NAD83 Zone 17 W)		Location		Status in 2021
			Easting	Northing	Latitude	Longitude	
SNP	MS-03B	Mine Site Bulk Fuel Storage Facility (Stormwater)	560993	7913601	71° 19' 00.8" N	-79° 17' 37.8" W	Active
SNP	MS-04	Mine Site Fuel Unloading Station (Stormwater)	-	-	-	-	Inactive ²
SNP	MS-05	Mine Site Landfarm Facility (Stormwater)	560828	7912726	71° 18' 32.7" N	-79° 17' 56.8" W	Active
SNP	MS-06	Mine Site Crusher Facility - Surface Water Management Pond	561475	7913000	71° 18' 40.9" N	-79° 16' 50.9" W	Active
SNP	MS-07	Mine Site Run of Mine (ROM) Ore Stockpile Pond - Surface Water Management Pond	563583	7913074	71° 18' 41.4" N	-79° 13' 18.6" W	Active
SNP	MS-08	Mine Site Waste Rock Facility (WRF) - Surface Water Management Pond	563218	7916802	71° 20' 24.7" N	-79° 13' 18.3" W	Active
SNP	MS-09	Waste Rock Stockpile - East Pond	-	-	-	-	Not Constructed ³
SNP	MS-10	Mine Site SDLT-1 Pond Ore Stockpile (Stormwater)	-	-	-	-	Not Constructed ³
SNP	MS-11	Mine Site KM105 Pond (Stormwater)	-	-	-	-	Inactive ²
SNP	MS-12	Mine Site Weatherhaven Camp (Stormwater)	-	-	-	-	Not Constructed ³
SNP	MS-13	Mine Site Explosives Magazine Pond	-	-	-	-	Not Constructed ³
SNP	MS-14	Mine Site Quarry QMR2 Pond/Sump	-	-	-	-	Not Constructed ³
SNP	MS-C-A	Surface Water Drainage Downstream of Mine Site Infrastructure	561263	7913571	71° 18' 59.6" N	-79° 17' 10.6" W	Active
SNP	MS-C-B		561454	7913537	71° 18' 58.3" N	-79° 16' 51.5" W	Active
SNP	MS-C-C		561110	7913199	71° 18' 47.7" N	-79° 17' 27.1" W	Active
SNP	MS-C-D		561008	7913280	71° 18' 50.4" N	-79° 17' 37.1" W	Active
SNP	MS-C-E		560980	7913388	71° 18' 53.9" N	-79° 17' 39.6" W	Active
SNP	MS-C-F		561797	7913278	71° 18' 49.6" N	-79° 16' 17.7" W	Active
SNP	MS-C-G		561813	7911830	71° 18' 02.9" N	-79° 16' 20.3" W	Active
SNP	MS-C-H		561162	7912067	71° 18' 11.1" N	-79° 17' 25.1" W	Active
Recycled Water	HR-CD-05	Mine Site Haul Road KM105 Pond Recycled Water for Dust Suppression	563812	7913140	71° 18' 43.3" N	79° 12' 55.4" W	Inactive ²
Recycled Water	MS-RW-01	Mine Site Flight Ops Pond (Pond 1) Recycled Water for Dust Suppression	559348	7914222	71° 19' 22.3" N	79° 20' 21.6" W	Active
Recycled Water	MS-RW-02	Mine Site Warehouse Pond (Pond 2) Recycled Water for Dust Suppression	559555	7913950	71° 19' 13.4" N	79° 20' 01.6" W	Active
SNP	MS-MRY-1	Fresh Water Intake at Camp Lake	557779	7914722	71° 19' 39.8" N	-79° 22' 58.2" W	Active
SNP	MS-MRY-04	Mine Site Exploration Camp Sewage Treatment Plant	558134	7914459	71° 19' 31.0" N	-79° 22' 23.2" W	Inactive ¹
SNP	MS-MRY-04A	Mine Site Polishing Waste Stabilization Pond (PWSP)	558549	7914112	71° 19' 19.4" N	-79° 21' 42.3" W	Active
SNP	MS-MRY-04B	Mine Site Polishing Waste Stabilization Pond (PWSP)	558438	7914310	71° 19' 25.9" N	-79° 21' 53.0" W	Active
SNP	MS-MRY-04C	Mine Site Polishing Waste Stabilization Pond (PWSP)	558508	7914264	71° 19' 24.4" N	-79° 21' 46.1" W	Active
SNP	MS-MRY-6	Hazardous Materials Storage Area (MS-HWB-7) (Stormwater)	558341	7914508	71° 19' 32.4" N	-79° 22' 02.2" W	Active
SNP	MS-MRY-09	Mine Site Deposit No.1 - Surface Water Drainage	561083	7915084	71° 19' 48.5" N	-79° 17' 24.5" W	Active
SNP	MS-MRY-10	Mine Site Deposit No. 1 - Surface Water Drainage	563820	7914620	71° 19' 31.0" N	-79° 12' 50.2" W	Active
SNP	MS-MRY-13A	Mine Site Non-Hazardous Waste Landfill Facility (Surface Water Drainage)	560754	7912484	71° 18' 25.0" N	-79° 18' 04.9" W	Active
SNP	MS-MRY-13B	Mine Site Non-Hazardous Waste Landfill Facility (Surface Water Drainage)	560642	7912527	71° 18' 26.4" N	-79° 18' 16.1" W	Active
SSPM	MS-SN-01	Mine Site Weatherhaven Snow Stockpile	558052	7914303	71° 19' 26.1" N	79° 22' 31.9" W	Active

Notes:

¹ Exploration Phase infrastructure decommissioned.

² No surface water flows at location in 2021.

³ Not constructed.

⁴ Tote Road Water Crossings CV-154-A and CV-072-C are replacements for CV-162 and CV-071, respectively, that were originally listed in the Roads Management Plan (BAF-PH1-830-P16-0023), that are still representative of the appropriate watershed.

SNP - Surveillance Network Program ; TRMP - Tote Road Monitoring Program ; SSPM - Snow Stockpile Program Monitoring

Table 7.1: Water Quality Monitoring Locations - 2021

Monitoring Program	Monitoring Station	Description	Location (UTM NAD83 Zone 17 W)		Location		Status in 2021
			Easting	Northing	Latitude	Longitude	
SSPM	MS-SN-02	Mine Site Landfill Access Road Snow Stockpile	561097	7912884	71° 18' 37.6" N	79° 17' 29.4" W	Active
SSPM	MS-SN-03	Mine Site Warehouse Snow Stockpile	559803	7913756	71° 19' 06.9" N	79° 19' 37.1" W	Active
Tote Road							
SSPM	TR-SN-01	Tote Road Snow Stockpile KM37	521756	7948884	71° 38' 23.8" N	80° 22' 52.2" W	Active
SSPM	TR-SN-02	Tote Road Snow Stockpile KM63	529396	7926786	71° 26' 27.7" N	80° 10' 20.9" W	Active
SSPM	TR-SN-03	Tote Road Snow Stockpile KM77	538726	7920503	71° 23' 00.1" N	79° 54' 47.0" W	Active
SSPM	TR-SN-04	Tote Road Snow Stockpile KM86	547040	7919654	71° 22' 27.3" N	-79° 40' 49.0" W	Active
SSPM	TR-SN-05	Tote Road Snow Stockpile KM92	551307	7916785	71° 20' 51.7" N	79° 33' 45.2" W	Inactive ²
SSPM	TR-SN-06	Tote Road Snow Stockpile KM97	555217	7914564	71° 19' 36.9" N	-79° 27' 16.6" W	Active
SSPM	TR-SN-07	Tote Road Snow Stockpile KM75	537681	7920369	71° 22' 56.4" N	-79° 56' 32.8" W	Active
Recycled Water	TR-BP-01	Tote Road KM97 Borrow Pond Recycled Water for Dust Suppression	556021	7914684	71° 19' 40.1" N	-79° 25' 55.4" W	Active
Recycled Water	TR-BP-02	Tote Road KM57 Borrow Pond Recycled Water for Dust Suppression	527171	7932085	71° 29' 19.6" N	-80° 13' 59.6" W	Active
TRMP	CV-167	Approximately located at KM6	505519	7972462	71° 51' 08.2" N	-80° 50' 28.5" W	Active
TRMP	CV-154-A ⁴	Approximately located at KM9.5	507620	7970076	71° 49' 51.0" N	-80° 46' 51.8" W	Active
TRMP	CV-128	Approximately located at KM17	513556	7965889	71° 47' 34.9" N	-80° 36' 40.6" W	Active
TRMP	CV-129	Approximately located at KM15	512381	7966783	71° 48' 03.9" N	-80° 38' 41.3" W	Active
TRMP	CV-115	Approximately located at KM28	519222	7958135	71° 43' 23.2" N	-80° 27' 03.0" W	Active
TRMP	CV-112	Approximately located at KM33	521033	7954935	71° 41' 39.3" N	-80° 24' 00.0" W	Active
TRMP	CV-106	Approximately located at KM33	521663	7953392	71° 40' 49.3" N	-80° 22' 57.0" W	Active
TRMP	CV-099	Approximately located at KM37	521886	7948843	71° 38' 22.4" N	-80° 22' 38.9" W	Active
TRMP	CV-093	Approximately located at KM42	522927	7945093	71° 36' 21.1" N	-80° 20' 56.4" W	Active
TRMP	CV-078	Approximately located at KM51	525852	7936787	71° 31' 51.9" N	-80° 16' 07.8" W	Active
TRMP	CV-072-C ⁴	Approximately located at KM54	526897	7934576	71° 30' 40.1" N	-80° 14' 24.2" W	Active
TRMP	CV-060	Approximately located at KM58	527622	7930342	71° 28' 23.2" N	-80° 13' 16.0" W	Active
TRMP	BG-50	Approximately located at KM63	529294	7926852	71° 26' 29.8" N	-80° 10' 31.1" W	Active
TRMP	CV-040	Approximately located at KM71.5	535168	7920326	71° 22' 56.4" N	-80° 00' 46.7" W	Active
TRMP	BG-32	Approximately located at KM78	540729	7921597	71° 23' 34.2" N	-79° 51' 22.6" W	Active
TRMP	CV-217	Approximately located at KM80	542321	7922189	71° 23' 52.4" N	-79° 48' 40.5" W	Active
TRMP	BG-30	Approximately located at KM84.5	546070	7919844	71° 22' 34.2" N	-79° 42' 26.6" W	Active
TRMP	BG-24	Approximately located at KM88	548766	7918878	71° 22' 01.1" N	-79° 37' 56.6" W	Active
TRMP	CV-001	Approximately located at KM94.1	553544	7914897	71° 19' 49.0" N	-79° 30' 04.3" W	Active
TRMP	CV-223	Approximately located at KM97.5	555705	7914676	71° 19' 40.1" N	-79° 26' 27.3" W	Active

Notes:

¹ Exploration Phase infrastructure decommissioned.

² No surface water flows at location in 2021.

³ Not constructed.

⁴ Tote Road Water Crossings CV-154-A and CV-072-C are replacements for CV-162 and CV-071, respectively, that were originally listed in the Roads Management Plan (BAF-PH1-830-P16-0023), that are still representative of the appropriate watershed.

SNP - Surveillance Network Program ; TRMP - Tote Road Monitoring Program ; SSPM - Snow Stockpile Program Monitoring

Table 7.2.1: Water Quality Results for Water Licence Monitoring Location - MP-01

Analyte	Sample ID			MP-01	MP-0101	MP-01	MP-01	MP-01	MP-01	MP-01	MP-01
	ALS Laboratory Sample ID			L2550732-1	L2550732-2	L2558665-1	L2563942-1	L2579172-1	L2584925-1	L2597166-1	L2602461-1
	Sample Date & Time			2021-01-21 12:45	2021-01-21 12:45	2021-02-16 10:15	2021-03-04 11:30	2021-04-20 13:15	2021-05-06 11:30	2021-06-02 13:10	2021-06-15 13:10
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹								
pH	pH units	0.10	6.0 - 9.5	7.78	7.79	7.61	7.85	7.57	7.73	7.90	7.83
Total Suspended Solids	mg/L	3.0/1.0	120	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.010	-	0.031	0.030	0.053	0.025	0.04	0.027	0.023	0.072
Total Kjeldahl Nitrogen	mg/L	0.50/0.050/5.0	-	1.91	1.82	1.04	0.98	1.23	1.17	0.920	35.0
Phosphorus, Total	mg/L	0.030/0.0030/0.060	-	9.77	9.76	13.2	9.92	12.9	11.9	8.90	12.5
Fecal Coliforms	CFU/100 mL	0	10,000	0	0	0	7	45	0	0	0
BOD	mg/L	2.0	100	<2.0	<2.0	<2.0	<2.0	4.8	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	Not Acutely Toxic	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.1: Water Quality Results for Water Licence Monitoring Location - MP-01

Analyte	Sample ID			MP-01	MP-01	MP-01	MP-0103	MP-01	MP-0103	MP-01	MP-0102
	ALS Laboratory Sample ID			L2611143-1	L2622710-1	L2637961-1	L2637961-3	L2640590-1	L2640590-3	L2648435-1	L2648435-3
	Sample Date & Time			2021-07-06 11:00	2021-08-03 13:00	2021-09-08 13:10	2021-09-08 13:10	2021-09-15 13:10	2021-09-15 13:00	2021-10-05 14:00	2021-10-05 14:00
	QA/QC Sample Type			N/A	N/A	N/A	Travel Blank	N/A	Travel Blank	N/A	Field Blank
	Units	LOR	Water Licence Criteria ¹								
pH	pH units	0.10	6.0 - 9.5	7.96	7.63	7.90	5.87	7.74	5.57	7.69	5.74
Total Suspended Solids	mg/L	3.0/1.0	120	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	1.0	<1.0
Ammonia, Total (as N)	mg/L	0.010	-	0.049	0.025	0.050	<0.010	0.042	<0.010	0.035	<0.010
Total Kjeldahl Nitrogen	mg/L	0.50/0.050/5.0	-	3.60	5.30	6.85	<0.050	3.49	<0.050	1.15	<0.050
Phosphorus, Total	mg/L	0.030/0.0030/0.060	-	11.1	14.9	13.7	0.0035	10.9	<0.0030	6.57	<0.0030
Fecal Coliforms	CFU/100 mL	0	10,000	0	0	0	0	0	0	0	0
BOD	mg/L	2.0	100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<2.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	-	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.1: Water Quality Results for Water Licence Monitoring Location - MP-01

Analyte	Sample ID			MP-01	MP-0101	MP-01	MP-0103
	ALS Laboratory Sample ID			L2661884-1	L2661884-4	L2671157-1	L2671157-3
	Sample Date & Time			2021-11-10 13:10	2021-11-10 13:10	2021-12-08 13:10	2021-12-08 13:00
	QA/QC Sample Type			N/A	Field Duplicate	N/A	Travel Blank
	Units	LOR	Water Licence Criteria ¹				
pH	pH units	0.10	6.0 - 9.5	7.86	7.87	8.07	5.32
Total Suspended Solids	mg/L	3.0/1.0	120	<1.0	<1.0	3.4	<1.0
Ammonia, Total (as N)	mg/L	0.010	-	0.031	0.036	0.027	0.013
Total Kjeldahl Nitrogen	mg/L	0.50/0.050/5.0	-	1.24	1.27	0.870	<0.050
Phosphorus, Total	mg/L	0.030/0.0030/0.060	-	11.1	11.1	8.58	<0.0030
Fecal Coliforms	CFU/100 mL	0	10,000	0	0	0	0
BOD	mg/L	2.0	100	<2.0	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	<2.0	<5.0	<2.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.2: Water Quality Results for Water Licence Monitoring Location - MP-01A

Analyte	Sample ID			MP-01A	MP-01A
	ALS Laboratory Sample ID			L2632384-1	L2635378-1
	Sample Date & Time			2021-08-26 11:10	2021-09-01 15:30
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
pH	pH units	0.10	6.0 - 9.5	7.83	7.96
Total Suspended Solids	mg/L	1.0	120	11.5	13.0
Total Dissolved Solids	mg/L	20	-	587	-
Turbidity	NTU	0.10	-	2.39	-
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	273	-
Ammonia, Total (as N)	mg/L	1.0	-	6.1	6.7
Total Kjeldahl Nitrogen	mg/L	0.10/0.50	-	11.5	13.0
Phosphorus, Total	mg/L	0.0030	-	0.186	0.217
Fecal Coliforms	CFU/100mL	0	10,000	0	0
BOD	mg/L	3.0	100	<3.0	<3.0
COD	mg/L	10	-	122	120
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	-	-	Not Acutely Toxic	Not Acutely Toxic	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5.

²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.3: Water Quality Results for Water Licence Monitoring Location - MP-01B

Analyte	Sample ID			MP-01B	MP-01B	MP-01B	MP-01B	MP-01B	MP-01B	MP-01B
	ALS Laboratory Sample ID			L2553158-1	L2558672-1	L2563947-1	L2579204-1	L2584928-1	L2597169-1	L2602482-1
	Sample Date & Time			2021-01-31 10:15	2021-02-16 13:30	2021-03-04 13:40	2021-04-20 13:30	2021-05-06 12:00	2021-06-02 13:15	2021-06-15 13:15
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
pH	pH units	0.10	6.0 - 9.5	7.99	8.57	8.47	8.12	7.22	8.43	8.45
Total Suspended Solids	mg/L	1.0/3.0	120	<3.0	<3.0	3.5	8.0	<3.0	3.7	<1.0
Ammonia, Total (as N)	mg/L	0.0050/0.010/0.50	-	0.0205	0.041	0.029	<0.010	0.0	0.018	0.038
Total Kjeldahl Nitrogen	mg/L	0.050	-	<0.050	1.26	2.40	1.20	0.550	5.20	0.730
Phosphorus, Total	mg/L	0.40/0.030/0.060/0.0030	-	9.57	7.25	7.62	10.5	15.3	3.61	6.96
Fecal Coliforms	CFU/100mL	1	10,000	<1	2	1	0	3	0	0
BOD	mg/L	2.0/3.0	100	3.0	3.1	<2.0	<2.0	<2.0	<2.0	<3.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A		Not Acutely Toxic	-	-	Not Acutely Toxic	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5.

²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.3: Water Quality Results for Water Licence Monitoring Location - MP-01B

Analyte	Sample ID			MP-01B	MP-01B	MP-01B	MP-01B03	MP-01B	MP-01B03	MP-01B
	ALS Laboratory Sample ID			L2611174-1	L2622708-1	L2637988-1	L2637988-3	L2640599-1	L2640599-3	L2648442-1
	Sample Date & Time			2021-07-06 12:00	2021-08-03 12:30	2021-09-08 13:15	2021-09-08 13:00	2021-09-15 13:15	2021-09-15 13:00	2021-10-05 14:00
	QA/QC Sample Type			N/A	N/A	N/A	Travel Blank	N/A	Travel Blank	N/A
	Units	LOR	Water Licence Criteria ¹							
pH	pH units	0.10	6.0 - 9.5	7.94	7.98	8.17	5.77	8.09	6.03	8.01
Total Suspended Solids	mg/L	1.0/3.0	120	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.0050/0.010/0.50	-	0.023	<0.50	0.048	<0.010	0.051	0.024	0.013
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.850	3.90	0.885	<0.050	0.787	<0.050	<0.050
Phosphorus, Total	mg/L	0.40/0.030/0.060/0.0030	-	11.4	8.81	9.38	0.0073	5.56	<0.0030	9.73
Fecal Coliforms	CFU/100mL	1	10,000	2	0	4	0	4	0	1
BOD	mg/L	2.0/3.0	100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen
Acute Lethality ^{2,3}	N/A		Not Acutely Toxic	-	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5.

²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.3: Water Quality Results for Water Licence Monitoring Location - MP-01B

Analyte	Sample ID			MP-01B03	MP-01B	MP-01B01	MP-01B	MP-01B02
	ALS Laboratory Sample ID			L2648442-3	L2661878-1	L2661878-4	L2671142-1	L2671142-3
	Sample Date & Time			2021-10-05 14:00	2021-11-10 13:10	2021-11-10 13:10	2021-12-08 13:45	2021-12-08 13:40
	QA/QC Sample Type			Travel Blank	N/A	Field Duplicate	N/A	Field Blank
	Units	LOR	Water Licence Criteria ¹					
pH	pH units	0.10	6.0 - 9.5	5.99	8.29	8.22	7.80	6.30
Total Suspended Solids	mg/L	1.0/3.0	120	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.0050/0.010/0.50	-	<0.010	0.043	0.044	0.024	<0.010
Total Kjeldahl Nitrogen	mg/L	0.050	-	<0.050	1.14	1.48	<0.050	<0.050
Phosphorus, Total	mg/L	0.40/0.030/0.060/0.0030	-	<0.0030	7.39	7.45	7.15	<0.0030
Fecal Coliforms	CFU/100mL	1	10,000	0	0	0	0	0
BOD	mg/L	2.0/3.0	100	<2.0	<2.0	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<2.0	<2.0	<2.0	<2.0
	-	-	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	-
Acute Lethality ^{2,3}	N/A		Not Acutely Toxic	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5.

²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.4: Water Quality Results for Water Licence Monitoring Location - MP-03

Analyte	Sample ID			MP-03	MP-03
	ALS Laboratory Sample ID			L2612302-1	L2631106-1
	Sample Date & Time			2021-07-09 13:20	2021-08-23 7:10
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
pH	pH units	0.10	-	8.07	8.47
Total Suspended Solids	mg/L	2.0	-	174	<2.0
Total Dissolved Solids	mg/L	10	-	535	343
Turbidity	NTU	0.10	-	185	1.88
Ammonia, Total (as N)	mg/L	0.0050/0.010	-	0.0369	0.162
Phosphorus, Total	mg/L	0.020/0.0030	-	0.072	0.0068
Arsenic (As)-Total	mg/L	0.00010	-	0.00101	0.00046
Copper (Cu)-Total	mg/L	0.0010/0.00050	-	0.00560	0.0023
Lead (Pb)-Total	mg/L	0.000050	0.001	0.00656	0.000347
Nickel (Ni)-Total	mg/L	0.00050	-	0.00279	0.00058
Zinc (Zn)-Total	mg/L	0.0030	-	0.0255	<0.0030
Benzene	mg/L	0.00050	0.37	<0.00050	<0.00050
Ethylbenzene	mg/L	0.00050	0.09	<0.00050	<0.00050
Toluene	mg/L	0.00045/0.00050	0.002	<0.00045	<0.00050
F1 (C6-C10)	mg/L	0.10/0.025	-	<0.10	<0.025
F2 (C10-C16)	mg/L	0.10	-	3.62	<0.10
F3 (C16-C34)	mg/L	0.25	-	1.29	<0.25
F4 (C34-C50)	mg/L	0.25	-	<0.25	<0.25
Total Hydrocarbons (C6-C50)	mg/L	0.38/0.37	-	4.91	<0.37
Oil and Grease, Total	mg/L	5.0	15	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 8.

Table 7.2.5: Water Quality Results for Water Licence Monitoring Location - MP-04

Analyte	Sample ID			MP-04	MP-04	MP-04
	ALS Laboratory Sample ID			L2612836-1	L2632383-1	L2634815-1
	Sample Date & Time			2021-07-12 14:20	2021-08-26 8:50	2021-09-01 10:30
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹			
pH	pH units	0.10	6.0 - 9.0	7.97	7.83	8.10
Total Suspended Solids	mg/L	1.0/2.0	15	17.3	1.6	2.6
Total Dissolved Solids	mg/L	10/20	-	616	902	785
Turbidity	NTU	0.10	-	10.8	4.66	5.43
Lead (Pb)-Total	mg/L	0.00005/0.00050	0.001	0.000124	0.000285	<0.00050
Benzene	mg/L	0.00050	0.370	<0.00050	<0.00050	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050	<0.00050	<0.00050
Toluene	mg/L	0.00050	0.002	<0.00050	<0.00050	<0.00050
F1 (C6-C10)	mg/L	0.025	-	<0.025	<0.025	<0.025
F2 (C10-C16)	mg/L	0.10	-	0.35	0.36	0.39
F3 (C16-C34)	mg/L	0.25	-	<0.25	<0.25	<0.25
F4 (C34-C50)	mg/L	0.25	-	<0.25	<0.25	<0.25
Total Hydrocarbons (C6-C50)	mg/L	0.37	-	<0.37	<0.37	0.39
Oil and Grease, Total	mg/L	5.0	15	<5.0	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 9.

Table 7.2.6: Water Quality Results for Water Licence Monitoring Location - MP-04A

Analyte	Sample ID			MP-04A	MP-04A
	ALS Laboratory Sample ID			L2622824-1	L2629905-1
	Sample Date & Time			2021-08-02 8:15	2021-08-20 14:30
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
pH	pH	0.10	6.0 - 9.0	6.58	7.12
Total Suspended Solids	mg/L	2.0	15	8.2	19.8
Total Dissolved Solids	mg/L	10/20	-	1990	1170
Turbidity	NTU	0.10	-	4.81	4.75
Lead (Pb)-Total	mg/L	0.00050/0.000050	0.001	0.00403	0.000237
Benzene	mg/L	0.00050	0.370	<0.00050	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050	<0.00050
Toluene	mg/L	0.00050/0.00045	0.002	<0.00050	<0.00045
F1 (C6-C10)	mg/ml	0.025/0.10	-	<0.025	<0.10
F2 (C10-C16)	mg/L	0.10	-	<0.10	<0.10
F3 (C16-C34)	mg/L	0.25	-	0.30	<0.25
F4 (C34-C50)	mg/L	0.25	-	<0.25	<0.25
Total Hydrocarbons (C6-C50)	mg/ml	0.37/0.38	-	<0.37	<0.38
Oil and Grease, Total	mg/L	5.0	15	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 9.

Table 7.2.7: Water Quality Results for Water Licence Monitoring Location - MP-05

Analyte	Sample ID			MP-05	MP-05
	ALS Laboratory Sample ID			L2606851-1	L2611194-1
	Sample Date & Time			2021-06-26 7:20	2021-07-05 15:30
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Hardness (as CaCO ₃)	mg/L	0.50/1.3	-	349	508
pH	pH units	0.10	6.0 - 9.5	8.27	8.32
Total Suspended Solids	mg/L	1.0/2.0	15	4.4	<1.0
Total Dissolved Solids	mg/L	10/20	-	613	833
Turbidity	NTU	0.10	-	14.9	6.81
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	118	137
Ammonia, Total (as N)	mg/L	0.0050/0.010/0.10	-	0.0481	0.096
Chloride (Cl)	mg/L	2.5/0.50	-	137	139
Fluoride (F)	mg/L	0.10/0.020	-	0.20	0.20
Nitrate (as N)	mg/L	0.020/0.10	-	3.01	4.28
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.434	0.730
Phosphorus, Total	mg/L	0.0020/0.0030	-	0.0145	0.0067
Sulfate (SO ₄)	mg/L	1.5/0.30	-	172	306
Dissolved Organic Carbon	mg/L	0.50	-	4.46	3.93
Total Organic Carbon	mg/L	0.50	-	3.90	4.50
Aluminum (Al)-Total	mg/L	0.0030/0.050/0.0050	-	0.150	0.115
Arsenic (As)-Total	mg/L	0.00010/0.0010	0.50	0.00024	<0.0010
Cadmium (Cd)-Total	mg/L	0.0000050/0.000050	-	<0.0000050	<0.000050
Calcium (Ca)-Total	mg/L	0.05/0.50	-	58.9	86.6
Copper (Cu)-Total	mg/L	0.00050/0.0050	0.30	0.00133	<0.0050
Iron (Fe)-Total	mg/L	0.010/0.10	-	0.170	0.14
Lead (Pb)-Total	mg/L	0.000050/0.00050	0.20	0.000259	<0.00050
Magnesium (Mg)-Total	mg/L	0.0050/0.050	-	45.8	69.7
Manganese (Mn)-Total	mg/L	0.00010/0.0050/0.00050	-	0.181	0.363
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050/0.00050	-	0.00510	0.00492
Nickel (Ni)-Total	mg/L	0.00050/0.0050	0.50	0.00161	<0.0050
Potassium (K)-Total	mg/L	0.050/0.50	-	8.65	9.00
Selenium (Se)-Total	mg/L	0.000050/0.00050	-	0.000363	0.00055
Sodium (Na)-Total	mg/L	0.050/0.50	-	57.2	53.3
Thallium (Tl)-Total	mg/L	0.000010/0.00010	-	0.000015	<0.00010
Uranium (U)-Total	mg/L	0.000010/0.00010	-	0.119	0.141
Zinc (Zn)-Total	mg/L	0.0030/0.030	0.50	0.0070	<0.030
Aluminum (Al)-Dissolved	mg/L	0.0010/0.50/0.050/0.0050	-	0.0206	<0.050
Arsenic (As)-Dissolved	mg/L	0.00010/0.0010	-	0.00021	<0.0010
Cadmium (Cd)-Dissolved	mg/L	0.0000050/0.000050	-	<0.0000050	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.050/0.50	-	60.3	85.60
Copper (Cu)-Dissolved	mg/L	0.00020/0.0020	-	0.00120	<0.0020
Iron (Fe)-Dissolved	mg/L	0.010/0.10	-	<0.010	<0.10
Lead (Pb)-Dissolved	mg/L	0.000050/0.00050	-	<0.000050	<0.00050
Magnesium (Mg)-Dissolved	mg/L	0.0050/0.050	-	48.1	71.4
Manganese (Mn)-Dissolved	mg/L	0.00010/0.0050/0.00050	-	0.158	0.330
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050/0.00050	-	0.00530	0.00471
Nickel (Ni)-Dissolved	mg/L	0.00050/0.0050	-	0.00136	<0.0050
Potassium (K)-Dissolved	mg/L	0.050/0.50	-	8.90	9.24
Selenium (Se)-Dissolved	mg/L	0.000050/0.00050	-	0.000348	0.00058
Sodium (Na)-Dissolved	mg/L	0.050/0.50	-	58.7	54.5
Thallium (Tl)-Dissolved	mg/L	0.000010/0.00010	-	0.000013	<0.00010
Uranium (U)-Dissolved	mg/L	0.000010/0.00010	-	0.114	0.137
Zinc (Zn)-Dissolved	mg/L	0.0010/0.010	-	0.0046	<0.010
Oil and Grease, Total	mg/L	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	Not Acutely Toxic	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10.

Table 7.2.7: Water Quality Results for Water Licence Monitoring Location - MP-05

Analyte	Sample ID			MP-05	MP-0501
	ALS Laboratory Sample ID			L2622832-1	L2622832-2
	Sample Date & Time			2021-08-02 14:30	2021-08-02 14:30
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹		
Hardness (as CaCO ₃)	mg/L	0.50/1.3	-	434	437
pH	pH units	0.10	6.0 - 9.5	8.36	8.33
Total Suspended Solids	mg/L	1.0/2.0	15	1.7	1.7
Total Dissolved Solids	mg/L	10/20	-	658	659
Turbidity	NTU	0.10	-	4.24	4.68
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	179	179
Ammonia, Total (as N)	mg/L	0.0050/0.010/0.10	-	0.049	0.049
Chloride (Cl)	mg/L	2.5/0.50	-	120	120
Fluoride (F)	mg/L	0.10/0.020	-	0.190	0.188
Nitrate (as N)	mg/L	0.020/0.10	-	3.77	3.77
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.490	0.770
Phosphorus, Total	mg/L	0.0020/0.0030	-	0.0073	0.0052
Sulfate (SO ₄)	mg/L	1.5/0.30	-	180	180
Dissolved Organic Carbon	mg/L	0.50	-	5.99	4.77
Total Organic Carbon	mg/L	0.50	-	5.10	4.51
Aluminum (Al)-Total	mg/L	0.0030/0.050/0.0050	-	0.097	0.077
Arsenic (As)-Total	mg/L	0.00010/0.0010	0.50	<0.0010	<0.0010
Cadmium (Cd)-Total	mg/L	0.0000050/0.000050	-	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L	0.05/0.50	-	78.4	79.8
Copper (Cu)-Total	mg/L	0.00050/0.0050	0.30	<0.0050	<0.0050
Iron (Fe)-Total	mg/L	0.010/0.10	-	<0.10	0.11
Lead (Pb)-Total	mg/L	0.000050/0.00050	0.20	<0.00050	<0.00050
Magnesium (Mg)-Total	mg/L	0.0050/0.050	-	57.8	56.6
Manganese (Mn)-Total	mg/L	0.00010/0.0050/0.00050	-	0.0977	0.0955
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050/0.00050	-	0.00388	0.00384
Nickel (Ni)-Total	mg/L	0.00050/0.0050	0.50	<0.0050	<0.0050
Potassium (K)-Total	mg/L	0.050/0.50	-	8.53	8.35
Selenium (Se)-Total	mg/L	0.000050/0.00050	-	<0.00050	<0.00050
Sodium (Na)-Total	mg/L	0.050/0.50	-	57.4	56.0
Thallium (Tl)-Total	mg/L	0.000010/0.00010	-	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.000010/0.00010	-	0.116	0.115
Zinc (Zn)-Total	mg/L	0.0030/0.030	0.50	<0.030	<0.030
Aluminum (Al)-Dissolved	mg/L	0.0010/0.50/0.050/0.0050	-	<0.050	<0.050
Arsenic (As)-Dissolved	mg/L	0.00010/0.0010	-	<0.0010	<0.0010
Cadmium (Cd)-Dissolved	mg/L	0.0000050/0.000050	-	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.050/0.50	-	78.4	79.3
Copper (Cu)-Dissolved	mg/L	0.00020/0.0020	-	<0.0020	<0.0020
Iron (Fe)-Dissolved	mg/L	0.010/0.10	-	<0.10	<0.10
Lead (Pb)-Dissolved	mg/L	0.000050/0.00050	-	<0.00050	<0.00050
Magnesium (Mg)-Dissolved	mg/L	0.0050/0.050	-	57.8	58.1
Manganese (Mn)-Dissolved	mg/L	0.00010/0.0050/0.00050	-	0.0789	0.0814
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050/0.00050	-	0.00402	0.00403
Nickel (Ni)-Dissolved	mg/L	0.00050/0.0050	-	<0.0050	<0.0050
Potassium (K)-Dissolved	mg/L	0.050/0.50	-	8.58	8.43
Selenium (Se)-Dissolved	mg/L	0.000050/0.00050	-	<0.00050	<0.00050
Sodium (Na)-Dissolved	mg/L	0.050/0.50	-	57.5	57.2
Thallium (Tl)-Dissolved	mg/L	0.000010/0.00010	-	<0.00010	<0.00010
Uranium (U)-Dissolved	mg/L	0.000010/0.00010	-	0.116	0.115
Zinc (Zn)-Dissolved	mg/L	0.0010/0.010	-	<0.010	<0.010
Oil and Grease, Total	mg/L	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10.

Table 7.2.7: Water Quality Results for Water Licence Monitoring Location - MP-05

Analyte	Sample ID			MP-05
	ALS Laboratory Sample ID			L2637962-1
	Sample Date & Time			2021-09-08 15:25
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Hardness (as CaCO ₃)	mg/L	0.50/1.3	-	426
pH	pH units	0.10	6.0 - 9.5	8.31
Total Suspended Solids	mg/L	1.0/2.0	15	2.1
Total Dissolved Solids	mg/L	10/20	-	697
Turbidity	NTU	0.10	-	6.16
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	198
Ammonia, Total (as N)	mg/L	0.0050/0.010/0.10	-	0.58
Chloride (Cl)	mg/L	2.5/0.50	-	131
Fluoride (F)	mg/L	0.10/0.020	-	<0.10
Nitrate (as N)	mg/L	0.020/0.10	-	4.45
Total Kjeldahl Nitrogen	mg/L	0.050	-	2.24
Phosphorus, Total	mg/L	0.0020/0.0030	-	0.0060
Sulfate (SO ₄)	mg/L	1.5/0.30	-	179
Dissolved Organic Carbon	mg/L	0.50	-	6.86
Total Organic Carbon	mg/L	0.50	-	5.89
Aluminum (Al)-Total	mg/L	0.0030/0.050/0.0050	-	0.0586
Arsenic (As)-Total	mg/L	0.00010/0.0010	0.50	0.00022
Cadmium (Cd)-Total	mg/L	0.0000050/0.000050	-	<0.0000050
Calcium (Ca)-Total	mg/L	0.05/0.50	-	83.5
Copper (Cu)-Total	mg/L	0.00050/0.0050	0.30	0.00170
Iron (Fe)-Total	mg/L	0.010/0.10	-	0.101
Lead (Pb)-Total	mg/L	0.000050/0.00050	0.20	0.000156
Magnesium (Mg)-Total	mg/L	0.0050/0.050	-	54.9
Manganese (Mn)-Total	mg/L	0.00010/0.0050/0.00050	-	0.0758
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050/0.00050	-	0.00339
Nickel (Ni)-Total	mg/L	0.00050/0.0050	0.50	0.00139
Potassium (K)-Total	mg/L	0.050/0.50	-	8.39
Selenium (Se)-Total	mg/L	0.000050/0.00050	-	0.000337
Sodium (Na)-Total	mg/L	0.050/0.50	-	58.0
Thallium (Tl)-Total	mg/L	0.000010/0.00010	-	0.000017
Uranium (U)-Total	mg/L	0.000010/0.00010	-	0.0747
Zinc (Zn)-Total	mg/L	0.0030/0.030	0.50	0.0114
Aluminum (Al)-Dissolved	mg/L	0.0010/0.50/0.050/0.0050	-	0.0091
Arsenic (As)-Dissolved	mg/L	0.00010/0.0010	-	0.00021
Cadmium (Cd)-Dissolved	mg/L	0.0000050/0.000050	-	0.0000135
Calcium (Ca)-Dissolved	mg/L	0.050/0.50	-	80.9
Copper (Cu)-Dissolved	mg/L	0.00020/0.0020	-	0.00159
Iron (Fe)-Dissolved	mg/L	0.010/0.10	-	0.014
Lead (Pb)-Dissolved	mg/L	0.000050/0.00050	-	0.000058
Magnesium (Mg)-Dissolved	mg/L	0.0050/0.050	-	54.4
Manganese (Mn)-Dissolved	mg/L	0.00010/0.0050/0.00050	-	0.0676
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050/0.00050	-	0.00328
Nickel (Ni)-Dissolved	mg/L	0.00050/0.0050	-	0.00165
Potassium (K)-Dissolved	mg/L	0.050/0.50	-	8.37
Selenium (Se)-Dissolved	mg/L	0.000050/0.00050	-	0.000421
Sodium (Na)-Dissolved	mg/L	0.050/0.50	-	57.5
Thallium (Tl)-Dissolved	mg/L	0.000010/0.00010	-	0.000014
Uranium (U)-Dissolved	mg/L	0.000010/0.00010	-	0.0711
Zinc (Zn)-Dissolved	mg/L	0.0010/0.010	-	0.0099
Oil and Grease, Total	mg/L	-	-	-
	-	-	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10.

Table 7.2.8: Water Quality Results for Water Licence Monitoring Location - MP-06

Analyte	Sample ID			MP-06	MP-06
	ALS Laboratory Sample ID			L2611198-1	L2622828-1
	Sample Date & Time			2021-07-05 14:30	2021-08-02 14:30
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Hardness (as CaCO3)	mg/L	0.50/1.3	-	356	378
pH	pH units	0.10	6.0 - 9.5	8.15	8.10
Total Suspended Solids	mg/L	1.0/2.0	15	2.1	2.7
Total Dissolved Solids	mg/L	10/20	-	643	699
Turbidity	NTU	0.10	-	1.66	2.35
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	77.1	103
Ammonia, Total (as N)	mg/L	0.010	-	<0.010	0.028
Chloride (Cl)	mg/L	2.5/0.50	-	123	115
Fluoride (F)	mg/L	0.10/0.020	-	0.115	0.334
Nitrate (as N)	mg/L	0.020/0.10	-	2.39	4.06
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.470	0.800
Phosphorus, Total	mg/L	0.0030	-	<0.0030	0.0042
Sulfate (SO4)	mg/L	1.5/0.30	-	217	238
Dissolved Organic Carbon	mg/L	0.50	-	8.17	12.6
Total Organic Carbon	mg/L	0.50	-	7.92	12.8
Aluminum (Al)-Total	mg/L	0.050/0.0050	-	0.0187	0.087
Arsenic (As)-Total	mg/L	0.00010/0.0010	0.50	0.00020	<0.0010
Cadmium (Cd)-Total	mg/L	0.0000050/0.000050	-	<0.0000050	<0.000050
Calcium (Ca)-Total	mg/L	0.050/0.50	-	52.9	67.9
Copper (Cu)-Total	mg/L	0.00050/0.0050	0.30	0.00076	<0.0050
Iron (Fe)-Total	mg/L	0.010/0.10	-	0.015	0.18
Lead (Pb)-Total	mg/L	0.000050/0.00050	0.20	<0.000050	<0.00050
Magnesium (Mg)-Total	mg/L	0.0050/0.050	-	53.5	50.5
Manganese (Mn)-Total	mg/L	0.0050/0.00050	-	0.0429	0.0189
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050/0.00050	-	0.00362	0.00581
Nickel (Ni)-Total	mg/L	0.00050/0.0050	0.50	0.00122	<0.0050
Potassium (K)-Total	mg/L	0.050/0.50	-	7.26	10.6
Selenium (Se)-Total	mg/L	0.000050/0.00050	-	0.000410	<0.00050
Sodium (Na)-Total	mg/L	0.050/0.50	-	55.7	71.8
Thallium (Tl)-Total	mg/L	0.000010/0.00010	-	0.000015	<0.00010
Uranium (U)-Total	mg/L	0.000010/0.00010	-	0.0406	0.444
Zinc (Zn)-Total	mg/L	0.0030/0.030	0.50	<0.0030	<0.030
Aluminum (Al)-Dissolved	mg/L	0.050/0.0050	-	0.0108	<0.050
Arsenic (As)-Dissolved	mg/L	0.00010/0.0010	-	0.00023	<0.0010
Cadmium (Cd)-Dissolved	mg/L	0.0000050/0.000050	-	0.0000061	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.050/0.50	-	52.2	67.8
Copper (Cu)-Dissolved	mg/L	0.00020/0.0020	-	0.00069	<0.0020
Iron (Fe)-Dissolved	mg/L	0.010/0.10	-	<0.010	<0.10
Lead (Pb)-Dissolved	mg/L	0.000050/0.00050	-	<0.000050	<0.00050
Magnesium (Mg)-Dissolved	mg/L	0.0050/0.050	-	54.9	50.7
Manganese (Mn)-Dissolved	mg/L	0.0050/0.00050	-	0.0410	0.0100
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050/0.00050	-	0.00356	0.00642
Nickel (Ni)-Dissolved	mg/L	0.00050/0.0050	-	0.00112	<0.0050
Potassium (K)-Dissolved	mg/L	0.050/0.50	-	7.44	10.6
Selenium (Se)-Dissolved	mg/L	0.000050/0.00050	-	0.000491	0.00060
Sodium (Na)-Dissolved	mg/L	0.050/0.50	-	56.1	72.7
Thallium (Tl)-Dissolved	mg/L	0.000010/0.00010	-	0.000017	<0.00010
Uranium (U)-Dissolved	mg/L	0.000010/0.00010	-	0.0407	0.450
Zinc (Zn)-Dissolved	mg/L	0.0010/0.010	-	0.0016	<0.010
Oil and Grease, Total	mg/L	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	Not Acutely Toxic	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10.

Table 7.2.8: Water Quality Results for Water Licence Monitoring Location - MP-06

Analyte	Sample ID			MP-06	MP-06
	ALS Laboratory Sample ID			L2634795-1	L2655270-1
	Sample Date & Time			2021-09-01 11:15	2021-10-24 16:15
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Hardness (as CaCO3)	mg/L	0.50/1.3	-	549	311
pH	pH units	0.10	6.0 - 9.5	8.11	8.13
Total Suspended Solids	mg/L	1.0/2.0	15	2.1	5.3
Total Dissolved Solids	mg/L	10/20	-	1,030	503
Turbidity	NTU	0.10	-	4.27	20.6
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	150	151
Ammonia, Total (as N)	mg/L	0.010	-	0.350	0.435
Chloride (Cl)	mg/L	2.5/0.50	-	159	77.8
Fluoride (F)	mg/L	0.10/0.020	-	0.48	0.165
Nitrate (as N)	mg/L	0.020/0.10	-	7.49	2.86
Total Kjeldahl Nitrogen	mg/L	0.050	-	1.82	1.46
Phosphorus, Total	mg/L	0.0030	-	0.0044	0.0049
Sulfate (SO4)	mg/L	1.5/0.30	-	428	139
Dissolved Organic Carbon	mg/L	0.50	-	5.13	7.49
Total Organic Carbon	mg/L	0.50	-	5.96	6.86
Aluminum (Al)-Total	mg/L	0.050/0.0050	-	<0.050	0.284
Arsenic (As)-Total	mg/L	0.00010/0.0010	0.50	<0.0010	0.00025
Cadmium (Cd)-Total	mg/L	0.0000050/0.000050	-	<0.000050	0.0000068
Calcium (Ca)-Total	mg/L	0.050/0.50	-	104	64.2
Copper (Cu)-Total	mg/L	0.00050/0.0050	0.30	<0.0050	0.00164
Iron (Fe)-Total	mg/L	0.010/0.10	-	<0.10	0.413
Lead (Pb)-Total	mg/L	0.000050/0.00050	0.20	<0.00050	0.000441
Magnesium (Mg)-Total	mg/L	0.0050/0.050	-	65.3	40.2
Manganese (Mn)-Total	mg/L	0.0050/0.00050	-	0.107	0.138
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050/0.00050	-	0.0134	0.00429
Nickel (Ni)-Total	mg/L	0.00050/0.0050	0.50	<0.0050	0.00132
Potassium (K)-Total	mg/L	0.050/0.50	-	15.6	6.70
Selenium (Se)-Total	mg/L	0.000050/0.00050	-	0.00073	0.000431
Sodium (Na)-Total	mg/L	0.050/0.50	-	104	36.1
Thallium (Tl)-Total	mg/L	0.000010/0.00010	-	<0.00010	0.000018
Uranium (U)-Total	mg/L	0.000010/0.00010	-	0.778	0.109
Zinc (Zn)-Total	mg/L	0.0030/0.030	0.50	<0.030	0.0098
Aluminum (Al)-Dissolved	mg/L	0.050/0.0050	-	<0.050	0.0175
Arsenic (As)-Dissolved	mg/L	0.00010/0.0010	-	<0.0010	0.00020
Cadmium (Cd)-Dissolved	mg/L	0.0000050/0.000050	-	<0.000050	0.0000075
Calcium (Ca)-Dissolved	mg/L	0.050/0.50	-	114	57.2
Copper (Cu)-Dissolved	mg/L	0.00020/0.0020	-	<0.0020	0.00136
Iron (Fe)-Dissolved	mg/L	0.010/0.10	-	<0.10	0.016
Lead (Pb)-Dissolved	mg/L	0.000050/0.00050	-	<0.00050	0.000061
Magnesium (Mg)-Dissolved	mg/L	0.0050/0.050	-	64.0	40.9
Manganese (Mn)-Dissolved	mg/L	0.0050/0.00050	-	0.0998	0.126
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050/0.00050	-	0.0150	0.00403
Nickel (Ni)-Dissolved	mg/L	0.00050/0.0050	-	<0.0050	0.00100
Potassium (K)-Dissolved	mg/L	0.050/0.50	-	15.5	6.91
Selenium (Se)-Dissolved	mg/L	0.000050/0.00050	-	0.0111	0.000451
Sodium (Na)-Dissolved	mg/L	0.050/0.50	-	<0.00050	36.2
Thallium (Tl)-Dissolved	mg/L	0.000010/0.00010	-	<0.0020	0.000015
Uranium (U)-Dissolved	mg/L	0.000010/0.00010	-	<0.0010	0.109
Zinc (Zn)-Dissolved	mg/L	0.0010/0.010	-	<0.0050	0.0088
Oil and Grease, Total	mg/L	-	-	<0.010	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10.

Table 7.2.9: Water Quality Results for Water Licence Monitoring Location - MP-C-B

Analyte	Sample ID			MP-C-B	MP-C-B	MP-C-B	MP-C-B	MP-C-B03	MP-C-B	MP-C-B	MP-C-B	MP-C-B
	ALS Laboratory Sample ID			L2586524-1	L2595282-4	L2600575-4	L2602404-6	L2602404-7	L2606493-6	L2608772-4	L2611804-3	L2614208-3
	Sample Date & Time			2021-05-09 12:15	2021-06-01 9:05	2021-06-08 9:30	2021-06-15 11:45	2021-06-15 11:45	2021-06-24 10:15	2021-06-29 8:45	2021-07-06 8:50	2021-07-13 16:40
	QA/QC Sample Type			N/A	N/A	N/A	N/A	Travel Blank	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹									
Conductivity	umhos/cm	1.0/3.0	-	-	472	-	257	<1.0	-	-	488	-
pH	pH units	0.10	6.0 - 9.5	8.08	8.23	8.08	8.11	6.26	8.28	8.30	8.22	8.21
Total Suspended Solids	mg/L	1.0/2.0	Grab 30, Average 15	<2.0	12.7	22.3	3.9	<1.0	<2.0	<2.0	1.8	<2.0
Total Dissolved Solids	mg/L	10/20	-	315	270	220	147	<10	224	278	320	344
Turbidity	NTU	0.10	-	3.99	33.6	51.0	0.20	0.31	5.10	10.0	2.22	3.80
Ammonia, Total (as N)	mg/L	0.010	-	-	0.406	-	0.066	0.013	-	-	0.022	-
Nitrate (as N)	mg/L	0.020	-	-	0.545	-	0.966	<0.020	-	-	0.903	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	<5.0	<5.0	-	-	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.9: Water Quality Results for Water Licence Monitoring Location - MP-C-B

Analyte	Sample ID			MP-C-B	MP-C-B	MP-C-B	MP-C-B	MP-C-B	MP-C-B01	MP-C-B	MP-C-B	MP-C-B01
	ALS Laboratory Sample ID			L2617707-3	L2620706-3	L2623229-8	L2626311-7	L2627807-2	L2627807-3	L2630604-5	L2634765-1	L2634765-2
	Sample Date & Time			2021-07-20 9:15	2021-07-27 14:15	2021-08-03 13:45	2021-08-11 6:40	2021-08-15 9:55	2021-08-15 9:55	2021-08-24 8:15	2021-09-01 10:00	2021-09-01 10:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Duplicate	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹									
Conductivity	umhos/cm	1.0/3.0	-	-	-	592	-	-	-	-	746	750
pH	pH units	0.10	6.0 - 9.5	8.28	8.31	8.29	8.28	8.33	8.32	8.37	8.18	8.22
Total Suspended Solids	mg/L	1.0/2.0	Grab 30, Average 15	<2.0	3.2	<2.0	2.9	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	354	389	354	394	351	354	343	432	428
Turbidity	NTU	0.10	-	2.93	9.88	1.68	7.76	4.30	4.27	3.07	1.69	1.71
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.019	-	-	-	-	0.023	0.022
Nitrate (as N)	mg/L	0.020	-	-	-	3.50	-	-	-	-	4.34	4.34
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	<5.0	-	-	-	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.9: Water Quality Results for Water Licence Monitoring Location - MP-C-B

Analyte	Sample ID			MP-C-B	MP-C-B	MP-C-B	MP-C-B	MP-C-B01
	ALS Laboratory Sample ID			L2637047-1	L2639311-4	L2648053-1	L2650270-1	L2650270-2
	Sample Date & Time			2021-09-07 16:25	2021-09-14 10:40	2021-10-05 14:15	2021-10-11 8:15	2021-10-11 8:15
	QA/QC Sample Type			N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	1.0/3.0	-	-	-	537	-	-
pH	pH units	0.10	6.0 - 9.5	8.20	7.85	8.03	7.77	7.80
Total Suspended Solids	mg/L	1.0/2.0	Grab 30, Average 15	<2.0	<2.0	26.8	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	394	469	343	433	432
Turbidity	NTU	0.10	-	1.64	0.47	111	3.08	3.11
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.247	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	1.95	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.10: Water Quality Results for Water Licence Monitoring Location - MP-C-H

Analyte	Sample ID			MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H01	MP-C-H
	ALS Laboratory Sample ID			L2600575-1	L2602404-1	L2606493-7	L2608772-1	L2611804-1	L2611804-2	L2614208-7
	Sample Date & Time			2021-06-08 7:30	2021-06-15 8:45	2021-06-24 10:40	2021-06-29 6:45	2021-07-06 7:40	2021-07-06 7:40	2021-07-13 15:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	150	-	-	227	228	-
pH	pH units	0.10	6.0 - 9.5	7.92	7.90	8.08	8.09	8.06	8.12	8.15
Total Suspended Solids	mg/L	2.0/1.0	Grab 30, Average 15	3.0	3.2	<2.0	<2.0	<1.0	<1.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	406	82	77	99	142	144	152
Turbidity	NTU	0.10	-	10.0	7.11	1.34	1.98	0.49	0.62	0.48
Ammonia, Total (as N)	mg/L	0.010	-	-	0.041	-	-	0.015	0.012	-
Nitrate (as N)	mg/L	0.020	-	-	0.343	-	-	0.335	0.327	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	-	<5.0	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.10: Water Quality Results for Water Licence Monitoring Location - MP-C-H

Analyte	Sample ID			MP-C-H	MP-C-H	MP-C-H03	MP-C-H	MP-C-H	MP-C-H	MP-C-H
	ALS Laboratory Sample ID			L2617707-2	L2620706-6	L2620706-7	L2623229-5	L2626311-6	L2627807-1	L2630604-1
	Sample Date & Time			2021-07-20 7:20	2021-07-28 7:15	2021-07-28 7:15	2021-08-03 11:20	2021-08-10 11:00	2021-08-15 9:10	2021-08-24 6:50
	QA/QC Sample Type			N/A	N/A	Travel Blank	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	-	-	392	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.23	8.19	5.95	8.26	8.18	8.32	8.32
Total Suspended Solids	mg/L	2.0/1.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	183	157	14	204	161	207	179
Turbidity	NTU	0.10	-	0.38	0.17	<0.10	0.38	0.29	0.41	0.23
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	0.073	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	0.988	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.10: Water Quality Results for Water Licence Monitoring Location - MP-C-H

Analyte	Sample ID			MP-C-H01	MP-C-H	MP-C-H	MP-C-H	MP-C-H01	MP-C-H	MP-C-H
	ALS Laboratory Sample ID			L2630604-2	L2634765-5	L2637047-5	L2639311-1	L2639311-2	L2648053-5	L2650270-5
	Sample Date & Time			2021-08-24 6:50	2021-09-01 10:45	2021-09-07 10:30	2021-09-14 9:00	2021-09-14 9:00	2021-10-05 13:50	2021-10-11 8:00
	QA/QC Sample Type			Field Duplicate	N/A	N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	346	-	-	-	291	-
pH	pH units	0.10	6.0 - 9.5	8.33	8.28	8.20	8.09	8.13	8.17	8.09
Total Suspended Solids	mg/L	2.0/1.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	174	202	204	217	197	187	166
Turbidity	NTU	0.10	-	0.25	0.12	0.45	0.11	0.11	0.72	0.26
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	-	-	0.012	-
Nitrate (as N)	mg/L	0.020	-	-	0.151	-	-	-	0.185	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<2.0	-	-	-	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.11: Water Quality Results for Water Licence Monitoring Location - MP-C-J

Analyte	Sample ID			MP-C-J	MP-C-J03	MP-C-J	MP-C-J	MP-C-J	MP-C-J
	ALS Laboratory Sample ID			L2600575-2	L2600575-3	L2602404-4	L2606493-4	L2608772-2	L2611804-5
	Sample Date & Time			2021-06-08 8:15	2021-06-08 8:15	2021-06-15 11:05	2021-06-24 9:30	2021-06-29 7:35	2021-07-06 9:55
	QA/QC Sample Type			N/A	Travel Blank	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-	-	-	466	-	-	400
pH	pH units	0.10	6.0 - 9.5	8.05	5.90	8.22	8.14	8.03	7.98
Total Suspended Solids	mg/L	2.0/1.0	Grab 30, Average 15	<2.0	<2.0	2.2	<2.0	<2.0	<1.0
Total Dissolved Solids	mg/L	10/20	-	263	<10	258	205	196	244
Turbidity	NTU	0.10	-	2.09	<0.10	1.03	0.96	0.20	0.29
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.013	-	-	0.021
Nitrate (as N)	mg/L	0.020	-	-	-	0.230	-	-	0.079
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	<5.0	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.11: Water Quality Results for Water Licence Monitoring Location - MP-C-J

Analyte	Sample ID			MP-C-J	MP-C-J	MP-C-J	MP-C-J	MP-C-J	MP-C-J01	MP-C-J
	ALS Laboratory Sample ID			L2614208-5	L2617707-5	L2620706-5	L2623229-6	L2626311-1	L2626311-2	L2627807-5
	Sample Date & Time			2021-07-13 16:00	2021-07-20 8:50	2021-07-28 8:00	2021-08-03 12:15	2021-08-10 8:35	2021-08-10 8:35	2021-08-15 10:35
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	-	-	452	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.96	8.09	7.95	8.07	8.06	8.06	8.15
Total Suspended Solids	mg/L	2.0/1.0	Grab 30, Average 15	2.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	276	220	244	244	172	235	242
Turbidity	NTU	0.10	-	<0.10	0.50	0.25	0.19	0.33	0.39	0.35
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	0.011	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	0.048	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.11: Water Quality Results for Water Licence Monitoring Location - MP-C-J

Analyte	Sample ID			MP-C-J	MP-C-J	MP-C-J	MP-C-J
	ALS Laboratory Sample ID			L2630604-3	L2634765-3	L2637047-2	L2648053-2
	Sample Date & Time			2021-08-24 7:30	2021-09-01 9:20	2021-09-07 9:45	2021-10-06 6:55
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0	-	-	500	-	419
pH	pH units	0.10	6.0 - 9.5	8.00	7.89	7.91	7.81
Total Suspended Solids	mg/L	2.0/1.0	Grab 30, Average 15	<2.0	2.2	<2.0	2.9
Total Dissolved Solids	mg/L	10/20	-	249	277	281	246
Turbidity	NTU	0.10	-	0.27	<0.10	0.21	0.69
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	0.018
Nitrate (as N)	mg/L	0.020	-	-	0.088	-	0.055
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	<2.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.12: Water Quality Results for Water Licence Monitoring Location - MP-C-K

Analyte	Sample ID			MP-C-K	MP-C-K	MP-C-K03	MP-C-K	MP-C-K	MP-C-K
	ALS Laboratory Sample ID			L2592243-1	L2595282-2	L2595282-3	L2600575-5	L2602404-5	L2606493-5
	Sample Date & Time			2021-05-25 11:35	2021-06-01 8:45	2021-06-01 8:45	2021-06-08 9:45	2021-06-15 11:30	2021-06-24 10:00
	QA/QC Sample Type			N/A	N/A	Travel Blank	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-	539	509	<1.0	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.99	8.25	8.00	8.11	8.17	8.21
Total Suspended Solids	mg/L	1.0/2.0/3.0	Grab 30, Average 15	10.2	4.4	<1.0	3.4	<1.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	430	302	<10	267	269	268
Turbidity	NTU	0.10	-	22.9	11.6	<0.10	7.52	1.14	0.87
Ammonia, Total (as N)	mg/L	0.010/0.050	-	2.06	0.284	<0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.285	0.544	<0.020	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.12: Water Quality Results for Water Licence Monitoring Location - MP-C-K

Analyte	Sample ID			MP-C-K	MP-C-K	MP-C-K	MP-C-K	MP-C-K	MP-C-K
	ALS Laboratory Sample ID			L2608772-3	L2611804-4	L2614208-4	L2617707-4	L2620706-4	L2623229-7
	Sample Date & Time			2021-06-29 8:30	2021-07-06 9:30	2021-07-13 15:45	2021-07-20 8:35	2021-07-27 14:45	2021-08-03 13:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-		569	-	-	-	783
pH	pH units	0.10	6.0 - 9.5	8.22	8.20	8.00	8.13	8.18	8.16
Total Suspended Solids	mg/L	1.0/2.0/3.0	Grab 30, Average 15	<2.0	1.0	12.7	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	269	406	404	437	425	543
Turbidity	NTU	0.10	-	0.92	0.75	0.51	0.52	0.42	0.42
Ammonia, Total (as N)	mg/L	0.010/0.050	-	-	0.017	-	-	-	0.053
Nitrate (as N)	mg/L	0.020	-	-	1.43	-	-	-	1.95
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	-	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.12: Water Quality Results for Water Licence Monitoring Location - MP-C-K

Analyte	Sample ID			MP-C-K	MP-C-K	MP-C-K	MP-C-K	MP-C-K	MP-C-K01
	ALS Laboratory Sample ID			L2626311-3	L2627807-4	L2630604-4	L2634765-4	L2637047-3	L2637047-4
	Sample Date & Time			2021-08-10 9:00	2021-08-15 10:20	2021-08-24 8:00	2021-09-01 9:40	2021-09-07 16:05	2021-09-07 16:05
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-	-	-	-	1,030	-	-
pH	pH units	0.10	6.0 - 9.5	8.15	8.26	8.29	8.15	8.15	8.13
Total Suspended Solids	mg/L	1.0/2.0/3.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	531	547	513	614	570	575
Turbidity	NTU	0.10	-	1.39	0.72	0.50	0.43	0.32	0.29
Ammonia, Total (as N)	mg/L	0.010/0.050	-	-	-	-	0.028	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	1.21	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.12: Water Quality Results for Water Licence Monitoring Location - MP-C-K

Analyte	Sample ID			MP-C-K	MP-C-K	MP-C-K01	MP-C-K
	ALS Laboratory Sample ID			L2639311-3	L2648053-3	L2648053-4	L2650270-3
	Sample Date & Time			2021-09-14 10:25	2021-10-05 14:30	2021-10-05 14:30	2021-10-11 9:00
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0	-	-	704	701	-
pH	pH units	0.10	6.0 - 9.5	7.84	8.00	8.01	7.75
Total Suspended Solids	mg/L	1.0/2.0/3.0	Grab 30, Average 15	2.5	2.1	<2.0	2.1
Total Dissolved Solids	mg/L	10/20	-	795	447	426	467
Turbidity	NTU	0.10	-	0.27	3.49	3.42	0.74
Ammonia, Total (as N)	mg/L	0.010/0.050	-	-	0.056	0.053	-
Nitrate (as N)	mg/L	0.020	-	-	0.964	0.974	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.2.13: Water Quality Results for Water Licence Monitoring Location - MP-Q1-01

Analyte	Sample ID			MP-Q1-01	MP-Q1-01	MP-Q1-01	MP-Q1-01	MP-Q1-01	MP-Q1-0101	MP-Q1-01
	ALS Laboratory Sample ID			L2595282-1	L2600575-7	L2602404-3	L2606493-3	L2608772-7	L2608772-8	L2611804-7
	Sample Date & Time			2021-06-01 8:00	2021-06-08 10:45	2021-06-15 10:40	2021-06-24 9:30	2021-06-29 9:35	2021-06-29 9:35	2021-07-06 11:20
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	211	-	-	-	-	-	190
pH	pH units	0.10	6.0 - 9.5	8.01	7.77	7.74	7.89	7.79	7.83	7.92
Total Suspended Solids	mg/L	1.0/2.0	Grab 30, Average 15	2.9	6.8	1.4	<2.0	<2.0	<2.0	<1.0
Total Dissolved Solids	mg/L	10/13/20	-	122	78	63	103	77	104	128
Turbidity	NTU	0.10	-	16.1	7.56	5.51	2.08	1.95	1.98	1.66
Ammonia, Total (as N)	mg/L	0.010	-	0.072	-	-	-	-	-	0.031
Nitrate (as N)	mg/L	0.020	-	1.08	-	-	-	-	-	0.811
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	Not Acutely Toxic	-	-	-	-	-	Not Acutely Toxic

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.13: Water Quality Results for Water Licence Monitoring Location - MP-Q1-01

Analyte	Sample ID			MP-Q1-01	MP-Q1-0103	MP-Q1-01	MP-Q1-01	MP-Q1-01	MP-Q1-0101	MP-Q1-01
	ALS Laboratory Sample ID			L2614208-1	L2614208-2	L2617707-1	L2620706-1	L2623229-3	L2623229-4	L2626311-5
	Sample Date & Time			2021-07-13 13:40	2021-07-13 13:40	2021-07-20 7:55	2021-07-27 13:40	2021-08-03 10:35	2021-08-03 10:35	2021-08-10 10:20
	QA/QC Sample Type			N/A	Travel Blank	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	-	-	-	195	196	-
pH	pH units	0.10	6.0 - 9.5	7.86	6.06	7.97	7.82	7.97	8.00	7.97
Total Suspended Solids	mg/L	1.0/2.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<2.0	<1.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13/20	-	101	17	133	115	72	71	112
Turbidity	NTU	0.10	-	3.88	<0.10	2.52	2.47	1.96	2.11	4.81
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	-	0.012	0.010	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	-	0.544	0.547	-
Oil and Grease, Total	mg/L	5.0	-	-	-	-	-	<5.0	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.13: Water Quality Results for Water Licence Monitoring Location - MP-Q1-01

Analyte	Sample ID			MP-Q1-01	MP-Q1-01
	ALS Laboratory Sample ID			L2627807-6	L2648053-8
	Sample Date & Time			2021-08-15 11:10	2021-10-06 7:45
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	1.0	-	-	184
pH	pH units	0.10	6.0 - 9.5	8.02	7.92
Total Suspended Solids	mg/L	1.0/2.0	Grab 30, Average 15	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13/20	-	109	138
Turbidity	NTU	0.10	-	4.08	10.6
Ammonia, Total (as N)	mg/L	0.010	-	-	0.010
Nitrate (as N)	mg/L	0.020	-	-	1.09
Oil and Grease, Total	mg/L	5.0	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.14: Water Quality Results for Water Licence Monitoring Location - MP-Q1-02

Analyte	Sample ID			MP-Q1-02	MP-Q1-02	MP-Q1-02	MP-Q1-02	MP-Q1-02	MP-Q1-02	MP-Q1-02
	ALS Laboratory Sample ID			L2600575-6	L2602404-2	L2606493-1	L2606493-2	L2608772-5	L2611804-6	L2614208-6
	Sample Date & Time			2021-06-08 10:15	2021-06-15 10:10	2021-06-24 8:45	2021-06-24 8:45	2021-06-29 9:10	2021-07-06 10:30	2021-07-13 17:10
	QA/QC Sample Type			N/A	N/A	N/A	Field Duplicate	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	237	-	-	-	336	-
pH	pH units	0.10	6.0 - 9.5	7.92	8.12	8.10	8.12	8.08	8.02	8.01
Total Suspended Solids ²	mg/L	1.0/2.0/5.0	Grab 30, Average 15	50.0	990.0	121.0	134.0	360.0	21.6	327.0
Total Dissolved Solids	mg/L	10/20	-	178	251	210	210	235	279	257
Turbidity	NTU	0.10	-	80.9	1,010	133	152	239	34.7	241
Ammonia, Total (as N)	mg/L	0.01/0.05/0.010	-	-	1.17	-	-	-	1.62	-
Nitrate (as N)	mg/L	0.020	-	-	4.49	-	-	-	9.21	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	-	-	-	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{3,4}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June, July, August and exceeded maximum average TSS concentration discharge limits.

³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

⁴ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.14: Water Quality Results for Water Licence Monitoring Location - MP-Q1-02

Analyte	Sample ID			MP-Q1-02	MP-Q1-02	MP-Q1-02	MP-Q1-02	MP-Q1-02	MP-Q1-02	MP-Q1-02
	ALS Laboratory Sample ID			L2617707-6	L2620706-2	L2623229-1	L2626311-4	L2627807-7	L2630604-6	L2634765-6
	Sample Date & Time			2021-07-22 15:50	2021-07-27 14:00	2021-08-03 9:30	2021-08-10 9:45	2021-08-15 8:15	2021-08-24 8:35	2021-09-01 8:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	-	514	-	-	-	558
pH	pH units	0.10	6.0 - 9.5	8.12	8.05	8.02	8.04	8.02	8.12	7.98
Total Suspended Solids ²	mg/L	1.0/2.0/5.0	Grab 30, Average 15	8.9	5.1	8.2	3.4	21.7	36.5	<2.0
Total Dissolved Solids	mg/L	10/20	-	292	286	336	320	406	292	336
Turbidity	NTU	0.10	-	9.83	8.29	9.00	6.39	19.2	22.7	2.29
Ammonia, Total (as N)	mg/L	0.01/0.05/0.010	-	-	-	0.967	-	-	-	0.010
Nitrate (as N)	mg/L	0.020	-	-	-	13.1	-	-	-	5.32
Oil and Grease, Total	mg/L	5.0	-	-	-	<5.0	-	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{3,4}	N/A	-	Not Acutely Toxic	-	-	Not Acutely Toxic	-	-	-	Not Acutely Toxic

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June, July, August and exceeded maximum average TSS concentration discharge limits.

³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

⁴ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.2.14: Water Quality Results for Water Licence Monitoring Location - MP-Q1-02

Analyte	Sample ID			MP-Q1-02	MP-Q1-02
	ALS Laboratory Sample ID			L2637047-6	L2648053-6
	Sample Date & Time			2021-09-07 15:10	2021-10-06 7:20
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	1.0	-	-	345
pH	pH units	0.10	6.0 - 9.5	7.76	8.01
Total Suspended Solids ²	mg/L	1.0/2.0/5.0	Grab 30, Average 15	<2.0	23.9
Total Dissolved Solids	mg/L	10/20	-	300	235
Turbidity	NTU	0.10	-	2.16	42.0
Ammonia, Total (as N)	mg/L	0.01/0.05/0.010	-	-	0.162
Nitrate (as N)	mg/L	0.020	-	-	3.13
Oil and Grease, Total	mg/L	5.0	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{3,4}	N/A	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June, July, August and exceeded maximum average TSS concentration discharge limits.

³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

⁴ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.1: Water Quality Results for Water Licence Monitoring Location - MS-01

Analyte	Sample ID			MS-01	MS-0101	MS-01	MS-01	MS-01	MS-01	MS-01
	ALS Laboratory Sample ID			L2546495-1	L2546495-3	L2558678-1	L2564297-1	L2579165-1	L2588104-1	L2603176-1
	Sample Date & Time			2021-01-06 15:00	2021-01-06 15:00	2021-02-16 15:00	2021-03-04 15:00	2021-04-20 15:00	2021-05-12 15:00	2021-06-16 14:45
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
pH	pH units	0.10	6.0 - 9.5	8.02	7.99	7.57	7.51	7.59	8.10	7.47
Total Suspended Solids	mg/L	1.0/2.0/3.0	35	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<2.0
Ammonia, Total (as N)	mg/L	0.010/0.020	4	2.19	2.21	0.399	0.589	1.79	0.047	0.129
Total Kjeldahl Nitrogen	mg/L	0.050/0.50	-	8.30	7.70	0.830	2.40	2.24	1.01	0.560
Phosphorus, Total	mg/L	0.0030/0.0060	4	1.05	1.07	0.621	0.77	1.8	1.36	1.29
Fecal Coliforms	CFU/100 mL	-	1,000	0	0	0	0	0	0	0
BOD	mg/L	2.0	30	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	Not Acutely Toxic	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.1: Water Quality Results for Water Licence Monitoring Location - MS-01

Analyte	Sample ID			MS-01	MS-01	MS-0102	MS-01	MS-0103	MS-01	MS-01
	ALS Laboratory Sample ID			L2614654-1	L2623232-1	L2623232-3	L2637974-1	L2637974-3	L2649043-1	L2662051-1
	Sample Date & Time			2021-07-14 14:45	2021-08-04 14:45	2021-08-04 14:45	2021-09-08 14:45	2021-09-08 14:45	2021-10-06 14:45	2021-11-10 14:45
	QA/QC Sample Type			N/A	N/A	Field Blank	N/A	Travel Blank	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
pH	pH units	0.10	6.0 - 9.5	7.60	7.63	5.50	7.56	6.48	7.68	7.16
Total Suspended Solids	mg/L	1.0/2.0/3.0	35	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.010/0.020	4	0.076	0.099	0.021	0.283	0.014	0.053	0.096
Total Kjeldahl Nitrogen	mg/L	0.050/0.50	-	0.720	4.10	<0.050	1.59	0.065	<0.050	0.560
Phosphorus, Total	mg/L	0.0030/0.0060	4	1.29	1.08	0.0064	2.66	<0.0030	0.728	1.18
Fecal Coliforms	CFU/100 mL	-	1,000	0	0	0	0	0	0	0
BOD	mg/L	2.0	30	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	7.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	-	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.1: Water Quality Results for Water Licence Monitoring Location - MS-01

Analyte	Sample ID			MS-0101	MS-01
	ALS Laboratory Sample ID			L2662051-3	L2671710-1
	Sample Date & Time			2021-11-10 14:45	2021-12-09 14:45
	QA/QC Sample Type			Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹		
pH	pH units	0.10	6.0 - 9.5	7.06	7.27
Total Suspended Solids	mg/L	1.0/2.0/3.0	35	1.7	<1.0
Ammonia, Total (as N)	mg/L	0.010/0.020	4	0.101	0.092
Total Kjeldahl Nitrogen	mg/L	0.050/0.50	-	1.74	0.660
Phosphorus, Total	mg/L	0.0030/0.0060	4	1.17	1.09
Fecal Coliforms	CFU/100 mL	-	1,000	0	0
BOD	mg/L	2.0	30	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4.

²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.2: Water Quality Results for Water Licence Monitoring Location - MS-01B

Analyte	Sample ID			MS-01B	MS-01B01	MS-01B	MS-01B	MS-01B	MS-01B
	ALS Laboratory Sample ID			L2546497-1	L2546497-3	L2558651-1	L2564299-1	L2579205-1	L2588098-1
	Sample Date & Time			2021-01-06 15:00	2021-01-06 15:00	2021-02-16 15:00	2021-03-04 15:00	2021-04-20 15:00	2021-05-12 15:00
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
pH	pH units	0.10	6.0 - 9.5	8.58	8.67	8.03	7.16	6.91	8.18
Total Suspended Solids	mg/L	1.0/3.0	35	4.0	3.0	<3.0	4.2	5.3	19.8
Ammonia, Total (as N)	mg/L	0.010	4	0.299	0.302	0.188	0.1	0.124	0.147
Total Kjeldahl Nitrogen	mg/L	0.050/0.50	-	4.30	4.70	0.810	1.2	1.42	0.860
Phosphorus, Total	mg/L	0.0030/0.0060/0.0090	4	0.800	0.800	1.17	1.2	0.389	0.479
Fecal Coliforms	CFU/100 mL	-	1,000	0	0	0	0	0	0
BOD	mg/L	2.0	30	2.0	2.1	<2.0	<2.0	<2.0	3.3
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<5.0	<2.0	<2.0	<2.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4.

²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.2: Water Quality Results for Water Licence Monitoring Location - MS-01B

Analyte	Sample ID			MS-01B	MS-01B	MS-01B	MS-01B02	MS-01B	MS-01B03
	ALS Laboratory Sample ID			L2603172-1	L2614658-1	L2623234-1	L2623234-3	L2637955-1	L2637955-3
	Sample Date & Time			2021-06-16 15:00	2021-07-14 15:00	2021-08-04 15:00	2021-08-04 15:00	2021-09-08 15:00	2021-09-08 15:00
	QA/QC Sample Type			N/A	N/A	N/A	Field Blank	N/A	Travel Blank
	Units	LOR	Water Licence Criteria ¹						
pH	pH units	0.10	6.0 - 9.5	8.15	7.87	7.98	6.54	8.37	6.31
Total Suspended Solids	mg/L	1.0/3.0	35	<2.0	2.2	6.3	<1.0	2.9	<1.0
Ammonia, Total (as N)	mg/L	0.010	4	0.114	0.207	0.374	<0.010	0.187	<0.010
Total Kjeldahl Nitrogen	mg/L	0.050/0.50	-	0.850	0.230	1.80	<0.050	1.48	0.085
Phosphorus, Total	mg/L	0.0030/0.0060/0.0090	4	1.46	0.444	2.38	0.0098	1.01	<0.0030
Fecal Coliforms	CFU/100 mL	-	1,000	-	0	30	0	0	0
BOD	mg/L	2.0	30	<2.0	<2.0	2.5	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	-
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4.

²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.2: Water Quality Results for Water Licence Monitoring Location - MS-01B

Analyte	Sample ID			MS-01B	MS-01B	MS-01B01	MS-01B
	ALS Laboratory Sample ID			L2649046-1	L2661895-1	L2661895-3	L2671716-1
	Sample Date & Time			2021-10-06 14:45	2021-11-10 14:45	2021-11-10 14:45	2021-12-09 15:00
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹				
pH	pH units	0.10	6.0 - 9.5	7.88	8.15	8.08	7.58
Total Suspended Solids	mg/L	1.0/3.0	35	2.3	1.4	<1.0	2.2
Ammonia, Total (as N)	mg/L	0.010	4	0.414	0.188	0.189	0.227
Total Kjeldahl Nitrogen	mg/L	0.050/0.50	-	1.15	0.760	0.230	0.570
Phosphorus, Total	mg/L	0.0030/0.0060/0.0090	4	1.05	0.915	0.904	1.19
Fecal Coliforms	CFU/100 mL	-	1,000	3	0	0	0
BOD	mg/L	2.0	30	<2.0	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<5.0	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4.

²Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.3: Water Quality Results for Water Licence Monitoring Location - MS-03B

Analyte	Sample ID			MS-03B	MS-03B
	ALS Laboratory Sample ID			L2625152-1	L2627334-1
	Sample Date & Time			2021-08-07 12:55	2021-08-15 9:50
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
pH	pH units	0.10	6.0 - 9.5	7.94	8.20
Total Suspended Solids	mg/L	1.0	-	<1.0	<2.0
Total Dissolved Solids	mg/L	20	-	234	426
Turbidity	NTU	0.10	-	1.86	6.70
Lead (Pb)-Total	mg/L	0.00050	0.001	<0.00050	0.00062
Benzene	mg/L	0.00050	0.370	<0.00050	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050	<0.00050
Toluene	mg/L	0.00050	0.002	<0.00050	<0.00050
F1 (C6-C10)	mg/L	0.025	-	<0.025	<0.025
F2 (C10-C16)	mg/L	0.10	-	<0.10	<0.10
F3 (C16-C34)	mg/L	0.25	-	<0.25	<0.25
F4 (C34-C50)	mg/L	0.25	-	<0.25	<0.25
Total Hydrocarbons (C6-C50)	mg/L	0.37	-	<0.37	<0.37
Oil and Grease, Total	mg/L	5.0	15	<5.0	<5.0
	-		No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 8: Effluent Quality Discharge Limits for the Bulk Fuel Storage Facilities.

Table 7.3.4: Water Quality Results for Water Licence Monitoring Location - MS-06

Analyte	Sample ID				MS-06	MS-06	MS-06	MS-0603	MS-06
	ALS Laboratory Sample ID				L2595329-1	L2595285-1	L2611695-1	L2611695-2	L2622149-1
	Sample Date & Time				2021-05-31 14:00	2021-06-01 12:00	2021-07-08 9:30	2021-07-08 9:30	2021-08-04 11:10
	QA/QC Sample Type				N/A	N/A	N/A	Travel Blank	N/A
	Units	LOR	Water Licence Criteria ¹	MDMER Criteria ²					
Conductivity	umhos/cm	1.0	-	-	-	-	1050	<1.0	-
Hardness (as CaCO3)	mg/L	0.50	-	-	120	84.1	536	<0.50	1,020
pH	pH units	0.10/0.50	6.0 - 9.5	6.0 - 9.5	7.46	7.41	7.69	5.74	7.54
Total Suspended Solids	mg/L	1.0/2.0	15	30	2.3	1.4	<2.0	<2.0	3.5
Total Dissolved Solids	mg/L	10/20	-	-	595	261	800	<10	744
Turbidity	NTU	0.10/10	-	-	2.15	7.68	10.6	<0.10	19.2
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	-	93.7	16.1	39.1	<1.0	32
Ammonia, Total (as N)	mg/L	0.010/0.10/0.050/0.0050	-	-	0.030	0.019	2.66	<0.010	2.31
Chloride (Cl)	mg/L	2.5/0.50	-	-	39.6	10.7	29.2	<0.50	24.9
Fluoride (F)	mg/L	0.10/0.020	-	-	0.035	0.045	<0.10	<0.020	0.071
Nitrate (as N)	mg/L	0.10/0.020	-	-	50.3	4.89	11.9	<0.020	11.3
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	0.620	0.520	3.71	<0.050	2.310
Phosphorus, Total	mg/L	0.0030	-	-	0.229	0.388	<0.0030	<0.0030	0.0086
Sulfate (SO4)	mg/L	1.5/0.30	-	-	109	136	489	<0.30	412
Dissolved Organic Carbon	mg/L	0.50	-	-	8.39	9.23	3.31	0.60	5.16
Total Organic Carbon	mg/L	0.50	-	-	9.00	7.49	3.73	1.01	2.72
Aluminum (Al)-Total	mg/L	0.050/0.0050	-	-	0.141	0.160	<0.050	<0.0050	0.026
Antimony (Sb)-Total	mg/L	0.0010/0.00010	-	-	0.00039	0.00046	<0.0010	<0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.0010/0.00010	0.5	0.60	0.00030	0.00036	<0.0010	<0.00010	0.00014
Barium (Ba)-Total	mg/L	0.0010/0.00010	-	-	0.00527	0.00279	0.0134	<0.00010	0.01310
Beryllium (Be)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	mg/L	0.00050/0.000050	-	-	0.00165	0.00131	<0.00050	<0.000050	<0.000050
Boron (B)-Total	mg/L	0.10/0.010	-	-	0.306	0.276	<0.10	<0.010	0.049
Cadmium (Cd)-Total	mg/L	0.000050/0.0000050	-	-	0.0000803	0.0000998	<0.000050	<0.0000050	0.000013
Calcium (Ca)-Total	mg/L	0.50/0.050	-	-	23.8	15.8	48.2	<0.050	45.2
Cesium (Cs)-Total	mg/L	0.00010/0.000010	-	-	0.000057	0.000052	<0.00010	<0.000010	0.000038
Chromium (Cr)-Total	mg/L	0.0050/0.00050	-	-	<0.00050	<0.00050	<0.0050	<0.00050	<0.00050
Cobalt (Co)-Total	mg/L	0.0010/0.00010	-	-	0.00072	0.00050	0.0033	<0.00010	0.00211
Copper (Cu)-Total	mg/L	0.0050/0.00050	0.3	0.60	0.0146	0.0126	<0.0050	<0.00050	0.00727
Iron (Fe)-Total	mg/L	0.10/0.010	-	-	0.128	0.078	<0.10	<0.010	0.077
Lead (Pb)-Total	mg/L	0.00050/0.000050	0.2	0.20	0.000151	0.000129	<0.00050	<0.000050	0.000553
Lithium (Li)-Total	mg/L	0.010/0.0010	-	-	0.0073	0.0054	0.021	<0.0010	0.0217
Magnesium (Mg)-Total	mg/L	0.050/0.0050	-	-	15.1	11.1	97.6	0.0112	95.1
Manganese (Mn)-Total	mg/L	0.0050/0.00050	-	-	0.0665	0.0804	1.70	<0.00050	1.30000
Mercury (Hg)-Total	mg/L	0.0000050	-	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00050/0.000050	-	-	0.00115	0.0021	0.00395	<0.000050	0.00266
Nickel (Ni)-Total	mg/L	0.0050/0.00050	0.5	1.00	0.00335	0.00357	0.0082	<0.00050	0.0053
Phosphorus (P)-Total	mg/L	0.50/0.050	-	-	0.283	0.432	<0.50	<0.050	<0.050
Potassium (K)-Total	mg/L	0.50/0.050	-	-	20.8	16.9	10.5	<0.050	9.9
Rubidium (Rb)-Total	mg/L	0.0020/0.00020	-	-	0.0202	0.0176	0.0118	<0.00020	0.0126
Selenium (Se)-Total	mg/L	0.00050/0.000050	-	-	0.000122	0.000136	0.00157	<0.000050	0.001690
Silicon (Si)-Total	mg/L	1.0/0.10	-	-	1.10	0.89	1.1	<0.10	0.81
Silver (Ag)-Total	mg/L	0.00050/0.000050	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sodium (Na)-Total	mg/L	0.50/0.050	-	-	146	149	11.4	<0.050	11
Strontium (Sr)-Total	mg/L	0.010/0.0010	-	-	0.0270	0.0153	0.103	<0.0010	0.0997
Sulfur (S)-Total	mg/L	5.0/0.50	-	-	46.2	35.9	150	<0.50	154
Tellurium (Te)-Total	mg/L	0.0020/0.00020	-	-	<0.00020	<0.00020	<0.0020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.00010/0.000010	-	-	<0.000010	<0.000010	<0.00010	<0.000010	0.000071
Thorium (Th)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.00010	<0.0010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	0.0010/0.00010	-	-	0.00015	0.00014	<0.0010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L	0.0010/0.0020/0.0030/0.00030	-	-	0.00131	<0.00050	<0.0030	<0.00030	0.00031
Tungsten (W)-Total	mg/L	0.0010/0.00010	-	-	0.00016	0.00026	<0.0010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	0.00010/0.000010	-	-	0.000229	0.000394	0.00525	<0.000010	0.00231
Vanadium (V)-Total	mg/L	0.0050/0.00050	-	-	<0.00050	<0.00050	<0.0050	<0.00050	<0.00050
Zinc (Zn)-Total	mg/L	0.030/0.0030	0.5	1.00	0.0875	0.0721	<0.030	<0.0030	0.0376
Zirconium (Zr)-Total	mg/L	0.0020/0.00020	-	-	<0.00020	<0.00020	<0.0020	<0.00020	<0.00020
Aluminum (Al)-Dissolved	mg/L	0.0050	-	-	0.0516	0.126	<0.0050	<0.0050	<0.0050
Antimony (Sb)-Dissolved	mg/L	0.00010	-	-	0.00040	0.00052	0.00014	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.00010	-	-	0.00032	0.00035	0.00012	<0.00010	0.00014
Barium (Ba)-Dissolved	mg/L	0.00010	-	-	0.00519	0.00288	0.0136	<0.00010	0.01260
Beryllium (Be)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	-	0.00162	0.00129	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	mg/L	0.010	-	-	0.271	0.255	0.047	<0.010	0.048
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	-	0.0000834	0.0000972	0.0000291	<0.0000050	0.0000089
Calcium (Ca)-Dissolved	mg/L	0.050	-	-	22.8	15.4	50.6	<0.050	46.1
Cesium (Cs)-Dissolved	mg/L	0.000010	-	-	0.000057	0.000057	0.000050	<0.000010	0.000039
Chromium (Cr)-Dissolved	mg/L	0.00050	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.00010	-	-	0.00064	0.00047	0.00297	<0.00010	0.00185
Copper (Cu)-Dissolved	mg/L	0.00020	-	-	0.0142	0.0122	0.00045	<0.00020	0.00047
Iron (Fe)-Dissolved	mg/L	0.010	-	-	0.072	0.063	<0.010	<0.010	<0.010
Lead (Pb)-Dissolved	mg/L	0.000050	-	-	0.000090	0.000110	<0.000050	<0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L	0.0010	-	-	0.0066	0.0049	0.0252	<0.0010	0.0237
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	-	15.4	11.1	99.4	<0.0050	94.9
Manganese (Mn)-Dissolved	mg/L	0.00050	-	-	0.0685	0.0071	1.67	<0.00050	1.2600
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	-	0.00109	0.0021	0.00419	<0.000050	0.00264
Nickel (Ni)-Dissolved	mg/L	0.00050	-	-	0.00322	0.00351	0.00696	<0.00050	0.00481
Phosphorus (P)-Dissolved	mg/L	0.050	-	-	0.238	0.466	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.050	-	-	21.2	17.2	10.9	<0.050	10.0
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	-	0.0204	0.0172	0.0129	<0.00020	0.0125
Selenium (Se)-Dissolved	mg/L	0.000050	-	-	0.000126	0.000146	0.00212	<0.000050	0.001700
Silicon (Si)-Dissolved	mg/L	0.050	-	-	0.992	0.841	1.14	<0.050	0.769
Silver (Ag)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sodium (Na)-Dissolved	mg/L	0.050	-	-	123	138	11.7	<0.050	11
Strontium (Sr)-Dissolved	mg/L	0.0010	-	-	0.0267	0.0152	0.112	<0.0010	0.0994
Sulfur (S)-Dissolved	mg/L	0.50	-	-	44.7	36.2	167	<0.50	153
Tellurium (Te)-Dissolved	mg/L	0.00020	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.000010	-	-	0.000010	<0.000010	0.000090	<0.000010	0.000070
Thorium (Th)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L	0.00010	-	-	<0.00010	0.00014	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.00030	-	-	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tungsten (W)-Dissolved	mg/L	0.00010	-	-	0.00016	0.00026	<0.00010	<0.00010	<0.00010
Uranium (U)-Dissolved	mg/L	0.000010	-	-	0.000205	0.000371	0.00550	<0.000010	0.00236
Vanadium (V)-Dissolved	mg/L	0.00050	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	mg/L	0.0010	-	-	0.0913	0.0765	0.0071	<0.0010	0.0168
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Ra-226	Bq/L	0.0067/0.0054/0.0058/0.0033/0.0031/0.0064	-	1.11	-	<0.0054	0.013	<0.0033	<0.0054
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-
Acute Toxicity ³	-	-	No Visible Sheen	Not acutely toxic	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (ZAM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

² Metal and Diamond Mining Effluent Regulations (MDMER) June 10, 2021, Schedule 4, Table 2.

³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13). Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.4: Water Quality Results for Water Licence Monitoring Location - MS-06

Analyte	Sample ID				MS-06	MS-06	MS-06
	ALS Laboratory Sample ID				L2624310-1	L2634291-1	L2638230-1
	Sample Date & Time				2021-08-08 11:35	2021-09-01 11:25	2021-09-10 10:55
	QA/QC Sample Type				N/A	N/A	N/A
Units	LOR	Water Licence Criteria ¹	MDMER Criteria ²				
Conductivity	umhos/cm	1.0	-	-	-	-	
Hardness (as CaCO3)	mg/L	0.50	-	-	507	523	
pH	pH units	0.10/0.50	6.0 - 9.5	6.0 - 9.5	7.69	7.49	
Total Suspended Solids	mg/L	1.0/2.0	15	30	2.8	4.0	
Total Dissolved Solids	mg/L	10/20	-	-	734	782	
Turbidity	NTU	0.10/10	-	-	11	8.77	
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	-	36.3	43.1	
Ammonia, Total (as N)	mg/L	0.010/0.10/0.050/0.0050	-	-	1.97	1.17	
Chloride (Cl)	mg/L	2.5/0.50	-	-	25.4	25.2	
Fluoride (F)	mg/L	0.10/0.020	-	-	0.07	0.059	
Nitrate (as N)	mg/L	0.10/0.020	-	-	11.5	12.6	
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	2.61	1.24	
Phosphorus, Total	mg/L	0.0030	-	-	0.0031	<0.0030	
Sulfate (SO4)	mg/L	1.5/0.30	-	-	420	434	
Dissolved Organic Carbon	mg/L	0.50	-	-	3.72	3.23	
Total Organic Carbon	mg/L	0.50	-	-	2.82	3.05	
Aluminum (Al)-Total	mg/L	0.050/0.0050	-	-	0.0526	0.0360	
Antimony (Sb)-Total	mg/L	0.0010/0.00010	-	-	0.00012	<0.00010	
Arsenic (As)-Total	mg/L	0.0010/0.00010	0.5	0.60	0.00018	0.00017	
Barium (Ba)-Total	mg/L	0.0010/0.00010	-	-	0.0131	0.0120	
Beryllium (Be)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.00010	
Bismuth (Bi)-Total	mg/L	0.00050/0.000050	-	-	<0.000050	<0.000050	
Boron (B)-Total	mg/L	0.10/0.010	-	-	0.056	0.050	
Cadmium (Cd)-Total	mg/L	0.000050/0.0000050	-	-	0.000006	0.0000120	
Calcium (Ca)-Total	mg/L	0.50/0.050	-	-	49.1	46.6	
Cesium (Cs)-Total	mg/L	0.00010/0.000010	-	-	0.000041	0.000030	
Chromium (Cr)-Total	mg/L	0.0050/0.00050	-	-	<0.00050	<0.00050	
Cobalt (Co)-Total	mg/L	0.0010/0.00010	-	-	0.00203	0.00198	
Copper (Cu)-Total	mg/L	0.0050/0.00050	0.3	0.60	0.00055	0.00510	
Iron (Fe)-Total	mg/L	0.10/0.010	-	-	0.159	0.078	
Lead (Pb)-Total	mg/L	0.00050/0.000050	0.2	0.20	0.000089	0.000471	
Lithium (Li)-Total	mg/L	0.010/0.0010	-	-	0.0261	0.0214	
Magnesium (Mg)-Total	mg/L	0.050/0.0050	-	-	95.5	98.0	
Manganese (Mn)-Total	mg/L	0.0050/0.00050	-	-	1.3	1.04	
Mercury (Hg)-Total	mg/L	0.0000050	-	-	<0.0000050	<0.0000050	
Molybdenum (Mo)-Total	mg/L	0.00050/0.000050	-	-	0.00265	0.00193	
Nickel (Ni)-Total	mg/L	0.0050/0.00050	0.5	1.00	0.00496	0.00463	
Phosphorus (P)-Total	mg/L	0.50/0.050	-	-	<0.050	<0.050	
Potassium (K)-Total	mg/L	0.50/0.050	-	-	10.1	9.25	
Rubidium (Rb)-Total	mg/L	0.0020/0.00020	-	-	0.0135	0.0120	
Selenium (Se)-Total	mg/L	0.00050/0.000050	-	-	0.00179	0.00186	
Silicon (Si)-Total	mg/L	1.0/0.10	-	-	0.81	0.40	
Silver (Ag)-Total	mg/L	0.00050/0.000050	-	-	<0.000050	<0.000050	
Sodium (Na)-Total	mg/L	0.50/0.050	-	-	10.6	10.2	
Strontium (Sr)-Total	mg/L	0.010/0.0010	-	-	0.104	0.102	
Sulfur (S)-Total	mg/L	5.0/0.50	-	-	153	169	
Tellurium (Te)-Total	mg/L	0.0020/0.00020	-	-	<0.00020	<0.00020	
Thallium (Tl)-Total	mg/L	0.00010/0.000010	-	-	0.000071	0.000064	
Thorium (Th)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.00010	
Tin (Sn)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.00010	
Titanium (Ti)-Total	mg/L	0.0010/0.0020/0.0030/0.00030	-	-	<0.0010	<0.0020	
Tungsten (W)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.00010	
Uranium (U)-Total	mg/L	0.00010/0.000010	-	-	0.00241	0.00167	
Vanadium (V)-Total	mg/L	0.0050/0.00050	-	-	<0.00050	<0.00050	
Zinc (Zn)-Total	mg/L	0.030/0.0030	0.5	1.00	0.0198	0.0512	
Zirconium (Zr)-Total	mg/L	0.0020/0.00020	-	-	<0.00020	<0.00020	
Aluminum (Al)-Dissolved	mg/L	0.0050	-	-	0.0078	0.0154	
Antimony (Sb)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	
Arsenic (As)-Dissolved	mg/L	0.00010	-	-	0.00015	0.00016	
Barium (Ba)-Dissolved	mg/L	0.00010	-	-	0.0126	0.0117	
Beryllium (Be)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	
Boron (B)-Dissolved	mg/L	0.010	-	-	0.053	0.052	
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	-	0.0000052	0.0000151	
Calcium (Ca)-Dissolved	mg/L	0.050	-	-	48.5	49.2	
Cesium (Cs)-Dissolved	mg/L	0.000010	-	-	0.000039	0.000028	
Chromium (Cr)-Dissolved	mg/L	0.00050	-	-	<0.00050	<0.00050	
Cobalt (Co)-Dissolved	mg/L	0.00010	-	-	0.00162	0.00173	
Copper (Cu)-Dissolved	mg/L	0.00020	-	-	0.00033	0.00414	
Iron (Fe)-Dissolved	mg/L	0.010	-	-	<0.010	0.027	
Lead (Pb)-Dissolved	mg/L	0.000050	-	-	<0.000050	0.000391	
Lithium (Li)-Dissolved	mg/L	0.0010	-	-	0.0265	0.0249	
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	-	93.7	97.2	
Manganese (Mn)-Dissolved	mg/L	0.00050	-	-	1.21	1.00	
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	-	<0.0000050	<0.0000050	
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	-	0.00271	0.00196	
Nickel (Ni)-Dissolved	mg/L	0.00050	-	-	0.00448	0.00434	
Phosphorus (P)-Dissolved	mg/L	0.050	-	-	<0.050	<0.050	
Potassium (K)-Dissolved	mg/L	0.050	-	-	10	9.70	
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	-	0.013	0.0124	
Selenium (Se)-Dissolved	mg/L	0.000050	-	-	0.00198	0.00180	
Silicon (Si)-Dissolved	mg/L	0.050	-	-	0.704	0.367	
Silver (Ag)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	
Sodium (Na)-Dissolved	mg/L	0.050	-	-	10.3	10.2	
Strontium (Sr)-Dissolved	mg/L	0.0010	-	-	0.105	0.101	
Sulfur (S)-Dissolved	mg/L	0.50	-	-	153	167	
Tellurium (Te)-Dissolved	mg/L	0.00020	-	-	<0.00020	<0.00020	
Thallium (Tl)-Dissolved	mg/L	0.000010	-	-	0.000071	0.000064	
Thorium (Th)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	
Tin (Sn)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	
Titanium (Ti)-Dissolved	mg/L	0.00030	-	-	<0.00030	0.00033	
Tungsten (W)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	
Uranium (U)-Dissolved	mg/L	0.000010	-	-	0.00231	0.00168	
Vanadium (V)-Dissolved	mg/L	0.00050	-	-	<0.00050	<0.00050	
Zinc (Zn)-Dissolved	mg/L	0.0010	-	-	0.0197	0.129	
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	-	<0.00020	<0.00020	
Ra-226	Bq/L	0.0067/0.0054/0.0058/0.0033/ 0.0031/0.0064	-	1.11	0.0037	0.016	
Oil and Grease, Total	mg/L	2	-	-	-	-	
Acute Toxicity ³	-	-	No Visible Sheen	Not Acutely Toxic	No Visible Sheen	Not Acutely Toxic	

Notes:
 Bold highlight indicate results that exceeded the applicable water quality criteria.
¹ Type A Water Licence (ZAM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.
² Metal and Diamond Mining Effluent Regulations (MDMER) June 10, 2021, Schedule 4, Table 2.
³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13). Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.5: Water Quality Results for Water Licence Monitoring Location - MS-06

Analyte	Sample ID				MS-07	MS-0702	MS-07
	ALS Laboratory Sample ID				L2611689-1	L2611689-2	L2628143-1
	Sample Date & Time				2021-07-08 11:45	2021-07-08 11:45	2021-08-17 14:10
	QA/QC Sample Type				N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹	MDMER Criteria ²			
Conductivity	umhos/cm	1.0	-	-	399	402	-
Hardness (as CaCO3)	mg/L	0.50	-	-	176	175	282
pH	pH units	0.10	6.0 - 9.5	6.0 - 9.5	7.56	7.58	8.11
Total Suspended Solids	mg/L	2.0	15	30	<2.0	<2.0	6.3
Total Dissolved Solids	mg/L	10	-	-	265	274	402
Turbidity	NTU	0.10	-	-	1.59	1.62	3.72
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	-	31.1	31.3	67.8
Ammonia, Total (as N)	mg/L	0.010	-	-	0.340	0.336	0.082
Chloride (Cl)	mg/L	0.50	-	-	3.54	3.55	8.82
Fluoride (F)	mg/L	0.020	-	-	0.117	0.116	0.125
Nitrate (as N)	mg/L	0.020	-	-	5.99	6.00	12.2
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	0.860	0.910	0.630
Phosphorus, Total	mg/L	0.0030	-	-	<0.0030	<0.0030	0.0097
Sulfate (SO4)	mg/L	0.30	-	-	134	134	183
Dissolved Organic Carbon	mg/L	0.50	-	-	2.19	2.26	2.91
Total Organic Carbon	mg/L	0.50	-	-	2.42	2.50	3.93
Aluminum (Al)-Total	mg/L	0.0050	-	-	0.0435	0.0563	0.185
Antimony (Sb)-Total	mg/L	0.00010	-	-	0.00013	0.00013	<0.00010
Arsenic (As)-Total	mg/L	0.00010	0.50	0.60	<0.00010	<0.00010	0.00013
Barium (Ba)-Total	mg/L	0.00010	-	-	0.0153	0.0152	0.0219
Beryllium (Be)-Total	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Total	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050
Boron (B)-Total	mg/L	0.010	-	-	0.016	0.017	0.026
Cadmium (Cd)-Total	mg/L	0.000050	-	-	0.0000233	0.0000210	0.0000203
Calcium (Ca)-Total	mg/L	0.050	-	-	24.8	25.0	47.4
Cesium (Cs)-Total	mg/L	0.000010	-	-	<0.000010	<0.000010	0.000022
Chromium (Cr)-Total	mg/L	0.00050	-	-	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total	mg/L	0.00010	-	-	0.00062	0.00062	0.00079
Copper (Cu)-Total	mg/L	0.00050	0.30	0.60	0.00090	0.00109	0.00128
Iron (Fe)-Total	mg/L	0.010	-	-	0.042	0.057	0.214
Lead (Pb)-Total	mg/L	0.000050	0.20	0.20	0.000071	0.000081	0.000234
Lithium (Li)-Total	mg/L	0.0010	-	-	0.0050	0.0050	0.006
Magnesium (Mg)-Total	mg/L	0.0050	-	-	28.0	28.2	39.7
Manganese (Mn)-Total	mg/L	0.00050	-	-	0.0421	0.0427	0.0319
Mercury (Hg)-Total	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Total	mg/L	0.000050	-	-	0.00729	0.00729	0.00985
Nickel (Ni)-Total	mg/L	0.00050	0.50	1.00	0.00061	0.00060	0.00086
Phosphorus (P)-Total	mg/L	0.050	-	-	<0.050	<0.050	<0.050
Potassium (K)-Total	mg/L	0.050	-	-	8.47	8.48	11.7
Rubidium (Rb)-Total	mg/L	0.00020	-	-	0.00345	0.00341	0.00481
Selenium (Se)-Total	mg/L	0.000050	-	-	0.00114	0.00121	0.00149
Silicon (Si)-Total	mg/L	0.10	-	-	1.07	1.11	1.69
Silver (Ag)-Total	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050
Sodium (Na)-Total	mg/L	0.050	-	-	2.83	2.82	4.64
Strontium (Sr)-Total	mg/L	0.0010	-	-	0.0300	0.0299	0.0816
Sulfur (S)-Total	mg/L	0.50	-	-	45.9	46.5	65.6
Tellurium (Te)-Total	mg/L	0.00020	-	-	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.000010	-	-	<0.000010	<0.000010	<0.000010
Thorium (Th)-Total	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Total	mg/L	0.00030	-	-	0.00106	0.00184	0.00745
Tungsten (W)-Total	mg/L	0.00010	-	-	<0.00010	<0.00010	0.00014
Uranium (U)-Total	mg/L	0.000010	-	-	0.00236	0.00236	0.00631
Vanadium (V)-Total	mg/L	0.00050	-	-	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Total	mg/L	0.0030	0.50	1.00	<0.0030	<0.0030	<0.0030
Zirconium (Zr)-Total	mg/L	0.00020	-	-	<0.00020	<0.00020	<0.00020
Aluminum (Al)-Dissolved	mg/L	0.0050	-	-	0.0192	0.0189	0.168
Antimony (Sb)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	0.00013
Barium (Ba)-Dissolved	mg/L	0.00010	-	-	0.0155	0.0152	0.025
Beryllium (Be)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050
Boron (B)-Dissolved	mg/L	0.010	-	-	0.016	0.016	0.022
Cadmium (Cd)-Dissolved	mg/L	0.000050	-	-	0.0000244	0.0000231	0.0000236
Calcium (Ca)-Dissolved	mg/L	0.050	-	-	25.7	25.7	46.3
Cesium (Cs)-Dissolved	mg/L	0.000010	-	-	<0.000010	<0.000010	0.000018
Chromium (Cr)-Dissolved	mg/L	0.00050	-	-	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.00010	-	-	0.00055	0.00055	0.00077
Copper (Cu)-Dissolved	mg/L	0.00020	-	-	0.00080	0.00064	0.00143
Iron (Fe)-Dissolved	mg/L	0.010	-	-	<0.010	<0.010	0.141
Lead (Pb)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	0.000232
Lithium (Li)-Dissolved	mg/L	0.0010	-	-	0.0047	0.0048	0.0057
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	-	27.2	26.9	40.4
Manganese (Mn)-Dissolved	mg/L	0.00050	-	-	0.0372	0.0366	0.0331
Mercury (Hg)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	-	0.00736	0.00744	0.00967
Nickel (Ni)-Dissolved	mg/L	0.00050	-	-	<0.00050	<0.00050	0.00082
Phosphorus (P)-Dissolved	mg/L	0.050	-	-	<0.050	<0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.050	-	-	8.35	8.34	12.1
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	-	0.00334	0.00348	0.0049
Selenium (Se)-Dissolved	mg/L	0.000050	-	-	0.00133	0.00131	0.00132
Silicon (Si)-Dissolved	mg/L	0.050	-	-	1.01	1.02	1.53
Silver (Ag)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050
Sodium (Na)-Dissolved	mg/L	0.050	-	-	2.72	2.69	4.71
Strontium (Sr)-Dissolved	mg/L	0.0010	-	-	0.0308	0.0315	0.0832
Sulfur (S)-Dissolved	mg/L	0.50	-	-	47.2	47.1	59.9
Tellurium (Te)-Dissolved	mg/L	0.00020	-	-	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.000010	-	-	<0.000010	<0.000010	0.000010
Thorium (Th)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.00030	-	-	<0.00030	<0.00030	0.00595
Tungsten (W)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	0.00013
Uranium (U)-Dissolved	mg/L	0.000010	-	-	0.00242	0.00242	0.00616
Vanadium (V)-Dissolved	mg/L	0.00050	-	-	<0.00050	<0.00050	<0.00050
Zinc (Zn)-Dissolved	mg/L	0.0010	-	-	0.0010	<0.0010	0.0010
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	-	<0.00020	<0.00020	<0.00020
Ra-226	Bq/L	0.0064/0.0035/0.0058	-	1.11	0.0068	<0.0035	0.0062
Oil and Grease, Total	mg/L	-	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Toxicity ³	-	-	Not Acutely Toxic	Not Acutely Toxic	Not Acutely Toxic	-	Not Acutely Toxic

Notes:
 Bold highlight indicate results that exceeded the applicable water quality criteria.
¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.
² Metal and Diamond Mining Effluent Regulations (MDMER) June 10, 2021, Schedule 4, Table 2.
³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13). Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.6: Water Quality Results for Water Licence Monitoring Location - MS-08

Analyte	Sample ID				MS-08	MS-08	MS-0802	MS-08	MS-08
	ALS Laboratory Sample ID				L2606206-1	L2611670-1	L2611670-2	L2621962-1	L2624309-1
	Sample Date & Time				2021-06-23 16:20	2021-07-08 13:05	2021-07-08 13:05	2021-08-03 13:20	2021-08-08 19:20
	QA/QC Sample Type				N/A	N/A	Field Blank	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	MDMER Criteria ²					
Conductivity	umhos/cm	1.0	-	-	551	943	<1.0	-	-
Hardness (as CaCO3)	mg/L	0.50/1.3	-	-	296	520	<0.50	1600	1610
pH	pH units	0.10	6.0 - 9.5	6.0 - 9.5	7.65	8.04	5.62	8.58	7.49
Total Suspended Solids	mg/L	2.0	15	30	2.5	13.0	<2.0	8.0	10.3
Total Dissolved Solids	mg/L	10	-	-	418	772	20	2,190	2,510
Turbidity	NTU	0.10	-	-	5.06	8.45	<0.10	6.43	14.1
Acidity (as CaCO3)	mg/L	2.0	-	-	<2.0	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	-	19.2	10.4	<1.0	10.1	8.4
Ammonia, Total (as N)	mg/L	0.10/0.010/0.20	-	-	0.436	1.09	<0.010	3.35	4.26
Chloride (Cl)	mg/L	0.50/2.5	-	-	1.35	3.94	<0.50	9.9	10.3
Fluoride (F)	mg/L	0.020/0.10	-	-	0.059	0.076	<0.020	<0.10	<0.10
Nitrate (as N)	mg/L	0.020/0.10	-	-	1.57	7.13	<0.020	18.8	19.2
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	0.71	1.46	<0.050	3.87	4.41
Phosphorus, Total	mg/L	0.0030	-	-	<0.0030	<0.0030	<0.0030	0.0058	0.0037
Sulfate (SO4)	mg/L	0.30/1.5	-	-	262	472	<0.30	1,370	1,350
Dissolved Organic Carbon	mg/L	0.50	-	-	2.09	1.87	<0.50	2.91	2.11
Total Organic Carbon	mg/L	0.50	-	-	1.63	1.42	0.87	2.29	2.14
Aluminum (Al)-Total	mg/L	0.050/0.0050	-	-	0.1	0.202	<0.0050	0.059	0.097
Antimony (Sb)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.0010	<0.0010
Arsenic (As)-Total	mg/L	0.0010/0.00010	0.50	0.60	<0.00010	<0.00010	<0.00010	<0.0010	<0.0010
Barium (Ba)-Total	mg/L	0.0010/0.00010	-	-	0.0013	0.0093	<0.00010	0.0191	0.0155
Beryllium (Be)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.0010	<0.0010
Bismuth (Bi)-Total	mg/L	0.00050/0.000050	-	-	<0.000050	<0.000050	<0.000050	<0.00050	<0.00050
Boron (B)-Total	mg/L	0.10/0.010	-	-	<0.010	<0.10	<0.010	<0.10	<0.10
Cadmium (Cd)-Total	mg/L	0.000050/0.0000050	-	-	<0.0000050	<0.0000050	<0.0000050	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L	0.50/0.050	-	-	19	50	<0.050	137	139
Cesium (Cs)-Total	mg/L	0.00010/0.000010	-	-	0.000014	<0.00010	<0.000010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	0.0050/0.00050	-	-	<0.00050	<0.0050	<0.00050	<0.0050	<0.0050
Cobalt (Co)-Total	mg/L	0.0010/0.00010	-	-	0.0020	0.0268	<0.00010	0.0181	0.033
Copper (Cu)-Total	mg/L	0.0050/0.00050	0.30	0.60	0.00059	0.0051	<0.00050	0.0162	0.0149
Iron (Fe)-Total	mg/L	0.10/0.010	-	-	0.59	2.52	<0.010	2.28	4.45
Lead (Pb)-Total	mg/L	0.00050/0.000050	0.20	0.20	0.000122	<0.00050	<0.000050	<0.00050	<0.00050
Lithium (Li)-Total	mg/L	0.10/0.0010/0.010	-	-	0.0047	<0.010	<0.0010	0.033	0.037
Magnesium (Mg)-Total	mg/L	0.050/0.0050	-	-	57	96.9	0.0382	316	369
Manganese (Mn)-Total	mg/L	0.0050/0.00050	-	-	0.17	2.29	<0.00050	3.77	4.6
Mercury (Hg)-Total	mg/L	0.0000050	-	-	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00050/0.000050	-	-	0.000169	<0.00050	<0.000050	<0.00050	<0.00050
Nickel (Ni)-Total	mg/L	0.0050/0.00050	0.50	1.00	0.00205	0.0238	<0.00050	0.0187	0.0322
Phosphorus (P)-Total	mg/L	0.50/0.050	-	-	<0.050	<0.50	<0.050	<0.50	<0.50
Potassium (K)-Total	mg/L	0.50/0.050	-	-	0.487	3.02	<0.050	6.78	7.76
Rubidium (Rb)-Total	mg/L	0.0020/0.00020	-	-	0.00117	0.004	<0.00020	0.0085	0.0099
Selenium (Se)-Total	mg/L	0.00050/0.000050	-	-	0.000587	0.00166	<0.000050	0.00586	0.00607
Silicon (Si)-Total	mg/L	1.0/0.10	-	-	0.31	<1.0	<0.10	<1.0	<1.0
Silver (Ag)-Total	mg/L	0.00050/0.000050	-	-	<0.000050	<0.000050	<0.000050	<0.00050	<0.00050
Sodium (Na)-Total	mg/L	0.50/0.050	-	-	0.466	1.55	<0.050	4.23	4.37
Strontium (Sr)-Total	mg/L	0.010/0.0010	-	-	0.0933	0.135	<0.0010	0.319	0.334
Sulfur (S)-Total	mg/L	5.0/0.50	-	-	88.7	165	<0.50	543	555
Tellurium (Te)-Total	mg/L	0.0020/0.00020	-	-	<0.00020	<0.0020	<0.00020	<0.0020	<0.0020
Thallium (Tl)-Total	mg/L	0.00010/0.000010	-	-	0.000026	<0.00010	<0.000010	0.00012	0.00012
Thorium (Th)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.0010	<0.00010	<0.0010	<0.0010
Tin (Sn)-Total	mg/L	0.0010/0.00010	-	-	0.00066	<0.0010	<0.00010	<0.0010	<0.0010
Titanium (Ti)-Total	mg/L	0.0030/0.00030	-	-	<0.00030	0.003	<0.00030	<0.0030	<0.0030
Tungsten (W)-Total	mg/L	0.0010/0.00010	-	-	<0.00010	<0.0010	<0.00010	<0.0010	<0.0010
Uranium (U)-Total	mg/L	0.00010/0.000010	-	-	0.000099	0.00054	<0.000010	0.000256	0.00037
Vanadium (V)-Total	mg/L	0.0050/0.00050	-	-	0.0007	<0.0050	<0.00050	<0.0050	<0.0050
Zinc (Zn)-Total	mg/L	0.030/0.0030	0.50	1.00	<0.030	<0.030	<0.0030	<0.030	<0.030
Zirconium (Zr)-Total	mg/L	0.0020/0.00020	-	-	<0.00020	<0.0020	<0.00020	<0.0020	<0.0020
Aluminum (Al)-Dissolved	mg/L	0.0050	-	-	<0.0050	0.0434	<0.0050	<0.050 *	<0.050
Antimony (Sb)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.0010	<0.0010
Arsenic (As)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.0010	<0.0010
Barium (Ba)-Dissolved	mg/L	0.00010	-	-	0.00093	0.00859	<0.00010	0.0184	0.0141
Beryllium (Be)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.0010	<0.0010
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L	0.010	-	-	<0.010	0.015	<0.010	<0.10	<0.10
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	-	<0.0000050	0.0000052	<0.0000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.050	-	-	20.5	49.6	0.055	133	131
Cesium (Cs)-Dissolved	mg/L	0.000010	-	-	<0.000010	0.000013	<0.000010	<0.00010	<0.00010
Chromium (Cr)-Dissolved	mg/L	0.00050	-	-	<0.00050	<0.00050	<0.00050	<0.0050	<0.0050
Cobalt (Co)-Dissolved	mg/L	0.00010	-	-	0.00136	0.00657	<0.00010	0.0097	0.0221
Copper (Cu)-Dissolved	mg/L	0.00020	-	-	<0.00020	0.00382	<0.00020	0.0153	0.0119
Iron (Fe)-Dissolved	mg/L	0.010	-	-	<0.010	<0.010	<0.010	<0.10	<0.10
Lead (Pb)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050	<0.00050	<0.00050
Lithium (Li)-Dissolved	mg/L	0.0010	-	-	0.005	0.0117	<0.0010	0.031	0.033
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	-	59.3	96.1	<0.0050	307	311
Manganese (Mn)-Dissolved	mg/L	0.00050	-	-	0.15	1.74	<0.00050	3.48	4.06
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	-	<0.0000050	<0.0000050	<0.0000050	<0.000050	<0.000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	-	0.00017	0.000115	<0.000050	<0.00050	<0.00050
Nickel (Ni)-Dissolved	mg/L	0.00050	-	-	0.00144	0.00795	<0.00050	0.0114	0.0204
Phosphorus (P)-Dissolved	mg/L	0.050	-	-	<0.050	<0.050	<0.050	<0.50	<0.50
Potassium (K)-Dissolved	mg/L	0.050	-	-	0.5	3.03	<0.050	6.65	7.27
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	-	0.00099	0.00378	<0.00020	0.0079	0.0092
Selenium (Se)-Dissolved	mg/L	0.000050	-	-	0.000717	0.00208	<0.000050	0.00566	0.00564
Silicon (Si)-Dissolved	mg/L	0.050	-	-	0.088	0.463	<0.050	<0.50	<0.50
Silver (Ag)-Dissolved	mg/L	0.000050	-	-	<0.000050	<0.000050	<0.000050	<0.00050	<0.00050
Sodium (Na)-Dissolved	mg/L	0.050	-	-	0.48	1.51	<0.050	3.82	4.03
Strontium (Sr)-Dissolved	mg/L	0.00100	-	-	0.0923	0.137	<0.0010	0.299	0.325
Sulfur (S)-Dissolved	mg/L	0.50/5.0	-	-	92.8	170	<0.50	533	520
Tellurium (Te)-Dissolved	mg/L	0.00020	-	-	<0.00020	<0.00020	<0.00020	<0.0020	<0.0020
Thallium (Tl)-Dissolved	mg/L	0.000010	-	-	0.000026	0.000046	<0.000010	0.00012	0.00012
Thorium (Th)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.0010	<0.0010
Tin (Sn)-Dissolved	mg/L	0.00010	-	-	0.00071	<0.00010	<0.00010	<0.0010	<0.0010
Titanium (Ti)-Dissolved	mg/L	0.00030/0.00030	-	-	<0.00030	<0.00030	<0.00030	<0.0030	<0.0030
Tungsten (W)-Dissolved	mg/L	0.00010	-	-	<0.00010	<0.00010	<0.00010	<0.0010	<0.0010
Uranium (U)-Dissolved	mg/L	0.000010	-	-	0.000032	0.000067	<0.000010	0.0001	<0.00010
Vanadium (V)-Dissolved	mg/L	0.00050	-	-	<0.00050	<0.00050	<0.00050	<0.0050	<0.0050
Zinc (Zn)-Dissolved	mg/L	0.0010	-	-	0.0022	<0.0010	<0.0010	<0.010	<0.010
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	-	<0.00020	<0.00020	<0.00020	<0.0020	<0.0020
Ra-226	Bq/L	0.0096/0.0060/0.0033 /0.0049/0.0047	-	1.11	<0.0096	0.0067	0.004	0.0047	0.0070
Oil and Grease, Total	mg/L	-	-	-	-	-	-	-	-
Acute Toxicity ³	-	-	Not Acutely Toxic	Not Acutely Toxic	Not Acutely Toxic	Not Acutely Toxic	-	Not Acutely Toxic	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

² Metal and Daimond Mining Effluent Regulations (MDMER) June 10, 2021, Schedule 4, Table 2.

³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13). Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.7: Water Quality Results for Water Licence Monitoring Location - MS-MRY-06

Analyte	Sample ID			MS-MRY-06
	ALS Laboratory Sample ID			L2618137-2
	Sample Date & Time			2021-07-23 9:10
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.10	6.0 - 9.5	8.05
Total Suspended Solids	mg/L	2.0	-	31.8
Lead (Pb)-Total	mg/L	0.00005/0.00050	0.001	0.000443
Oil and Grease, Total	mg/L	5.0	15	<5.0
	-	-	No Visible Sheen	No Visible Sheen
Benzene	mg/L	0.00050	0.370	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050
Toluene	mg/L	0.00045/0.00050	0.002	0.00088
F1 (C6-C10)	mg/L	0.10/0.025	-	<0.10
F2 (C10-C16)	mg/L	0.10	-	0.18
F3 (C16-C34)	mg/L	0.25	-	0.30
F4 (C34-C50)	mg/L	0.25	-	<0.25
Total Petroleum Hydrocarbons (TPH)	mg/L	0.38/0.37	-	0.48

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 8: Effluent Quality Discharge Limits for the Bulk Fuel Storage Facilities.

Table 7.3.8: Water Quality Results for Water Licence Monitoring Location - MS-MRY-09

Analyte	Sample ID			MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09	
	ALS Laboratory Sample ID			L2600578-1	L2602902-1	L2605841-5	L2608050-1	L2609333-1	L2614342-1	L2618103-1	L2621268-10	L2621381-16	L2627735-1	L2631125-1	L2635818-1	L2635847-1
	Sample Date & Time			2021-06-10 7:50	2021-06-15 15:10	2021-06-21 8:25	2021-06-28 9:00	2021-07-04 8:15	2021-07-13 10:55	2021-07-21 10:35	2021-07-30 9:10	2021-08-02 14:20	2021-08-12 13:35	2021-08-24 8:45	2021-09-04 15:25	2021-09-06 11:45
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹													
Hardness	mg/L	0.50	-	-	26.5	-	-	44.5	-	-	-	65.7	-	-	85.4	-
pH	pH units	0.10	6.0 - 9.5	7.63	7.70	7.72	7.87	8.05	7.78	7.91	7.98	8.00	8.19	8.11	8.09	7.99
Total Suspended Solids	mg/L	1.0/2.0	15	16.1	6.7	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.9	<2.0	<2.0	<2.0	2.5
Total Dissolved Solids	mg/L	10	-	43	39	25	33	90	72	60	75	84	25	83	75	94
Turbidity	NTU	0.10	-	1.70	7.08	2.89	2.67	1.01	2.01	1.12	0.55	0.83	0.40	0.33	0.25	0.60
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	-	36.1	-	-	46.2	-	-	-	58.6	-	-	86.6	-
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	-	<0.010	-	-	-	<0.010	-	-	<0.010	-
Chloride (Cl)	mg/L	0.50	-	-	0.77	-	-	1.11	-	-	-	1.16	-	-	1.62	-
Fluoride (F)	mg/L	0.020	-	-	<0.020	-	-	<0.020	-	-	-	<0.020	-	-	<0.020	-
Nitrate (as N)	mg/L	0.020	-	-	0.053	-	-	0.052	-	-	-	<0.020	-	-	0.057	-
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	0.070	-	-	0.110	-	-	-	0.060	-	-	0.116	-
Phosphorus, Total	mg/L	0.0030	-	-	0.0112	-	-	<0.0030	-	-	-	0.0100	-	-	<0.0030	-
Sulfate (SO4)	mg/L	0.30	-	-	1.22	-	-	2.43	-	-	-	2.49	-	-	4.06	-
Dissolved Organic Carbon	mg/L	0.50	-	-	1.96	-	-	1.69	-	-	-	2.58	-	-	2.90	-
Total Organic Carbon	mg/L	0.50	-	-	1.85	-	-	2.09	-	-	-	2.94	-	-	2.48	-
Aluminum (Al)-Total	mg/L	0.0050	-	-	0.204	-	-	0.0242	-	-	-	0.136	-	-	0.0378	-
Arsenic (As)-Total	mg/L	0.00010	0.50	-	<0.00010	-	-	<0.00010	-	-	-	<0.00010	-	-	<0.00010	-
Cadmium (Cd)-Total	mg/L	0.0000050	-	-	<0.0000050	-	-	<0.0000050	-	-	-	<0.0000050	-	-	0.0000056	-
Calcium (Ca)-Total	mg/L	0.050	-	-	5.53	-	-	8.83	-	-	-	12.2	-	-	15.3	-
Copper (Cu)-Total	mg/L	0.00050	0.30	-	0.00187	-	-	0.00203	-	-	-	0.00174	-	-	0.00224	-
Iron (Fe)-Total	mg/L	0.010	-	-	0.286	-	-	0.031	-	-	-	0.174	-	-	0.049	-
Lead (Pb)-Total	mg/L	0.000050	0.20	-	0.000262	-	-	<0.000050	-	-	-	0.000133	-	-	0.000053	-
Magnesium (Mg)-Total	mg/L	0.0050	-	-	3.27	-	-	5.33	-	-	-	8.38	-	-	10.1	-
Manganese (Mn)-Total	mg/L	0.00050	-	-	0.00527	-	-	0.00062	-	-	-	0.00267	-	-	0.00	-
Mercury (Hg)-Total	mg/L	0.0000050	-	-	<0.0000050	-	-	<0.0000050	-	-	-	<0.0000050	-	-	<0.0000050	-
Molybdenum (Mo)-Total	mg/L	0.000050	-	-	0.000232	-	-	0.000491	-	-	-	0.000434	-	-	0.00118	-
Nickel (Ni)-Total	mg/L	0.00050	0.50	-	0.00073	-	-	<0.00050	-	-	-	0.00063	-	-	0.00052	-
Potassium (K)-Total	mg/L	0.050	-	-	0.904	-	-	1.23	-	-	-	1.46	-	-	2.14	-
Selenium (Se)-Total	mg/L	0.000050	-	-	<0.000050	-	-	<0.000050	-	-	-	<0.000050	-	-	0.000076	-
Sodium (Na)-Total	mg/L	0.050	-	-	0.322	-	-	0.418	-	-	-	0.653	-	-	0.763	-
Thallium (Tl)-Total	mg/L	0.000010	-	-	0.000013	-	-	0.000012	-	-	-	0.000011	-	-	0.000014	-
Uranium (U)-Total	mg/L	0.000010	-	-	0.000569	-	-	0.00149	-	-	-	0.00196	-	-	0.0071	-
Zinc (Zn)-Total	mg/L	0.0030	0.50	-	<0.0030	-	-	<0.0030	-	-	-	<0.0030	-	-	<0.0030	-
Aluminum (Al)-Dissolved	mg/L	0.0050	-	-	0.0097	-	-	0.0076	-	-	-	0.0076	-	-	0.0067	-
Arsenic (As)-Dissolved	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010	-	-	-	<0.00010	-	-	<0.00010	-
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	-	<0.0000050	-	-	<0.0000050	-	-	-	<0.0000050	-	-	<0.0000050	-
Calcium (Ca)-Dissolved	mg/L	0.050	-	-	5.15	-	-	8.95	-	-	-	12.6	-	-	16.7	-
Copper (Cu)-Dissolved	mg/L	0.00020	-	-	0.00125	-	-	<0.010	-	-	-	0.00143	-	-	0.00205	-
Iron (Fe)-Dissolved	mg/L	0.010	-	-	0.011	-	-	<0.000050	-	-	-	<0.010	-	-	<0.010	-
Lead (Pb)-Dissolved	mg/L	0.000050	-	-	<0.000050	-	-	<0.0010	-	-	-	<0.000050	-	-	<0.000050	-
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	-	3.30	-	-	5.37	-	-	-	8.32	-	-	10.6	-
Manganese (Mn)-Dissolved	mg/L	0.00050	-	-	0.00098	-	-	<0.00050	-	-	-	<0.00050	-	-	<0.00050	-
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	-	<0.0000050	-	-	<0.0000050	-	-	-	<0.0000050	-	-	<0.0000050	-
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	-	0.000218	-	-	0.000495	-	-	-	0.000401	-	-	0.0012	-
Nickel (Ni)-Dissolved	mg/L	0.00050	-	-	<0.00050	-	-	<0.00050	-	-	-	<0.00050	-	-	<0.00050	-
Potassium (K)-Dissolved	mg/L	0.050	-	-	0.875	-	-	1.28	-	-	-	1.42	-	-	2.26	-
Selenium (Se)-Dissolved	mg/L	0.000050	-	-	<0.000050	-	-	0.000053	-	-	-	<0.000050	-	-	0.0001	-
Sodium (Na)-Dissolved	mg/L	0.050	-	-	0.344	-	-	0.436	-	-	-	0.647	-	-	0.786	-
Thallium (Tl)-Dissolved	mg/L	0.000010	-	-	<0.000010	-	-	<0.000010	-	-	-	<0.000010	-	-	0.000012	-
Uranium (U)-Dissolved	mg/L	0.000010	-	-	0.000403	-	-	0.00147	-	-	-	0.00192	-	-	0.00739	-
Zinc (Zn)-Dissolved	mg/L	0.0010	-	-	<0.0010	-	-	0.0015	-	-	-	<0.0010	-	-	<0.0010	-
Oil and Grease, Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acute Toxicity	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:
 Bold highlight indicate results that exceeded the applicable water quality criteria.
¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

Table 7.3.8: Water Quality Results for Water Licence Monitoring Location - MS-MRY-09

Analyte	Sample ID			MS-MRY-09	MS-MRY-0901	MS-MRY-09	MS-MRY-09
	ALS Laboratory Sample ID			L2639307-1	L2639307-2	L2642214-1	L2644501-1
	Sample Date & Time			2021-09-13 9:50	2021-09-13 9:50	2021-09-20 8:05	2021-09-27 7:40
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Hardness	mg/L	0.50	-	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.90	7.89	7.88	7.99
Total Suspended Solids	mg/L	1.0/2.0	15	<2.0	<2.0	<2.0	4.0
Total Dissolved Solids	mg/L	10	-	53	25	131	214
Turbidity	NTU	0.10	-	0.27	0.26	0.11	0.22
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	-	-	-	-
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	-
Chloride (Cl)	mg/L	0.50	-	-	-	-	-
Fluoride (F)	mg/L	0.020	-	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	-
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	-	-	-
Phosphorus, Total	mg/L	0.0030	-	-	-	-	-
Sulfate (SO4)	mg/L	0.30	-	-	-	-	-
Dissolved Organic Carbon	mg/L	0.50	-	-	-	-	-
Total Organic Carbon	mg/L	0.50	-	-	-	-	-
Aluminum (Al)-Total	mg/L	0.0050	-	-	-	-	-
Arsenic (As)-Total	mg/L	0.00010	0.50	-	-	-	-
Cadmium (Cd)-Total	mg/L	0.0000050	-	-	-	-	-
Calcium (Ca)-Total	mg/L	0.050	-	-	-	-	-
Copper (Cu)-Total	mg/L	0.00050	0.30	-	-	-	-
Iron (Fe)-Total	mg/L	0.010	-	-	-	-	-
Lead (Pb)-Total	mg/L	0.000050	0.20	-	-	-	-
Magnesium (Mg)-Total	mg/L	0.0050	-	-	-	-	-
Manganese (Mn)-Total	mg/L	0.00050	-	-	-	-	-
Mercury (Hg)-Total	mg/L	0.0000050	-	-	-	-	-
Molybdenum (Mo)-Total	mg/L	0.000050	-	-	-	-	-
Nickel (Ni)-Total	mg/L	0.00050	0.50	-	-	-	-
Potassium (K)-Total	mg/L	0.050	-	-	-	-	-
Selenium (Se)-Total	mg/L	0.000050	-	-	-	-	-
Sodium (Na)-Total	mg/L	0.050	-	-	-	-	-
Thallium (Tl)-Total	mg/L	0.000010	-	-	-	-	-
Uranium (U)-Total	mg/L	0.000010	-	-	-	-	-
Zinc (Zn)-Total	mg/L	0.0030	0.50	-	-	-	-
Aluminum (Al)-Dissolved	mg/L	0.0050	-	-	-	-	-
Arsenic (As)-Dissolved	mg/L	0.00010	-	-	-	-	-
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	-	-	-	-
Calcium (Ca)-Dissolved	mg/L	0.050	-	-	-	-	-
Copper (Cu)-Dissolved	mg/L	0.00020	-	-	-	-	-
Iron (Fe)-Dissolved	mg/L	0.010	-	-	-	-	-
Lead (Pb)-Dissolved	mg/L	0.000050	-	-	-	-	-
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	-	-	-	-
Manganese (Mn)-Dissolved	mg/L	0.00050	-	-	-	-	-
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	-	-	-	-
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	-	-	-	-
Nickel (Ni)-Dissolved	mg/L	0.00050	-	-	-	-	-
Potassium (K)-Dissolved	mg/L	0.050	-	-	-	-	-
Selenium (Se)-Dissolved	mg/L	0.000050	-	-	-	-	-
Sodium (Na)-Dissolved	mg/L	0.050	-	-	-	-	-
Thallium (Tl)-Dissolved	mg/L	0.000010	-	-	-	-	-
Uranium (U)-Dissolved	mg/L	0.000010	-	-	-	-	-
Zinc (Zn)-Dissolved	mg/L	0.0010	-	-	-	-	-
Oil and Grease, Total	mg/L	-	-	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Toxicity	-	-	Not Acutely Toxic	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

Table 7.3.9: Water Quality Results for Water Licence Monitoring Location - MS-MRY-10

Analyte	Sample ID			MS-MRY-10	MS-MRY-10	MS-MRY-10	MS-MRY-10	MS-MRY-10
	ALS Laboratory Sample ID			L2600491-1	L2602423-1	L2605841-6	L2608050-13	L2609728-7
	Sample Date & Time			2021-06-07 16:00	2021-06-14 12:50	2021-06-21 10:35	2021-06-28 14:40	2021-07-05 16:20
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹					
Hardness	mg/L	0.50	-	-	29.6	-	-	124
pH	pH units	0.10	6.0 - 9.5	6.95	7.39	8.06	8.21	8.42
Total Suspended Solids	mg/L	2.0/1.0	15	<2.0	13.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13	-	21	36	130	64	153
Turbidity	NTU	0.10	-	1.36	6.99	0.29	0.27	0.13
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	-	30.6	-	-	108
Ammonia, Total (as N)	mg/L	0.010	-	-	0.014	-	-	<0.010
Chloride (Cl)	mg/L	0.50	-	-	2.00	-	-	11.3
Fluoride (F)	mg/L	0.020	-	-	<0.020	-	-	0.028
Nitrate (as N)	mg/L	0.020	-	-	<0.020	-	-	0.022
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	0.190	-	-	0.130
Phosphorus, Total	mg/L	0.0030	-	-	0.0149	-	-	<0.0030
Sulfate (SO4)	mg/L	0.30	-	-	2.64	-	-	10.4
Dissolved Organic Carbon	mg/L	0.50	-	-	2.76	-	-	1.13
Total Organic Carbon	mg/L	0.50	-	-	2.77	-	-	2.20
Aluminum (Al)-Total	mg/L	0.0050	-	-	0.290	-	-	0.0207
Antimony (Sb)-Total	mg/L	0.00010	-	-	<0.00010	-	-	0.00011
Arsenic (As)-Total	mg/L	0.00010	0.50	-	<0.00010	-	-	<0.00010
Barium (Ba)-Total	mg/L	0.00010	-	-	0.00637	-	-	0.0148
Beryllium (Be)-Total	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Bismuth (Bi)-Total	mg/L	0.000050	-	-	<0.000050	-	-	<0.000050
Boron (B)-Total	mg/L	0.010	-	-	<0.010	-	-	<0.010
Cadmium (Cd)-Total	mg/L	0.0000050	-	-	<0.0000050	-	-	<0.0000050
Calcium (Ca)-Total	mg/L	0.050	-	-	5.39	-	-	25.3
Cesium (Cs)-Total	mg/L	0.000010	-	-	0.000022	-	-	<0.000010
Chromium (Cr)-Total	mg/L	0.00050	-	-	0.00053	-	-	<0.00050
Cobalt (Co)-Total	mg/L	0.00010	-	-	0.00020	-	-	<0.00010
Copper (Cu)-Total	mg/L	0.00050	0.30	-	0.00092	-	-	0.00130
Iron (Fe)-Total	mg/L	0.010	-	-	0.404	-	-	0.026
Lead (Pb)-Total	mg/L	0.000050	0.20	-	0.000213	-	-	<0.000050
Lithium (Li)-Total	mg/L	0.0010	-	-	<0.0010	-	-	0.0015
Magnesium (Mg)-Total	mg/L	0.0050	-	-	3.60	-	-	14.8
Manganese (Mn)-Total	mg/L	0.00050	-	-	0.00811	-	-	0.00064
Mercury (Hg)-Total	mg/L	0.0000050	-	-	<0.0000050	-	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050	-	-	0.000162	-	-	0.000311
Nickel (Ni)-Total	mg/L	0.00050	0.50	-	0.00059	-	-	<0.00050
Phosphorus (P)-Total	mg/L	0.050	-	-	<0.050	-	-	<0.050
Potassium (K)-Total	mg/L	0.050	-	-	0.958	-	-	1.51
Rubidium (Rb)-Total	mg/L	0.00020	-	-	0.00153	-	-	0.00146
Selenium (Se)-Total	mg/L	0.000050	-	-	<0.000050	-	-	<0.000050
Silicon (Si)-Total	mg/L	0.10	-	-	0.82	-	-	1.26
Silver (Ag)-Total	mg/L	0.000050	-	-	<0.000050	-	-	<0.000050
Sodium (Na)-Total	mg/L	0.050	-	-	0.363	-	-	2.42
Strontium (Sr)-Total	mg/L	0.0010	-	-	0.0032	-	-	0.0153
Sulfur (S)-Total	mg/L	0.50	-	-	1.02	-	-	3.61
Tellurium (Te)-Total	mg/L	0.00020	-	-	<0.00020	-	-	<0.00020
Thallium (Tl)-Total	mg/L	0.000010	-	-	<0.000010	-	-	<0.000010
Thorium (Th)-Total	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Tin (Sn)-Total	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Titanium (Ti)-Total	mg/L	0.00030	-	-	0.0149	-	-	0.00110
Tungsten (W)-Total	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Uranium (U)-Total	mg/L	0.000010	-	-	0.000093	-	-	0.00138
Vanadium (V)-Total	mg/L	0.00050	-	-	0.00063	-	-	<0.00050
Zinc (Zn)-Total	mg/L	0.0030	0.50	-	<0.0030	-	-	<0.0030
Zirconium (Zr)-Total	mg/L	0.00020	-	-	<0.00020	-	-	<0.00020
Aluminum (Al)-Dissolved	mg/L	0.0050	-	-	0.0086	-	-	<0.0050
Antimony (Sb)-Dissolved	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Arsenic (As)-Dissolved	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Barium (Ba)-Dissolved	mg/L	0.00010	-	-	0.00390	-	-	0.0143
Beryllium (Be)-Dissolved	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	-	<0.000050	-	-	<0.000050
Boron (B)-Dissolved	mg/L	0.010	-	-	<0.010	-	-	<0.010
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	-	<0.0000050	-	-	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.050	-	-	5.71	-	-	25.7
Cesium (Cs)-Dissolved	mg/L	0.000010	-	-	<0.000010	-	-	<0.000010
Chromium (Cr)-Dissolved	mg/L	0.00050	-	-	<0.00050	-	-	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Copper (Cu)-Dissolved	mg/L	0.00020	-	-	0.00052	-	-	0.00104
Iron (Fe)-Dissolved	mg/L	0.010	-	-	<0.010	-	-	<0.010
Lead (Pb)-Dissolved	mg/L	0.000050	-	-	<0.000050	-	-	<0.000050
Lithium (Li)-Dissolved	mg/L	0.0010	-	-	0.0010	-	-	0.0010
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	-	3.72	-	-	14.6
Manganese (Mn)-Dissolved	mg/L	0.00050	-	-	0.00278	-	-	<0.00050
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	-	<0.0000050	-	-	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	-	0.000146	-	-	0.000299
Nickel (Ni)-Dissolved	mg/L	0.00050	-	-	<0.00050	-	-	<0.00050
Phosphorus (P)-Dissolved	mg/L	0.050	-	-	<0.050	-	-	<0.050
Potassium (K)-Dissolved	mg/L	0.050	-	-	0.863	-	-	1.50
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	-	0.00091	-	-	0.00141
Selenium (Se)-Dissolved	mg/L	0.000050	-	-	<0.000050	-	-	<0.000050
Silicon (Si)-Dissolved	mg/L	0.050	-	-	0.360	-	-	1.16
Silver (Ag)-Dissolved	mg/L	0.000050	-	-	<0.000050	-	-	<0.000050
Sodium (Na)-Dissolved	mg/L	0.050	-	-	0.357	-	-	2.35
Strontium (Sr)-Dissolved	mg/L	0.0010	-	-	0.0033	-	-	0.0155
Sulfur (S)-Dissolved	mg/L	0.50	-	-	0.97	-	-	3.75
Tellurium (Te)-Dissolved	mg/L	0.00020	-	-	<0.00020	-	-	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.000010	-	-	<0.000010	-	-	<0.000010
Thorium (Th)-Dissolved	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Tin (Sn)-Dissolved	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.00030	-	-	<0.00030	-	-	<0.00030
Tungsten (W)-Dissolved	mg/L	0.00010	-	-	<0.00010	-	-	<0.00010
Uranium (U)-Dissolved	mg/L	0.000010	-	-	0.000051	-	-	0.00129
Vanadium (V)-Dissolved	mg/L	0.00050	-	-	<0.00050	-	-	<0.00050
Zinc (Zn)-Dissolved	mg/L	0.0010	-	-	<0.0010	-	-	<0.0010
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	-	<0.00020	-	-	<0.00020
Oil and Grease, Total	mg/L	-	-	-	-	-	-	-
Acute Toxicity	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
	-	-	Not Acutely Toxic	-	Not Acutely Toxic	-	-	-

Notes:
 Bold highlight indicate results that exceeded the applicable water quality criteria.
¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

Table 7.3.9: Water Quality Results for Water Licence Monitoring Location - MS-MRY-10

Analyte	Sample ID			MS-MRY-10	MS-MRY-10	MS-MRY-10	MS-MRY-10	MS-MRY-10
	ALS Laboratory Sample ID			L2612809-16	L2618103-2	L2621358-7	L2621963-1	L2627333-1
	Sample Date & Time			2021-07-12 15:35	2021-07-22 16:15	2021-07-31 14:55	2021-08-03 14:40	2021-08-14 17:40
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹					
Hardness	mg/L	0.50	-	-	-	-	140	-
pH	pH units	0.10	6.0 - 9.5	7.75	8.32	8.34	8.35	8.34
Total Suspended Solids	mg/L	2.0/1.0	15	2.7	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13	-	124	157	128	136	96
Turbidity	NTU	0.10	-	0.33	0.17	0.19	<0.10	0.14
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	-	-	-	115	-
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	0.011	-
Chloride (Cl)	mg/L	0.50	-	-	-	-	8.99	-
Fluoride (F)	mg/L	0.020	-	-	-	-	0.032	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	<0.020	-
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	-	-	0.120	-
Phosphorus, Total	mg/L	0.0030	-	-	-	-	0.0039	-
Sulfate (SO4)	mg/L	0.30	-	-	-	-	9.95	-
Dissolved Organic Carbon	mg/L	0.50	-	-	-	-	1.88	-
Total Organic Carbon	mg/L	0.50	-	-	-	-	2.68	-
Aluminum (Al)-Total	mg/L	0.0050	-	-	-	-	<0.0050	-
Antimony (Sb)-Total	mg/L	0.00010	-	-	-	-	<0.00010	-
Arsenic (As)-Total	mg/L	0.00010	0.50	-	-	-	<0.00010	-
Barium (Ba)-Total	mg/L	0.00010	-	-	-	-	0.0153	-
Beryllium (Be)-Total	mg/L	0.00010	-	-	-	-	<0.00010	-
Bismuth (Bi)-Total	mg/L	0.000050	-	-	-	-	<0.000050	-
Boron (B)-Total	mg/L	0.010	-	-	-	-	<0.010	-
Cadmium (Cd)-Total	mg/L	0.000050	-	-	-	-	<0.000050	-
Calcium (Ca)-Total	mg/L	0.050	-	-	-	-	26.8	-
Cesium (Cs)-Total	mg/L	0.000010	-	-	-	-	<0.000010	-
Chromium (Cr)-Total	mg/L	0.00050	-	-	-	-	<0.00050	-
Cobalt (Co)-Total	mg/L	0.00010	-	-	-	-	<0.00010	-
Copper (Cu)-Total	mg/L	0.00050	0.30	-	-	-	0.0115	-
Iron (Fe)-Total	mg/L	0.010	-	-	-	-	<0.010	-
Lead (Pb)-Total	mg/L	0.000050	0.20	-	-	-	<0.000050	-
Lithium (Li)-Total	mg/L	0.0010	-	-	-	-	0.0010	-
Magnesium (Mg)-Total	mg/L	0.0050	-	-	-	-	17.4	-
Manganese (Mn)-Total	mg/L	0.00050	-	-	-	-	<0.00050	-
Mercury (Hg)-Total	mg/L	0.0000050	-	-	-	-	<0.0000050	-
Molybdenum (Mo)-Total	mg/L	0.000050	-	-	-	-	0.000313	-
Nickel (Ni)-Total	mg/L	0.00050	0.50	-	-	-	<0.00050	-
Phosphorus (P)-Total	mg/L	0.050	-	-	-	-	<0.050	-
Potassium (K)-Total	mg/L	0.050	-	-	-	-	1.63	-
Rubidium (Rb)-Total	mg/L	0.00020	-	-	-	-	0.00134	-
Selenium (Se)-Total	mg/L	0.000050	-	-	-	-	<0.000050	-
Silicon (Si)-Total	mg/L	0.10	-	-	-	-	1.53	-
Silver (Ag)-Total	mg/L	0.000050	-	-	-	-	<0.000050	-
Sodium (Na)-Total	mg/L	0.050	-	-	-	-	2.81	-
Strontium (Sr)-Total	mg/L	0.0010	-	-	-	-	0.0162	-
Sulfur (S)-Total	mg/L	0.50	-	-	-	-	3.78	-
Tellurium (Te)-Total	mg/L	0.00020	-	-	-	-	<0.00020	-
Thallium (Tl)-Total	mg/L	0.000010	-	-	-	-	<0.000010	-
Thorium (Th)-Total	mg/L	0.00010	-	-	-	-	<0.00010	-
Tin (Sn)-Total	mg/L	0.00010	-	-	-	-	<0.00010	-
Titanium (Ti)-Total	mg/L	0.00030	-	-	-	-	<0.00030	-
Tungsten (W)-Total	mg/L	0.00010	-	-	-	-	<0.00010	-
Uranium (U)-Total	mg/L	0.000010	-	-	-	-	0.00159	-
Vanadium (V)-Total	mg/L	0.00050	-	-	-	-	<0.00050	-
Zinc (Zn)-Total	mg/L	0.0030	0.50	-	-	-	<0.0030	-
Zirconium (Zr)-Total	mg/L	0.00020	-	-	-	-	<0.00020	-
Aluminum (Al)-Dissolved	mg/L	0.0050	-	-	-	-	<0.0050	-
Antimony (Sb)-Dissolved	mg/L	0.00010	-	-	-	-	<0.00010	-
Arsenic (As)-Dissolved	mg/L	0.00010	-	-	-	-	<0.00010	-
Barium (Ba)-Dissolved	mg/L	0.00010	-	-	-	-	0.0155	-
Beryllium (Be)-Dissolved	mg/L	0.00010	-	-	-	-	<0.00010	-
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	-	-	-	<0.000050	-
Boron (B)-Dissolved	mg/L	0.010	-	-	-	-	<0.010	-
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	-	-	-	<0.0000050	-
Calcium (Ca)-Dissolved	mg/L	0.050	-	-	-	-	27.2	-
Cesium (Cs)-Dissolved	mg/L	0.000010	-	-	-	-	<0.000010	-
Chromium (Cr)-Dissolved	mg/L	0.00050	-	-	-	-	<0.00050	-
Cobalt (Co)-Dissolved	mg/L	0.00010	-	-	-	-	<0.00010	-
Copper (Cu)-Dissolved	mg/L	0.00020	-	-	-	-	0.00112	-
Iron (Fe)-Dissolved	mg/L	0.010	-	-	-	-	<0.010	-
Lead (Pb)-Dissolved	mg/L	0.000050	-	-	-	-	<0.000050	-
Lithium (Li)-Dissolved	mg/L	0.0010	-	-	-	-	0.0012	-
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	-	-	-	17.5	-
Manganese (Mn)-Dissolved	mg/L	0.00050	-	-	-	-	<0.00050	-
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	-	-	-	<0.0000050	-
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	-	-	-	0.000294	-
Nickel (Ni)-Dissolved	mg/L	0.00050	-	-	-	-	<0.00050	-
Phosphorus (P)-Dissolved	mg/L	0.050	-	-	-	-	<0.050	-
Potassium (K)-Dissolved	mg/L	0.050	-	-	-	-	1.63	-
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	-	-	-	0.00148	-
Selenium (Se)-Dissolved	mg/L	0.000050	-	-	-	-	<0.000050	-
Silicon (Si)-Dissolved	mg/L	0.050	-	-	-	-	1.52	-
Silver (Ag)-Dissolved	mg/L	0.000050	-	-	-	-	<0.000050	-
Sodium (Na)-Dissolved	mg/L	0.050	-	-	-	-	2.83	-
Strontium (Sr)-Dissolved	mg/L	0.0010	-	-	-	-	0.0162	-
Sulfur (S)-Dissolved	mg/L	0.50	-	-	-	-	3.45	-
Tellurium (Te)-Dissolved	mg/L	0.00020	-	-	-	-	<0.00020	-
Thallium (Tl)-Dissolved	mg/L	0.000010	-	-	-	-	<0.000010	-
Thorium (Th)-Dissolved	mg/L	0.00010	-	-	-	-	<0.00010	-
Tin (Sn)-Dissolved	mg/L	0.00010	-	-	-	-	<0.00010	-
Titanium (Ti)-Dissolved	mg/L	0.00030	-	-	-	-	<0.00030	-
Tungsten (W)-Dissolved	mg/L	0.00010	-	-	-	-	<0.00010	-
Uranium (U)-Dissolved	mg/L	0.000010	-	-	-	-	0.00153	-
Vanadium (V)-Dissolved	mg/L	0.00050	-	-	-	-	<0.00050	-
Zinc (Zn)-Dissolved	mg/L	0.0010	-	-	-	-	<0.0010	-
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	-	-	-	<0.00020	-
Oil and Grease, Total	mg/L	-	-	-	-	-	-	-
Acute Toxicity	-	-	No Visible Sheen Not Acutely Toxic	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:
 Bold highlight indicate results that exceeded the applicable water quality criteria.
¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

Table 7.3.9: Water Quality Results for Water Licence Monitoring Location - MS-MRY-10

Analyte	Sample ID			MS-MRY-10	MS-MRY-10	MS-MRY-10	MS-MRY-10
	ALS Laboratory Sample ID			L2627332-15	L2630140-8	L2635757-1	L2637080-1
	Sample Date & Time			2021-08-16 9:50	2021-08-22 12:30	2021-09-03 11:40	2021-09-08 13:25
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Hardness	mg/L	0.50	-	-	-	143	-
pH	pH units	0.10	6.0 - 9.5	8.37	8.45	8.25	7.99
Total Suspended Solids	mg/L	2.0/1.0	15	<2.0	<2.0	2.5	2.6
Total Dissolved Solids	mg/L	10/13	-	122	209	144	222
Turbidity	NTU	0.10	-	0.15	<0.10	0.10	0.41
Alkalinity, Total (as CaCO3)	mg/L	1.0	-	-	-	130	-
Ammonia, Total (as N)	mg/L	0.010	-	-	-	<0.010	-
Chloride (Cl)	mg/L	0.50	-	-	-	10.3	-
Fluoride (F)	mg/L	0.020	-	-	-	0.025	-
Nitrate (as N)	mg/L	0.020	-	-	-	0.026	-
Total Kjeldahl Nitrogen	mg/L	0.050	-	-	-	0.117	-
Phosphorus, Total	mg/L	0.0030	-	-	-	<0.0030	-
Sulfate (SO4)	mg/L	0.30	-	-	-	9.88	-
Dissolved Organic Carbon	mg/L	0.50	-	-	-	2.76	-
Total Organic Carbon	mg/L	0.50	-	-	-	1.91	-
Aluminum (Al)-Total	mg/L	0.0050	-	-	-	0.0231	-
Antimony (Sb)-Total	mg/L	0.00010	-	-	-	<0.00010	-
Arsenic (As)-Total	mg/L	0.00010	0.50	-	-	<0.00010	-
Barium (Ba)-Total	mg/L	0.00010	-	-	-	0.0138	-
Beryllium (Be)-Total	mg/L	0.00010	-	-	-	<0.00010	-
Bismuth (Bi)-Total	mg/L	0.000050	-	-	-	<0.000050	-
Boron (B)-Total	mg/L	0.010	-	-	-	<0.010	-
Cadmium (Cd)-Total	mg/L	0.000050	-	-	-	<0.000050	-
Calcium (Ca)-Total	mg/L	0.050	-	-	-	25.3	-
Cesium (Cs)-Total	mg/L	0.000010	-	-	-	<0.000010	-
Chromium (Cr)-Total	mg/L	0.00050	-	-	-	<0.00050	-
Cobalt (Co)-Total	mg/L	0.00010	-	-	-	<0.00010	-
Copper (Cu)-Total	mg/L	0.00050	0.30	-	-	0.00103	-
Iron (Fe)-Total	mg/L	0.010	-	-	-	0.030	-
Lead (Pb)-Total	mg/L	0.000050	0.20	-	-	<0.000050	-
Lithium (Li)-Total	mg/L	0.0010	-	-	-	0.0011	-
Magnesium (Mg)-Total	mg/L	0.0050	-	-	-	16.9	-
Manganese (Mn)-Total	mg/L	0.00050	-	-	-	0.00076	-
Mercury (Hg)-Total	mg/L	0.0000050	-	-	-	<0.0000050	-
Molybdenum (Mo)-Total	mg/L	0.000050	-	-	-	0.000272	-
Nickel (Ni)-Total	mg/L	0.00050	0.50	-	-	<0.00050	-
Phosphorus (P)-Total	mg/L	0.050	-	-	-	<0.050	-
Potassium (K)-Total	mg/L	0.050	-	-	-	1.37	-
Rubidium (Rb)-Total	mg/L	0.00020	-	-	-	0.00117	-
Selenium (Se)-Total	mg/L	0.000050	-	-	-	<0.000050	-
Silicon (Si)-Total	mg/L	0.10	-	-	-	1.37	-
Silver (Ag)-Total	mg/L	0.000050	-	-	-	<0.000050	-
Sodium (Na)-Total	mg/L	0.050	-	-	-	2.50	-
Strontium (Sr)-Total	mg/L	0.0010	-	-	-	0.0155	-
Sulfur (S)-Total	mg/L	0.50	-	-	-	3.32	-
Tellurium (Te)-Total	mg/L	0.00020	-	-	-	<0.00020	-
Thallium (Tl)-Total	mg/L	0.000010	-	-	-	<0.000010	-
Thorium (Th)-Total	mg/L	0.00010	-	-	-	<0.00010	-
Tin (Sn)-Total	mg/L	0.00010	-	-	-	<0.00010	-
Titanium (Ti)-Total	mg/L	0.00030	-	-	-	0.00154	-
Tungsten (W)-Total	mg/L	0.00010	-	-	-	<0.00010	-
Uranium (U)-Total	mg/L	0.000010	-	-	-	0.00172	-
Vanadium (V)-Total	mg/L	0.00050	-	-	-	<0.00050	-
Zinc (Zn)-Total	mg/L	0.0030	0.50	-	-	<0.0030	-
Zirconium (Zr)-Total	mg/L	0.00020	-	-	-	<0.00020	-
Aluminum (Al)-Dissolved	mg/L	0.0050	-	-	-	<0.0050	-
Antimony (Sb)-Dissolved	mg/L	0.00010	-	-	-	<0.00010	-
Arsenic (As)-Dissolved	mg/L	0.00010	-	-	-	<0.00010	-
Barium (Ba)-Dissolved	mg/L	0.00010	-	-	-	0.0149	-
Beryllium (Be)-Dissolved	mg/L	0.00010	-	-	-	<0.00010	-
Bismuth (Bi)-Dissolved	mg/L	0.000050	-	-	-	<0.000050	-
Boron (B)-Dissolved	mg/L	0.010	-	-	-	<0.010	-
Cadmium (Cd)-Dissolved	mg/L	0.0000050	-	-	-	<0.0000050	-
Calcium (Ca)-Dissolved	mg/L	0.050	-	-	-	28.1	-
Cesium (Cs)-Dissolved	mg/L	0.000010	-	-	-	<0.000010	-
Chromium (Cr)-Dissolved	mg/L	0.00050	-	-	-	<0.00050	-
Cobalt (Co)-Dissolved	mg/L	0.00010	-	-	-	<0.00010	-
Copper (Cu)-Dissolved	mg/L	0.00020	-	-	-	0.00098	-
Iron (Fe)-Dissolved	mg/L	0.010	-	-	-	<0.010	-
Lead (Pb)-Dissolved	mg/L	0.000050	-	-	-	<0.000050	-
Lithium (Li)-Dissolved	mg/L	0.0010	-	-	-	0.0014	-
Magnesium (Mg)-Dissolved	mg/L	0.0050	-	-	-	17.7	-
Manganese (Mn)-Dissolved	mg/L	0.00050	-	-	-	<0.00050	-
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	-	-	<0.0000050	-
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	-	-	0.000306	-
Nickel (Ni)-Dissolved	mg/L	0.00050	-	-	-	<0.00050	-
Phosphorus (P)-Dissolved	mg/L	0.050	-	-	-	<0.050	-
Potassium (K)-Dissolved	mg/L	0.050	-	-	-	1.46	-
Rubidium (Rb)-Dissolved	mg/L	0.00020	-	-	-	0.00124	-
Selenium (Se)-Dissolved	mg/L	0.000050	-	-	-	<0.000050	-
Silicon (Si)-Dissolved	mg/L	0.050	-	-	-	1.47	-
Silver (Ag)-Dissolved	mg/L	0.000050	-	-	-	<0.000050	-
Sodium (Na)-Dissolved	mg/L	0.050	-	-	-	2.63	-
Strontium (Sr)-Dissolved	mg/L	0.0010	-	-	-	0.0170	-
Sulfur (S)-Dissolved	mg/L	0.50	-	-	-	3.85	-
Tellurium (Te)-Dissolved	mg/L	0.00020	-	-	-	<0.00020	-
Thallium (Tl)-Dissolved	mg/L	0.000010	-	-	-	<0.000010	-
Thorium (Th)-Dissolved	mg/L	0.00010	-	-	-	<0.00010	-
Tin (Sn)-Dissolved	mg/L	0.00010	-	-	-	<0.00010	-
Titanium (Ti)-Dissolved	mg/L	0.00030	-	-	-	<0.00030	-
Tungsten (W)-Dissolved	mg/L	0.00010	-	-	-	<0.00010	-
Uranium (U)-Dissolved	mg/L	0.000010	-	-	-	0.00184	-
Vanadium (V)-Dissolved	mg/L	0.00050	-	-	-	<0.00050	-
Zinc (Zn)-Dissolved	mg/L	0.0010	-	-	-	<0.0010	-
Zirconium (Zr)-Dissolved	mg/L	0.00020	-	-	-	<0.00020	-
Oil and Grease, Total	mg/L	-	-	-	-	-	-
Acute Toxicity	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:
 Bold highlight indicate results that exceeded the applicable water quality criteria.
¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

Table 7.3.10: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A	MS-MRY-13A	MS-MRY-13A
	ALS Laboratory Sample ID			L2585502-6	L2592735-4	L2595911-8	L2601055-10
	Sample Date & Time			2021-05-09 14:45	2021-05-26 12:20	2021-05-31 15:45	2021-06-08 14:50
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0	-		89.1	-	-
pH	pH units	0.10	6.0 - 9.5	7.77	7.54	7.45	7.37
Total Suspended Solids	mg/L	2.0	15.0	2.0	7.9	2.0	4.6
Total Dissolved Solids	mg/L	10	-	63	73	41	45
Turbidity	NTU	0.10	-	49.6	85.8	14.5	17.7
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	-	38.1	-	-
Dissolved Organic Carbon	mg/L	0.50	-	-	7.44	-	-
Total Organic Carbon	mg/L	0.50	-	-	5.0	-	-
Aluminum (Al)-Total	mg/L	0.0050/0.050	-	-	1.48	-	-
Antimony (Sb)-Total	mg/L	0.00010/0.0010	-	-	0.00042	-	-
Arsenic (As)-Total	mg/L	0.00010/0.0010	0.50	-	0.00041	-	-
Barium (Ba)-Total	mg/L	0.00010/0.0010	-	-	0.0143	-	-
Beryllium (Be)-Total	mg/L	0.00010/0.0010	-	-	<0.00010	-	-
Bismuth (Bi)-Total	mg/L	0.000050/0.00050	-	-	<0.000050	-	-
Boron (B)-Total	mg/L	0.010/0.10	-	-	0.078	-	-
Cadmium (Cd)-Total	mg/L	0.000050/0.00050	-	-	0.0000167	-	-
Calcium (Ca)-Total	mg/L	0.050/0.50	-	-	8.80	-	-
Cesium (Cs)-total	mg/L	0.000010/0.00010	-	-	0.000169	-	-
Chromium (Cr)-Total	mg/L	0.00050/0.0050	-	-	0.00330	-	-
Cobalt (Co)-Total	mg/L	0.00010/0.0010	-	-	0.00151	-	-
Copper (Cu)-Total	mg/L	0.00050/0.0050	0.30	-	0.00339	-	-
Iron (Fe)-Total	mg/L	0.010/0.10	-	-	1.92	-	-
Lead (Pb)-Total	mg/L	0.000050/0.00050	0.20	-	0.00143	-	-
Lithium (Li)-Total	mg/L	0.0010/0.010	-	-	0.0038	-	-
Magnesium (Mg)-Total	mg/L	0.0050/0.00050	-	-	4.74	-	-
Manganese (Mn)-Total	mg/L	0.00050/0.0050	-	-	0.0462	-	-
Mercury (Hg)-Total	mg/L	0.0000050	-	-	0.0000065	-	-
Molybdenum (Mo)-Total	mg/L	0.000050/0.00050	-	-	0.000559	-	-
Nickel (Ni)-Total	mg/L	0.00050/0.0050	0.50	-	0.00626	-	-
Phosphorus (P)-Total	mg/L	0.050/0.50	-	-	0.058	-	-
Potassium (K)-Total	mg/L	0.050/0.50	-	-	2.13	-	-
Rubidium (Rb)-Total	mg/L	0.00020/0.0020	-	-	0.00498	-	-
Selenium (Se)-Total	mg/L	0.000050/0.00050	-	-	0.000052	-	-
Silicon (Si)-Total	mg/L	0.10/1.0	-	-	3.11	-	-
Silver (Ag)-Total	mg/L	0.00005/0.00050	-	-	<0.000050	-	-
Sodium (Na)-Total	mg/L	0.050/0.50	-	-	1.16	-	-
Strontium (Sr)-Total	mg/L	0.0010/0.010	-	-	0.0127	-	-
Sulfur (S)-Total	mg/L	0.50/5.0	-	-	2.51	-	-
Tellurium (Te)-Total	mg/L	0.00020/0.0020	-	-	<0.00020	-	-
Thallium (Tl)-Total	mg/L	0.000010/0.00010	-	-	0.000027	-	-
Thorium (Th)-Total	mg/L	0.00010/0.0010	-	-	0.00078	-	-
Tin (Sn)-Total	mg/L	0.00010/0.0010	-	-	<0.00010	-	-
Titanium (Ti)-Total	mg/L	0.00030/0.0030	-	-	0.0523	-	-
Tungsten (W)-Total	mg/L	0.00010/0.0010	-	-	<0.00010	-	-
Uranium (U)-Total	mg/L	0.000010/0.00010	-	-	0.000775	-	-
Vanadium (V)-Total	mg/L	0.00050/0.0050	-	-	0.00255	-	-
Zinc (Zn)-Total	mg/L	0.0030/0.030	0.50	-	0.0093	-	-
Zirconium (Zr)-Total	mg/L	0.00020/0.0020	-	-	0.00126	-	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	-	-
	-	0.00010	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.010/0.0010	-	-	<0.010	-	-
F1 (C6-C10)	ug/L	25	-	-	<25	-	-
F2 (C10-C16)	ug/L	100/150	-	-	<150	-	-
F3 (C16-C34)	ug/L	250/380	-	-	<380	-	-
F4 (C34-C50)	ug/L	250/380	-	-	<380	-	-
Total Hydrocarbons (C6-C50)	ug/L	370/550	-	-	<550	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 7: Landfill Facilities.

Table 7.3.10: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A	MS-MRY-13A	MS-MRY-13A03
	ALS Laboratory Sample ID			L2602498-10	L2605841-12	L2608050-5	L2608050-6
	Sample Date & Time			2021-06-13 14:50	2021-06-21 15:10	2021-06-28 16:10	2021-06-28 16:10
	QA/QC Sample Type			N/A	N/A	N/A	Travel Blank
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0	-	125	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.66	7.93	8.27	6.13
Total Suspended Solids	mg/L	2.0	15.0	2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	67	312	416	<10
Turbidity	NTU	0.10	-	8.87	0.27	0.43	<0.10
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	47.1	-	-	-
Dissolved Organic Carbon	mg/L	0.50	-	2.50	-	-	-
Total Organic Carbon	mg/L	0.50	-	3.10	-	-	-
Aluminum (Al)-Total	mg/L	0.0050/0.050	-	0.113	-	-	-
Antimony (Sb)-Total	mg/L	0.00010/0.0010	-	0.00014	-	-	-
Arsenic (As)-Total	mg/L	0.00010/0.0010	0.50	0.00013	-	-	-
Barium (Ba)-Total	mg/L	0.00010/0.0010	-	0.0130	-	-	-
Beryllium (Be)-Total	mg/L	0.00010/0.0010	-	<0.00010	-	-	-
Bismuth (Bi)-Total	mg/L	0.000050/0.00050	-	<0.000050	-	-	-
Boron (B)-Total	mg/L	0.010/0.10	-	0.271	-	-	-
Cadmium (Cd)-Total	mg/L	0.0000050/0.000050	-	0.0000058	-	-	-
Calcium (Ca)-Total	mg/L	0.050/0.50	-	11.0	-	-	-
Cesium (Cs)-total	mg/L	0.000010/0.00010	-	0.000013	-	-	-
Chromium (Cr)-Total	mg/L	0.00050/0.0050	-	<0.00050	-	-	-
Cobalt (Co)-Total	mg/L	0.00010/0.0010	-	0.00017	-	-	-
Copper (Cu)-Total	mg/L	0.00050/0.0050	0.30	0.00132	-	-	-
Iron (Fe)-Total	mg/L	0.010/0.10	-	0.190	-	-	-
Lead (Pb)-Total	mg/L	0.000050/0.00050	0.20	0.000130	-	-	-
Lithium (Li)-Total	mg/L	0.0010/0.010	-	0.0027	-	-	-
Magnesium (Mg)-Total	mg/L	0.0050/0.00050	-	6.84	-	-	-
Manganese (Mn)-Total	mg/L	0.00050/0.0050	-	0.00401	-	-	-
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	-	-	-
Molybdenum (Mo)-Total	mg/L	0.000050/0.00050	-	0.000446	-	-	-
Nickel (Ni)-Total	mg/L	0.00050/0.0050	0.50	0.00468	-	-	-
Phosphorus (P)-Total	mg/L	0.050/0.50	-	<0.050	-	-	-
Potassium (K)-Total	mg/L	0.050/0.50	-	1.08	-	-	-
Rubidium (Rb)-Total	mg/L	0.00020/0.0020	-	0.00248	-	-	-
Selenium (Se)-Total	mg/L	0.000050/0.00050	-	<0.000050	-	-	-
Silicon (Si)-Total	mg/L	0.10/1.0	-	0.99	-	-	-
Silver (Ag)-Total	mg/L	0.00005/0.00050	-	<0.000050	-	-	-
Sodium (Na)-Total	mg/L	0.050/0.50	-	1.93	-	-	-
Strontium (Sr)-Total	mg/L	0.0010/0.010	-	0.0100	-	-	-
Sulfur (S)-Total	mg/L	0.50/5.0	-	4.62	-	-	-
Tellurium (Te)-Total	mg/L	0.00020/0.0020	-	<0.00020	-	-	-
Thallium (Tl)-Total	mg/L	0.000010/0.00010	-	0.000013	-	-	-
Thorium (Th)-Total	mg/L	0.00010/0.0010	-	<0.00010	-	-	-
Tin (Sn)-Total	mg/L	0.00010/0.0010	-	0.00053	-	-	-
Titanium (Ti)-Total	mg/L	0.00030/0.0030	-	0.00428	-	-	-
Tungsten (W)-Total	mg/L	0.00010/0.0010	-	<0.00010	-	-	-
Uranium (U)-Total	mg/L	0.000010/0.00010	-	0.000107	-	-	-
Vanadium (V)-Total	mg/L	0.00050/0.0050	-	<0.00050	-	-	-
Zinc (Zn)-Total	mg/L	0.0030/0.030	0.50	0.0110	-	-	-
Zirconium (Zr)-Total	mg/L	0.00020/0.0020	-	<0.00020	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-
	-	0.00010	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-
Phenols (4AAP)	mg/L	0.010/0.0010	-	<0.0010	-	-	-
F1 (C6-C10)	ug/L	25	-	<25	-	-	-
F2 (C10-C16)	ug/L	100/150	-	<100	-	-	-
F3 (C16-C34)	ug/L	250/380	-	<250	-	-	-
F4 (C34-C50)	ug/L	250/380	-	<250	-	-	-
Total Hydrocarbons (C6-C50)	ug/L	370/550	-	<370	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 7: Landfill Facilities.

Table 7.3.10: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A	MS-MRY-13A01	MS-MRY-13A
	ALS Laboratory Sample ID			L2609333-5	L2612809-9	L2612809-10	L2615981-2
	Sample Date & Time			2021-07-04 12:45	2021-07-12 11:45	2021-07-12 11:45	2021-07-19 10:35
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0	-	749	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.26	7.94	7.92	8.01
Total Suspended Solids	mg/L	2.0	15.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	526	480	486	497
Turbidity	NTU	0.10	-	0.30	0.35	0.22	0.17
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	136	-	-	-
Dissolved Organic Carbon	mg/L	0.50	-	4.54	-	-	-
Total Organic Carbon	mg/L	0.50	-	5.53	-	-	-
Aluminum (Al)-Total	mg/L	0.0050/0.050	-	<0.050	-	-	-
Antimony (Sb)-Total	mg/L	0.00010/0.0010	-	<0.0010	-	-	-
Arsenic (As)-Total	mg/L	0.00010/0.0010	0.50	<0.0010	-	-	-
Barium (Ba)-Total	mg/L	0.00010/0.0010	-	0.0472	-	-	-
Beryllium (Be)-Total	mg/L	0.00010/0.0010	-	<0.0010	-	-	-
Bismuth (Bi)-Total	mg/L	0.000050/0.00050	-	<0.00050	-	-	-
Boron (B)-Total	mg/L	0.010/0.10	-	1.44	-	-	-
Cadmium (Cd)-Total	mg/L	0.000050/0.00050	-	<0.00050	-	-	-
Calcium (Ca)-Total	mg/L	0.050/0.50	-	65.3	-	-	-
Cesium (Cs)-total	mg/L	0.000010/0.00010	-	<0.00010	-	-	-
Chromium (Cr)-Total	mg/L	0.00050/0.0050	-	<0.0050	-	-	-
Cobalt (Co)-Total	mg/L	0.00010/0.0010	-	<0.0010	-	-	-
Copper (Cu)-Total	mg/L	0.00050/0.0050	0.30	<0.0050	-	-	-
Iron (Fe)-Total	mg/L	0.010/0.10	-	<0.10	-	-	-
Lead (Pb)-Total	mg/L	0.000050/0.00050	0.20	<0.00050	-	-	-
Lithium (Li)-Total	mg/L	0.0010/0.010	-	0.026	-	-	-
Magnesium (Mg)-Total	mg/L	0.0050/0.00050	-	48.9	-	-	-
Manganese (Mn)-Total	mg/L	0.00050/0.0050	-	<0.0050	-	-	-
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	-	-	-
Molybdenum (Mo)-Total	mg/L	0.000050/0.00050	-	0.00056	-	-	-
Nickel (Ni)-Total	mg/L	0.00050/0.0050	0.50	0.0125	-	-	-
Phosphorus (P)-Total	mg/L	0.050/0.50	-	<0.50	-	-	-
Potassium (K)-Total	mg/L	0.050/0.50	-	3.08	-	-	-
Rubidium (Rb)-Total	mg/L	0.00020/0.0020	-	0.0088	-	-	-
Selenium (Se)-Total	mg/L	0.000050/0.00050	-	<0.00050	-	-	-
Silicon (Si)-Total	mg/L	0.10/1.0	-	3.3	-	-	-
Silver (Ag)-Total	mg/L	0.00005/0.00050	-	<0.00050	-	-	-
Sodium (Na)-Total	mg/L	0.050/0.50	-	15.2	-	-	-
Strontium (Sr)-Total	mg/L	0.0010/0.010	-	0.055	-	-	-
Sulfur (S)-Total	mg/L	0.50/5.0	-	56.6	-	-	-
Tellurium (Te)-Total	mg/L	0.00020/0.0020	-	<0.0020	-	-	-
Thallium (Tl)-Total	mg/L	0.000010/0.00010	-	<0.00010	-	-	-
Thorium (Th)-Total	mg/L	0.00010/0.0010	-	<0.0010	-	-	-
Tin (Sn)-Total	mg/L	0.00010/0.0010	-	<0.0010	-	-	-
Titanium (Ti)-Total	mg/L	0.00030/0.0030	-	<0.0030	-	-	-
Tungsten (W)-Total	mg/L	0.00010/0.0010	-	<0.0010	-	-	-
Uranium (U)-Total	mg/L	0.000010/0.00010	-	0.00255	-	-	-
Vanadium (V)-Total	mg/L	0.00050/0.0050	-	<0.0050	-	-	-
Zinc (Zn)-Total	mg/L	0.0030/0.030	0.50	<0.030	-	-	-
Zirconium (Zr)-Total	mg/L	0.00020/0.0020	-	<0.0020	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	-
	-	0.00010	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.010/0.0010	-	<0.0010	-	-	-
F1 (C6-C10)	ug/L	25	-	<25	-	-	-
F2 (C10-C16)	ug/L	100/150	-	<100	-	-	-
F3 (C16-C34)	ug/L	250/380	-	<250	-	-	-
F4 (C34-C50)	ug/L	250/380	-	<250	-	-	-
Total Hydrocarbons (C6-C50)	ug/L	370/550	-	<370	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 7: Landfill Facilities.

Table 7.3.10: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A	MS-MRY-13A	MS-MRY-13A
	ALS Laboratory Sample ID			L2621268-6	L2621381-5	L2624988-5	L2627332-5
	Sample Date & Time			2021-07-29 11:40	2021-08-02 10:15	2021-08-10 14:15	2021-08-16 12:20
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0	-	-	874	-	-
pH	pH units	0.10	6.0 - 9.5	7.95	7.89	8.08	8.14
Total Suspended Solids	mg/L	2.0	15.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	512	588	700	794
Turbidity	NTU	0.10	-	0.12	0.24	0.22	0.21
Alkalinity, Total (as CaCO ₃)	mg/L	1.0	-	-	149	-	-
Dissolved Organic Carbon	mg/L	0.50	-	-	6.13	-	-
Total Organic Carbon	mg/L	0.50	-	-	6.68	-	-
Aluminum (Al)-Total	mg/L	0.0050/0.050	-	-	<0.050	-	-
Antimony (Sb)-Total	mg/L	0.00010/0.0010	-	-	<0.0010	-	-
Arsenic (As)-Total	mg/L	0.00010/0.0010	0.50	-	<0.0010	-	-
Barium (Ba)-Total	mg/L	0.00010/0.0010	-	-	0.0547	-	-
Beryllium (Be)-Total	mg/L	0.00010/0.0010	-	-	<0.0010	-	-
Bismuth (Bi)-Total	mg/L	0.000050/0.00050	-	-	<0.00050	-	-
Boron (B)-Total	mg/L	0.010/0.10	-	-	1.94	-	-
Cadmium (Cd)-Total	mg/L	0.0000050/0.000050	-	-	<0.000050	-	-
Calcium (Ca)-Total	mg/L	0.050/0.50	-	-	82.8	-	-
Cesium (Cs)-total	mg/L	0.000010/0.00010	-	-	<0.00010	-	-
Chromium (Cr)-Total	mg/L	0.00050/0.0050	-	-	<0.0050	-	-
Cobalt (Co)-Total	mg/L	0.00010/0.0010	-	-	<0.0010	-	-
Copper (Cu)-Total	mg/L	0.00050/0.0050	0.30	-	<0.0050	-	-
Iron (Fe)-Total	mg/L	0.010/0.10	-	-	<0.10	-	-
Lead (Pb)-Total	mg/L	0.000050/0.00050	0.20	-	<0.00050	-	-
Lithium (Li)-Total	mg/L	0.0010/0.010	-	-	0.030	-	-
Magnesium (Mg)-Total	mg/L	0.0050/0.00050	-	-	61.0	-	-
Manganese (Mn)-Total	mg/L	0.00050/0.0050	-	-	<0.0050	-	-
Mercury (Hg)-Total	mg/L	0.0000050	-	-	<0.0000050	-	-
Molybdenum (Mo)-Total	mg/L	0.000050/0.00050	-	-	0.00051	-	-
Nickel (Ni)-Total	mg/L	0.00050/0.0050	0.50	-	0.0148	-	-
Phosphorus (P)-Total	mg/L	0.050/0.50	-	-	<0.50	-	-
Potassium (K)-Total	mg/L	0.050/0.50	-	-	3.97	-	-
Rubidium (Rb)-Total	mg/L	0.00020/0.0020	-	-	0.0131	-	-
Selenium (Se)-Total	mg/L	0.000050/0.00050	-	-	<0.00050	-	-
Silicon (Si)-Total	mg/L	0.10/1.0	-	-	3.8	-	-
Silver (Ag)-Total	mg/L	0.00005/0.00050	-	-	<0.00050	-	-
Sodium (Na)-Total	mg/L	0.050/0.50	-	-	21.4	-	-
Strontium (Sr)-Total	mg/L	0.0010/0.010	-	-	0.064	-	-
Sulfur (S)-Total	mg/L	0.50/5.0	-	-	73.6	-	-
Tellurium (Te)-Total	mg/L	0.00020/0.0020	-	-	<0.0020	-	-
Thallium (Tl)-Total	mg/L	0.000010/0.00010	-	-	<0.00010	-	-
Thorium (Th)-Total	mg/L	0.00010/0.0010	-	-	<0.0010	-	-
Tin (Sn)-Total	mg/L	0.00010/0.0010	-	-	<0.0010	-	-
Titanium (Ti)-Total	mg/L	0.00030/0.0030	-	-	<0.0030	-	-
Tungsten (W)-Total	mg/L	0.00010/0.0010	-	-	<0.0010	-	-
Uranium (U)-Total	mg/L	0.000010/0.00010	-	-	0.00622	-	-
Vanadium (V)-Total	mg/L	0.00050/0.0050	-	-	<0.0050	-	-
Zinc (Zn)-Total	mg/L	0.0030/0.030	0.50	-	<0.030	-	-
Zirconium (Zr)-Total	mg/L	0.00020/0.0020	-	-	<0.0020	-	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	-	-
	-	0.00010	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.010/0.0010	-	-	<0.0010	-	-
F1 (C6-C10)	ug/L	25	-	-	<25	-	-
F2 (C10-C16)	ug/L	100/150	-	-	<100	-	-
F3 (C16-C34)	ug/L	250/380	-	-	<250	-	-
F4 (C34-C50)	ug/L	250/380	-	-	<250	-	-
Total Hydrocarbons (C6-C50)	ug/L	370/550	-	-	<370	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 7: Landfill Facilities.

Table 7.3.11: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13B

Analyte	Sample ID			MS-MRY-13B	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B
	ALS Laboratory Sample ID			L2585502-5	L2601055-9	L2605841-11	L2609333-4	L2612809-8	L2615981-1	L2621268-5
	Sample Date & Time			2021-05-09 14:20	2021-06-08 14:30	2021-06-21 14:25	2021-07-04 12:10	2021-07-12 11:20	2021-07-19 10:10	2021-07-29 11:15
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	3.0/1.0	-	-	861	835	-	-	-	
pH	pH units	0.10	6.0 - 9.5	7.92	7.53	8.13	8.29	8.01	8.10	
Total Suspended Solids	mg/L	1.0/2.0	15.0	3.9	2.5	3.1	2.1	2.5	<2.0	
Total Dissolved Solids	mg/L	10	-	157	71	558	563	366	681	
Turbidity	NTU	0.10	-	36.6	9.14	2.49	0.31	1.53	0.16	
Alkalinity, Total (as CaCO3)	mg/L	10	-	-	-	147	135	-	-	
Dissolved Organic Carbon	mg/L	0.50	-	-	-	6.71	4.72	-	-	
Total Organic Carbon	mg/L	0.50	-	-	-	5.72	5.69	-	-	
Aluminum (Al)-Total	mg/L	0.050	-	-	-	<0.050	<0.050	-	-	
Antimony (Sb)-Total	mg/L	0.0010	-	-	-	<0.0010	<0.0010	-	-	
Arsenic (As)-Total	mg/L	0.0010	0.50	-	-	<0.0010	<0.0010	-	-	
Barium (Ba)-Total	mg/L	0.0010	-	-	-	0.0572	0.0501	-	-	
Beryllium (Be)-Total	mg/L	0.0010	-	-	-	<0.0010	<0.0010	-	-	
Bismuth (Bi)-Total	mg/L	0.00050	-	-	-	<0.00050	<0.00050	-	-	
Boron (B)-Total	mg/L	0.10	-	-	-	1.66	1.92	-	-	
Cadmium (Cd)-Total	mg/L	0.000050	-	-	-	<0.000050	<0.000050	-	-	
Calcium (Ca)-Total	mg/L	0.50	-	-	-	84.1	82.1	-	-	
Chromium (Cr)-Total	mg/L	0.0050	-	-	-	<0.0050	<0.0050	-	-	
Cobalt (Co)-Total	mg/L	0.0010	-	-	-	<0.0010	<0.0010	-	-	
Copper (Cu)-Total	mg/L	0.0050	0.30	-	-	<0.0050	<0.0050	-	-	
Iron (Fe)-Total	mg/L	0.10	-	-	-	<0.10	<0.10	-	-	
Lead (Pb)-Total	mg/L	0.00050	0.20	-	-	<0.00050	<0.00050	-	-	
Lithium (Li)-Total	mg/L	0.010	-	-	-	<0.010	0.023	-	-	
Magnesium (Mg)-Total	mg/L	0.050	-	-	-	52.3	46.5	-	-	
Manganese (Mn)-Total	mg/L	0.0050	-	-	-	<0.0050	0.0072	-	-	
Mercury (Hg)-Total	mg/L	0.0000050	-	-	-	<0.0000050	<0.0000050	-	-	
Molybdenum (Mo)-Total	mg/L	0.00050	-	-	-	<0.00050	<0.00050	-	-	
Nickel (Ni)-Total	mg/L	0.0050	0.50	-	-	0.0131	0.0130	-	-	
Potassium (K)-Total	mg/L	0.50	-	-	-	2.96	3.57	-	-	
Selenium (Se)-Total	mg/L	0.00050	-	-	-	<0.00050	<0.00050	-	-	
Silicon (Si)-Total	mg/L	1.0	-	-	-	2.6	3.2	-	-	
Silver (Ag)-Total	mg/L	0.00050	-	-	-	<0.00050	<0.00050	-	-	
Sodium (Na)-Total	mg/L	0.50	-	-	-	16.5	18.4	-	-	
Strontium (Sr)-Total	mg/L	0.010	-	-	-	0.091	0.101	-	-	
Thallium (Tl)-Total	mg/L	0.00010	-	-	-	<0.00010	<0.00010	-	-	
Tin (Sn)-Total	mg/L	0.0010	-	-	-	<0.0010	<0.0010	-	-	
Titanium (Ti)-Total	mg/L	0.0030	-	-	-	<0.0030	<0.0030	-	-	
Tungsten (W)-Total	mg/L	0.0010	-	-	-	<0.0010	<0.0010	-	-	
Uranium (U)-Total	mg/L	0.00010	-	-	-	0.00488	0.00493	-	-	
Vanadium (V)-Total	mg/L	0.0050	-	-	-	<0.0050	<0.0050	-	-	
Zinc (Zn)-Total	mg/L	0.030	0.50	-	-	<0.030	<0.030	-	-	
Zirconium (Zr)-Total	mg/L	0.0020	-	-	-	<0.0020	<0.0020	-	-	
Oil and Grease, Total	-	2.0/5.0	-	-	-	<5.0	<2.0	-	-	
Phenols (4AAP)	mg/L	0.0010	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	
F1 (C6-C10)	ug/L	25	-	-	-	<25	<25	-	-	
F2 (C10-C16)	ug/L	100	-	-	-	<100	<100	-	-	
F3 (C16-C34)	ug/L	250	-	-	-	<250	<250	-	-	
F4 (C34-C50)	ug/L	250	-	-	-	<250	<250	-	-	
Total Hydrocarbons (C6-C50)	ug/L	370	-	-	-	<370	<370	-	-	

Notes:
Bold highlight indicate results that exceeded the applicable water quality criteria.
¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 7: Landfill Facilities.

Table 7.3.11: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13B

Analyte	Sample ID			MS-MRY-13B	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B03	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B	MS-MRY-13B01	MS-MRY-13B	
	ALS Laboratory Sample ID			L2621381-6	L2624988-4	L2627332-3	L2627332-4	L2630140-5	L2635278-9	L2636426-5	L2636426-6	L2639307-9	
	Sample Date & Time			2021-08-02 9:30	2021-08-10 13:55	2021-08-16 12:00	2021-08-16 12:00	2021-08-22 10:40	2021-09-02 10:30	2021-09-07 12:30	2021-09-07 12:30	2021-09-13 14:10	
	QA/QC Sample Type			N/A	N/A	N/A	Travel Blank	N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹										
Conductivity	umhos/cm	3.0/1.0	-	815	-	-	-	-	1,380	-	-	-	
pH	pH units	0.10	6.0 - 9.5	7.99	8.10	8.15	5.97	8.11	7.93	7.55	7.57	7.30	
Total Suspended Solids	mg/L	1.0/2.0	15.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Total Dissolved Solids	mg/L	10	-	658	832	649	<10	959	991	1100	1030	1240	
Turbidity	NTU	0.10	-	0.15	0.16	0.25	<0.10	<0.10	0.24	0.11	0.12	0.41	
Alkalinity, Total (as CaCO3)	mg/L	10	-	135	-	-	-	-	189	-	-	-	
Dissolved Organic Carbon	mg/L	0.50	-	6.53	-	-	-	-	8.75	-	-	-	
Total Organic Carbon	mg/L	0.50	-	6.97	-	-	-	-	7.85	-	-	-	
Aluminum (Al)-Total	mg/L	0.050	-	<0.050	-	-	-	-	<0.050	-	-	-	
Antimony (Sb)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-	<0.0010	-	-	-	
Arsenic (As)-Total	mg/L	0.0010	0.50	<0.0010	-	-	-	-	<0.0010	-	-	-	
Barium (Ba)-Total	mg/L	0.0010	-	0.0419	-	-	-	-	0.0818	-	-	-	
Beryllium (Be)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-	<0.0010	-	-	-	
Bismuth (Bi)-Total	mg/L	0.00050	-	<0.00050	-	-	-	-	<0.00050	-	-	-	
Boron (B)-Total	mg/L	0.10	-	2.25	-	-	-	-	4.92	-	-	-	
Cadmium (Cd)-Total	mg/L	0.000050	-	<0.000050	-	-	-	-	<0.000050	-	-	-	
Calcium (Ca)-Total	mg/L	0.50	-	88.1	-	-	-	-	165	-	-	-	
Chromium (Cr)-Total	mg/L	0.0050	-	<0.0050	-	-	-	-	<0.0050	-	-	-	
Cobalt (Co)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-	<0.0010	-	-	-	
Copper (Cu)-Total	mg/L	0.0050	0.30	<0.0050	-	-	-	-	<0.0050	-	-	-	
Iron (Fe)-Total	mg/L	0.10	-	<0.10	-	-	-	-	<0.10	-	-	-	
Lead (Pb)-Total	mg/L	0.00050	0.20	<0.00050	-	-	-	-	<0.00050	-	-	-	
Lithium (Li)-Total	mg/L	0.010	-	0.023	-	-	-	-	0.059	-	-	-	
Magnesium (Mg)-Total	mg/L	0.050	-	51.7	-	-	-	-	71.2	-	-	-	
Manganese (Mn)-Total	mg/L	0.0050	-	<0.0050	-	-	-	-	<0.0050	-	-	-	
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	-	-	-	-	<0.0000050	-	-	-	
Molybdenum (Mo)-Total	mg/L	0.00050	-	<0.00050	-	-	-	-	0.00059	-	-	-	
Nickel (Ni)-Total	mg/L	0.0050	0.50	0.0123	-	-	-	-	0.0189	-	-	-	
Potassium (K)-Total	mg/L	0.50	-	3.07	-	-	-	-	6.90	-	-	-	
Selenium (Se)-Total	mg/L	0.00050	-	<0.00050	-	-	-	-	<0.00050	-	-	-	
Silicon (Si)-Total	mg/L	1.0	-	3.5	-	-	-	-	4.2	-	-	-	
Silver (Ag)-Total	mg/L	0.00050	-	<0.00050	-	-	-	-	<0.00050	-	-	-	
Sodium (Na)-Total	mg/L	0.50	-	18.0	-	-	-	-	35.3	-	-	-	
Strontium (Sr)-Total	mg/L	0.010	-	0.108	-	-	-	-	0.232	-	-	-	
Thallium (Tl)-Total	mg/L	0.00010	-	<0.00010	-	-	-	-	<0.00010	-	-	-	
Tin (Sn)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-	<0.0010	-	-	-	
Titanium (Ti)-Total	mg/L	0.0030	-	<0.0030	-	-	-	-	<0.0030	-	-	-	
Tungsten (W)-Total	mg/L	0.0010	-	<0.0010	-	-	-	-	<0.0010	-	-	-	
Uranium (U)-Total	mg/L	0.00010	-	0.00551	-	-	-	-	0.0165	-	-	-	
Vanadium (V)-Total	mg/L	0.0050	-	<0.0050	-	-	-	-	<0.0050	-	-	-	
Zinc (Zn)-Total	mg/L	0.030	0.50	<0.030	-	-	-	-	<0.030	-	-	-	
Zirconium (Zr)-Total	mg/L	0.0020	-	<0.0020	-	-	-	-	<0.0020	-	-	-	
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	-	-	-	-	<5.0	-	-	-	
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	
Phenols (4AAP)	mg/L	0.0010	-	0.0011	-	-	-	-	<0.0010	-	-	-	
F1 (C6-C10)	ug/L	25	-	<25	-	-	-	-	<25	-	-	-	
F2 (C10-C16)	ug/L	100	-	<100	-	-	-	-	<100	-	-	-	
F3 (C16-C34)	ug/L	250	-	<250	-	-	-	-	<250	-	-	-	
F4 (C34-C50)	ug/L	250	-	<250	-	-	-	-	<250	-	-	-	
Total Hydrocarbons (C6-C50)	ug/L	370	-	<370	-	-	-	-	<370	-	-	-	

Notes:
Bold highlight indicate results that exceeded the applicable water quality criteria.
¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 7: Landfill Facilities.

Table 7.3.12: Water Quality Results for Water Licence Monitoring Location - MS-C-A

Analyte	Sample ID			MS-C-A	MS-C-A	MS-C-A	MS-C-A	MS-C-A01	MS-C-A
	ALS Laboratory Sample ID			L2592735-5	L2595911-7	L2601055-5	L2602498-6	L2602498-7	L2605841-13
	Sample Date & Time			2021-05-26 10:45	2021-05-31 10:45	2021-06-08 12:55	2021-06-13 11:25	2021-06-13 11:25	2021-06-21 17:15
	QA/QC Sample Type			N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0/3.0	-	46.0	-	-	91.2	91.5	-
pH	pH units	0.10	6.0 - 9.5	7.31	7.35	7.55	7.74	7.73	7.93
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	6.5	3.5	3.1	<1.0	<1.0	<2.0
Total Dissolved Solids	mg/L	10	-	36	33	47	53	38	85
Turbidity	NTU	0.10	-	26.7	13.1	1.45	10.2	10.2	3.37
Ammonia, Total (as N)	mg/L	0.010/0.20	-	<0.010	-	-	<0.010	<0.010	-
Nitrate (as N)	mg/L	0.020	-	0.062	-	-	0.084	0.088	-
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	-	-	<5.0	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.12: Water Quality Results for Water Licence Monitoring Location - MS-C-A

Analyte	Sample ID			MS-C-A03	MS-C-A	MS-C-A	MS-C-A	MS-C-A	MS-C-A	MS-C-A
	ALS Laboratory Sample ID			L2605841-14	L2608050-11	L2609728-4	L2612809-1	L2612809-2	L2615981-9	L2621358-2
	Sample Date & Time			2021-06-21 17:15	2021-06-29 12:30	2021-07-05 11:30	2021-07-12 8:50	2021-07-12 8:50	2021-07-19 13:40	2021-07-31 9:10
	QA/QC Sample Type			Travel Blank	N/A	N/A	N/A	Field Blank	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	-	155	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	5.91	7.88	8.14	7.80	5.54	7.91	7.87
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	2.9	2.5
Total Dissolved Solids	mg/L	10	-	<10	66	69	88	11	128	117
Turbidity	NTU	0.10	-	<0.10	1.95	1.15	1.16	<0.10	9.03	7.43
Ammonia, Total (as N)	mg/L	0.010/0.20	-	-	-	0.34	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	0.180	-	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	<5.0	-	-	-	-
	-	-	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.12: Water Quality Results for Water Licence Monitoring Location - MS-C-A

Analyte	Sample ID			MS-C-A01	MS-C-A	MS-C-A	MS-C-A	MS-C-A	MS-C-A	MS-C-A
	ALS Laboratory Sample ID			L2621358-3	L2621381-4	L2626309-5	L2627332-9	L2630140-13	L2635278-2	L2636426-1
	Sample Date & Time			2021-07-31 9:10	2021-08-02 11:10	2021-08-11 10:20	2021-08-16 15:55	2021-08-22 14:35	2021-09-02 9:00	2021-09-07 10:30
	QA/QC Sample Type			Field Duplicate	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	250	-	-	-	238	-
pH	pH units	0.10	6.0 - 9.5	7.88	7.89	8.05	8.09	8.06	7.95	7.87
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	2.5	<2.0	2.4	<2.0	<2.0	<2.0	3.7
Total Dissolved Solids	mg/L	10	-	120	134	135	137	170	127	123
Turbidity	NTU	0.10	-	7.57	4.47	14.6	11.2	8.15	3.00	2.44
Ammonia, Total (as N)	mg/L	0.010/0.20	-	-	0.053	-	-	-	<0.010	-
Nitrate (as N)	mg/L	0.020	-	-	0.344	-	-	-	0.289	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	-	-	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.12: Water Quality Results for Water Licence Monitoring Location - MS-C-A

Analyte	Sample ID			MS-C-A	MS-C-A	MS-C-A	MS-C-A
	ALS Laboratory Sample ID			L2639307-12	L2642214-4	L2644501-3	L2647099-6
	Sample Date & Time			2021-09-13 16:00	2021-09-20 15:30	2021-09-27 14:30	2021-10-04 16:30
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0/3.0	-	-	-	-	221
pH	pH units	0.10	6.0 - 9.5	7.85	7.76	7.63	7.79
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	98	154	193	109
Turbidity	NTU	0.10	-	2.11	1.04	0.80	2.05
Ammonia, Total (as N)	mg/L	0.010/0.20	-	-	-	-	<0.010
Nitrate (as N)	mg/L	0.020	-	-	-	-	0.219
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	-	<2.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.13: Water Quality Results for Water Licence Monitoring Location - MS-C-B

Analyte	Sample ID			MS-C-B	MS-C-B01	MS-C-B	MS-C-B01	MS-C-B	MS-C-B01	MS-C-B
	ALS Laboratory Sample ID			L2585502-3	L2585502-4	L2592735-6	L2592735-7	L2595911-5	L2595911-6	L2601055-6
	Sample Date & Time			2021-05-09 10:55	2021-05-09 10:55	2021-05-26 11:10	2021-05-26 11:10	2021-05-31 11:10	2021-05-31 11:10	2021-06-08 13:20
	QA/QC Sample Type			N/A	Field Duplicate	N/A	Field Duplicate	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	-	46.9	46.7	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.50	7.49	7.29	7.31	7.40	7.37	7.58
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	2.5	2.0	20.1	29.6	2.4	2.0	2.5
Total Dissolved Solids	mg/L	10	-	55	57	49	44	32	32	44
Turbidity	NTU	0.10	-	32.6	32.9	40.4	60.2	14.8	15.6	19.4
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.011	0.012	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	0.076	0.114	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	<5.0	<2.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.13: Water Quality Results for Water Licence Monitoring Location - MS-C-B

Analyte	Sample ID			MS-C-B01	MS-C-B	MS-C-B	MS-C-B01	MS-C-B	MS-C-B	MS-C-B
	ALS Laboratory Sample ID			L2601055-7	L2602498-8	L2605841-15	L2605841-16	L2608050-15	L2609728-5	L2612809-3
	Sample Date & Time			2021-06-08 13:20	2021-06-13 12:05	2021-06-21 17:45	2021-06-21 17:45	2021-06-29 12:40	2021-07-05 12:05	2021-07-12 9:20
	QA/QC Sample Type			Field Duplicate	N/A	N/A	Field Duplicate	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	87.5	-	-	-	160	-
pH	pH units	0.10	6.0 - 9.5	7.52	7.72	7.89	7.86	7.80	8.16	7.79
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	43	53	61	61	74	82	101
Turbidity	NTU	0.10	-	19.2	10.6	3.86	3.84	2.37	1.38	1.45
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	-	-	0.033	-
Nitrate (as N)	mg/L	0.020	-	-	0.104	-	-	-	0.195	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	-	-	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.13: Water Quality Results for Water Licence Monitoring Location - MS-C-B

Analyte	Sample ID			MS-C-B	MS-C-B01	MS-C-B	MS-C-B	MS-C-B	MS-C-B01	MS-C-B
	ALS Laboratory Sample ID			L2615981-12	L2615981-14	L2621358-4	L2621381-3	L2626309-6	L2626309-7	L2627332-10
	Sample Date & Time			2021-07-19 14:10	2021-07-19 14:10	2021-07-31 9:45	2021-08-02 11:45	2021-08-11 10:55	2021-08-11 10:55	2021-08-16 16:35
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	-	-	253	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.88	7.63	7.87	7.85	8.03	8.03	8.11
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	2.1	<2.0	<2.0	<2.0	2.9	<2.0	2.4
Total Dissolved Solids	mg/L	10	-	120	133	118	143	150	148	104
Turbidity	NTU	0.10	-	10.2	10.4	8.83	5.10	17.4	17.2	12.9
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	<0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	0.369	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.13: Water Quality Results for Water Licence Monitoring Location - MS-C-B

Analyte	Sample ID			MS-C-B	MS-C-B	MS-C-B	MS-C-B	MS-C-B
	ALS Laboratory Sample ID			L2630140-14	L2635278-7	L2636426-2	L2639307-13	L2647099-7
	Sample Date & Time			2021-08-22 15:00	2021-09-02 9:40	2021-09-07 10:55	2021-09-13 16:15	2021-10-04 16:45
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	1.0/3.0	-	-	252	-	-	201
pH	pH units	0.10	6.0 - 9.5	8.00	7.84	7.83	7.72	7.70
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	3.5	<2.0	2.1	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	169	148	133	64	99
Turbidity	NTU	0.10	-	8.64	2.95	2.23	1.76	4.24
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	-	<0.010
Nitrate (as N)	mg/L	0.020	-	-	0.336	-	-	0.235
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	-	<2.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.14: Water Quality Results for Water Licence Monitoring Location - MS-C-C

Analyte	Sample ID			MS-C-C	MS-C-C	MS-C-C	MS-C-C	MS-C-C	MS-C-C	MS-C-C
	ALS Laboratory Sample ID			L2585502-9	L2592735-3	L2595911-10	L2608050-9	L2609333-9	L2612809-7	L2615981-13
	Sample Date & Time			2021-05-09 16:40	2021-05-26 10:50	2021-06-01 9:55	2021-06-28 17:00	2021-07-04 15:10	2021-07-12 10:25	2021-07-19 14:10
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	320	-	-	930	-	-
pH	pH units	0.10	6.0 - 9.5	7.80	7.75	7.69	7.83	8.18	7.82	7.92
Total Suspended Solids	mg/L	2.0	Grab 30 and Average 15	13.6	8.4	16.7	2.5	<2.0	5.8	2.5
Total Dissolved Solids	mg/L	10	-	168	181	298	745	679	556	601
Turbidity	NTU	0.10	-	108	24.7	32.3	2.8	4.64	94.1	3.67
Ammonia, Total (as N)	mg/L	0.010	-	-	1.02	-	-	<0.010	-	-
Nitrate (as N)	mg/L	0.020	-	-	1.36	-	-	7.40	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<2.0	-	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.14: Water Quality Results for Water Licence Monitoring Location - MS-C-C

Analyte	Sample ID			MS-C-C	MS-C-C	MS-C-C	MS-C-C	MS-C-C	MS-C-C	MS-C-C	MS-C-C
	ALS Laboratory Sample ID			L2621268-9	L2621381-12	L2626309-3	L2627332-13	L2630140-11	L2635278-6	L2636426-10	L2647099-5
	Sample Date & Time			2021-07-29 14:05	2021-08-02 14:00	2021-08-11 9:40	2021-08-16 15:05	2021-08-22 13:55	2021-09-02 9:30	2021-09-07 13:40	2021-10-04 10:15
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹								
Conductivity	umhos/cm	1.0/3.0	-	-	836	-	-	-	937	-	670
pH	pH units	0.10	6.0 - 9.5	7.93	7.94	8.00	8.11	8.12	8.02	7.85	7.97
Total Suspended Solids	mg/L	2.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	4.2	4.6	8.0
Total Dissolved Solids	mg/L	10	-	564	557	487	500	611	640	658	405
Turbidity	NTU	0.10	-	2.18	6.27	3.74	0.22	2.07	8.31	0.76	57.6
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	-	-	<0.010	-	0.058
Nitrate (as N)	mg/L	0.020	-	-	6.54	-	-	-	7.51	-	5.76
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	-	-	<5.0	-	<2.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.15: Water Quality Results for Water Licence Monitoring Location - MS-C-D

Analyte	Sample ID		MS-C-D	MS-C-D	MS-C-D	MS-C-D01	MS-C-D	MS-C-D	MS-C-D	MS-C-D01	
	ALS Laboratory Sample ID		L2585502-8	L2592735-2	L2595911-11	L2595911-12	L2600576-1	L2608050-8	L2609333-7	L2609333-8	
	Sample Date & Time		2021-05-09 16:25	2021-05-26 10:25	2021-06-01 9:30	2021-06-01 9:30	2021-06-08 17:10	2021-06-28 16:40	2021-07-04 14:35	2021-07-04 14:35	
	QA/QC Sample Type		N/A	N/A	N/A	Field Duplicate	N/A	N/A	N/A	Field Duplicate	
	Units	LOR	Water Licence Criteria ¹								
Conductivity	umhos/cm	1.0/3.0	-	-	291	-	-	-	-	845	854
pH	pH units	0.10	6.0 - 9.5	7.82	7.67	7.91	7.86	7.99	8.45	8.45	8.44
Total Suspended Solids	mg/L	2.0	Grab 30 and Average 15	131	5.8	12.3	12.4	25.0	4.5	4.6	5.9
Total Dissolved Solids	mg/L	10	-	171	166	183	181	146	561	610	624
Turbidity	NTU	0.10	-	411	74.3	64.1	66.5	88.4	13.2	23.7	23.9
Ammonia, Total (as N)	mg/L	0.010	-	-	0.568	-	-	-	-	<0.010	<0.010
Nitrate (as N)	mg/L	0.020	-	-	0.581	-	-	-	-	3.99	4.00
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<2.0	-	-	-	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.15: Water Quality Results for Water Licence Monitoring Location - MS-C-D

Analyte	Sample ID		MS-C-D	MS-C-D	MS-C-D	MS-C-D	MS-C-D	MS-C-D	MS-C-D	MS-C-D	
	ALS Laboratory Sample ID		L2612809-6	L2615981-11	L2621268-8	L2621381-10	L2626309-2	L2627332-7	L2630140-10	L2635278-5	
	Sample Date & Time		2021-07-12 10:10	2021-07-19 13:55	2021-07-29 13:50	2021-08-02 13:35	2021-08-11 9:15	2021-08-16 14:55	2021-08-22 13:45	2021-09-02 9:15	
	QA/QC Sample Type		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Units	LOR	Water Licence Criteria ¹								
Conductivity	umhos/cm	1.0/3.0	-	-	-	885	-	-	-	869	
pH	pH units	0.10	6.0 - 9.5	8.10	8.31	8.20	8.26	8.17	8.37	8.49	8.30
Total Suspended Solids	mg/L	2.0	Grab 30 and Average 15	10.9	10.1	4.7	3.9	3.8	5.7	6.0	2.5
Total Dissolved Solids	mg/L	10	-	616	677	626	578	464	472	561	565
Turbidity	NTU	0.10	-	71.3	42.5	20.5	22.0	25.8	44.8	13.8	7.11
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	0.028	-	-	-	<0.010
Nitrate (as N)	mg/L	0.020	-	-	-	-	5.41	-	-	-	6.32
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	-	<2.0	-	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.15: Water Quality Results for Water Licence Monitoring Location - MS-C-D

Analyte	Sample ID			MS-C-D	MS-C-D
	ALS Laboratory Sample ID			L2636426-8	L2639307-8
	Sample Date & Time			2021-09-07 13:25	2021-09-13 13:00
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	1.0/3.0	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.24	8.13
Total Suspended Solids	mg/L	2.0	Grab 30 and Average 15	4.1	3.0
Total Dissolved Solids	mg/L	10	-	599	563
Turbidity	NTU	0.10	-	13.8	10.1
Ammonia, Total (as N)	mg/L	0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.16: Water Quality Results for Water Licence Monitoring Location - MS-C-E

Analyte	Sample ID			MS-C-E	MS-C-E	MS-C-E	MS-C-E	MS-C-E	MS-C-E	MS-C-E
	ALS Laboratory Sample ID			L2585502-7	L2592735-1	L2595911-9	L2601055-12	L2602498-3	L2602498-4	L2605841-10
	Sample Date & Time			2021-05-09 16:10	2021-05-26 9:25	2021-06-01 9:15	2021-06-08 16:10	2021-06-13 9:50	2021-06-13 9:50	2021-06-21 13:20
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	166	-	-	346	348	-
pH	pH units	0.10	6.0 - 9.5	7.67	7.65	7.67	7.85	7.98	7.98	8.14
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	69.4	21.7	7.4	7.7	1.3	1.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	85	102	77	103	204	200	497
Turbidity	NTU	0.10	-	157	60.5	21.0	43.6	1.66	1.39	3.14
Ammonia, Total (as N)	mg/L	0.010	-	-	0.179	-	-	0.013	0.013	-
Nitrate (as N)	mg/L	0.020	-	-	0.292	-	-	0.751	0.746	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<2.0	-	-	<5.0	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.16: Water Quality Results for Water Licence Monitoring Location - MS-C-E

Analyte	Sample ID			MS-C-E	MS-C-E	MS-C-E	MS-C-E	MS-C-E	MS-C-E	MS-C-E	MS-C-E
	ALS Laboratory Sample ID			L2608050-7	L2609333-6	L2612809-5	L2615981-10	L2621268-7	L2621381-11	L2626309-4	L2627332-6
	Sample Date & Time			2021-06-28 16:30	2021-07-04 14:20	2021-07-12 10:00	2021-07-19 13:45	2021-07-29 13:45	2021-08-02 12:55	2021-08-11 8:50	2021-08-16 14:25
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹								
Conductivity	umhos/cm	1.0/3.0	-	-	730	-	-	-	832	-	-
pH	pH units	0.10	6.0 - 9.5	8.16	8.30	7.99	8.05	8.03	8.06	8.06	8.15
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	<2.0	<2.0	2.5	2.1	<2.0	2.9	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	487	537	559	672	605	564	631	624
Turbidity	NTU	0.10	-	1.70	4.75	11.3	5.85	3.71	8.15	5.73	6.98
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	-	-	<0.010	-	-
Nitrate (as N)	mg/L	0.020	-	-	2.74	-	-	-	4.79	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	-	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.16: Water Quality Results for Water Licence Monitoring Location - MS-C-E

Analyte	Sample ID			MS-C-E	MS-C-E	MS-C-E01	MS-C-E	MS-C-E	MS-C-E03	MS-C-E
	ALS Laboratory Sample ID			L2630140-9	L2635278-3	L2635278-3	L2636426-7	L2639307-6	L2639307-7	L2647099-4
	Sample Date & Time			2021-08-22 13:35	2021-09-02 9:00	2021-09-02 9:00	2021-09-07 13:20	2021-09-13 12:50	2021-09-13 12:50	2021-10-04 9:50
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A	Travel Blank	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	980	973	-	-	-	667
pH	pH units	0.10	6.0 - 9.5	8.19	7.99	8.01	7.91	7.52	5.91	8.02
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	2.5	3.3	2.9	3.8	10.2	<2.0	4.0
Total Dissolved Solids	mg/L	10/20	-	715	661	698	725	685	<10	390
Turbidity	NTU	0.10	-	2.73	5.46	5.30	2.04	2.29	<0.10	36.5
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	<0.010	-	-	-	0.046
Nitrate (as N)	mg/L	0.020	-	-	6.73	6.71	-	-	-	4.15
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	<5.0	-	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.17: Water Quality Results for Water Licence Monitoring Location - MS-C-F

Analyte	Sample ID			MS-C-F	MS-C-F	MS-C-F	MS-C-F	MS-C-F	MS-C-F	MS-C-F
	ALS Laboratory Sample ID			L2601055-8	L2602498-5	L2605841-1	L2608050-10	L2609333-10	L2612809-4	L2616345-1
	Sample Date & Time			2021-06-08 13:55	2021-06-13 10:35	2021-06-22 9:20	2021-06-29 13:15	2021-07-04 16:10	2021-07-12 9:45	2021-07-21 7:45
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	84.8	-	-	152	-	-
pH	pH units	0.10	6.0 - 9.5	7.48	7.68	7.92	8.06	8.19	7.94	7.87
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	4.0	3.4	23.5	<2.0	<2.0	2.5	16.7
Total Dissolved Solids	mg/L	10	-	47	51	68	96	105	106	117
Turbidity	NTU	0.10	-	32.9	20.2	29.0	12.0	8.84	11.3	33.3
Ammonia, Total (as N)	mg/L	0.010	-	-	0.023	-	-	0.016	-	-
Nitrate (as N)	mg/L	0.020	-	-	0.060	-	-	0.184	-	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	-	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.17: Water Quality Results for Water Licence Monitoring Location - MS-C-F

Analyte	Sample ID			MS-C-F	MS-C-F	MS-C-F01	MS-C-F	MS-C-F	MS-C-F	MS-C-F	
	ALS Laboratory Sample ID			L2621358-1	L2621381-1	L2621381-2	L2624988-8	L2627332-8	L2630140-12	L2635278-1	L2636426-9
	Sample Date & Time			2021-07-31 8:50	2021-08-02 12:50	2021-08-02 12:50	2021-08-10 16:55	2021-08-16 15:35	2021-08-22 14:15	2021-09-02 8:25	2021-09-07 13:25
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹								
Conductivity	umhos/cm	1.0	-	-	266	267	-	-	-	252	-
pH	pH units	0.10	6.0 - 9.5	7.92	8.02	8.03	8.01	8.08	8.03	7.95	7.87
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	10.4	5.8	6.3	29.4	15.7	36.3	26.7	7.7
Total Dissolved Solids	mg/L	10	-	138	139	145	200	151	206	153	144
Turbidity	NTU	0.10	-	31.9	15.4	16.0	94.7	48.8	68.3	41.9	14.3
Ammonia, Total (as N)	mg/L	0.010	-	-	0.019	0.023	-	-	-	0.015	-
Nitrate (as N)	mg/L	0.020	-	-	0.460	0.445	-	-	-	0.357	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	<5.0	-	-	-	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.18: Water Quality Results for Water Licence Monitoring Location - MS-C-G

Analyte	Sample ID			MS-C-G	MS-C-G03	MS-C-G	MS-C-G02	MS-C-G	MS-C-G	MS-C-G
	ALS Laboratory Sample ID			L2605841-2	L2605841-3	L2608050-2	L2608050-3	L2609333-2	L2612809-11	L2615981-7
	Sample Date & Time			2021-06-22 9:55	2021-06-22 9:55	2021-06-28 10:55	2021-06-28 10:55	2021-07-04 10:30	2021-07-12 12:15	2021-07-19 12:05
	QA/QC Sample Type			N/A	Travel Blank	N/A	Field Blank	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	194	1.2	-	-	191	-	-
pH	pH units	0.10	6.0 - 9.5	8.07	5.29	7.9	6.05	8.17	7.77	7.77
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	97	<10	106	97	117	120	121
Turbidity	NTU	0.10	-	3.17	0.22	1.35	<0.10	0.54	0.26	<0.10
Ammonia, Total (as N)	mg/L	0.050/0.010	-	0.038	<0.010	-	-	<0.010	-	-
Nitrate (as N)	mg/L	0.020	-	0.478	<0.020	-	-	0.693	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0	-	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.18: Water Quality Results for Water Licence Monitoring Location - MS-C-G

Analyte	Sample ID			MS-C-G	MS-C-G	MS-C-G	MS-C-G02	MS-C-G	MS-C-G	MS-C-G01
	ALS Laboratory Sample ID			L2621358-5	L2621381-13	L2624988-1	L2624988-2	L2627332-14	L2630140-6	L2630140-15
	Sample Date & Time			2021-07-31 11:50	2021-08-02 11:00	2021-08-10 12:40	2021-08-10 12:40	2021-08-16 12:55	2021-08-22 11:15	2021-08-22 11:15
	QA/QC Sample Type			N/A	N/A	N/A	Field Blank	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	243	-	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.76	7.71	7.99	6.26	7.97	7.73	7.75
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.3
Total Dissolved Solids	mg/L	10	-	106	146	153	<10	93	171	170
Turbidity	NTU	0.10	-	0.17	<0.10	0.18	<0.10	0.22	0.10	<0.10
Ammonia, Total (as N)	mg/L	0.050/0.010	-	-	0.012	-	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	5.28	-	-	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	-	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.18: Water Quality Results for Water Licence Monitoring Location - MS-C-G

Analyte	Sample ID			MS-C-G	MS-C-G	MS-C-G
	ALS Laboratory Sample ID			L2635278-8	L2636426-3	L2639307-10
	Sample Date & Time			2021-09-02 10:25	2021-09-07 12:05	2021-09-13 14:40
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹			
Conductivity	umhos/cm	1.0	-	312	-	-
pH	pH units	0.10	6.0 - 9.5	7.63	7.61	7.55
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	187	177	152
Turbidity	NTU	0.10	-	0.10	<0.10	0.11
Ammonia, Total (as N)	mg/L	0.050/0.010	-	1.82	-	-
Nitrate (as N)	mg/L	0.020	-	11.2	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.19: Water Quality Results for Water Licence Monitoring Location - MS-C-H

Analyte	Sample ID			MS-C-H	MS-C-H	MS-C-H	MS-C-H	MS-C-H	MS-C-H
	ALS Laboratory Sample ID			L2601055-11	L2602498-9	L2605841-4	L2608050-4	L2609333-3	L2612809-12
	Sample Date & Time			2021-06-08 15:35	2021-06-13 14:50	2021-06-21 10:35	2021-06-28 11:35	2021-07-04 11:10	2021-07-12 12:45
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-	-	67.0	-	-	187	-
pH	pH units	0.10	6.0 - 9.5	7.40	7.64	7.88	8.05	8.29	8.10
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	2.0	2.2	<1.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	27	34	74	96	111	118
Turbidity	NTU	0.10	-	10.9	12.0	1.0	0.38	0.29	0.48
Ammonia, Total (as N)	mg/L	0.010	-	-	0.021	-	-	0.018	-
Nitrate (as N)	mg/L	0.020	-	-	0.268	-	-	0.184	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	-	-	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.19: Water Quality Results for Water Licence Monitoring Location - MS-C-H

Analyte	Sample ID			MS-C-H	MS-C-H	MS-C-H	MS-C-H	MS-C-H	MS-C-H01
	ALS Laboratory Sample ID			L2615981-8	L2621358-6	L2621381-14	L2624988-3	L2627332-11	L2627332-12
	Sample Date & Time			2021-07-19 12:35	2021-07-31 12:20	2021-08-02 11:35	2021-08-10 13:15	2021-08-16 13:30	2021-08-16 13:30
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-	-	234	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.06	8.17	8.20	8.21	8.29	8.28
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	100	102	128	120	87	88
Turbidity	NTU	0.10	-	0.18	0.16	0.12	0.30	0.27	0.13
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.022	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	0.221	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.19: Water Quality Results for Water Licence Monitoring Location - MS-C-H

Analyte	Sample ID			MS-C-H	MS-C-H	MS-C-H01	MS-C-H	MS-C-H
	ALS Laboratory Sample ID			L2630140-7	L2635278-10	L2635278-11	L2636426-4	L2639307-11
	Sample Date & Time			2021-08-22 11:40	2021-09-02 10:55	2021-09-02 10:55	2021-09-07 12:25	2021-09-13 15:10
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	1.0	-	-	253	253	-	-
pH	pH units	0.10	6.0 - 9.5	8.36	8.26	8.28	8.16	8.10
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	155	210	135	129	90
Turbidity	NTU	0.10	-	0.13	3.35	0.33	0.17	0.33
Ammonia, Total (as N)	mg/L	0.010	-	-	0.013	0.014	-	-
Nitrate (as N)	mg/L	0.020	-	-	0.138	0.129	-	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.3.20: Water Quality Results for Water Licence Monitoring Location - MQ-C-A

Analyte	Sample ID			MQ-C-A	MQ-C-A	MQ-C-A	MQ-C-A01	MQ-C-A	MQ-C-A02	MQ-C-A
	ALS Laboratory Sample ID			L2592735-8	L2593502-1	L2595911-1	L2595911-2	L2601055-1	L2601055-2	L2602498-1
	Sample Date & Time			2021-05-26 13:40	2021-05-27 13:45	2021-05-31 9:10	2021-05-31 9:10	2021-06-07 13:50	2021-06-07 13:50	2021-06-13 8:45
	QA/QC Sample Type			N/A	N/A	N/A	Field Duplicate	N/A	Field Blank	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	31.5	41.7	-	-	-	-	85.2
pH	pH units	0.10	6.0 - 9.5	7.08	7.61	7.57	7.56	7.66	5.81	7.64
Total Suspended Solids	mg/L	2.0/1.0	Grab 30 and Average 15	<2.0	<3.0	2.0	<2.0	3.0	<2.0	<1.0
Total Dissolved Solids	mg/L	10/13	-	25	27	53	49	53	<10	38
Turbidity	NTU	0.10	-	4.93	20.2	3.17	3.49	7.92	<0.10	2.39
Ammonia, Total (as N)	mg/L	0.010	-	<0.010	0.013	-	-	-	-	<0.010
Nitrate (as N)	mg/L	0.020	-	0.050	0.035	-	-	-	-	<0.020
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<5.0	-	-	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	-	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	Not Acutely Toxic	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow Trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.20: Water Quality Results for Water Licence Monitoring Location - MQ-C-A

Analyte	Sample ID			MQ-C-A	MQ-C-A	MQ-C-A	MQ-C-A03	MQ-C-A	MQ-C-A	MQ-C-A	MQ-C-A01
	ALS Laboratory Sample ID			L2605841-7	L2608050-12	L2609728-1	L2609728-2	L2612809-15	L2615981-5	L2621268-1	L2621268-2
	Sample Date & Time			2021-06-21 11:20	2021-06-29 7:45	2021-07-05 9:30	2021-07-05 9:30	2021-07-12 15:15	2021-07-19 11:05	2021-07-29 9:40	2021-07-29 9:40
	QA/QC Sample Type			N/A	N/A	N/A	Travel Blank	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹								
Conductivity	umhos/cm	1.0/3.0	-	-	-	211	<1.0	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.80	7.94	8.31	6.01	8.00	8.03	8.12	8.15
Total Suspended Solids	mg/L	2.0/1.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13	-	43	72	106	25	140	153	162	156
Turbidity	NTU	0.10	-	6.90	0.77	0.23	<0.10	0.72	0.19	0.20	0.19
Ammonia, Total (as N)	mg/L	0.010	-	-	-	<0.010	<0.010	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	0.026	<0.020	-	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	<5.0	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	-
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow Trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.20: Water Quality Results for Water Licence Monitoring Location - MQ-C-A

Analyte	Sample ID			MQ-C-A	MQ-C-A	MQ-C-A	MQ-C-A	MQ-C-A	MQ-C-A	MQ-C-A
	ALS Laboratory Sample ID			L2621381-9	L2624988-6	L2627332-1	L2630140-1	L2635806-1	L2636426-12	L2639307-3
	Sample Date & Time			2021-08-02 8:50	2021-08-10 15:20	2021-08-16 9:40	2021-08-22 8:00	2021-09-04 9:25	2021-09-07 14:40	2021-09-13 11:50
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	321	-	327	-	358	-	-
pH	pH units	0.10	6.0 - 9.5	8.16	8.23	8.34	8.19	8.23	8.12	7.99
Total Suspended Solids	mg/L	2.0/1.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	2.5	3.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13	-	186	175	120	207	190	191	146
Turbidity	NTU	0.10	-	0.23	0.22	0.25	0.17	0.27	<0.10	0.21
Ammonia, Total (as N)	mg/L	0.010	-	0.024	-	0.011	-	<0.010	-	-
Nitrate (as N)	mg/L	0.020	-	<0.020	-	<0.020	-	<0.020	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	-	<5.0	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	Not Acutely Toxic	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow Trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.21: Water Quality Results for Water Licence Monitoring Location - MQ-C-B

Analyte	Sample ID			MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B02	MQ-C-B
	ALS Laboratory Sample ID			L2585502-2	L2592735-9	L2595911-4	L2601055-4	L2601684-1	L2601684-2	L2605841-9
	Sample Date & Time			2021-05-09 10:35	2021-05-26 14:00	2021-05-31 10:10	2021-06-07 15:00	2021-06-15 9:20	2021-06-15 9:20	2021-06-21 12:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Blank	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	54.2	-	-	133	<1.0	-
pH	pH units	0.10	6.0 - 9.5	7.56	7.34	7.62	7.65	7.88	5.93	8.17
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	2.7	43.6	19.7	92.2	2.4	<2.0	6.9
Total Dissolved Solids	mg/L	10	-	69	66	73	84	100	15	113
Turbidity	NTU	0.10	-	25.6	217	113	146	56.6	<0.10	34.4
Ammonia, Total (as N)	mg/L	0.010	-	-	0.050	-	-	0.039	<0.010	-
Nitrate (as N)	mg/L	0.020	-	-	0.136	-	-	0.452	<0.020	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<2.0	-	-	<5.0	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen
Acute Lethality ^{3,4}	N/A	-	Not Acutely Toxic	-	-	-	-	Not Acutely Toxic	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for May, June, August and October exceeded maximum average TSS concentration discharge limits.

³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

⁴ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.21: Water Quality Results for Water Licence Monitoring Location - MQ-C-B

Analyte	Sample ID			MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B02
	ALS Laboratory Sample ID			L2608050-14	L2609728-3	L2612809-13	L2615981-6	L2621268-4	L2621381-8	L2621381-15
	Sample Date & Time			2021-06-29 9:00	2021-07-05 10:30	2021-07-12 14:05	2021-07-19 11:35	2021-07-29 10:45	2021-08-02 9:50	2021-08-02 9:50
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	Field Blank
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	287	-	-	-	341	<1.0
pH	pH units	0.10	6.0 - 9.5	8.09	8.33	8.06	8.14	8.14	8.14	6.64
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	19.0	5.6	10.4	5.3	<2.0	11.9	<2.0
Total Dissolved Solids	mg/L	10	-	116	167	153	163	159	196	15
Turbidity	NTU	0.10	-	58.9	24.1	23.3	9.76	3.41	23.5	<0.10
Ammonia, Total (as N)	mg/L	0.010	-	-	0.037	-	-	-	0.021	<0.010
Nitrate (as N)	mg/L	0.020	-	-	2.09	-	-	-	1.44	<0.020
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	-	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-
Acute Lethality ^{3,4}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for May, June, August and October exceeded maximum average TSS concentration discharge limits.

³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

⁴ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.21: Water Quality Results for Water Licence Monitoring Location - MQ-C-B

Analyte	Sample ID			MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B01	MQ-C-B	MQ-C-B	MQ-C-B
	ALS Laboratory Sample ID			L2626309-1	L2628128-1	L2630140-3	L2630140-4	L2635278-12	L2636426-11	L2639307-5
	Sample Date & Time			2021-08-11 12:35	2021-08-17 8:40	2021-08-22 9:50	2021-08-22 9:50	2021-09-02 11:45	2021-09-07 14:35	2021-09-13 12:30
	QA/QC Sample Type			N/A	N/A	N/A	Field Duplicate	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	-	-	-	365	-	-
pH	pH units	0.10	6.0 - 9.5	8.20	8.28	8.32	8.33	8.29	8.12	7.86
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	98.7	<2.0	<2.0	3.0	<2.0	<2.0	3.9
Total Dissolved Solids	mg/L	10	-	288	174	224	222	136	229	284
Turbidity	NTU	0.10	-	184	2.51	3.27	3.23	0.33	0.89	8.44
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	-	<0.010	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	-	1.35	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	-	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{3,4}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for May, June, August and October exceeded maximum average TSS concentration discharge limits.

³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

⁴ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.21: Water Quality Results for Water Licence Monitoring Location - MQ-C-B

Analyte	Sample ID			MQ-C-B	MQ-C-B	MQ-C-B	MQ-C-B01
	ALS Laboratory Sample ID			L2642214-3	L2644501-4	L2647099-2	L2647099-3
	Sample Date & Time			2021-09-20 11:30	2021-09-27 10:00	2021-10-04 9:10	2021-10-04 9:10
	QA/QC Sample Type			N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0/3.0	-	-	475	377	377
pH	pH units	0.10	6.0 - 9.5	7.72	7.56	7.92	7.92
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	<2.0	<2.0	18.5	16.5
Total Dissolved Solids	mg/L	10	-	257	281	178	220
Turbidity	NTU	0.10	-	1.46	1.2	71.1	69.5
Ammonia, Total (as N)	mg/L	0.010	-	-	0.020	0.043	0.043
Nitrate (as N)	mg/L	0.020	-	-	0.135	0.292	0.282
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	<2.0	<2.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{3,4}	N/A	-	Not Acutely Toxic	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for May, June, August and October exceeded maximum average TSS concentration discharge limits.

³ Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

⁴ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14).

Table 7.3.22: Water Quality Results for Water Licence Monitoring Location - MQ-C-D

Analyte	Sample ID			MQ-C-D	MQ-C-D	MQ-C-D01	MQ-C-D	MQ-C-D	MQ-C-D
	ALS Laboratory Sample ID			L2585502-1	L2592735-10	L2592735-11	L2595911-3	L2601055-3	L2602498-2
	Sample Date & Time			2021-05-09 9:30	2021-05-26 14:00	2021-05-26 14:00	2021-05-31 9:40	2021-06-07 14:25	2021-06-13 9:10
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0/3.0	-	-	65.3	65.7	-	-	274
pH	pH units	0.10	6.0 - 9.5	7.58	7.39	7.42	7.54	7.73	7.93
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	3.1	8.2	10.6	11.9	14.9	10.8
Total Dissolved Solids	mg/L	10	-	108	49	53	61	66	172
Turbidity	NTU	0.10	-	38.8	70.4	53.6	41.7	64.1	55.9
Ammonia, Total (as N)	mg/L	0.010	-	-	0.087	0.084	-	-	0.037
Nitrate (as N)	mg/L	0.020	-	-	0.044	0.023	-	-	0.860
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<2.0	<2.0	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14)

Table 7.3.22: Water Quality Results for Water Licence Monitoring Location - MQ-C-D

Analyte	Sample ID			MQ-C-D	MQ-C-D	MQ-C-D	MQ-C-D	MQ-C-D03	MQ-C-D	MQ-C-D
	ALS Laboratory Sample ID			L2605841-8	L2608050-16	L2609728-6	L2612809-14	L2615981-3	L2615981-4	L2621268-3
	Sample Date & Time			2021-06-21 11:35	2021-06-29 8:00	2021-07-05 15:30	2021-07-12 14:40	2021-07-19 11:05	2021-07-19 11:05	2021-07-29 10:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	Travel Blank	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	-	-	250	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.02	8.20	8.35	8.00	5.97	8.14	8.05
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	10.6	9.3	6.0	24.0	<2.0	11.5	9.0
Total Dissolved Solids	mg/L	10	-	155	157	132	180	<10	179	177
Turbidity	NTU	0.10	-	34.4	29.3	21.8	50.1	<0.10	25.2	21.5
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.022	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	0.597	-	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	Not Acutely Toxic	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14)

Table 7.3.22: Water Quality Results for Water Licence Monitoring Location - MQ-C-D

Analyte	Sample ID			MQ-C-D	MQ-C-D	MQ-C-D	MQ-C-D	MQ-C-D	MQ-C-D	MQ-C-D
	ALS Laboratory Sample ID			L2621381-7	L2624988-7	L2627332-2	L2630140-2	L2635278-13	L2636426-13	L2639307-4
	Sample Date & Time			2021-08-02 9:10	2021-08-10 15:40	2021-08-16 10:15	2021-08-22 8:10	2021-09-02 11:50	2021-09-07 14:50	2021-09-13 12:05
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0/3.0	-	313	-	-	-	348	-	-
pH	pH units	0.10	6.0 - 9.5	8.09	8.23	8.13	8.21	8.17	7.98	7.92
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	4.6	7.1	8.1	3.5	2.5	5.5	2.9
Total Dissolved Solids	mg/L	10	-	153	127	139	218	197	199	255
Turbidity	NTU	0.10	-	14.8	25.5	26.0	13.3	7.12	4.96	4.83
Ammonia, Total (as N)	mg/L	0.010	-	0.026	-	-	-	<0.010	-	-
Nitrate (as N)	mg/L	0.020	-	0.968	-	-	-	0.970	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	-	-	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14)

Table 7.3.22: Water Quality Results for Water Licence Monitoring Location - MQ-C-D

Analyte	Sample ID			MQ-C-D	MQ-C-D02	MQ-C-D	MQ-C-D01	MQ-C-D
	ALS Laboratory Sample ID			L2642214-2	L2642214-5	L2644501-2	L2644501-5	L2647099-1
	Sample Date & Time			2021-09-20 10:40	2021-09-20 10:40	2021-09-27 9:10	2021-09-27 9:10	2021-10-04 8:35
	QA/QC Sample Type			N/A	Field Blank	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	1.0/3.0	-	-	-	-	-	263
pH	pH units	0.10	6.0 - 9.5	7.90	5.84	7.78	7.80	7.53
Total Suspended Solids	mg/L	1.0/2.0	Grab 30 and Average 15	<2.0	<2.0	2.0	2.0	<2.0
Total Dissolved Solids	mg/L	10	-	235	26	290	300	129
Turbidity	NTU	0.10	-	3.64	<0.10	3.18	3.01	5.79
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	-	0.210
Nitrate (as N)	mg/L	0.020	-	-	-	-	-	0.115
Oil and Grease, Total	mg/L	2.0/5.0	-	-	-	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Acute Lethality ^{2,3}	N/A	-	Not Acutely Toxic	-	-	-	-	-

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Acute lethality to Rainbow trout (as per Environment Canada Method EPS/1/RM/13).

³ Acute lethality to Daphnia magna (as per Environment Canada Method EPS/1/RM/14)

Table 7.4.1: Water Quality Results for Water Licence Monitoring Location - MS-SN-01

Analyte	Sample ID ³			MS-SN-01_2021-05-25_1635	MS-SN-01_2021-06-01_1500	MS-SN-01_2021-06-09_1115	MS-SN-01_2021-06-14_1525	MS-SN-01_2021-06-22_1000	MS-SN-01_2021-06-30_1535
	ALS Laboratory Sample ID			L2592985-1	L2595323-4	L2601057-1	L2602839-3	L2604736-1	L2608766-1
	Sample Date & Time			2021-05-25 16:35	2021-06-01 13:40	2021-06-09 11:15	2021-06-14 15:25	2021-06-22 10:00	2021-06-30 15:35
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-	32.7	172	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.33	7.98	7.58	7.62	7.97	7.89
Total Suspended Solids ²	mg/L	1.0/2.0/3.0	Grab 30 and Average 15	3.8	52.1	23.6	11.0	9.7	8.8
Total Dissolved Solids	mg/L	10/13	-	<10	133	96	99	103	93
Turbidity	NTU	0.10	-	23.1	60.5	33.6	31.9	18.8	17.7
Ammonia, Total (as N)	mg/L	0.010	-	<0.010	0.011	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	<0.020	0.197	-	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<5.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June exceeded maximum average TSS concentration discharge limits.

³ Sample location for MS-SN-01 was incorrect for June samples. Results may not be representative of location.

Table 7.4.2: Water Quality Results for Water Licence Monitoring Location - MS-SN-02

Analyte	Sample ID			MS-SN-02_2021-05-25_1730	MS-SN-02_2021-06-01_1300	MS-SN-02_2021-06-09_1340	MS-SN-02_2021-06-14_1040	MS-SN-02_2021-06-22_1530	MS-SN-02_2021-06-30_1645
	ALS Laboratory Sample ID			L2592985-2	L2595323-2	L2601057-2	L2602839-1	L2604736-4	L2608766-2
	Sample Date & Time			2021-05-25 17:30	2021-06-01 13:00	2021-06-09 13:40	2021-06-14 10:40	2021-06-22 15:30	2021-06-30 16:45
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-	36.2	81.0	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.40	7.62	7.82	7.97	8.04	8.18
Total Suspended Solids	mg/L	1.0/2.0/3.0	Grab 30 and Average 15	39.3	24.6	14.9	3.9	19.0	6.0
Total Dissolved Solids	mg/L	10/13	-	51	58	77	85	114	127
Turbidity	NTU	0.10	-	263	206	113	55.8	157	29.5
Ammonia, Total (as N)	mg/L	0.010	-	0.052	0.099	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.111	1.39	-	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<2.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.4.3: Water Quality Results for Water Licence Monitoring Location - MS-SN-03

Analyte	Sample ID			MS-SN-03_2021-05-25_1710	MS-SN-03_2021-06-01_1045	MS-SN-03_2021-06-09_1250	MS-SN-03_2021-06-14_1420	MS-SN-03_2021-06-22_1150	MS-SN-0301_2021-06-22_1150
	ALS Laboratory Sample ID			L2592985-3	L2595323-1	L2601057-2	L2602839-2	L2604736-2	L2604736-3
	Sample Date & Time			2021-05-25 17:10	2021-06-01 10:45	2021-06-09 12:50	2021-06-14 14:40	2021-06-22 11:50	2021-06-22 11:50
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-	116	158	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.72	7.88	7.64	7.78	8.03	7.97
Total Suspended Solids ²	mg/L	1.0/2.0/3.0	Grab 30 and Average 15	21.4	17.1	112	53.8	18.2	18.6
Total Dissolved Solids	mg/L	10/13	-	82	115	110	138	131	142
Turbidity	NTU	0.10	-	113	126	354	205	114	115
Ammonia, Total (as N)	mg/L	0.010	-	0.231	0.089	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.118	0.137	-	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<2.0	-	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for May and June exceeded maximum average TSS concentration discharge limits.

Table 7.4.4: Water Quality Results for Water Licence Monitoring Location - TR-SN-01

Analyte	Sample ID			TR-SN-01_2021-06-05_1140	TR-SN-01_2021-06-07_1510
	ALS Laboratory Sample ID			L2600488-1	L2599385-7
	Sample Date & Time			2021-06-05 11:40	2021-06-07 15:10
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	1.0	-	-	162
pH	pH units	0.10	6.0 - 9.5	8.11	8.11
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	260.0	84.8
Total Dissolved Solids	mg/L	10	-	100	134
Turbidity	NTU	0.10	-	80.5	183
Ammonia, Total (as N)	mg/L	0.010	-	-	0.034
Nitrate (as N)	mg/L	0.020	-	-	0.152
Oil and Grease, Total	mg/L	2.0	-	-	<2.0
	-	-	No Visible Sheen	No visible sheen	No visible sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June exceeded maximum average TSS concentration discharge limits.

Table 7.4.5: Water Quality Results for Water Licence Monitoring Location - TR-SN-02

Analyte	Sample ID			TR-SN-02_2021-06-05_1300	TR-SN-02_2021-06-07_1340	TR-SN-0203_2021-06-07_1340	TR-SN-02_2021-06-13_1120	TR-SN-02_2021-06-29_1530
	ALS Laboratory Sample ID			L2600488-2	L2599385-5	L2599385-6	L2603800-5	L2608769-4
	Sample Date & Time			2021-06-05 13:00	2021-06-07 13:40	2021-06-07 13:40	2021-06-13 11:20	2021-06-29 15:30
	QA/QC Sample Type			N/A	N/A	Travel Blank	N/A	N/A
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	1.0	-	-	110	<1.0	-	-
pH	pH units	0.10	6.0 - 9.5	8.16	8.11	6.08	8.07	8.15
Total Suspended Solids ²	mg/L	1.0/2.0/3.0	Grab 30 and Average 15	129	117	<1.0	31.0	65.4
Total Dissolved Solids	mg/L	10	-	117	106	<10	106	142
Turbidity	NTU	0.10	-	110	195	0.54	90.7	123
Ammonia, Total (as N)	mg/L	0.010	-	-	0.026	<0.010	-	-
Nitrate (as N)	mg/L	0.020	-	-	0.088	<0.020	-	-
Oil and Grease, Total	mg/L	2.0	-	-	<2.0	<2.0	-	-
	-	-	No Visible Sheen	No visible sheen	No visible sheen	-	No visible sheen	No visible sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June exceeded maximum average TSS concentration discharge limits.

Table 7.4.6: Water Quality Results for Water Licence Monitoring Location - TR-SN-03

Analyte	Sample ID			TR-SN-03_2021-06-05_1420	TR-SN-03_2021-06-07_1215	TR-SN-03_2021-06-13_1555	TR-SN-0301_2021-06-13_1555
	ALS Laboratory Sample ID			L2600488-5	L2599385-3	L2603800-2	L2603800-3
	Sample Date & Time			2021-06-05 14:20	2021-06-07 12:15	2021-06-13 15:55	2021-06-13 15:55
	QA/QC Sample Type			N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0	-	-	117	-	-
pH	pH units	0.10	6.0 - 9.5	8.07	8.22	8.15	8.21
Total Suspended Solids ²	mg/L	1.0/2.0/3.0	Grab 30 and Average 15	476	905	158	112
Total Dissolved Solids	mg/L	10	-	136	197	181	177
Turbidity	NTU	0.10	-	700	588	215	222
Ammonia, Total (as N)	mg/L	0.010	-	-	0.039	-	-
Nitrate (as N)	mg/L	0.020	-	-	0.102	-	-
Oil and Grease, Total	mg/L	2.0	-	-	<2.0	-	-
	-	-	No Visible Sheen	No visible sheen	No visible sheen	No visible sheen	No visible sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June exceeded maximum average TSS concentration discharge limits.

Table 7.4.7: Water Quality Results for Water Licence Monitoring Location - TR-SN-04

Analyte	Sample ID			TR-SN-04_2021-06-07_1135	TR-SN-04_2021-06-13_1345	TR-SN-04_2021-06-29_1210
	ALS Laboratory Sample ID			L2599385-2	L2603800-1	L2608769-1
	Sample Date & Time			2021-06-07 11:35	2021-06-13 13:45	2021-06-29 12:10
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹			
Conductivity	umhos/cm	1.0	-	102	-	-
pH	pH units	0.10	6.0 - 9.5	7.62	7.11	7.53
Total Suspended Solids ²	mg/L	1.0/2.0/3.0	Grab 30 and Average 15	1,080	74.9	19.5
Total Dissolved Solids	mg/L	10	-	135	93	113
Turbidity	NTU	0.10	-	364	91.0	131
Ammonia, Total (as N)	mg/L	0.010	-	0.042	-	-
Nitrate (as N)	mg/L	0.020	-	0.030	-	-
Oil and Grease, Total	mg/L	2.0	-	<5.0	-	-
	-	-	No Visible Sheen	No visible sheen	No visible sheen	No visible sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

²Average TSS for June exceeded maximum average TSS concentration discharge limits.

Table 7.4.8: Water Quality Results for Water Licence Monitoring Location - TR-SN-06

Analyte	Sample ID			TR-SN-06_2021-06-05_1535	TR-SN-06_2021-06-07_1045
	ALS Laboratory Sample ID			L2600488-6	L2599385-1
	Sample Date & Time			2021-06-05 15:35	2021-06-07 10:45
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	1.0	-	-	132
pH	pH units	0.10	6.0 - 9.5	7.84	7.94
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	73.6	235
Total Dissolved Solids	mg/L	10	-	147	189
Turbidity	NTU	0.10	-	134	362
Ammonia, Total (as N)	mg/L	0.010	-	-	0.023
Nitrate (as N)	mg/L	0.020	-	-	0.114
Oil and Grease, Total	mg/L	2.0	-	-	<2.0
	-	-	No Visible Sheen	No visible sheen	No visible sheen

Notes:

Bold highlighted values indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

²Average TSS for June exceeded maximum average TSS concentration discharge limits.

Table 7.4.9: Water Quality Results for Water Licence Monitoring Location - TR-SN-07

Analyte	Sample ID			TR-SN-07_2021-06-05_1345	TR-SN-0701_2021-06-05_1345	TR-SN-07_2021-06-07_1255	TR-SN-07_2021-06-13_930	TR-SN-07_2021-06-29_1430	TR-SN-0701_2021-06-29_1430
	ALS Laboratory Sample ID			L2600488-3	L2600488-4	L2599385-4	L2603800-4	L2608769-2	L2608769-3
	Sample Date & Time			2021-06-05 13:45	2021-06-05 13:45	2021-06-07 12:55	2021-06-13 9:30	2021-06-29 14:30	2021-06-29 14:30
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	1.0	-	-	-	107	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.14	8.09	8.18	7.88	7.99	7.99
Total Suspended Solids ²	mg/L	1.0/2.0/3.0	Grab 30 and Average 15	556	464	995	22.7	285	267
Total Dissolved Solids	mg/L	10	-	131	132	126	101	248	267
Turbidity	NTU	0.10	-	656	602	305	73.2	475	474
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.060	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	0.060	-	-	-
Oil and Grease, Total	mg/L	2.0	-	-	-	<2.0	-	-	-
	-	-	No Visible Sheen	No visible sheen	-	No visible sheen	No visible sheen	No visible sheen	No visible sheen

Notes:

Bold highlighted values indicate results that exceeded the applicable water quality criteria.

¹Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

²Average TSS for June exceeded maximum average TSS concentration discharge limits.

Table 7.5.1: Water Quality Results for Water Licence Monitoring Location - MS-RW-01

Analyte	Sample ID			MS-RW-01	MS-RW-01	MS-RW-01
	ALS Laboratory Sample ID			L2602509-1	L2606196-2	L2608042-1
	Sample Date & Time			2021-06-14 13:45	2021-06-24 16:15	2021-06-29 14:30
	QA/QC Sample Type			NA	NA	NA
	Units	LOR	Water Licence Criteria ¹			
Conductivity	umhos/cm	1.0	-	-	-	-
pH	pH units	0.10	6.0 - 9.5	7.77	8.10	8.08
Total Suspended Solids ²	mg/L	2.0	Grab 30, Average 15	35.9	21.3	12.2
Total Dissolved Solids	mg/L	10	-	171	264	274
Turbidity	NTU	0.10	-	132.0	59.4	39.3
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-		-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June exceeded maximum average TSS concentration discharge limits. It should be noted that this water was applied directly to roadways for dust suppression efforts and did not migrate to receiving water bodies.

Table 7.5.2: Water Quality Results for Water Licence Monitoring Location - MS-RW-02

Analyte	Sample ID			MS-RW-02	MS-RW-02	MS-RW-02	MS-RW-02
	ALS Laboratory Sample ID			L2599259-1	L2602509-2	L2606196-3	L2608042-2
	Sample Date & Time			2021-06-09 12:25	2021-06-14 14:00	2021-06-24 16:30	2021-06-29 14:45
	QA/QC Sample Type			NA	NA	NA	NA
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	1.0	-	-	111	-	-
pH	pH units	0.10	6.0 - 9.5	7.73	7.74	8.03	8.31
Total Suspended Solids ²	mg/L	2.0	Grab 30, Average 15	35.0	21.0	8.2	4.3
Total Dissolved Solids	mg/L	10	-	79	74	89	70
Turbidity	NTU	0.10	-	124	76.4	26.0	14.7
Ammonia, Total (as N)	mg/L	0.010	-	-	0.071	-	-
Nitrate (as N)	mg/L	0.020	-	-	0.188	-	-
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<5.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June exceeded maximum average TSS concentration discharge limits, although only two (2) samples were collected. It should be noted that this water was applied directly to roadways for dust suppression efforts and did not migrate to receiving water bodies.

Table 7.5.3: Water Quality Results for Water Licence Monitoring Location - MP-Q1-P1

Analyte	Sample ID			MP-Q1-P1	MP-Q1-P1	MP-Q1-P1	MP-Q1-P1	MP-Q1-P1	MP-Q1-P1	MP-Q1-P101
	ALS Laboratory Sample ID			L2602410-1	L2606555-2	L2608772-6	L2611924-1	L2614201-1	L2617629-1	L2617629-2
	Sample Date & Time			2021-06-15	2021-06-22 17:00	2021-06-29 9:30	2021-07-06 11:00	2021-07-13 13:50	2021-07-20 8:05	2021-07-20 8:05
	QA/QC Sample Type			NA	NA	NA	NA	NA	NA	Field Duplicate
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	210		-	313	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.02	8.20	8.27	8.22	8.30	8.33	8.33
Total Suspended Solids	mg/L	1.0/2.0	Grab 30, Average 15	7.2	<2.0	<2.0	1.5	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	121	207	77	226	218	201	194
Turbidity	NTU	0.10	-	4.52	1.75	1.95	2.16	1.61	1.36	1.38
Ammonia, Total (as N)	mg/L	0.0050	-	0.153	-	-	0.0402	-	-	-
Nitrate (as N)	mg/L	0.020	-	0.245	-	-	0.249	-	-	-
Oil and Grease, Total	mg/L	5.0	-	<5.0	-	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.5.3: Water Quality Results for Water Licence Monitoring Location - MP-Q1-P1

Analyte	Sample ID			MP-Q1-P1	MP-Q1-P1	MP-Q1-P1	MP-Q1-P1	MP-Q1-P1
	ALS Laboratory Sample ID			L2620707-1	L2623229-2	L2626310-1	L2627881-1	L2630428-1
	Sample Date & Time			2021-07-27 13:50	2021-08-03 10:35	2021-08-10 10:05	2021-08-15 11:20	2021-08-24 8:45
	QA/QC Sample Type			NA	NA	NA	NA	NA
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	1.0	-	-	312	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.15	8.22	8.26	8.28	8.21
Total Suspended Solids	mg/L	1.0/2.0	Grab 30, Average 15	<2.0	1.7	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/20	-	187	199	128	179	161
Turbidity	NTU	0.10	-	2.07	1.99	4.54	5.13	4.39
Ammonia, Total (as N)	mg/L	0.0050	-	-	0.034	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	0.243	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	<5.0	-	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

Table 7.5.4: Water Quality Results for Water Licence Monitoring Location - TR-BP-01

Analyte	Sample ID			TR-BP-01	TR-BP-01	TR-BP-01	TR-BP-01	TR-BP-01	TR-BP-01	TR-BP-01
	ALS Laboratory Sample ID			L2599259-4	L2602421-1	L2606196-1	L2608768-1	L2609726-3	L2614868-1	L2618096-1
	Sample Date & Time			2021-06-09 15:15	2021-06-15 10:40	2021-06-24 15:50	2021-06-30 16:50	2021-07-05 16:00	2021-07-15 12:30	2021-07-21 17:35
	QA/QC Sample Type			NA	NA	NA	NA	NA	NA	NA
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	126	-	-	523	-	-
pH	pH units	0.10	6.0 - 9.5	7.53	7.33	7.84	7.81	8.02	7.68	7.57
Total Suspended Solids ²	mg/L	2.0	Grab 30, Average 15	28.5	18.4	21.3	14	6.0	<2.0	5.2
Total Dissolved Solids	mg/L	10	-	118	110	264	445	465	455	512
Turbidity	NTU	0.10	-	131	77.70	59.40	21.30	13.4	9.87	5.27
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	-	0.053	-	-
Nitrate (as N)	mg/L	0.020	-	-	0.065	-	-	<0.020	-	-
Oil and Grease, Total	mg/L	2.0	-	-	<5.0	-	-	<2.0	-	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June exceeded maximum average TSS concentration discharge limits. It should be noted that this water was applied directly to roadways for dust suppression efforts and did not migrate to receiving water bodies.

Table 7.5.4: Water Quality Results for Water Licence Monitoring Location - TR-BP-01

Analyte	Sample ID			TR-BP-01	TR-BP-01	TR-BP-01	TR-BP-01	TR-BP-01	TR-BP-01	TR-BP-01
	ALS Laboratory Sample ID			L2621357-4	L2623789-4	L2626308-2	L2627457-3	L2632985-1	L2635807-3	L2635807-4
	Sample Date & Time			2021-07-31 11:25	2021-08-06 17:50	2021-08-11 17:45	2021-08-16 17:10	2021-08-28 15:40	2021-09-04 10:10	2021-09-04 10:10
	QA/QC Sample Type			NA	NA	NA	NA	NA	NA	Field Duplicate
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	1.0	-	-	-	-	773	-	721	720
pH	pH units	0.10	6.0 - 9.5	7.75	7.8	7.95	7.89	7.79	7.93	7.9
Total Suspended Solids ²	mg/L	2.0	Grab 30, Average 15	4.8	7.0	3.2	5.1	<2.0	6.1	5.6
Total Dissolved Solids	mg/L	10	-	576	621	579	635	563	586	598
Turbidity	NTU	0.10	-	3.84	4.35	4.05	3.12	2.42	2.66	2.77
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	<0.010	-	0.023	0.015
Nitrate (as N)	mg/L	0.020	-	-	-	-	<0.020	-	0.089	0.084
Oil and Grease, Total	mg/L	2.0	-	-	-	-	<5.0	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June exceeded maximum average TSS concentration discharge limits. It should be noted that this water was applied directly to roadways for dust suppression efforts and did not migrate to receiving water bodies.

Table 7.5.5: Water Quality Results for Water Licence Monitoring Location - TR-BP-02

Analyte	Sample ID			TR-BP-02	TR-BP-02	TR-BP-02
	ALS Laboratory Sample ID			L2602531-1	L2606555-1	L2613425-1
	Sample Date & Time			2021-06-10 11:35	2021-06-22 13:00	2021-07-13 15:55
	QA/QC Sample Type			NA	NA	NA
	Units	LOR	Water Licence Criteria ¹			
Conductivity	umhos/cm	1.0	-	-	-	288
pH	pH units	0.10	6.0 - 9.5	7.94	8.21	7.98
Total Suspended Solids ²	mg/L	2.0	Grab 30, Average 15	21.2	12.8	12.4
Total Dissolved Solids	mg/L	10	-	64	155	164
Turbidity	NTU	0.10	-	44.2	23.6	17.4
Ammonia, Total (as N)	mg/L	0.010	-	-	-	<0.010
Nitrate (as N)	mg/L	0.020	-	-	-	<0.020
Oil and Grease, Total	mg/L	5.0	-	-	-	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

Bold highlight indicate results that exceeded the applicable water quality criteria.

¹ Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 11.

² Average TSS for June exceeded maximum average TSS concentration discharge limits, although only two (2) samples were collected. It should be noted that this water was applied directly to roadways for dust suppression efforts and did not migrate to receiving water bodies.

Table 7.6.1: Field QA/QC Water Quality Data Analysis - Field Duplicates - MP-01

Parameter	Sample ID		MP-01	MP-0101	Relative Percent Difference (RPD)	MP-01	MP-0101	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2550732-1	L2550732-2		L2661884-1	L2661884-4	
	Sample Date & Time		2021-01-21 12:45	2021-01-21 12:45		2021-11-10 13:10	2021-11-10 13:10	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
pH	pH units	0.10	7.78	7.79	0.1	7.86	7.87	0.1
Total Suspended Solids	mg/L	3.0	<3.0	<3.0	N/A	<1.0	<1.0	N/A
Ammonia, Total (as N)	mg/L	0.010	0.031	0.030	N/A	0.031	0.036	N/A
Total Kjeldahl Nitrogen	mg/L	0.050	1.91	1.82	4.8	1.24	1.27	2.4
Phosphorus, Total	mg/L	0.030	9.77	9.76	0.1	11.1	11.1	N/A
Fecal Coliforms	CFU/100 mL	-	0	0	N/A	0	0	N/A
BOD	mg/L	2.0	<2.0	<2.0	N/A	<2.0	<2.0	N/A
Oil and Grease, Total	mg/L	2.0	<2.0	<2.0	N/A	<2.0	<2.0	N/A

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.2: Field QA/QC Water Quality Data Analysis - Field Duplicates - MP-01

Parameter	Sample ID		MP-01B	MP-01B01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2661878-1	L2661878-4	
	Sample Date & Time		2021-11-10 13:10	2021-11-10 13:10	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
pH	pH units	0.1	8.29	8.22	0.8
Total Suspended Solids	mg/L	1.0	<1.0	<1.0	N/A
Ammonia, Total (as N)	mg/L	0.010	0.043	0.044	N/A
Total Kjeldahl Nitrogen	mg/L	0.050	1.14	1.48	26.0
Phosphorus, Total	mg/L	0.030	7.39	7.45	0.8
Fecal Coliforms	CFU/100 mL	-	0	0	N/A
BOD	mg/L	2.0	<2.0	<2.0	N/A
Oil and Grease, Total	mg/L	2.0	<2.0	<2.0	N/A

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - MP-05

Parameter	Sample ID		MP-05	MP-0501	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2622832-1	L2622832-2	
	Sample Date & Time		2021-08-02 14:30	2021-08-02 14:30	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Hardness (as CaCO3)	mg/L	1.3	434	437	0.7
pH	pH units	0.10	8.36	8.33	0.4
Total Suspended Solids	mg/L	1.0	1.7	1.7	N/A
Total Dissolved Solids	mg/L	20	658	659	0.2
Turbidity	NTU	0.10	4.24	4.68	9.9
Alkalinity, Total (as CaCO3)	mg/L	1.0	179	179	N/A
Ammonia, Total (as N)	mg/L	0.010	0.049	0.049	N/A
Chloride (Cl)	mg/L	0.50	120	120	N/A
Fluoride (F)	mg/L	0.020	0.190	0.188	1.1
Nitrate (as N)	mg/L	0.020	3.77	3.77	N/A
Total Kjeldahl Nitrogen	mg/L	0.050	0.490	0.770	44.4
Phosphorus, Total	mg/L	0.0030	0.0073	0.0052	N/A
Sulfate (SO4)	mg/L	0.30	180	180	N/A
Dissolved Organic Carbon	mg/L	0.50	5.99	4.77	22.7
Total Organic Carbon	mg/L	0.50	5.10	4.51	12.3
Aluminum (Al)-Total	mg/L	0.050	0.097	0.077	N/A
Arsenic (As)-Total	mg/L	0.0010	<0.0010	<0.0010	N/A
Cadmium (Cd)-Total	mg/L	0.000050	<0.000050	<0.000050	N/A
Calcium (Ca)-Total	mg/L	0.50	78.4	79.8	1.8
Copper (Cu)-Total	mg/L	0.0050	<0.0050	<0.0050	N/A
Iron (Fe)-Total	mg/L	0.10	<0.10	0.11	N/A
Lead (Pb)-Total	mg/L	0.00050	<0.00050	<0.00050	N/A
Magnesium (Mg)-Total	mg/L	0.050	57.8	56.6	2.1
Manganese (Mn)-Total	mg/L	0.0050	0.0977	0.0955	2.3
Mercury (Hg)-Total	mg/L	0.0000050	<0.0000050	<0.0000050	N/A
Molybdenum (Mo)-Total	mg/L	0.00050	0.00388	0.00384	1.0
Nickel (Ni)-Total	mg/L	0.0050	<0.0050	<0.0050	N/A
Potassium (K)-Total	mg/L	0.50	8.53	8.35	2.1
Selenium (Se)-Total	mg/L	0.00050	<0.00050	<0.00050	N/A
Sodium (Na)-Total	mg/L	0.50	57.4	56.0	2.5
Thallium (Tl)-Total	mg/L	0.00010	<0.00010	<0.00010	N/A
Uranium (U)-Total	mg/L	0.00010	0.116	0.115	0.9
Zinc (Zn)-Total	mg/L	0.030	<0.030	<0.030	N/A
Aluminum (Al)-Dissolved	mg/L	0.050	<0.050	<0.050	N/A
Arsenic (As)-Dissolved	mg/L	0.0010	<0.0010	<0.0010	N/A
Cadmium (Cd)-Dissolved	mg/L	0.000050	<0.000050	<0.000050	N/A
Calcium (Ca)-Dissolved	mg/L	0.50	78.4	79.3	1.1
Copper (Cu)-Dissolved	mg/L	0.0020	<0.0020	<0.0020	N/A
Iron (Fe)-Dissolved	mg/L	0.10	<0.10	<0.10	N/A
Lead (Pb)-Dissolved	mg/L	0.00050	<0.00050	<0.00050	N/A
Magnesium (Mg)-Dissolved	mg/L	0.050	57.8	58.1	0.5
Manganese (Mn)-Dissolved	mg/L	0.0050	0.0789	0.0814	3.1
Mercury (Hg)-Dissolved	mg/L	0.0000050	<0.0000050	<0.0000050	N/A
Molybdenum (Mo)-Dissolved	mg/L	0.00050	0.00402	0.00403	0.2
Nickel (Ni)-Dissolved	mg/L	0.0050	<0.0050	<0.0050	N/A
Potassium (K)-Dissolved	mg/L	0.50	8.58	8.43	1.8
Selenium (Se)-Dissolved	mg/L	0.00050	<0.00050	<0.00050	N/A
Sodium (Na)-Dissolved	mg/L	0.50	57.5	57.2	0.5
Thallium (Tl)-Dissolved	mg/L	0.00010	<0.00010	<0.00010	N/A
Uranium (U)-Dissolved	mg/L	0.00010	0.116	0.115	0.9
Zinc (Zn)-Dissolved	mg/L	0.010	<0.010	<0.010	N/A
Oil and Grease, Total	mg/L	-	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.4: Field QA/QC Water Quality Data Analysis - Field Duplicates - MP-C-B

Parameter	Sample ID		MP-C-B	MP-C-B01	Relative Percent Difference (RPD)	MP-C-B	MP-C-B01	Relative Percent Difference (RPD)	MP-C-B	MP-C-B01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2627807-2	L2627807-3		L2634765-1	L2634765-2		L2650270-1	L2650270-2	
	Sample Date & Time		2021-08-15 9:55	2021-08-15 9:55		2021-09-01 10:00	2021-09-01 10:00		2021-10-11 8:15	2021-10-11 8:15	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR									
Conductivity	umhos/cm	1.0	-	-	-	746	750	0.5	-	-	-
pH	pH units	0.10	8.33	8.32	0.1	8.18	8.22	0.5	7.77	7.80	0.4
Total Suspended Solids	mg/L	2.0	<2.0	<2.0	N/A	<2.0	<2.0	N/A	<2.0	<2.0	N/A
Total Dissolved Solids	mg/L	10/20	351	354	0.9	432	428	0.9	433	432	0.2
Turbidity	NTU	0.10	4.30	4.27	0.7	1.69	1.71	1.2	3.08	3.11	1.0
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.023	0.022	N/A	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	4.34	4.34	N/A	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-	<5.0	<5.0	N/A	-	-	-

Note:
 RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.6.5: Field QA/QC Water Quality Data Analysis - Field Duplicates - MP-C-H

Parameter	Sample ID		MP-C-H	MP-C-H01	Relative Percent Difference (RPD)	MP-C-H	MP-C-H01	Relative Percent Difference (RPD)	MP-C-H	MP-C-H01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2611804-1	L2611804-2		L2630604-1	L2630604-2		L2639311-1	L2639311-2	
	Sample Date & Time		2021-07-06 7:40	2021-07-06 7:40		2021-08-24 6:50	2021-08-24 6:50		2021-09-14 9:00	2021-09-14 9:00	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR									
Conductivity	umhos/cm	1.0	227	228	0.4	-	-	-	-	-	-
pH	pH units	0.10	8.06	8.12	0.7	8.32	8.33	0.1	8.09	8.13	0.5
Total Suspended Solids	mg/L	1.0/2.0	<1.0	<1.0	N/A	<2.0	<2.0	N/A	<2.0	<2.0	N/A
Total Dissolved Solids	mg/L	13/10	142	144	1.4	179	174	2.8	217	197	9.7
Turbidity	NTU	0.10	0.49	0.62	23.4	0.23	0.25	N/A	0.11	0.11	N/A
Ammonia, Total (as N)	mg/L	0.010	0.015	0.012	NA	-	-	-	-	-	-
Nitrate (as N)	mg/L	0.020	0.335	0.327	2.4	-	-	-	-	-	-
Oil and Grease, Total	mg/L	5.0	<5.0	<5.0	N/A	-	-	-	-	-	-

Note:
 RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.6.6: Field QA/QC Water Quality Data Analysis - Field Duplicates - MP-C-J

Parameter	Sample ID		MP-C-J	MP-C-J01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2626311-1	L2626311-2	
	Sample Date & Time		2021-08-10 8:35	2021-08-10 8:35	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Conductivity	umhos/cm	1.0	-	-	-
pH	pH units	0.10	8.06	8.06	N/A
Total Suspended Solids	mg/L	2.0	<2.0	<2.0	N/A
Total Dissolved Solids	mg/L	10	172	235	31
Turbidity	NTU	0.10	0.33	0.39	N/A
Ammonia, Total (as N)	mg/L	0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.7: Field QA/QC Water Quality Data Analysis - Field Duplicates - MP-C-K

Parameter	Sample ID		MP-C-K	MP-C-K01	Relative Percent Difference (RPD)	MP-C-K	MP-C-K01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2637047-3	L2637047-4		L2648053-3	L2648053-4	
	Sample Date & Time		2021-09-07 16:05	2021-09-07 16:05		2021-10-05 14:30	2021-10-05 14:30	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
Conductivity	umhos/cm	1.0	-	-	-	704	701	0.4
pH	pH units	0.10	8.15	8.13	0.2	8.00	8.01	0.1
Total Suspended Solids	mg/L	2.0	<2.0	<2.0	N/A	2.1	<2.0	N/A
Total Dissolved Solids	mg/L	10	570	575	0.9	447	426	4.8
Turbidity	NTU	0.10	0.32	0.29	N/A	3.49	3.42	2.0
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.056	0.053	5.5
Nitrate (as N)	mg/L	0.020	-	-	-	0.964	0.974	1.0
Oil and Grease, Total	mg/L	5.0	-	-	-	<5.0	<5.0	N/A

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.8: Field QA/QC Water Quality Data Analysis - Field Duplicates - MP-Q1-01

Parameter	Sample ID		MP-Q1-01	MP-Q1-0101	Relative Percent Difference (RPD)	MP-Q1-01	MP-Q1-0101	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2608772-7	L2608772-8		L2623229-3	L2623229-4	
	Sample Date & Time		2021-06-29 9:35	2021-06-29 9:35		2021-08-03 10:35	2021-08-03 10:35	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
Conductivity	umhos/cm	1.0	-	-	-	195	196	0.5
pH	pH units	0.10	7.79	7.83	0.5	7.97	8.00	0.4
Total Suspended Solids	mg/L	1.0/2.0	<2.0	<2.0	N/A	<1.0	<2.0	N/A
Total Dissolved Solids	mg/L	10/13	77	104	29.8	72	71	1.4
Turbidity	NTU	0.10	1.95	1.98	1.5	1.96	2.11	7.4
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.012	0.010	N/A
Nitrate (as N)	mg/L	0.020	-	-	-	0.544	0.547	0.5
Oil and Grease, Total	mg/L	5.0	-	-	-	<5.0	<5.0	N/A

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.9: Field QA/QC Water Quality Data Analysis - Field Duplicates - MP-Q1-02

Parameter	Sample ID		MP-Q1-02	MP-Q1-0201	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2606493-1	L2606493-2	
	Sample Date & Time		2021-06-24 8:45	2021-06-24 8:45	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Conductivity	umhos/cm	1.0	-	-	-
pH	pH units	0.10	8.10	8.12	0.2
Total Suspended Solids	mg/L	2.0	121	134	10.2
Total Dissolved Solids	mg/L	10	210	210	N/A
Turbidity	NTU	0.10	133	152	13.3
Ammonia, Total (as N)	mg/L	0.01	-	-	-
Nitrate (as N)	mg/L	0.0	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.10: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-01

Parameter	Sample ID		MS-01	MS-0101	Relative Percent Difference (RPD)	MS-01	MS-0101	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2546495-1	L2546495-3		L2662051-1	L2662051-3	
	Sample Date & Time		2021-01-06 15:00	2021-01-06 15:00		2021-11-10 14:45	2021-11-10 14:45	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
pH	pH units	0.10	8.02	7.99	0.4	7.16	7.06	1.4
Total Suspended Solids	mg/L	3.0/1.0	<3.0	<3.0	N/A	<1.0	1.7	N/A
Ammonia, Total (as N)	mg/L	0.10	2.19	2.21	0.9	0.096	0.101	N/A
Total Kjeldahl Nitrogen	mg/L	0.50	8.30	7.70	7.5	0.560	1.74	N/A
Phosphorus, Total	mg/L	0.0060	1.05	1.07	1.9	1.18	1.17	0.9
Fecal Coliforms	CFU/100 mL	-	0	0	N/A	0	0	N/A
BOD	mg/L	2.0	<2.0	<2.0	N/A	<2.0	<2.0	N/A
Oil and Grease, Total	mg/L	5.0	<5.0	<5.0	N/A	<5.0	<5.0	N/A

Note:
 RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.6.11: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-01B

Parameter	Sample ID		MS-01B	MS-01B01	Relative Percent Difference (RPD)	MS-01B	MS-01B01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2546497-1	L2546497-3		L2661895-1	L2661895-3	
	Sample Date & Time		2021-01-06 15:00	2021-01-06 15:00		2021-11-10 14:45	2021-11-10 14:45	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
pH	pH units	0.10	8.58	8.67	1.0	8.15	8.08	0.9
Total Suspended Solids	mg/L	3.0	4.0	3.0	N/A	1.4	<1.0	N/A
Ammonia, Total (as N)	mg/L	0.01	0.299	0.302	1.0	0.188	0.189	0.5
Total Kjeldahl Nitrogen	mg/L	0.50	4.30	4.70	8.9	0.760	0.230	N/A
Phosphorus, Total	mg/L	0.0030	0.800	0.800	N/A	0.915	0.904	1.2
Fecal Coliforms	CFU/100 mL	-	0	0	N/A	0	0	N/A
BOD	mg/L	2.0	2.0	2.1	N/A	<2.0	<2.0	N/A
Oil and Grease, Total	mg/L	5.0	<5.0	<5.0	N/A	<5.0	<5.0	N/A

Note:
 RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.6.12: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-07

Parameter	Sample ID		MS-07	MS-0701	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2611689-1	L2611689-2	
	Sample Date & Time		2021-07-08 11:45	2021-07-08 11:45	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Conductivity	umhos/cm	1.0	399	402	0.7
Hardness (as CaCO3)	mg/L	0.50	176	175	0.6
pH	pH units	0.10	7.56	7.58	0.3
Total Suspended Solids	mg/L	2.0	<2.0	<2.0	N/A
Total Dissolved Solids	mg/L	10	265	274	3.3
Turbidity	NTU	0.10	1.59	1.62	1.9
Alkalinity, Total (as CaCO3)	mg/L	1.0	31.1	31.3	0.6
Ammonia, Total (as N)	mg/L	0.010	0.340	0.336	1.2
Chloride (Cl)	mg/L	0.50	3.54	3.55	0.3
Fluoride (F)	mg/L	0.020	0.117	0.116	0.9
Nitrate (as N)	mg/L	0.020	5.99	6.00	0.2
Total Kjeldahl Nitrogen	mg/L	0.050	0.860	0.910	5.6
Phosphorus, Total	mg/L	0.0030	<0.0030	<0.0030	N/A
Sulfate (SO4)	mg/L	0.30	134	134	N/A
Dissolved Organic Carbon	mg/L	0.50	2.19	2.26	N/A
Total Organic Carbon	mg/L	0.50	2.42	2.50	N/A
Aluminum (Al)-Total	mg/L	0.0050	0.0435	0.0563	25.7
Antimony (Sb)-Total	mg/L	0.00010	0.00013	0.00013	N/A
Arsenic (As)-Total	mg/L	0.00010	<0.00010	<0.00010	N/A
Barium (Ba)-Total	mg/L	0.00010	0.0153	0.0152	0.7
Beryllium (Be)-Total	mg/L	0.00010	<0.00010	<0.00010	N/A
Bismuth (Bi)-Total	mg/L	0.000050	<0.000050	<0.000050	N/A
Boron (B)-Total	mg/L	0.010	0.016	0.017	N/A
Cadmium (Cd)-Total	mg/L	0.0000050	0.0000233	0.0000210	N/A
Calcium (Ca)-Total	mg/L	0.050	24.8	25.0	0.8
Cesium (Cs)-Total	mg/L	0.000010	<0.000010	<0.000010	N/A
Chromium (Cr)-Total	mg/L	0.00050	<0.00050	<0.00050	N/A
Cobalt (Co)-Total	mg/L	0.00010	0.00062	0.00062	N/A
Copper (Cu)-Total	mg/L	0.00050	0.00090	0.00109	N/A
Iron (Fe)-Total	mg/L	0.010	0.042	0.057	N/A
Lead (Pb)-Total	mg/L	0.000050	0.000071	0.000081	N/A
Lithium (Li)-Total	mg/L	0.0010	0.0050	0.0050	N/A
Magnesium (Mg)-Total	mg/L	0.0050	28.0	28.2	0.7
Manganese (Mn)-Total	mg/L	0.00050	0.0421	0.0427	1.4
Mercury (Hg)-Total	mg/L	0.0000050	<0.0000050	<0.0000050	N/A
Molybdenum (Mo)-Total	mg/L	0.000050	0.00729	0.00729	N/A
Nickel (Ni)-Total	mg/L	0.00050	0.00061	0.00060	N/A
Phosphorus (P)-Total	mg/L	0.050	<0.050	<0.050	N/A
Potassium (K)-Total	mg/L	0.050	8.47	8.48	0.1
Rubidium (Rb)-Total	mg/L	0.00020	0.00345	0.00341	1.2
Selenium (Se)-Total	mg/L	0.000050	0.00114	0.00121	6.0
Silicon (Si)-Total	mg/L	0.10	1.07	1.11	3.7
Silver (Ag)-Total	mg/L	0.000050	<0.000050	<0.000050	N/A
Sodium (Na)-Total	mg/L	0.050	2.83	2.82	0.4
Strontium (Sr)-Total	mg/L	0.0010	0.0300	0.0299	0.3
Sulfur (S)-Total	mg/L	0.50	45.9	46.5	1.3
Tellurium (Te)-Total	mg/L	0.00020	<0.00020	<0.00020	N/A
Thallium (Tl)-Total	mg/L	0.000010	<0.000010	<0.000010	N/A
Thorium (Th)-Total	mg/L	0.00010	<0.00010	<0.00010	N/A
Tin (Sn)-Total	mg/L	0.00010	<0.00010	<0.00010	N/A
Titanium (Ti)-Total	mg/L	0.00030	0.00106	0.00184	N/A
Tungsten (W)-Total	mg/L	0.00010	<0.00010	<0.00010	N/A
Uranium (U)-Total	mg/L	0.000010	0.00236	0.00236	N/A
Vanadium (V)-Total	mg/L	0.00050	<0.00050	<0.00050	N/A
Zinc (Zn)-Total	mg/L	0.0030	<0.0030	<0.0030	N/A
Zirconium (Zr)-Total	mg/L	0.00020	<0.00020	<0.00020	N/A
Aluminum (Al)-Dissolved	mg/L	0.0050	0.0192	0.0189	N/A
Antimony (Sb)-Dissolved	mg/L	0.00010	<0.00010	<0.00010	N/A
Arsenic (As)-Dissolved	mg/L	0.00010	<0.00010	<0.00010	N/A
Barium (Ba)-Dissolved	mg/L	0.00010	0.0155	0.0152	2.0
Beryllium (Be)-Dissolved	mg/L	0.00010	<0.00010	<0.00010	N/A
Bismuth (Bi)-Dissolved	mg/L	0.000050	<0.000050	<0.000050	N/A
Boron (B)-Dissolved	mg/L	0.010	0.016	0.016	N/A
Cadmium (Cd)-Dissolved	mg/L	0.0000050	0.0000244	0.0000231	N/A
Calcium (Ca)-Dissolved	mg/L	0.050	25.7	25.7	N/A
Cesium (Cs)-Dissolved	mg/L	0.000010	<0.000010	<0.000010	N/A
Chromium (Cr)-Dissolved	mg/L	0.00050	<0.00050	<0.00050	N/A

Table 7.6.12: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-07

Parameter	Sample ID		MS-07	MS-0701	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2611689-1	L2611689-2	
	Sample Date & Time		2021-07-08 11:45	2021-07-08 11:45	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Cobalt (Co)-Dissolved	mg/L	0.00010	0.00055	0.00055	N/A
Copper (Cu)-Dissolved	mg/L	0.00020	0.00080	0.00064	N/A
Iron (Fe)-Dissolved	mg/L	0.010	<0.010	<0.010	N/A
Lead (Pb)-Dissolved	mg/L	0.000050	<0.000050	<0.000050	N/A
Lithium (Li)-Dissolved	mg/L	0.0010	0.0047	0.0048	N/A
Magnesium (Mg)-Dissolved	mg/L	0.0050	27.2	26.9	1.1
Manganese (Mn)-Dissolved	mg/L	0.00050	0.0372	0.0366	1.6
Mercury (Hg)-Dissolved	mg/L	0.0000050	<0.0000050	<0.0000050	N/A
Molybdenum (Mo)-Dissolved	mg/L	0.000050	0.00736	0.00744	1.1
Nickel (Ni)-Dissolved	mg/L	0.00050	<0.00050	<0.00050	N/A
Phosphorus (P)-Dissolved	mg/L	0.050	<0.050	<0.050	N/A
Potassium (K)-Dissolved	mg/L	0.050	8.35	8.34	0.1
Rubidium (Rb)-Dissolved	mg/L	0.00020	0.00334	0.00348	4.1
Selenium (Se)-Dissolved	mg/L	0.000050	0.00133	0.00131	1.5
Silicon (Si)-Dissolved	mg/L	0.050	1.01	1.02	1.0
Silver (Ag)-Dissolved	mg/L	0.000050	<0.000050	<0.000050	N/A
Sodium (Na)-Dissolved	mg/L	0.050	2.72	2.69	1.1
Strontium (Sr)-Dissolved	mg/L	0.0010	0.0308	0.0315	2.2
Sulfur (S)-Dissolved	mg/L	0.50	47.2	47.1	0.2
Tellurium (Te)-Dissolved	mg/L	0.00020	<0.00020	<0.00020	N/A
Thallium (Tl)-Dissolved	mg/L	0.000010	<0.000010	<0.000010	N/A
Thorium (Th)-Dissolved	mg/L	0.00010	<0.00010	<0.00010	N/A
Tin (Sn)-Dissolved	mg/L	0.00010	<0.00010	<0.00010	N/A
Titanium (Ti)-Dissolved	mg/L	0.00030	<0.00030	<0.00030	N/A
Tungsten (W)-Dissolved	mg/L	0.00010	<0.00010	<0.00010	N/A
Uranium (U)-Dissolved	mg/L	0.000010	0.00242	0.00242	N/A
Vanadium (V)-Dissolved	mg/L	0.00050	<0.00050	<0.00050	N/A
Zinc (Zn)-Dissolved	mg/L	0.0010	0.0010	<0.0010	N/A
Zirconium (Zr)-Dissolved	mg/L	0.00020	<0.00020	<0.00020	N/A
Ra-226	Bq/L	0.0035	0.0068	<0.0035	N/A
Oil and Grease, Total	mg/L	-	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.6.13: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-MRY-09

Parameter	Sample ID		MS-MRY-09	MS-MRY-0901	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2639307-1	L2639307-2	
	Sample Date & Time		2021-09-13 9:50	2021-09-13 9:50	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Hardness (as CaCO ₃)	mg/L	0.50	-	-	-
pH	pH units	0.10	7.90	7.89	0.1
Total Suspended Solids	mg/L	2.0	<2.0	<2.0	N/A
Total Dissolved Solids	mg/L	10	53	25	N/A
Turbidity	NTU	0.10	0.27	0.26	N/A
Ammonia, Total (as N)	mg/L	0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.14: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-MRY-13A

Parameter	Sample ID		MS-MRY-13A	MS-MRY-13A01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2612809-9	L2612809-10	
	Sample Date & Time		2021-07-12 11:45	2021-07-12 11:45	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Conductivity	umhos/cm	1.0	-	-	-
pH	pH units	0.10	7.94	7.92	0.3
Total Suspended Solids	mg/L	2.0	<2.0	<2.0	N/A
Total Dissolved Solids	mg/L	10	480	486	1.2
Turbidity	NTU	0.10	0.35	0.22	N/A
Ammonia, Total (as N)	mg/L	0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.15: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-MRY-13B

Parameter	Sample ID		MS-MRY-13B	MS-MRY-13B01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2636426-5	L2636426-6	
	Sample Date & Time		2021-09-07 12:30	2021-09-07 12:30	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Conductivity	umhos/cm	1.0	-	-	-
pH	pH units	0.10	7.55	7.57	0.3
Total Suspended Solids	mg/L	2.0	<2.0	<2.0	N/A
Total Dissolved Solids	mg/L	10	1100	1030	6.6
Turbidity	NTU	0.10	0.11	0.12	N/A
Ammonia, Total (as N)	mg/L	0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.16: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-C-A

Parameter	Sample ID		MS-C-A	MS-C-A01	Relative Percent Difference (RPD)	MS-C-A	MS-C-A01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2602498-6	L2602498-7		L2621358-2	L2621358-3	
	Sample Date & Time		2021-06-13 11:25	2021-06-13 11:25		2021-07-31 9:10	2021-07-31 9:10	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
Conductivity	umhos/cm	1.0	91.2	91.5	0.3	-	-	-
pH	pH units	0.10	7.74	7.73	0.1	7.87	7.88	0.1
Total Suspended Solids	mg/L	1.0	<1.0	<1.0	N/A	2.5	2.5	N/A
Total Dissolved Solids	mg/L	10	53	38	N/A	117	120	2.5
Turbidity	NTU	0.10	10.2	10.2	N/A	7.43	7.57	1.9
Ammonia, Total (as N)	mg/L	0.010	<0.010	<0.010	N/A	-	-	-
Nitrate (as N)	mg/L	0.020	0.084	0.088	N/A	-	-	-
Oil and Grease, Total	mg/L	5.0	<5.0	<5.0	N/A	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.17: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-C-B

Parameter	Sample ID		MS-C-B	MS-C-B01	Relative Percent Difference (RPD)	MS-C-B	MS-C-B01	Relative Percent Difference (RPD)	MS-C-B	MS-C-B01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2585502-3	L2585502-4		L2592735-6	L2592735-7		L2595911-5	L2595911-6	
	Sample Date & Time		2021-05-09 10:55	2021-05-09 10:55		2021-05-26 11:10	2021-05-26 11:10		2021-05-31 11:10	2021-05-31 11:10	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR									
Conductivity	umhos/cm	1.0	-	-	-	46.9	46.7	0.4	-	-	-
pH	pH units	0.10	7.50	7.49	0.1	7.29	7.31	0.3	7.40	7.37	0.4
Total Suspended Solids	mg/L	1.0/2.0	2.5	2.0	N/A	20.1	29.6	38.2	2.4	2.0	N/A
Total Dissolved Solids	mg/L	10	55	57	3.6	49	44	N/A	32	32	N/A
Turbidity	NTU	0.10	32.6	32.9	0.9	40.4	60.2	39.4	14.8	15.6	5.3
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.011	0.012	N/A	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	0.076	0.114	N/A	-	-	-
Oil and Grease, Total	mg/L	2.0	-	-	-	<5.0	<2.0	N/A	-	-	-

Note:
 RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.6.17: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-C-B

Parameter	Sample ID		MS-C-B	MS-C-B01	Relative Percent Difference (RPD)	MS-C-B	MS-C-B01	Relative Percent Difference (RPD)	MS-C-B	MS-C-B01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2601055-6	L2601055-7		L2605841-15	L2605841-16		L2615981-12	L2615981-14	
	Sample Date & Time		2021-06-08 13:20	2021-06-08 13:20		2021-06-21 17:45	2021-06-21 17:45		2021-07-19 14:10	2021-07-19 14:10	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR									
Conductivity	umhos/cm	1.0	-	-	-	-	-	-	-	-	-
pH	pH units	0.10	7.58	7.52	0.8	7.89	7.86	0.4	7.88	7.63	3.2
Total Suspended Solids	mg/L	1.0/2.0	2.5	2.0	N/A	<2.0	<2.0	N/A	2.1	<2.0	N/A
Total Dissolved Solids	mg/L	10	44	43	N/A	61	61	N/A	120	133	10.3
Turbidity	NTU	0.10	19.4	19.2	1.0	3.86	3.84	0.5	10.2	10.4	1.9
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	-	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	-	-	-	-	-
Oil and Grease, Total	mg/L	2.0	-	-	-	-	-	-	-	-	-

Note:
 RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.6.17: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-C-B

Parameter	Sample ID		MS-C-B	MS-C-B01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2626309-6	L2626309-7	
	Sample Date & Time		2021-08-11 10:55	2021-08-11 10:55	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Conductivity	umhos/cm	1.0	-	-	-
pH	pH units	0.10	8.03	8.03	N/A
Total Suspended Solids	mg/L	1.0/2.0	2.9	<2.0	N/A
Total Dissolved Solids	mg/L	10	150	148	1.3
Turbidity	NTU	0.10	17.4	17.2	1.2
Ammonia, Total (as N)	mg/L	0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-
Oil and Grease, Total	mg/L	2.0	-	-	-

Note:
 RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.6.18: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-C-D

Parameter	Sample ID		MS-C-D	MS-C-D01	Relative Percent Difference (RPD)	MS-C-D	MS-C-D01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2595911-11	L2595911-12		L2609333-7	L2609333-8	
	Sample Date & Time		2021-06-01 9:30	2021-06-01 9:30		2021-07-04 14:35	2021-07-04 14:35	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
Conductivity	umhos/cm	1.0	-	-	-	845	854	1.1
pH	pH units	0.10	7.91	7.86	0.6	8.45	8.44	0.1
Total Suspended Solids	mg/L	2.0	12.3	12.4	0.8	4.6	5.9	N/A
Total Dissolved Solids	mg/L	10	183	181	1.1	610	624	2.3
Turbidity	NTU	0.10	64.1	66.5	3.7	23.7	23.9	0.8
Ammonia, Total (as N)	mg/L	0.010	-	-	-	<0.010	<0.010	N/A
Nitrate (as N)	mg/L	0.020	-	-	-	3.99	4.00	0.3
Oil and Grease, Total	mg/L	5.0	-	-	-	<5.0	<5.0	N/A

Note:
 RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.6.19: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-C-E

Parameter	Sample ID		MS-C-E	MS-C-E01	Relative Percent Difference (RPD)	MS-C-E	MS-C-E01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2602498-3	L2602498-4		L2635278-3	L2635278-3	
	Sample Date & Time		2021-06-13 9:50	2021-06-13 9:50		2021-09-02 9:00	2021-09-02 9:00	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
Conductivity	umhos/cm	1.0	346	348	0.6	980	973	0.7
pH	pH units	0.10	7.98	7.98	N/A	7.99	8.01	0.2
Total Suspended Solids	mg/L	1.0/2.0	1.3	1.0	N/A	3.3	2.9	N/A
Total Dissolved Solids	mg/L	13/10	204	200	2.0	661	698	5.4
Turbidity	NTU	0.10	1.66	1.39	17.7	5.46	5.30	3.0
Ammonia, Total (as N)	mg/L	0.010	0.013	0.013	N/A	<0.010	<0.010	N/A
Nitrate (as N)	mg/L	0.020	0.751	0.746	0.7	6.73	6.71	0.3
Oil and Grease, Total	mg/L	5.0	<5.0	<5.0	N/A	<5.0	<5.0	N/A

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.20: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-C-F

Parameter	Sample ID		MS-C-F	MS-C-F01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2621381-1	L2621381-2	
	Sample Date & Time		2021-08-02 12:50	2021-08-02 12:50	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Conductivity	umhos/cm	1.0	266	267	0.4
pH	pH units	0.10	8.02	8.03	0.1
Total Suspended Solids	mg/L	2.0	5.8	6.3	N/A
Total Dissolved Solids	mg/L	10	139	145	4.2
Turbidity	NTU	0.10	15.4	16.0	3.8
Ammonia, Total (as N)	mg/L	0.010	0.019	0.023	N/A
Nitrate (as N)	mg/L	0.020	0.460	0.445	3.3
Oil and Grease, Total	mg/L	5.0	<5.0	<5.0	N/A

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.21: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-C-G

Parameter	Sample ID		MS-C-G	MS-C-G01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2630140-6	L2630140-15	
	Sample Date & Time		2021-08-22 11:15	2021-08-22 11:15	
	QA/QC Sample Type		N/A	Field Duplicate	
	Units	LOR			
Conductivity	umhos/cm	1.0	-	-	-
pH	pH units	0.10	7.73	7.75	0.3
Total Suspended Solids	mg/L	2.0	<2.0	3.3	N/A
Total Dissolved Solids	mg/L	10	171	170	0.6
Turbidity	NTU	0.10	0.10	<0.10	N/A
Ammonia, Total (as N)	mg/L	0.010	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.22: Field QA/QC Water Quality Data Analysis - Field Duplicates - MS-C-H

Parameter	Sample ID		MS-C-H	MS-C-H01	Relative Percent Difference (RPD)	MS-C-H	MS-C-H01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2627332-11	L2627332-12		L2635278-10	L2635278-11	
	Sample Date & Time		2021-08-16 13:30	2021-08-16 13:30		2021-09-02 10:55	2021-09-02 10:55	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
Conductivity	umhos/cm	1.0	-	-	-	253	253	N/A
pH	pH units	0.10	8.29	8.28	0.1	8.26	8.28	0.2
Total Suspended Solids	mg/L	2.0	<2.0	<2.0	N/A	<2.0	<2.0	N/A
Total Dissolved Solids	mg/L	10	87	88	1.1	210	135	43.5
Turbidity	NTU	0.10	0.27	0.13	N/A	3.35	0.33	164.1
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.013	0.014	N/A
Nitrate (as N)	mg/L	0.020	-	-	-	0.138	0.129	6.7
Oil and Grease, Total	mg/L	5.0	-	-	-	<5.0	<5.0	N/A

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.23: Field QA/QC Water Quality Data Analysis - Field Duplicates - MQ-C-A

Parameter	Sample ID		MQ-C-A	MQ-C-A01	Relative Percent Difference (RPD)	MQ-C-A	MQ-C-A01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2595911-1	L2595911-2		L2621268-1	L2621268-2	
	Sample Date & Time		2021-05-31 9:10	2021-05-31 9:10		2021-07-29 9:40	2021-07-29 9:40	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
Conductivity	umhos/cm	1.0	-	-	-	-	-	-
pH	pH units	0.10	7.57	7.56	0.1	8.12	8.15	0.4
Total Suspended Solids	mg/L	2.0	2.0	<2.0	N/A	<2.0	<2.0	N/A
Total Dissolved Solids	mg/L	10	53	49	7.8	162	156	3.8
Turbidity	NTU	0.10	3.17	3.49	9.6	0.20	0.19	N/A
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	-	-	-	-
Oil and Grease, Total	mg/L	5.0	-	-	-	-	-	-

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.24: Field QA/QC Water Quality Data Analysis - Field Duplicates - MQ-C-B

Parameter	Sample ID		MQ-C-B	MQ-C-B01	Relative Percent Difference (RPD)	MQ-C-B	MQ-C-B01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2630140-3	L2630140-4		L2647099-2	L2647099-3	
	Sample Date & Time		2021-08-22 9:50	2021-08-22 9:50		2021-10-04 9:10	2021-10-04 9:10	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
Conductivity	umhos/cm	1.0	-	-	-	377	377	N/A
pH	pH units	0.10	8.32	8.33	0.1	7.92	7.92	N/A
Total Suspended Solids	mg/L	2.0	<2.0	3.0	N/A	18.5	16.5	11.4
Total Dissolved Solids	mg/L	10	224	222	0.9	178	220	21.1
Turbidity	NTU	0.10	3.27	3.23	1.2	71.1	69.5	2.3
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.043	0.043	N/A
Nitrate (as N)	mg/L	0.020	-	-	-	0.292	0.282	3.5
Oil and Grease, Total	mg/L	2.0	-	-	-	<2.0	<2.0	N/A

Note:

RPD calculated when average of two samples > 5x LOR.

Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.

Calculations of results below detection limits used the value of the detection limit.

RPD values exceeding 30% are bolded.

Table 7.6.25: Field QA/QC Water Quality Data Analysis - Field Duplicates - MQ-C-D

Parameter	Sample ID		MQ-C-D	MQ-C-D01	Relative Percent Difference (RPD)	MQ-C-D	MQ-C-D01	Relative Percent Difference (RPD)
	ALS Laboratory Sample ID		L2592735-10	L2592735-11		L2644501-2	L2644501-5	
	Sample Date & Time		2021-05-26 14:00	2021-05-26 14:00		2021-09-27 9:10	2021-09-27 9:10	
	QA/QC Sample Type		N/A	Field Duplicate		N/A	Field Duplicate	
	Units	LOR						
Conductivity	umhos/cm	3.0	65.3	65.7	0.6	-	-	-
pH	pH units	0.10	7.39	7.42	0.4	7.78	7.80	0.3
Total Suspended Solids	mg/L	2.0	8.2	10.6	N/A	2.0	2.0	N/A
Total Dissolved Solids	mg/L	10	49	53	7.8	290	300	3.4
Turbidity	NTU	0.10	70.4	53.6	27.1	3.18	3.01	5.5
Ammonia, Total (as N)	mg/L	0.010	0.087	0.084	3.5	-	-	-
Nitrate (as N)	mg/L	0.020	0.044	0.023	N/A	-	-	-
Oil and Grease, Total	mg/L	2.0	<2.0	<2.0	N/A	-	-	-

Note:
 RPD calculated when average of two samples > 5x LOR.
 Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the average of the two samples, and multiplying by 100.
 Calculations of results below detection limits used the value of the detection limit.
 RPD values exceeding 30% are bolded.

Table 7.7.1: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MP-01

Analyte	Sample ID		MP-0103	MP-0103	MP-0102	MP-0103
	ALS Laboratory Sample ID		L2637961-3	L2640590-3	L2648435-3	L2671157-3
	Sample Date & Time		2021-09-08 13:10	2021-09-15 13:00	2021-10-05 14:00	2021-12-08 13:00
	QA/QC Sample Type		Travel Blank	Travel Blank	Field Blank	Travel Blank
	Units	LOR				
pH	pH units	0.10	5.87	5.57	5.74	5.32
Total Suspended Solids	mg/L	1.0	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.010	<0.010	<0.010	<0.010	0.013
Total Kjeldahl Nitrogen	mg/L	0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	mg/L	0.0030	0.0035	<0.0030	<0.0030	<0.0030
Fecal Coliforms	CFU/100 mL	-	0	0	0	0
BOD	mg/L	2.0	<2.0	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	<2.0	<5.0	<2.0	<2.0

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field and travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.2: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MP-01B

Analyte	Sample ID		MP-01B03	MP-01B03	MP-01B03	MP-01B02
	ALS Laboratory Sample ID		L2637988-3	L2640599-3	L2648442-3	L2671142-3
	Sample Date & Time		2021-09-08 13:00	2021-09-15 13:00	2021-10-05 14:00	2021-12-08 13:40
	QA/QC Sample Type		Travel Blank	Travel Blank	Travel Blank	Field Blank
	Units	LOR				
pH	pH units	0.10	5.77	6.03	5.99	6.30
Total Suspended Solids	mg/L	1.0	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.010	<0.010	0.024	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L	0.050	<0.050	<0.050	<0.050	<0.050
Phosphorus, Total	mg/L	0.0030	0.0073	<0.0030	<0.0030	<0.0030
Fecal Coliforms	CFU/100 mL	-	0	0	0	0
BOD	mg/L	2.0	<2.0	<2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0/5.0	<2.0	<2.0	<5.0	<2.0

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field and travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.3: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MP-C-B

Analyte	Sample ID		MP-C-B03
	ALS Laboratory Sample ID		L2602404-7
	Sample Date & Time		2021-06-15 11:45
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	<1.0
pH	pH units	0.10	6.26
Total Suspended Solids	mg/L	1.0	<1.0
Total Dissolved Solids	mg/L	10	<10
Turbidity	NTU	0.10	0.31
Ammonia, Total (as N)	mg/L	0.010	0.013
Nitrate (as N)	mg/L	0.020	<0.020
Oil and Grease, Total	mg/L	5.0	<5.0

Notes:

Bold values indicate values greater than their respective parameter LORs.

The travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.4: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MP-C-H

Analyte	Sample ID		MP-C-H03
	ALS Laboratory Sample ID		L2620706-7
	Sample Date & Time		2021-07-28 7:15
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	-
pH	pH units	0.10	5.95
Total Suspended Solids	mg/L	2.0	<2.0
Total Dissolved Solids	mg/L	10	14
Turbidity	NTU	0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	-
Nitrate (as N)	mg/L	0.020	-
Oil and Grease, Total	mg/L	5.0	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field and travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.5: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MP-C-J

Analyte	Sample ID		MP-C-J03
	ALS Laboratory Sample ID		L2600575-3
	Sample Date & Time		2021-06-08 8:15
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	-
pH	pH units	0.10	5.90
Total Suspended Solids	mg/L	1.0	<2.0
Total Dissolved Solids	mg/L	10	<10
Turbidity	NTU	0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	-
Nitrate (as N)	mg/L	0.020	-
Oil and Grease, Total	mg/L	5.0	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The travel result values were within their respective parameter LOR.

Table 7.7.6: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MP-C-K

Analyte	Sample ID		MP-C-K03
	ALS Laboratory Sample ID		L2595282-3
	Sample Date & Time		2021-06-01 8:45
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	<1.0
pH	pH units	0.10	8.00
Total Suspended Solids	mg/L	1.0	<1.0
Total Dissolved Solids	mg/L	10	<10
Turbidity	NTU	0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	<0.010
Nitrate (as N)	mg/L	0.020	<0.020
Oil and Grease, Total	mg/L	5.0	<5.0

Notes:

Bold values indicate values greater than their respective parameter LORs.

The travel result values were within their respective parameter LOR.

Table 7.7.7: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MP-Q1-01

Analyte	Sample ID		MP-Q1-0103
	ALS Laboratory Sample ID		L2614208-2
	Sample Date & Time		2021-07-13 13:40
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	-
pH	pH units	0.10	6.06
Total Suspended Solids	mg/L	2.0	<2.0
Total Dissolved Solids	mg/L	10	17
Turbidity	NTU	0.10	<0.10
Ammonia, Total (as N)	mg/L	-	-
Nitrate (as N)	mg/L	0.020	-
Oil and Grease, Total	mg/L	5.0	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.8: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-MRY-13A

Analyte	Sample ID		MS-MRY-13A03
	ALS Laboratory Sample ID		L2608050-6
	Sample Date & Time		2021-06-28 16:10
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	-
pH	pH units	0.10	6.13
Total Suspended Solids	mg/L	2.0	<2.0
Total Dissolved Solids	mg/L	10	<10
Turbidity	NTU	0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	-
Nitrate (as N)	mg/L	0.020	-
Oil and Grease, Total	mg/L	5.0	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The travel result values were within their respective parameter LOR.

Table 7.7.9: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-MRY-13B

Analyte	Sample ID		MS-MRY-13B03
	ALS Laboratory Sample ID		L2627332-4
	Sample Date & Time		2021-08-16 12:00
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	-
pH	pH units	0.10	5.97
Total Suspended Solids	mg/L	2.0	<2.0
Total Dissolved Solids	mg/L	10	<10
Turbidity	NTU	0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	-
Nitrate (as N)	mg/L	0.020	-
Oil and Grease, Total	mg/L	5.0	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The travel result values were within their respective parameter LOR.

Table 7.7.10: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-01

Analyte	Sample ID		MS-0102	MS-0103
	ALS Laboratory Sample ID		L2623232-3	L2637974-3
	Sample Date & Time		2021-08-04 14:45	2021-09-08 14:45
	QA/QC Sample Type		Field Blank	Travel Blank
	Units	LOR		
pH	pH units	0.10	5.50	6.48
Total Suspended Solids	mg/L	1.0	<1.0	<1.0
Total Dissolved Solids	mg/L	10	<10	-
Turbidity	NTU	0.10	<0.10	-
Ammonia, Total (as N)	mg/L	0.01	-	0.014
Total Kjeldahl Nitrogen	mg/L	0.05	<0.050	0.065
Total Phosphorus	mg/L	0.0030	0.0064	<0.0030
Fecal Coliforms	mg/L	-	0	0
BOD	mg/L	2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	5.0	<5.0	<5.0

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field and travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.11: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-01B

Analyte	Sample ID		MS-01B02	MS-01B03
	ALS Laboratory Sample ID		L2623234-3	L2637955-3
	Sample Date & Time		2021-08-04 15:00	2021-09-08 15:00
	QA/QC Sample Type		Field Blank	Travel Blank
	Units	LOR		
pH	pH units	0.10	6.54	6.31
Total Suspended Solids	mg/L	1.0	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.010	<0.010	<0.010
Total Kjeldahl Nitrogen	mg/L	0.050	<0.050	0.085
Phosphorus, Total	mg/L	0.0090/0.0030	0.0098	<0.0030
Fecal Coliforms	CFU/100 mL	10/0	0	0
BOD	mg/L	2.0	<2.0	<2.0
Oil and Grease, Total	mg/L	5.0	<5.0	<5.0

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field and travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.12: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-06

Analyte	Sample ID		MS-0603
	ALS Laboratory Sample ID		L2611695-2
	Sample Date & Time		2021-07-08 9:30
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	<1.0
Hardness (as CaCO3)	mg/L	0.50	<0.50
pH	pH units	0.10	5.74
Total Suspended Solids	mg/L	2.0	<2.0
Total Dissolved Solids	mg/L	10	<10
Turbidity	NTU	0.10	<0.10
Alkalinity, Total (as CaCO3)	mg/L	1.0	<1.0
Ammonia, Total (as N)	mg/L	0.010	<0.010
Chloride (Cl)	mg/L	0.50	<0.50
Fluoride (F)	mg/L	0.020	<0.020
Nitrate (as N)	mg/L	0.020	<0.020
Total Kjeldahl Nitrogen	mg/L	0.050	<0.050
Phosphorus, Total	mg/L	0.0030	<0.0030
Sulfate (SO4)	mg/L	0.30	<0.30
Dissolved Organic Carbon	mg/L	0.50	0.60
Total Organic Carbon	mg/L	0.50	1.01
Aluminum (Al)-Total	mg/L	0.0050	<0.0050
Antimony (Sb)-Total	mg/L	0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.00010	<0.00010
Barium (Ba)-Total	mg/L	0.00010	<0.00010
Beryllium (Be)-Total	mg/L	0.00010	<0.00010
Bismuth (Bi)-Total	mg/L	0.000050	<0.000050
Boron (B)-Total	mg/L	0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0000050	<0.0000050
Calcium (Ca)-Total	mg/L	0.050	<0.050
Cesium (Cs)-Total	mg/L	0.000010	<0.000010
Chromium (Cr)-Total	mg/L	0.00050	<0.00050
Cobalt (Co)-Total	mg/L	0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.00050	<0.00050
Iron (Fe)-Total	mg/L	0.010	<0.010
Lead (Pb)-Total	mg/L	0.000050	<0.000050
Lithium (Li)-Total	mg/L	0.0010	<0.0010
Magnesium (Mg)-Total	mg/L	0.0050	0.0112
Manganese (Mn)-Total	mg/L	0.00050	<0.00050
Mercury (Hg)-Total	mg/L	0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050	<0.000050
Nickel (Ni)-Total	mg/L	0.00050	<0.00050
Phosphorus (P)-Total	mg/L	0.050	<0.050
Potassium (K)-Total	mg/L	0.050	<0.050
Rubidium (Rb)-Total	mg/L	0.00020	<0.00020
Selenium (Se)-Total	mg/L	0.000050	<0.000050
Silicon (Si)-Total	mg/L	0.10	<0.10
Silver (Ag)-Total	mg/L	0.000050	<0.000050
Sodium (Na)-Total	mg/L	0.050	<0.050
Strontium (Sr)-Total	mg/L	0.0010	<0.0010
Sulfur (S)-Total	mg/L	0.50	<0.50
Tellurium (Te)-Total	mg/L	0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.000010	<0.000010
Thorium (Th)-Total	mg/L	0.00010	<0.00010
Tin (Sn)-Total	mg/L	0.00010	<0.00010
Titanium (Ti)-Total	mg/L	0.00030	<0.00030
Tungsten (W)-Total	mg/L	0.00010	<0.00010
Uranium (U)-Total	mg/L	0.000010	<0.000010
Vanadium (V)-Total	mg/L	0.00050	<0.00050
Zinc (Zn)-Total	mg/L	0.0030	<0.0030
Zirconium (Zr)-Total	mg/L	0.00020	<0.00020
Aluminum (Al)-Dissolved	mg/L	0.0050	<0.0050
Antimony (Sb)-Dissolved	mg/L	0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.00010	<0.00010
Barium (Ba)-Dissolved	mg/L	0.00010	<0.00010
Beryllium (Be)-Dissolved	mg/L	0.00010	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.000050	<0.000050
Boron (B)-Dissolved	mg/L	0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L	0.0000050	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.050	<0.050

Notes:

Bold values indicate values greater than their respective parameter LORs.

The travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.12: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-06

Analyte	Sample ID		MS-0603
	ALS Laboratory Sample ID		L2611695-2
	Sample Date & Time		2021-07-08 9:30
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Cesium (Cs)-Dissolved	mg/L	0.000010	<0.000010
Chromium (Cr)-Dissolved	mg/L	0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L	0.00020	<0.00020
Iron (Fe)-Dissolved	mg/L	0.010	<0.010
Lead (Pb)-Dissolved	mg/L	0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L	0.0010	<0.0010
Magnesium (Mg)-Dissolved	mg/L	0.0050	<0.0050
Manganese (Mn)-Dissolved	mg/L	0.00050	<0.00050
Mercury (Hg)-Dissolved	mg/L	0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L	0.00050	<0.00050
Phosphorus (P)-Dissolved	mg/L	0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.050	<0.050
Rubidium (Rb)-Dissolved	mg/L	0.00020	<0.00020
Selenium (Se)-Dissolved	mg/L	0.000050	<0.000050
Silicon (Si)-Dissolved	mg/L	0.050	<0.050
Silver (Ag)-Dissolved	mg/L	0.000050	<0.000050
Sodium (Na)-Dissolved	mg/L	0.050	<0.050
Strontium (Sr)-Dissolved	mg/L	0.0010	<0.0010
Sulfur (S)-Dissolved	mg/L	0.50	<0.50
Tellurium (Te)-Dissolved	mg/L	0.00020	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.000010	<0.000010
Thorium (Th)-Dissolved	mg/L	0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L	0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.00030	<0.00030
Tungsten (W)-Dissolved	mg/L	0.00010	<0.00010
Uranium (U)-Dissolved	mg/L	0.000010	<0.000010
Vanadium (V)-Dissolved	mg/L	0.00050	<0.00050
Zinc (Zn)-Dissolved	mg/L	0.0010	<0.0010
Zirconium (Zr)-Dissolved	mg/L	0.00020	<0.00020
Ra-226	Bq/L	0.0058/0.0033	<0.0033
Oil and Grease, Total	mg/L	-	-
Acute Toxicity	-	-	-

Notes:

Bold values indicate values greater than their respective parameter LORs.
The travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.13: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-08

Analyte	Sample ID		MS-0802
	ALS Laboratory Sample ID		L2611670-2
	Sample Date & Time		2021-07-08 13:05
	QA/QC Sample Type		Field Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	<1.0
Hardness (as CaCO3)	mg/L	0.50	<0.50
pH	pH units	0.10	5.62
Total Suspended Solids	mg/L	2.0	<2.0
Total Dissolved Solids	mg/L	10	20
Turbidity	NTU	0.10	<0.10
Alkalinity, Total (as CaCO3)	mg/L	1.0	<1.0
Ammonia, Total (as N)	mg/L	0.0100	<0.010
Chloride (Cl)	mg/L	0.50	<0.50
Fluoride (F)	mg/L	0.020	<0.020
Nitrate (as N)	mg/L	0.020	<0.020
Total Kjeldahl Nitrogen	mg/L	0.050	<0.050
Phosphorus, Total	mg/L	0.0030	<0.0030
Sulfate (SO4)	mg/L	0.30	<0.30
Dissolved Organic Carbon	mg/L	0.50	<0.50
Total Organic Carbon	mg/L	0.50	0.87
Aluminum (Al)-Total	mg/L	0.0050	<0.0050
Antimony (Sb)-Total	mg/L	0.00010	<0.00010
Arsenic (As)-Total	mg/L	0.00010	<0.00010
Barium (Ba)-Total	mg/L	0.00010	<0.00010
Beryllium (Be)-Total	mg/L	0.00010	<0.00010
Bismuth (Bi)-Total	mg/L	0.000050	<0.000050
Boron (B)-Total	mg/L	0.010	<0.010
Cadmium (Cd)-Total	mg/L	0.0000050	<0.0000050
Calcium (Ca)-Total	mg/L	0.05	<0.050
Cesium (Cs)-Total	mg/L	0.000010	<0.000010
Chromium (Cr)-Total	mg/L	0.00050	<0.00050
Cobalt (Co)-Total	mg/L	0.00010	<0.00010
Copper (Cu)-Total	mg/L	0.00050	<0.00050
Iron (Fe)-Total	mg/L	0.010	<0.010
Lead (Pb)-Total	mg/L	0.000050	<0.000050
Lithium (Li)-Total	mg/L	0.0010	<0.0010
Magnesium (Mg)-Total	mg/L	0.0050	0.0382
Manganese (Mn)-Total	mg/L	0.00050	<0.00050
Mercury (Hg)-Total	mg/L	0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050	<0.000050
Nickel (Ni)-Total	mg/L	0.00050	<0.00050
Phosphorus (P)-Total	mg/L	0.050	<0.050
Potassium (K)-Total	mg/L	0.050	<0.050
Rubidium (Rb)-Total	mg/L	0.00020	<0.00020
Selenium (Se)-Total	mg/L	0.000050	<0.000050
Silicon (Si)-Total	mg/L	0.10	<0.10
Silver (Ag)-Total	mg/L	0.000050	<0.000050
Sodium (Na)-Total	mg/L	0.050	<0.050
Strontium (Sr)-Total	mg/L	0.0010	<0.0010
Sulfur (S)-Total	mg/L	0.50	<0.50
Tellurium (Te)-Total	mg/L	0.00020	<0.00020
Thallium (Tl)-Total	mg/L	0.000010	<0.000010
Thorium (Th)-Total	mg/L	0.00010	<0.00010
Tin (Sn)-Total	mg/L	0.00010	<0.00010
Titanium (Ti)-Total	mg/L	0.00030	<0.00030
Tungsten (W)-Total	mg/L	0.00010	<0.00010
Uranium (U)-Total	mg/L	0.000010	<0.000010
Vanadium (V)-Total	mg/L	0.00050	<0.00050
Zinc (Zn)-Total	mg/L	0.0030	<0.0030
Zirconium (Zr)-Total	mg/L	0.00020	<0.00020
Aluminum (Al)-Dissolved	mg/L	0.0050	<0.0050
Antimony (Sb)-Dissolved	mg/L	0.00010	<0.00010
Arsenic (As)-Dissolved	mg/L	0.00010	<0.00010
Barium (Ba)-Dissolved	mg/L	0.00010	<0.00010
Beryllium (Be)-Dissolved	mg/L	0.00010	<0.00010
Bismuth (Bi)-Dissolved	mg/L	0.000050	<0.000050
Boron (B)-Dissolved	mg/L	0.010	<0.010
Cadmium (Cd)-Dissolved	mg/L	0.0000050	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.050	0.055

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR, with the exception of total magnesium.

Table 7.7.13: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-08

Analyte	Sample ID		MS-0802
	ALS Laboratory Sample ID		L2611670-2
	Sample Date & Time		2021-07-08 13:05
	QA/QC Sample Type		Field Blank
	Units	LOR	
Cesium (Cs)-Dissolved	mg/L	0.000010	<0.000010
Chromium (Cr)-Dissolved	mg/L	0.00050	<0.00050
Cobalt (Co)-Dissolved	mg/L	0.00010	<0.00010
Copper (Cu)-Dissolved	mg/L	0.00020	<0.00020
Iron (Fe)-Dissolved	mg/L	0.010	<0.010
Lead (Pb)-Dissolved	mg/L	0.000050	<0.000050
Lithium (Li)-Dissolved	mg/L	0.0010	<0.0010
Magnesium (Mg)-Dissolved	mg/L	0.0050	<0.0050
Manganese (Mn)-Dissolved	mg/L	0.00050	<0.00050
Mercury (Hg)-Dissolved	mg/L	0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	<0.000050
Nickel (Ni)-Dissolved	mg/L	0.00050	<0.00050
Phosphorus (P)-Dissolved	mg/L	0.050	<0.050
Potassium (K)-Dissolved	mg/L	0.050	<0.050
Rubidium (Rb)-Dissolved	mg/L	0.00020	<0.00020
Selenium (Se)-Dissolved	mg/L	0.000050	<0.000050
Silicon (Si)-Dissolved	mg/L	0.050	<0.050
Silver (Ag)-Dissolved	mg/L	0.000050	<0.000050
Sodium (Na)-Dissolved	mg/L	0.050	<0.050
Strontium (Sr)-Dissolved	mg/L	0.0010	<0.0010
Sulfur (S)-Dissolved	mg/L	0.50	<0.50
Tellurium (Te)-Dissolved	mg/L	0.00020	<0.00020
Thallium (Tl)-Dissolved	mg/L	0.000010	<0.000010
Thorium (Th)-Dissolved	mg/L	0.00010	<0.00010
Tin (Sn)-Dissolved	mg/L	0.00010	<0.00010
Titanium (Ti)-Dissolved	mg/L	0.00030	<0.00030
Tungsten (W)-Dissolved	mg/L	0.00010	<0.00010
Uranium (U)-Dissolved	mg/L	0.000010	<0.000010
Vanadium (V)-Dissolved	mg/L	0.00050	<0.00050
Zinc (Zn)-Dissolved	mg/L	0.0010	<0.0010
Zirconium (Zr)-Dissolved	mg/L	0.00020	<0.00020
Ra-226	Bq/L	0.0033	0.0040
Oil and Grease, Total	mg/L	-	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR, with the exception of total magnesium.

Table 7.7.14: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-C-A

Analyte	Sample ID		MS-C-A03	MS-C-A02
	ALS Laboratory Sample ID		L2605841-14	L2612809-2
	Sample Date & Time		2021-06-21 17:15	2021-07-12 8:50
	QA/QC Sample Type		Travel Blank	Field Blank
	Units	LOR		
Conductivity	umhos/cm	1.0	-	-
pH	pH units	0.10	5.91	5.54
Total Suspended Solids	mg/L	1.0/2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	<10	11
Turbidity	NTU	0.10	<0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	-	-
Nitrate (as N)	mg/L	0.020	-	-
Oil and Grease, Total	mg/L	5.0	-	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field and travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.15: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-C-E

Analyte	Sample ID		MS-C-E03
	ALS Laboratory Sample ID		L2639307-7
	Sample Date & Time		2021-09-13 12:50
	QA/QC Sample Type		Travel Blank
	Units	LOR	
Conductivity	umhos/cm	1.0	-
pH	pH units	0.10	5.91
Total Suspended Solids	mg/L	2.0	<2.0
Total Dissolved Solids	mg/L	10	<10
Turbidity	NTU	0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	-
Nitrate (as N)	mg/L	0.020	-
Oil and Grease, Total	mg/L	5.0	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The travel result values were within their respective parameter LOR.

Table 7.7.16: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MS-C-G

Analyte	Sample ID		MS-C-G03	MS-C-G02	MS-C-G02
	ALS Laboratory Sample ID		L2605841-3	L2624988-2	L2608050-3
	Sample Date & Time		2021-06-21 9:55	2021-08-10 12:40	2021-06-28 10:55
	QA/QC Sample Type		Travel Blank	Field Blank	Field Blank
	Units	LOR			
Conductivity	umhos/cm	1.0	1.2	-	-
pH	pH units	0.10	5.29	6.26	6.05
Total Suspended Solids	mg/L	2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	<10	<10	97
Turbidity	NTU	0.10	0.22	<0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	<0.010	-	-
Nitrate (as N)	mg/L	0.020	<0.020	-	-
Oil and Grease, Total	mg/L	5.0	<5.0	-	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field and travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR, with the exception of TDS on June 28.

Table 7.7.17: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MQ-C-A

Analyte	Sample ID		MQ-C-A02	MQ-C-A03
	ALS Laboratory Sample ID		L2601055-2	L2609728-2
	Sample Date & Time		2021-06-07 13:50	2021-07-05 9:30
	QA/QC Sample Type		Field Blank	Travel Blank
	Units	LOR		
Conductivity	umhos/cm	1.0	-	<1.0
pH	pH units	0.10	5.81	6.01
Total Suspended Solids	mg/L	2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	<10	25
Turbidity	NTU	0.10	<0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	-	<0.010
Nitrate (as N)	mg/L	0.020	-	<0.020
Oil and Grease, Total	mg/L	5.0	-	<5.0

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field and travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.18: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MQ-C-B

Analyte	Sample ID		MQ-C-B02	MQ-C-B02
	ALS Laboratory Sample ID		L2601684-2	L2621381-15
	Sample Date & Time		2021-06-15 9:20	2021-08-02 9:50
	QA/QC Sample Type		Field Blank	Field Blank
	Units	LOR		
Conductivity	umhos/cm	1.0	<1.0	<1.0
pH	pH units	0.10	5.93	6.64
Total Suspended Solids	mg/L	2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	15	15
Turbidity	NTU	0.10	<0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	<0.010	<0.010
Nitrate (as N)	mg/L	0.020	<0.020	<0.020
Oil and Grease, Total	mg/L	5.0	<5.0	<5.0

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.7.19: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - MQ-C-D

Analyte	Sample ID		MQ-C-D03	MQ-C-D02
	ALS Laboratory Sample ID		L2615981-3	L2642214-5
	Sample Date & Time		2021-07-19 11:05	2021-09-20 10:40
	QA/QC Sample Type		Travel Blank	Field Blank
	Units	LOR		
Conductivity	umhos/cm	1.0	-	-
pH	pH units	0.10	5.97	5.84
Total Suspended Solids	mg/L	2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	<10	26
Turbidity	NTU	0.10	<0.10	<0.10
Ammonia, Total (as N)	mg/L	0.010	-	-
Nitrate (as N)	mg/L	0.020	-	-
Oil and Grease, Total	mg/L	5.0	-	-

Notes:

Bold values indicate values greater than their respective parameter LORs.

The field and travel result values greater than their respective parameter LORs were within 5 times the value of each parameter LOR.

Table 7.8: Summary - QA/QC Analysis of Duplicates with an RPD > 30% - 2021

Sample ID	Date Sampled	Parameter	RPD (%) ^a
MP-0501	2-Aug-21	Total Kjeldahl Nitrogen	44
MP-C-J01	10-Aug-21	Total Dissolved Solids	31
MS-C-B01	26-May-21	Total Suspended Solids; Turbidity	38; 39
MS-C-H01	2-Sep-21	Total Dissolved Solids; Turbidity	44; 164

Notes

^a Relative Percent Difference (RPD) for a parameter is calculated by dividing the absolute analytical result difference between the sample and its duplicate by the mean of the sample and duplicate, and multiplying by 100. $RPD = |(Result2 - Result1) / Mean| * 100$.

Table 7.9: Water Quality Monitoring Results - Natural Sedimentation Events - 2021

Analyte	Sample ID		MP-NS-04-DS_2021-06-11_1410	MP-NS-04-US_2021-06-11_1435
	ALS Laboratory Sample ID		L2601685-1	L2601685-2
	Sample Date & Time		2021-06-11 14:10	2021-06-11 14:35
	QA/QC Sample Type		N/A	N/A
	Units	LOR		
Total Suspended Solids	mg/L	2	8,090	33.3
Turbidity	NTU	0.1	848	8.58

Table 7.10.1: Surface Water Quality Results CV-167

Analyte	Sample ID				CV-167-DS_2021-06-10_0940	CV-167-US_2021-06-10_0950	CV-167-US02_2021-06-10_0950	CV-167-DS_2021-06-15_1515	CV-167-US_2021-06-15_1530	CV-167-US03_2021-06-15_1530	CV-167-DS_2021-06-21_1630	CV-167-US_2021-06-21_1640
	ALS Laboratory Sample ID				L2602352-28	L2602352-29	L2602352-30	L2603802-25	L2603802-26	L2603802-27	L2605811-41	L2605811-42
	Sample Date & Time				2021-06-10 9:40	2021-06-10 9:50	2021-06-10 9:50	2021-06-15 15:15	2021-06-15 15:30	2021-06-15 15:30	2021-06-21 16:30	2021-06-21 16:40
	QA/QC Sample Type				N/A	N/A	Field Blank	N/A	N/A	Travel Blank	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	7.80	7.79	5.78	7.91	7.99	5.85	7.98	7.93
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	11.2	6.1	<2.0	5.5	5.4	<1.0	7.3	2.9
Total Dissolved Solids	mg/L	10	-	-	82	93	<10	78	72	<10	78	59
Turbidity	NTU	0.1	-	-	9.10	6.25	0.22	6.81	3.94	0.46	8.61	3.14

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.1: Surface Water Quality Results CV-167

Analyte	Sample ID				CV-167-DS_2021-06-28_1400	CV-167-US_2021-06-28_1415	CV-167-DS_2021-07-04_0710	CV-167-US_2021-07-04_0720	CV-167-DS_2021-07-11_0810	CV-167-US_2021-07-11_0820	CV-167-DS_2021-07-28_0945	CV-167-US_2021-07-28_0950
	ALS Laboratory Sample ID				L2608262-43	L2608262-44	L2610075-1	L2610075-2	L2614284-1	L2614284-2	L2621359-1	L2621359-2
	Sample Date & Time				2021-06-28 14:00	2021-06-28 14:15	2021-07-04 7:10	2021-07-04 7:20	2021-07-11 8:10	2021-07-11 8:20	2021-07-28 9:45	2021-07-28 9:50
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	8.07	8.04	8.04	8.09	8.04	8.11	8.15	8.20
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	4.4	5.2	8.1	2.6	10.9	2.2	8.8	2.2
Total Dissolved Solids	mg/L	10	-	-	92	94	106	98	137	118	150	168
Turbidity	NTU	0.1	-	-	5.76	4.78	5.01	4.84	4.37	2.86	8.01	2.82

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.1: Surface Water Quality Results CV-167

Analyte	Sample ID				CV-167-DS_2021-08-16_1050	CV-167-US_2021-08-16_1100
	ALS Laboratory Sample ID				L2628935-1	L2628935-2
	Sample Date & Time				2021-08-16 10:50	2021-08-16 11:00
	QA/QC Sample Type				N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria		
pH	pH units	0.1	6.0 - 9.5	-	7.93	8.09
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	3.5	2.0
Total Dissolved Solids	mg/L	10	-	-	183	166
Turbidity	NTU	0.1	-	-	5.91	1.05

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.2: Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-DS_2021-06-01_1745	CV-154-A-US_2021-06-01_1755	CV-154-A-DS_2021-06-10_1005	CV-154-A-US_2021-06-10_1015	CV-154-A-US01_2021-06-10_1015	CV-154-A-DS_2021-06-15_1450	CV-154-A-US_2021-06-15_1455
	ALS Laboratory Sample ID				L2597794-10	L2597794-11	L2602352-31	L2602352-32	L2602352-33	L2603802-23	L2603802-24
	Sample Date & Time				2021-06-01 17:45	2021-06-01 17:55	2021-06-10 10:05	2021-06-10 10:15	2021-06-10 10:15	2021-06-15 14:50	2021-06-15 14:55
	QA/QC Sample Type				N/A	N/A	N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	8.19	8.00	7.89	7.76	7.86	8.07	8.06
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	455	74.7	16.3	6.4	6.6	7.0	5.4
Total Dissolved Solids	mg/L	10	-	-	138	121	66	79	73	74	69
Turbidity	NTU	0.1	-	-	186	50.5	6.10	4.14	4.80	7.11	5.43

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.2: Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-DS_2021-06-21_1605	CV-154-A-US_2021-06-21_1615	CV-154-A-DS_2021-06-28_1320	CV-154-A-US_2021-06-28_1340	CV-154-A-DS_2021-07-04_0735	CV-154-A-US_2021-07-04_0745	CV-154-A-DS_2021-07-11_0835
	ALS Laboratory Sample ID				L2605811-39	L2605811-40	L2608262-41	L2608262-42	L2610075-3	L2610075-4	L2614284-3
	Sample Date & Time				2021-06-21 16:05	2021-06-21 16:15	2021-06-28 13:20	2021-06-28 13:40	2021-07-04 7:35	2021-07-04 7:45	2021-07-11 8:35
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.99	8.09	8.11	8.14	8.12	8.13	8.12
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	3.7	3.9	17.2	16.7	2.8	6.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	83	80	97	97	161	135	175
Turbidity	NTU	0.1	-	-	4.51	4.75	21.0	23.1	8.47	18.6	1.03

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.2: Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-US_2021-07-11_0845	CV-154-A-DS_2021-07-28_1005	CV-154-A-US_2021-07-28_1015	CV-154-A-DS_2021-08-17_0800	CV-154-A-US_2021-08-17_0810
	ALS Laboratory Sample ID				L2614284-4	L2621359-3	L2621359-4	L2628935-12	L2628935-13
	Sample Date & Time				2021-07-11 8:45	2021-07-28 10:05	2021-07-28 10:15	2021-08-17 8:00	2021-08-17 8:10
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria					
pH	pH units	0.1	6.0 - 9.5	-	7.85	8.14	8.18	8.26	8.28
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	7.0	8.9	19.7	15.5	26.0
Total Dissolved Solids	mg/L	10	-	-	171	193	208	197	190
Turbidity	NTU	0.1	-	-	1.33	10.6	23.1	34.0	41.7

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.3: Surface Water Quality Results CV-128

Analyte	Sample ID				CV-128-DS_2021-06-09_1720	CV-128-DS01_2021-06-09_1720	CV-128-US_2021-06-09_1730	CV-128-DS_2021-06-21_1445	CV-128-US_2021-06-21_1455	CV-128-DS_2021-06-28_1200	CV-128-US_2021-06-28_1215	CV-128-DS_2021-07-04_0825
	ALS Laboratory Sample ID				L2602352-25	L2602352-26	L2602352-27	L2605811-35	L2605811-36	L2608262-37	L2608262-38	L2610075-8
	Sample Date & Time				2021-06-09 17:20	2021-06-09 17:20	2021-06-09 17:30	2021-06-21 14:45	2021-06-21 14:55	2021-06-28 12:00	2021-06-28 12:15	2021-07-04 8:25
	QA/QC Sample Type				N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	7.59	7.57	7.58	7.92	7.92	7.91	7.90	7.92
Total Suspended Solids	mg/L	2	30	See note ¹	4.2	5.1	2.9	<2.0	1.2	<2.0	<2.0	<1.0
Total Dissolved Solids	mg/L	10	-	-	60	63	60	40	45	61	66	46
Turbidity	NTU	0.1	-	-	1.15	1.12	1.11	1.06	0.88	0.89	0.89	0.66

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.3: Surface Water Quality Results CV-128

Analyte	Sample ID				CV-128-DS01_2021-07-04_0825	CV-128-US_2021-07-04_0835	CV-128-DS_2021-07-11_0940	CV-128-US_2021-07-11_0950	CV-128-DS_2021-07-28_1105	CV-128-US_2021-07-28_1115
	ALS Laboratory Sample ID				L2610075-9	L2610075-10	L2614284-8	L2614284-9	L2621359-7	L2621359-8
	Sample Date & Time				2021-07-04 8:25	2021-07-04 8:35	2021-07-11 9:40	2021-07-11 9:50	2021-07-28 11:05	2021-07-28 11:15
	QA/QC Sample Type				Field Duplicate	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria						
pH	pH units	0.1	6.0 - 9.5	-	7.94	7.98	7.81	7.98	8.12	8.08
Total Suspended Solids	mg/L	2	30	See note ¹	1.3	<1.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	47	46	50	44	77	51
Turbidity	NTU	0.1	-	-	0.66	0.65	0.63	1.17	0.26	0.31

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.4: Surface Water Quality Results CV-129

Analyte	Sample ID				CV-129-DS_2021-06-10_1035	CV-129-US_2021-06-10_1045	CV-129-DS_2021-06-15_1335	CV-129-US_2021-06-15_1345	CV-129-DS_2021-06-21_1525	CV-129-US_2021-06-21_1535	CV-129-DS_2021-06-28_1245
	ALS Laboratory Sample ID				L2602352-34	L2602352-35	L2603802-21	L2603802-22	L2605811-37	L2605811-38	L2608262-39
	Sample Date & Time				2021-06-10 10:35	2021-06-10 10:45	2021-06-15 13:35	2021-06-15 13:45	2021-06-21 15:25	2021-06-21 15:25	2021-06-28 12:45
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.80	7.82	7.97	7.95	7.98	7.98	8.17
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	17.2	<2.0	<1.0	<1.0	1.2	<1.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	74	80	59	58	49	43	186
Turbidity	NTU	0.1	-	-	4.44	0.78	0.37	0.45	0.44	0.11	0.58

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.4: Surface Water Quality Results CV-129

Analyte	Sample ID				CV-129-US_2021-06-28_1300	CV-129-DS_2021-07-04_0800	CV-129-US_2021-07-04_0810	CV-129-US02_2021-07-04_0810	CV-129-DS_2021-07-11_0910	CV-129-DS02_2021-07-11_0910	CV-129-US_2021-07-11_0920
	ALS Laboratory Sample ID				L2608262-40	L2610075-5	L2610075-6	L2610075-7	L2614284-5	L2614284-6	L2614284-7
	Sample Date & Time				2021-06-28 13:00	2021-07-04 8:00	2021-07-04 8:10	2021-07-04 8:10	2021-07-11 9:10	2021-07-11 9:10	2021-07-11 9:20
	QA/QC Sample Type				N/A	N/A	N/A	Field Blank	N/A	Field Blank	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	8.18	8.15	8.17	5.87	7.99	5.62	7.88
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	<2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	93	87	80	<10	93	<10	94
Turbidity	NTU	0.1	-	-	0.15	0.19	0.10	<0.10	0.23	1.61	0.12

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.4: Surface Water Quality Results CV-129

Analyte	Sample ID				CV-129-DS_2021-07-28_1040	CV-129-US_2021-07-28_1050	CV-129-DS_2021-08-16_1130	CV-129-US_2021-08-16_1140
	ALS Laboratory Sample ID				L2621359-5	L2621359-6	L2628935-3	L2628935-4
	Sample Date & Time				2021-07-28 10:40	2021-07-28 10:50	2021-08-16 11:30	2021-08-16 11:40
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.23	8.30	8.37	8.42
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	116	127	139	128
Turbidity	NTU	0.1	-	-	<0.10	<0.10	0.53	0.14

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.5: Surface Water Quality Results CV-112

Analyte	Sample ID				CV-112-DS_2021-06-01_1605	CV-112-US_2021-06-01_1620	CV-112-DS_2021-06-09_1620	CV-112-US_2021-06-09_1630	CV-112-DS_2021-06-15_1100	CV-112-US_2021-06-15_1105	CV-112-DS_2021-06-21_1350
	ALS Laboratory Sample ID				L2597794-6	L2597794-7	L2602352-21	L2602352-22	L2603802-17	L2603802-18	L2605811-33
	Sample Date & Time				2021-06-01 16:05	2021-06-01 16:20	2021-06-09 16:20	2021-06-09 16:30	2021-06-15 11:00	2021-06-15 11:05	2021-06-21 13:50
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	8.38	8.16	7.75	7.75	7.99	7.98	8.09
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	807	230	33.0	6.3	2.6	1.1	<2.0
Total Dissolved Solids	mg/L	10	-	-	230	108	66	66	57	67	74
Turbidity	NTU	0.1	-	-	954	104	2.40	1.50	1.79	1.21	0.82

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.5: Surface Water Quality Results CV-112

Analyte	Sample ID				CV-112-US_2021-06-21_1400	CV-112-DS_2021-06-28_1050	CV-112-US_2021-06-28_1100	CV-112-DS_2021-07-04_0930	CV-112-US_2021-07-04_0940	CV-112-DS_2021-07-11_1045	CV-112-US_2021-07-11_1050
	ALS Laboratory Sample ID				L2605811-34	L2608262-33	L2608262-34	L2610075-11	L2610075-12	L2614284-10	L2614284-11
	Sample Date & Time				2021-06-21 14:00	2021-06-28 10:50	2021-06-28 11:00	2021-07-04 9:30	2021-07-04 9:40	2021-07-11 10:45	2021-07-11 10:50
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	8.10	8.09	8.15	8.23	8.26	8.24	8.22
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	<2.0	<2.0	<2.0	<1.0	<1.0	<2.0	4.4
Total Dissolved Solids	mg/L	10	-	-	75	105	104	121	116	109	114
Turbidity	NTU	0.1	-	-	0.58	0.33	0.25	0.65	0.14	0.74	1.36

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.5: Surface Water Quality Results CV-112

Analyte	Sample ID				CV-112-US03_1900-01-00_0000	CV-112-DS_2021-07-28_1620	CV-112-US_2021-07-28_1625	CV-112-DS_2021-08-16_1330	CV-112-US_2021-08-16_1340	CV-112-US01_2021-08-16_1340
	ALS Laboratory Sample ID				L2614284-12	L2621359-12	L2621359-13	L2628935-7	L2628935-8	L2628935-9
	Sample Date & Time				2021-07-11 10:50	2021-07-28 16:20	2021-07-28 16:25	2021-08-16 13:30	2021-08-16 13:40	2021-08-16 13:40
	QA/QC Sample Type				Travel Blank	N/A	N/A	N/A	N/A	Field Blank
	Units	LOR	Water Licence Criteria ¹	Screening Criteria						
pH	pH units	0.1	6.0 - 9.5	-	5.67	8.33	8.38	8.50	8.47	8.51
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	<10	156	170	192	204	210
Turbidity	NTU	0.1	-	-	0.33	0.30	<0.10	0.22	<0.10	<0.10

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.6: Surface Water Quality Results CV-115

Analyte	Sample ID				CV-115-DS_2021-05-26_0915	CV-115-DS01_2021-05-26_0915	CV-115-US_2021-05-26_0930	CV-115-DS_2021-06-01_1640	CV-115-US_2021-06-01_1650	CV-115-DS_2021-06-09_1645	CV-115-US_2021-06-09_1650
	ALS Laboratory Sample ID				L2594754-1	L2594754-2	L2594754-3	L2597794-8	L2597794-9	L2602352-23	L2602352-24
	Sample Date & Time				2021-05-26 9:15	2021-05-26 9:15	2021-05-26 9:30	2021-06-01 16:40	2021-06-01 16:50	2021-06-09 16:45	2021-06-09 16:50
	QA/QC Sample Type				N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	8.02	8.03	7.95	8.15	8.25	7.92	7.83
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	21.7	22.9	3.6	114	5.5	9.6	7.1
Total Dissolved Solids	mg/L	10	-	-	174	168	143	173	171	70	87
Turbidity	NTU	0.1	-	-	30.8	31.3	12.6	125	4.10	2.27	1.19

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.6: Surface Water Quality Results CV-115

Analyte	Sample ID				CV-115-DS_2021-06-15_1125	CV-115-US_2021-06-15_1140	CV-115-DS_2021-06-28_1120	CV-115-US_2021-06-28_1130	CV-115-DS_2021-07-28_1145	CV-115-DS02_2021-07-28_1145	CV-115-US_2021-07-28_1155	CV-115-DS_2021-08-16_1300	CV-115-US_2021-08-16_1310
	ALS Laboratory Sample ID				L2603802-19	L2603802-20	L2608262-35	L2608262-36	L2621359-9	L2621359-10	L2621359-11	L2628935-5	L2628935-6
	Sample Date & Time				2021-06-15 11:25	2021-06-15 11:00	2021-06-28 11:20	2021-06-28 11:30	2021-07-28 11:45	2021-07-28 11:45	2021-07-28 11:55	2021-08-16 13:00	2021-08-16 13:10
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	Field Blank	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria									
pH	pH units	0.1	6.0 - 9.5	-	8.29	8.18	8.26	8.11	8.32	6.21	8.35	8.40	8.26
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	2.2	<1.0	4.6	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	140	112	172	170	214	30	192	197	180
Turbidity	NTU	0.1	-	-	4.74	0.39	8.56	1.00	1.30	<0.10	0.16	0.65	0.14

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.7: Surface Water Quality Results CV-106

Analyte	Sample ID				CV-106-DS_2021-06-09_1600	CV-106-US_2021-06-09_1605	CV-106-DS_2021-06-15_1035	CV-106-DS012021-06-15_1035	CV-106-US_2021-06-15_1040	CV-106-DS_2021-06-21_1315	CV-106-US_2021-06-21_1325	CV-106-DS_2021-07-04_0950
	ALS Laboratory Sample ID				L2602352-19	L2602352-20	L2603802-14	L2603802-15	L2603802-16	L2605811-31	L2605811-32	L2610075-13
	Sample Date & Time				2021-06-09 16:00	2021-06-09 16:05	2021-06-15 10:35	2021-06-15 10:35	2021-06-15 10:40	2021-06-15 13:15	2021-06-15 13:25	2021-07-04 9:50
	QA/QC Sample Type				N/A	N/A	N/A	Field Duplicate	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	7.92	7.94	7.95	7.95	7.72	7.96	7.73	8.06
Total Suspended Solids	mg/L	2	30	See note ¹	34.4	6.7	3.9	3.4	<1.0	4.3	<2.0	<1.0
Total Dissolved Solids	mg/L	10	-	-	92	127	54	54	37	62	33	126
Turbidity	NTU	0.1	-	-	4.26	1.67	2.32	2.28	1.10	3.03	1.18	0.49

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.7: Surface Water Quality Results CV-106

Analyte	Sample ID				CV-106-DS03_2021-07-04_0950	CV-106-US_2021-07-04_1000	CV-106-DS_2021-07-11_1100	CV-106-US_2021-07-11_1110	CV-106-DS_2021-07-28_1235	CV-106-US_2021-07-28_1245	CV-106-DS_2021-08-16_1400	CV-106-US_2021-08-16_1405
	ALS Laboratory Sample ID				L2610075-14	L2610075-15	L2614284-13	L2614284-14	L2621359-14	L2621359-15	L2628935-10	L2628935-11
	Sample Date & Time				2021-07-04 9:50	2021-07-04 10:00	2021-07-11 11:00	2021-07-11 11:10	2021-07-28 12:35	2021-07-28 12:45	2021-08-16 14:00	2021-08-16 14:05
	QA/QC Sample Type				Travel Blank	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	5.95	7.96	7.94	7.80	7.98	8.13	7.93	8.32
Total Suspended Solids	mg/L	2	30	See note ¹	<1.0	<1.0	6.5	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	<10	82	91	45	207	110	227	141
Turbidity	NTU	0.1	-	-	0.22	0.16	0.97	0.45	0.53	0.11	2.81	0.13

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.8: Surface Water Quality Results CV-099

Analyte	Sample ID				CV-099-DS_2021-06-09_1400	CV-099-DS01_2021-06-09_1400	CV-099-US_2021-06-09_1415	CV-099-DS_2021-06-21_1210	CV-099-US_2021-06-21_1220	CV-099-DS_2021-06-28_0950	CV-099-US_2021-06-28_1000	CV-099-DS_2021-07-04_1025
	ALS Laboratory Sample ID				L2602352-16	L2602352-17	L2602352-18	L2605811-29	L2605811-30	L2608262-29	L2608262-30	L2610075-16
	Sample Date & Time				2021-06-09 14:00	2021-06-09 14:00	2021-06-09 14:15	2021-06-21 12:10	2021-06-21 12:20	2021-06-28 9:50	2021-06-28 10:00	2021-07-04 10:25
	QA/QC Sample Type				N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	7.88	7.83	7.82	8.00	7.90	8.15	8.13	8.25
Total Suspended Solids	mg/L	2.0/4.0	30	See note ¹	41.5	40.1	18.9	<2.0	<2.0	2.5	<2.0	<1.0
Total Dissolved Solids	mg/L	10	-	-	87	89	77	62	60	107	98	118
Turbidity	NTU	0.1	-	-	3.04	3.13	1.34	0.75	0.62	0.39	0.34	0.19

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.8: Surface Water Quality Results CV-099

Analyte	Sample ID				CV-099-US_2021-07-04_1035	CV-099-DS_2021-07-11_1135	CV-099-US_2021-07-11_1145	CV-099-DS_2021-07-28_1310	CV-099-US_2021-07-28_1315
	ALS Laboratory Sample ID				L2610075-17	L2614284-15	L2614284-16	L2621359-16	L2621359-17
	Sample Date & Time				2021-07-04 10:35	2021-07-11 11:35	2021-07-11 11:45	2021-07-28 13:10	2021-07-28 13:15
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria					
pH	pH units	0.1	6.0 - 9.5	-	8.28	8.22	8.17	8.38	8.38
Total Suspended Solids	mg/L	2.0/4.0	30	See note ¹	<1.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	113	94	85	160	157
Turbidity	NTU	0.1	-	-	<0.10	0.22	0.18	<0.10	<0.10

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.9: Surface Water Quality Results CV-093

Analyte	Sample ID				CV-093-DS_2021-06-09_1325	CV-093-US_2021-06-09_1340	CV-093-DS_2021-06-21_1130	CV-093-US_2021-06-21_1140	CV-093-DS_2021-06-28_0920	CV-093-US_2021-06-28_0930	CV-093-DS_2021-07-28_1350	CV-093-US_2021-07-28_1355
	ALS Laboratory Sample ID				L2602352-14	L2602352-15	L2605811-27	L2605811-28	L2608262-27	L2608262-28	L2621359-18	L2621359-19
	Sample Date & Time				2021-06-09 13:25	2021-06-09 13:40	2021-06-21 11:30	2021-06-21 11:30	2021-06-28 9:20	2021-06-28 9:30	2021-07-28 13:50	2021-07-28 13:55
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	8.21	8.14	8.17	8.13	8.17	8.14	8.25	8.07
Total Suspended Solids	mg/L	2	30	See note ¹	133	48.9	2.9	8.9	5.4	<2.0	3.2	<2.0
Total Dissolved Solids	mg/L	10	-	-	86	97	102	93	122	125	168	181
Turbidity	NTU	0.1	-	-	28.5	1.61	3.39	10.0	0.74	0.24	0.44	0.10

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.10: Surface Water Quality Results CV-078

Analyte	Sample ID				CV-078-DS_2021-06-09_1250	CV-078-US_2021-06-09_1255	CV-078-DS_2021-06-21_1050	CV-078-DS01_2021-06-21_1050	CV-078-US_2021-06-21_1100	CV-078-US01_2021-06-21_1100	CV-078-DS_2021-06-27_1610
	ALS Laboratory Sample ID				L2602352-12	L2602352-13	L2605811-23	L2605811-24	L2605811-25	L2605811-26	L2608262-24
	Sample Date & Time				2021-06-09 12:50	2021-06-09 12:55	2021-06-21 10:50	2021-06-21 10:50	2021-06-21 11:00	2021-06-21 11:00	2021-06-27 16:10
	QA/QC Sample Type				N/A	N/A	N/A	Field Duplicate	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.98	7.84	8.06	8.07	8.07	8.07	8.56
Total Suspended Solids	mg/L	2	30	See note ¹	32.8	12.0	<2.0	1.4	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	56	44	67	70	66	71	81
Turbidity	NTU	0.1	-	-	3.91	1.71	0.92	0.90	0.68	0.59	0.19

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.10: Surface Water Quality Results CV-078

Analyte	Sample ID				CV-078-US_2021-06-27_1615	CV-078-US01_2021-06-27_1615	CV-078-DS_2021-07-04_1130	CV-078-DS01_2021-07-04_1130	CV-078-US_2021-07-04_1140	CV-078-DS_2021-07-11_1240	CV-078-US_2021-07-11_1250
	ALS Laboratory Sample ID				L2608262-25	L2608262-26	L2610075-18	L2610075-19	L2610075-20	L2614284-17	L2614284-18
	Sample Date & Time				2021-06-27 16:15	2021-06-27 16:15	2021-07-04 11:30	2021-07-04 11:30	2021-07-04 11:40	2021-07-11 12:40	2021-07-11 12:50
	QA/QC Sample Type				N/A	Field Duplicate	N/A	Field Duplicate	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	8.09	8.12	8.27	8.29	8.29	8.20	8.27
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<1.0	<1.0	<1.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	88	88	107	106	101	108	110
Turbidity	NTU	0.1	-	-	0.20	0.19	0.21	0.18	0.11	0.63	<0.10

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.11: Surface Water Quality Results CV-072

Analyte	Sample ID				CV-072-DS_2021-06-14_1350	CV-072-DS_2021-06-14_1400	CV-072-C-DS_2021-06-21_1015	CV-072-C-US_2021-06-21_1020	CV-072-C-DS_2021-06-27_1545	CV-072-C-US_2021-06-27_1555
	ALS Laboratory Sample ID				L2603802-12	L2603802-13	L2605811-21	L2605811-22	L2608262-22	L2608262-23
	Sample Date & Time				2021-06-14 13:50	2021-06-14 14:00	2021-06-21 10:15	2021-06-21 10:20	2021-06-27 15:45	2021-06-27 15:50
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria						
pH	pH units	0.1	6.0 - 9.5	-	8.07	8.02	8.01	7.99	8.01	7.97
Total Suspended Solids	mg/L	2	30	See note ¹	13.3	13.0	<2.0	<2.0	2.1	<2.0
Total Dissolved Solids	mg/L	10	-	-	41	44	53	52	64	64
Turbidity	NTU	0.1	-	-	2.81	2.18	0.34	0.30	0.43	0.41

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.11: Surface Water Quality Results CV-072

Analyte	Sample ID				CV-072-C-DS_2021-07-04_1215	CV-072-C-US_2021-07-04_1225	CV-072-C-DS_2021-07-11_1325	CV-072-C-DS01_2021-07-11_1325	CV-072-C-US_2021-07-11_1335	CV-072-C-DS_2021-07-28_1430
	ALS Laboratory Sample ID				L2610075-21	L2610075-22	L2614284-19	L2614284-20	L2614284-21	L2621359-22
	Sample Date & Time				2021-07-04 12:15	2021-07-04 12:25	2021-07-11 13:25	2021-07-11 13:25	2021-07-11 13:35	2021-07-28 14:30
	QA/QC Sample Type				N/A	N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria						
pH	pH units	0.1	6.0 - 9.5	-	8.16	8.17	8.10	8.10	8.05	8.24
Total Suspended Solids	mg/L	2	30	See note ¹	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	88	81	75	75	71	114
Turbidity	NTU	0.1	-	-	0.25	<0.10	0.30	0.26	0.15	0.18

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.11: Surface Water Quality Results CV-072

Analyte	Sample ID				CV-072-C-US_2021-07-28_1440	CV-072-C-US02_2021-07-28_1145	CV-072-C-DS_2021-08-17_0900	CV-072-C-US_2021-08-17_0910
	ALS Laboratory Sample ID				L2621359-23	L2621359-44	L2628935-14	L2628935-15
	Sample Date & Time				2021-07-28 14:40	2021-07-28 14:40	2021-08-17 9:00	2021-08-17 9:10
	QA/QC Sample Type				N/A	Field Blank	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.23	8.23	8.33	8.33
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	104	100	125	155
Turbidity	NTU	0.1	-	-	0.11	0.13	<0.10	0.16

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.12: Surface Water Quality Results CV-060

Analyte	Sample ID				CV-060-DS_2021-06-09-1140	CV-060-US_2021-06-09_1150	CV-060-DS_2021-06-14_1305	CV-060-US_2021-06-14_1310	CV-060-DS_2021-06-21_0945	CV-060-US_2021-06-21_0950	CV-060-DS_2021-06-27_1520
	ALS Laboratory Sample ID				L2602352-10	L2602352-11	L2603802-10	L2603802-11	L2605811-19	L2605811-20	L2608262-20
	Sample Date & Time				2021-06-09 11:40	2021-06-09 11:50	2021-06-14 13:05	2021-06-14 13:10	2021-06-21 9:45	2021-06-21 9:50	2021-06-27 15:20
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.79	7.73	8.05	8.03	8.02	8.09	8.25
Total Suspended Solids	mg/L	2	30	See note ¹	19.1	2.7	1.4	<1.0	1.5	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	70	29	73	67	89	89	130
Turbidity	NTU	0.1	-	-	3.93	1.96	1.59	0.56	0.17	<0.10	0.17

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.12: Surface Water Quality Results CV-060

Analyte	Sample ID				CV-060-US_2021-06-27_1530	CV-060-DS_2021-07-04_1250	CV-060-US_2021-07-04_1300	CV-060-DS_2021-07-11_1400	CV-060-US_2021-07-11_1410	CV-060-DS_2021-07-28_1455	CV-060-US_2021-07-28_1500
	ALS Laboratory Sample ID				L2608262-21	L2610075-23	L2610075-24	L2614284-22	L2614284-23	L2621359-24	L2621359-25
	Sample Date & Time				2021-06-27 15:30	2021-07-04 12:50	2021-07-04 13:50	2021-07-11 14:00	2021-07-11 14:10	2021-07-28 14:55	2021-07-28 15:00
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	8.15	8.23	8.23	8.18	8.15	8.17	8.18
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	120	113	114	124	121	131	137
Turbidity	NTU	0.1	-	-	0.14	0.32	0.12	0.36	0.22	0.25	0.11

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.12: Surface Water Quality Results CV-060

Analyte	Sample ID				CV-060-DS_2021-08-17_0925	CV-060-US_2021-08-17_0935
	ALS Laboratory Sample ID				L2628935-16	L2628935-17
	Sample Date & Time				2021-08-17 9:25	2021-08-17 9:35
	QA/QC Sample Type				N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria		
pH	pH units	0.1	6.0 - 9.5	-	8.22	8.21
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	162	153
Turbidity	NTU	0.1	-	-	0.11	0.11

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.13: Surface Water Quality Results BG-50

Analyte	Sample ID				BG-50-DS_2021-06-20_1615	BG-50-US_2021-06-20_1625	BG-50-DS_2021-06-27_1445	BG-50-US_2021-06-27_1455	BG-50-US01_2021-06-27_1455	BG-50-DS_2021-07-04_1315	BG-50-US_2021-07-04_1325
	ALS Laboratory Sample ID				L2605811-17	L2605811-18	L2608262-17	L2608262-18	L2608262-19	L2610075-25	L2610075-26
	Sample Date & Time				2021-06-20 16:15	2021-06-20 16:25	2021-06-27 14:45	2021-06-27 14:55	2021-06-27 14:55	2021-07-04 13:15	2021-07-04 13:25
	QA/QC Sample Type				N/A	N/A	N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.95	7.94	8.00	7.96	7.94	8.11	8.10
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	1.1	<2.0	<2.0	<2.0	<1.0	<1.0
Total Dissolved Solids	mg/L	10	-	-	62	62	83	87	86	72	83
Turbidity	NTU	0.1	-	-	0.57	0.41	0.53	0.33	0.32	0.28	0.28

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.13: Surface Water Quality Results BG-50

Analyte	Sample ID				BG-50-DS_2021-07-11_1425	BG-50-US_2021-07-11_1435	BG-50-DS_2021-07-31_1100	BG-50-US_2021-07-31_1110
	ALS Laboratory Sample ID				L2614284-24	L2614284-25	L2621359-26	L2621359-27
	Sample Date & Time				2021-07-11 14:25	2021-07-11 14:35	2021-07-31 11:00	2021-07-31 11:10
	QA/QC Sample Type				N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria				
pH	pH units	0.1	6.0 - 9.5	-	8.01	8.11	8.22	8.17
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	80	71	80	74
Turbidity	NTU	0.1	-	-	0.53	0.21	0.18	0.16

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.14: Surface Water Quality Results CV-040

Analyte	Sample ID				CV-040-DS_2021-06-20_1525	CV-040-US_2021-06-20_1530	CV-040-DS_2021-06-27_1400	CV-040-US_2021-06-27_1410	CV-040-DS_2021-07-05_0825	CV-040-US_2021-07-05_0835	CV-040-DS_2021-07-13_1035	CV-040-US_2021-07-13_1045
	ALS Laboratory Sample ID				L2605811-15	L2605811-16	L2608262-15	L2608262-16	L2610075-27	L2610075-28	L2614284-26	L2614284-27
	Sample Date & Time				2021-06-20 15:25	2021-06-20 15:30	2021-06-27 14:00	2021-06-27 14:10	2021-07-05 8:25	2021-07-05 8:35	2021-07-13 10:35	2021-07-13 10:45
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	7.95	7.95	8.14	8.15	8.30	8.33	8.32	8.38
Total Suspended Solids	mg/L	2	30	See note ¹	3.5	2.2	<2.0	<2.0	<1.0	<1.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13	-	-	57	56	107	99	130	143	165	166
Turbidity	NTU	0.1	-	-	1.19	1.25	0.96	1.10	0.22	0.18	1.92	0.40

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.14: Surface Water Quality Results CV-040

Analyte	Sample ID				CV-040-DS_2021-07-31_1135	CV-040-US_2021-07-31_1145
	ALS Laboratory Sample ID				L2621359-28	L2621359-29
	Sample Date & Time				2021-07-31 11:35	2021-07-31 11:45
	QA/QC Sample Type				N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria		
pH	pH units	0.1	6.0 - 9.5	-	8.43	8.47
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13	-	-	189	191
Turbidity	NTU	0.1	-	-	0.58	0.58

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.15: Surface Water Quality Results BG-32

Analyte	Sample ID				BG-32-DS_2021-06-08_1600	BG-32-US_2021-06-08_1610	BG-32-DS_2021-06-14_0900	BG-32-US_2021-06-14_0910	BG-32-DS_2021-06-20_1435	BG-32-US_2021-06-20_1445	BG-32-DS_2021-06-27_1330
	ALS Laboratory Sample ID				L2602352-8	L2602352-9	L2603802-8	L2603802-9	L2605811-13	L2605811-14	L2608262-13
	Sample Date & Time				2021-06-08 14:00	2021-06-08 16:10	2021-06-14 9:00	2021-06-14 9:10	2021-06-20 14:35	2021-06-20 14:45	2021-06-27 13:30
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.52	7.58	7.82	7.88	7.97	8.02	8.08
Total Suspended Solids	mg/L	2	30	See note ¹	22.1	8.2	2.5	3.7	<2.0	2.3	<2.0
Total Dissolved Solids	mg/L	10	-	-	92	80	66	65	101	101	233
Turbidity	NTU	0.1	-	-	1.96	1.72	0.94	1.09	0.85	0.95	0.70

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.15: Surface Water Quality Results BG-32

Analyte	Sample ID				BG-32-US_2021-06-27_1335	BG-32-DS_2021-07-05_0920	BG-32-US_2021-07-05_0930	BG-32-DS_2021-07-13_1115	BG-32-US_2021-07-13_1125	BG-32-DS_2021-07-31_1220	BG-32-US_2021-07-31_1230
	ALS Laboratory Sample ID				L2608262-14	L2610075-29	L2610075-30	L2614284-28	L2614284-29	L2621359-30	L2621359-31
	Sample Date & Time				2021-06-27 13:35	2021-07-05 9:20	2021-07-05 9:30	2021-07-13 11:15	2021-07-13 11:25	2021-07-31 12:20	2021-07-31 12:30
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	8.07	8.09	8.15	8.02	8.10	8.14	8.16
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	237	186	181	156	176	212	236
Turbidity	NTU	0.1	-	-	0.78	0.59	0.56	0.71	0.93	0.75	0.86

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.15: Surface Water Quality Results BG-32

Analyte	Sample ID				BG-32-DS_2021-08-17_1145	BG-32-US_2021-08-17_1155
	ALS Laboratory Sample ID				L2628935-18	L2628935-19
	Sample Date & Time				2021-08-17 11:45	2021-08-17 11:55
	QA/QC Sample Type				N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria		
pH	pH units	0.1	6.0 - 9.5	-	8.25	8.26
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	183	183
Turbidity	NTU	0.1	-	-	0.59	0.62

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.16: Surface Water Quality Results CV-217

Analyte	Sample ID				CV-217-DS_2021-06-20_1400	CV-217-DS01_2021-06-20_1400	CV-217-US_2021-06-20_1410	CV-217-US01_2021-06-20_1410	CV-217-DS_2021-06-27_1300	CV-217-DS03_2021-06-27_1300	CV-217-US_2021-06-27_1310
	ALS Laboratory Sample ID				L2605811-9	L2605811-10	L2605811-11	L2605811-12	L2608262-10	L2608262-11	L2608262-12
	Sample Date & Time				2021-06-20 14:00	2021-06-20 14:00	2021-06-20 14:10	2021-06-20 14:10	2021-06-27 13:00	2021-06-27 13:00	2021-06-27 13:10
	QA/QC Sample Type				N/A	Field Duplicate	N/A	Field Duplicate	N/A	Travel Blank	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.52	7.53	7.43	7.44	7.56	5.71	7.55
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	37	37	27	27	74	26	77
Turbidity	NTU	0.1	-	-	1.14	1.00	0.84	0.82	0.73	0.11	0.76

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.16: Surface Water Quality Results CV-217

Analyte	Sample ID				CV-217-DS_2021-07-05_0945	CV-217-US_2021-07-05_0955	CV-217-DS_2021-07-13_1135	CV-217-DS01_2021-07-13_1135	CV-217-US_2021-07-13_1145	CV-217-DS_2021-07-31_1245	CV-217-US_2021-07-31_1255
	ALS Laboratory Sample ID				L2610075-31	L2610075-32	L2614284-30	L2614284-31	L2614284-32	L2621359-32	L2621359-33
	Sample Date & Time				2021-07-05 9:45	2021-07-05 9:55	2021-07-13 11:35	2021-07-13 11:35	2021-07-13 11:45	2021-07-31 12:45	2021-07-31 12:55
	QA/QC Sample Type				N/A	N/A	N/A	Field Duplicate	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.72	7.73	7.66	7.64	7.66	7.91	7.84
Total Suspended Solids	mg/L	2	30	See note ¹	4.1	7.1	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	51	52	54	53	51	41	40
Turbidity	NTU	0.1	-	-	1.92	1.59	1.31	1.60	0.95	0.75	0.73

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.17: Surface Water Quality Results BG-30

Analyte	Sample ID				BG-30-DS_2021-06-13_1405	BG-30-US_2021-06-13_1415	BG-30-US01_2021-06-13_1415	BG-30-DS_2021-06-20_1310	BG-30-US_2021-06-20_1315	BG-30-DS_2021-06-27_1225	BG-30-US_2021-06-27_1235
	ALS Laboratory Sample ID				L2603802-5	L2603802-6	L2603802-7	L2605811-7	L2605811-8	L2608262-8	L2608262-9
	Sample Date & Time				2021-06-13 14:05	2021-06-13 14:15	2021-06-13 14:15	2021-06-20 13:10	2021-06-20 13:15	2021-06-27 12:25	2021-06-27 12:35
	QA/QC Sample Type				N/A	N/A	Field Duplicate	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.74	7.73	7.60	7.86	7.79	8.09	8.07
Total Suspended Solids	mg/L	2	30	See note ¹	23.1	15.9	28.5	24.8	6.3	21.3	<2.0
Total Dissolved Solids	mg/L	10	-	-	48	48	50	69	69	185	188
Turbidity	NTU	0.1	-	-	14.8	11.7	14.4	11.6	2.42	4.52	1.25

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.17: Surface Water Quality Results BG-30

Analyte	Sample ID				BG-30-DS_2021-07-05_1015	BG-30-US_2021-07-05_1025	BG-30-DS_2021-07-13_1200	BG-30-US_2021-07-13_1210	BG-30-DS_2021-07-31_1310	BG-30-US_2021-07-31_1320	BG-32-DS03_2021-07-31_1220
	ALS Laboratory Sample ID				L2610075-33	L2610075-34	L2614284-33	L2614284-34	L2621359-34	L2621359-35	L2621359-42
	Sample Date & Time				2021-07-05 10:15	2021-07-05 10:25	2021-07-13 12:00	2021-07-13 12:10	2021-07-31 13:10	2021-07-31 13:20	2021-07-31 12:20
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	Travel Blank
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	8.15	8.12	8.08	8.01	8.21	8.08	6.12
Total Suspended Solids	mg/L	2	30	See note ¹	1.1	<1.0	<2.0	<2.0	<2.0	2.5	<2.0
Total Dissolved Solids	mg/L	10	-	-	140	142	132	132	140	150	<10
Turbidity	NTU	0.1	-	-	1.13	0.73	1.64	1.55	0.91	0.89	<0.10

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.17: Surface Water Quality Results BG-30

Analyte	Sample ID				BG-30-US01_2021-07-31_1320	BG-30-DS_2021-08-17_1250	BG-30-US_2021-08-17_1300
	ALS Laboratory Sample ID				L2621359-43	L2628935-20	L2628935-21
	Sample Date & Time				2021-07-31 13:20	2021-08-17 12:50	2021-08-17 13:00
	QA/QC Sample Type				Field Blank	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria			
pH	pH units	0.1	6.0 - 9.5	-	8.07	8.24	8.19
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	4.0
Total Dissolved Solids	mg/L	10	-	-	154	187	161
Turbidity	NTU	0.1	-	-	0.88	2.05	2.53

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.18: Surface Water Quality Results BG-24

Analyte	Sample ID				BG-24-DS_2021-06-08_1405	BG-24-US_2021-06-08_1420	BG-24-US01_2021-06-08_1420	BG-24-DS_2021-06-20_1230	BG-24-US_2021-06-20_1240	BG-24-DS_2021-06-27_1130	BG-24-US_2021-06-27_1140	BG-24-DS_2021-07-05_1050
	ALS Laboratory Sample ID				L2602352-5	L2602352-6	L2602352-7	L2605811-5	L2605811-6	L2608262-6	L2608262-7	L2610075-35
	Sample Date & Time				2021-06-08 14:05	2021-06-08 14:20	2021-06-08 14:20	2021-06-20 12:30	2021-06-20 12:40	2021-06-27 11:30	2021-06-27 11:40	2021-07-05 10:50
	QA/QC Sample Type				N/A	N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	7.64	7.57	7.56	7.90	7.89	7.98	7.97	8.14
Total Suspended Solids	mg/L	2	30	See note ¹	60.2	9.4	8.7	<2.0	<2.0	<2.0	<2.0	<1.0
Total Dissolved Solids	mg/L	10	-	-	77	43	50	65	64	87	81	96
Turbidity	NTU	0.1	-	-	11.4	21.4	1.93	0.89	0.55	0.53	0.47	0.59

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.18: Surface Water Quality Results BG-24

Analyte	Sample ID				BG-24-US_2021-07-05_1100	BG-24-DS_2021-07-13_1245	BG-24-US_2021-07-13_1255	BG-24-DS_2021-07-31_1330	BG-24-US_2021-07-31_1340
	ALS Laboratory Sample ID				L2610075-36	L2614284-35	L2614284-36	L2621359-36	L2621359-37
	Sample Date & Time				2021-07-05 11:00	2021-07-13 12:45	2021-07-13 12:55	2021-07-31 13:30	2021-07-31 13:40
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria					
pH	pH units	0.1	6.0 - 9.5	-	8.14	8.13	8.11	8.33	8.35
Total Suspended Solids	mg/L	2	30	See note ¹	<1.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	96	96	84	135	137
Turbidity	NTU	0.1	-	-	0.51	0.69	0.62	0.69	0.26

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹ When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.19: Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-DS_2021-05-26_1430	CV-001-US_2021-05-26_1440	CV-001-DS_2021-05-31_1135	CV-001-US_2021-05-31_1140	CV-001-DS_2021-06-08_1330	CV-001-US_2021-06-08_1335	CV-001-DS_2021-06-13_1130	CV-001-US_2021-06-13_1135
	ALS Laboratory Sample ID				L2594754-4	L2594754-5	L2597794-4	L2597794-5	L2602352-3	L2602352-4	L2603802-3	L2603802-4
	Sample Date & Time				2021-05-26 14:30	2021-05-26 14:40	2021-05-31 11:35	2021-05-31 11:40	2021-06-08 13:30	2021-06-08 13:35	2021-06-13 11:30	2021-06-13 11:35
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria								
pH	pH units	0.1	6.0 - 9.5	-	7.46	7.32	7.18	7.09	7.47	7.36	7.77	7.79
Total Suspended Solids	mg/L	2	30	See note ¹	169	29.1	4.5	2.7	11.8	5.1	1.9	<1.0
Total Dissolved Solids	mg/L	10	-	-	60	63	45	50	39	33	40	43
Turbidity	NTU	0.1	-	-	169	39.9	7.20	6.15	5.57	2.84	1.51	1.36

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.19: Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-DS_2021-06-20_1140	CV-001-US_2021-06-20_1145	CV-001-DS_2021-06-27_1055	CV-001-DS02_2021-06-27_1055	CV-001-US_2021-06-27_1105	CV-001-DS_2021-07-05_1125	CV-001-US_2021-07-05_1135
	ALS Laboratory Sample ID				L2605811-3	L2605811-4	L2608262-3	L2608262-4	L2608262-5	L2610075-37	L2610075-38
	Sample Date & Time				2021-06-20 11:40	2021-06-20 11:45	2021-06-27 10:55	2021-06-27 10:55	2021-06-27 11:05	2021-07-05 11:25	2021-07-05 11:35
	QA/QC Sample Type				N/A	N/A	N/A	Field Blank	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.65	7.72	7.61	5.75	7.71	7.66	7.77
Total Suspended Solids	mg/L	2	30	See note ¹	1.8	<2.0	<2.0	<2.0	<2.0	<1.0	1.3
Total Dissolved Solids	mg/L	10	-	-	56	58	92	25	90	77	69
Turbidity	NTU	0.1	-	-	1.76	1.76	1.84	<0.10	1.48	2.23	1.46

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.19: Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-DS_2021-07-13_1315	CV-001-US_2021-07-13_1325	CV-001-DS_2021-07-31_1355	CV-001-US_2021-07-31_1405	CV-001-DS_2021-08-17_1400	CV-001-DS01_2021-08-17_1400	CV-001-US_2021-08-17_1410
	ALS Laboratory Sample ID				L2614284-37	L2614284-38	L2621359-38	L2621359-39	L2628935-22	L2628935-23	L2628935-24
	Sample Date & Time				2021-07-05 13:15	2021-07-05 13:25	2021-07-31 13:55	2021-07-31 14:05	2021-08-17 14:00	2021-08-17 14:00	2021-08-17 14:10
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.75	7.80	7.74	7.86	7.87	7.89	7.97
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	74	70	87	79	90	87	82
Turbidity	NTU	0.1	-	-	2.20	1.42	1.96	1.58	1.59	1.57	1.44

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.20: Surface Water Quality Results CV-223

Analyte	Sample ID				CV-223-DS_2021-05-31_1105	CV-223-DS01_2021-05-31_1105	CV-223-US_2021-05-31_1115	CV-223-DS_2021-06-08_1240	CV-223-US_2021-06-08_1255	CV-223-DS_2021-06-13_1045	CV-223-US_2021-06-13_1050
	ALS Laboratory Sample ID				L2597794-1	L2597794-2	L2597794-3	L2602352-1	L2602352-2	L2603802-1	L2603802-2
	Sample Date & Time				2021-05-31 11:05	2021-05-31 11:05	2021-05-31 11:15	2021-06-08 12:40	2021-06-08 12:55	2021-06-13 10:45	2021-06-13 10:50
	QA/QC Sample Type				N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.58	7.55	7.55	7.46	7.22	7.45	7.45
Total Suspended Solids	mg/L	2	30	See note ¹	2.8	2.7	<2.0	49.4	8.3	13.5	5.4
Total Dissolved Solids	mg/L	10	-	-	55	54	55	81	60	26	18
Turbidity	NTU	0.1	-	-	12.0	12.4	9.57	80.3	3.38	3.07	1.36

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.20: Surface Water Quality Results CV-223

Analyte	Sample ID				CV-223-DS_2021-06-20_1110	CV-223-US_2021-06-20_1115	CV-223-DS_2021-06-27_1030	CV-223-US_2021-06-27_1035	CV-223-DS_2021-07-05_1220	CV-223-US_2021-07-05_1230	CV-223-DS_2021-07-13_1340
	ALS Laboratory Sample ID				L2605811-1	L2605811-2	L2608262-1	L2608262-2	L2610075-39	L2610075-40	L2614284-39
	Sample Date & Time				2021-06-20 11:10	2021-06-20 11:15	2021-06-27 10:30	2021-06-27 10:35	2021-07-05 12:20	2021-07-05 12:30	2021-07-13 13:40
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	6.0 - 9.5	-	7.38	7.37	7.30	7.34	7.94	7.92	7.80
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	4.9	5.0	<2.0	<1.0	1.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	18	20	39	38	30	44	27
Turbidity	NTU	0.1	-	-	0.83	1.24	1.10	1.01	0.52	0.59	0.84

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 7.10.20: Surface Water Quality Results CV-223

Analyte	Sample ID				CV-223-US_2021-07-13_1350	CV-223-DS_2021-07-31_1415	CV-223-US_2021-07-31_1425	CV-223-DS_2021-08-17_1420	CV-223-US_2021-08-17_1430
	ALS Laboratory Sample ID				L2614284-40	L2621359-40	L2621359-41	L2628935-25	L2628935-26
	Sample Date & Time				2021-07-13 13:50	2021-07-31 14:15	2021-07-31 14:25	2021-08-17 14:20	2021-08-17 14:30
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria					
pH	pH units	0.1	6.0 - 9.5	-	7.77	8.14	8.10	8.25	8.26
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	28	67	45	84	74
Turbidity	NTU	0.1	-	-	0.85	0.39	0.38	0.49	0.36

Notes:

Bold highlight indicate results that were greater than the applicable water quality screening criteria.

¹When upstream TSS concentrations are less than 250 mg/L, a potential Project related change is defined as a greater than 50 mg/L increase in the downstream concentration. Where concentrations are greater than 250 mg/L in the upstream sample, a potential Project related change is defined as a greater than 20% increase in the downstream sample.

Reference: Roads Management Plan (BAF-PH1-830-P16-0023).

Table 8.1: Reclamation Works Related to Project Operations on Inuit-Owned and Crown Lands - 2021

Property Section	Land Type / Parcel ID	Reclamation Objective	Reclamation Principle	Description of Reclamation Works	Regulatory Authority	Impact on Financial Security
Project-Wide	Inuit-Owned Lands - Surface and Subsurface (PI-16, PI-17, P1-19) Crown Lands (Tote Road - KM 59 to 63)	- Remaining area will be safe for humans and the receiving environment - Aesthetic conditions of the project areas are similar to surrounding natural conditions	Progressive Reclamation	Demobilization and backhaul of equipment and supplies not required for near term activities, including the current inventory of hazardous waste and other materials by means of sealifts from Milne Port.	QIA CIRNAC	No change in financial security held by the QIA or the Crown (CIRNAC). Annual demobilization and backhaul of wastes, materials and equipment not required by the Project for near term activities is taken into account during the Annual Security Review process.
Tote Road	Inuit-Owned Lands - Surface (PI-16)	- Drainage pathways for surface runoff are physically stable to limit risk to humans and receiving environment - Mine areas are physically stable for use by humans and receiving environment - Area facilitates the desired wildlife movement - Natural revegetation is promoted - Aesthetic conditions of the project areas are similar to surrounding natural conditions	Progressive Reclamation	Continued implementation of the reclamation plan for the historical Km 97 borrow areas detailed in the Project's Borrow Source Management Plan – KM 97 (BAF-PH1-830-P16-0032).	QIA	No impact on financial security held by the QIA. Reclamation works at the historical Km 97 borrow areas is ongoing.
Tote Road	Inuit-Owned Lands - Surface (PI-16, PI-17, PI-19)	- Drainage pathways for surface runoff are physically stable to limit risk to humans and receiving environment - Mine areas are physically stable for use by humans and receiving environment - Area facilitates the desired wildlife movement - Natural revegetation is promoted - Aesthetic conditions of the project areas are similar to surrounding natural conditions	Progressive Reclamation	Implementation of the action plan to address historical borrow sources within the Tote Road corridor. Work in 2021 included bulk fill and grading of borrow sources along the Tote Road.	QIA	No current impact on financial security held by the QIA. Reclamation works at the historical Tote Road borrow areas initiated in 2019 and will be ongoing through 2022.
Milne Port	Inuit-Owned Lands - Surface (PI-19)	- Chemically stable disturbed areas to limit risk impact to humans and receiving environment- Surface runoff and seepage water quality is safe for humans and receiving environment	Progressive Reclamation	On-going management of hydrocarbon impacted soils at the Milne Port Landfarm Facility generated from historical decommissioning efforts and ongoing operations.	QIA	No impact on financial security held by the QIA. Continued remediation and treatment of soils held within the Landfarm Facility anticipated during 2022.

Table 8.2: Mary River Project Total Closure and Reclamation Security Summary - 2021 ^b

Authorization	Liability	Securities Held on 1 Jan 2021 (Actual) (\$)	Adjustment for 2021 (Actual) ^c (\$)	Securities Held on 31 Dec 2021 (Actual) (\$)
Type 'A' Water Licence 2AM-MRY1325	IOL ^b	113,371,000	7,628,500	120,999,500
	Crown	1,591,000	1,197,000	2,788,000
Subtotal Type 'A' Water Licence		114,962,000	8,825,500	123,787,500
Type 'B' Water Licence 2BE-MRY1421	IOL ^b			
	Crown	1,250,000	-	1,250,000
Subtotal Type 'B' Water Licence		1,250,000	-	1,250,000
GRAND TOTAL		116,212,000	8,825,500	125,037,500

Notes:

^a Totals rounded to nearest '000 in CAD.

^b All security relating to Inuit-Owned Land (IOL) held by Qikiqtani Inuit Association (QIA) under Commercial Lease No. Q13C301.

^c Total adjustments for 2021 include the 2021 Annual Security Review.

Table 9.1: Management and Monitoring Plan Updates - 2021

Reference No.	Management Plan	Current Revision	Updated since 2020 QIA and NWB Annual Report for Operations?
BAF-PH1-300-P16-0002	Snow Management Plan	31-Mar-2022	Yes
BAF-PH1-310-P16-0001	Milne Inlet Marine Facility Security Plan	18-Jul-2017	No
BAF-PH1-340-P16-0004	Waste Rock Facility QAQC Monitoring Plan	31-Dec-2019	No
BAF-PH1-830-P16-0001	Sampling Program - QAQC Plan	31-Mar-2022	Yes
BAF-PH1-830-P16-0002	Air Quality and Noise Abatement Management Plan	30-Apr-2021	Yes
BAF-PH1-830-P16-0004	Borrow Pit and Quarry Management Plan	20-Mar-2014	No
BAF-PH1-830-P16-0006	Cultural Heritage Resource Protection Plan	07-Mar-2016	No
BAF-PH1-830-P16-0008	Environmental Protection Plan	30-Apr-2021	Yes
BAF-PH1-830-P16-0010	Fresh Water Supply, Sewage, and Wastewater Management Plan	31-Mar-2022	Yes
BAF-PH1-830-P16-0011	Hazardous Materials and Hazardous Waste Management Plan	31-Mar-2022	Yes
BAF-PH1-830-P16-0012	Interim Closure and Reclamation Plan	19-Oct-2018	No
BAF-PH1-830-P16-0013	Oil Pollution Emergency Plan - Milne Inlet (OPEP)	11-May-2021	Yes
BAF-PH1-830-P16-0023	Roads Management Plan	31-Mar-2019	No
BAF-PH1-830-P16-0024	Shipping and Marine Wildlife Management Plan	15-Jul-2020	No
BAF-PH1-830-P16-0026	Surface Water and Aquatic Ecosystem Management Plan	31-Mar-2021	Yes
BAF-PH1-830-P16-0027	Terrestrial Environment Mitigation and Monitoring Plan	14-Mar-2016	No
BAF-PH1-830-P16-0028	Waste Management Plan	31-Mar-2020	No
BAF-PH1-830-P16-0029	Phase 1 Waste Rock Management Plan	16-Jun-2020	No
BAF-PH1-830-P16-0031	Life-of-Mine Waste Rock Management Plan	30-Apr-2014	No
BAF-PH1-830-P16-0036	Spill Contingency Plan	31-Jan-2021	No
BAF-PH1-830-P16-0037	Exploration Spill Contingency Plan	17-Jun-2014	No
BAF-PH1-830-P16-0038	Exploration Closure and Reclamation Plan	02-Jul-2014	No
BAF-PH1-830-P16-0039	Aquatic Effects Monitoring Plan	31-Mar-2022	Yes
BAF-PH1-830-P16-0042	Spill at Sea Response Plan (SSRP)	15-Aug-2015	No
BAF-PH1-830-P16-0046	Marine Environmental Effects Monitoring Plan	17-Mar-2016	No
BAF-PH1-830-P16-0047	MDMER Emergency Response Plan	16-Dec-2020	No
BAF-PH1-830-P16-0048	Milne Inlet Tote Road Quarry Borrow Source Plan	07-Mar-2019	No
BAF-PH1-830-P16-0050	Ballast Water Management Plan	31-Mar-2019	No
BAF-PH1-830-P16-0056	Diesel E2 Plan - Milne Port	22-Feb-2020	No
BAF-PH1-830-P16-0057	Diesel E2 Plan - Mary River	22-Feb-2020	No
BAF-PH1-830-P16-0058	Oil Pollution Prevention Plan	11-May-2021	Yes
BAF-PH1-840-P16-0001	Crisis Management Plan	09-Feb-2016	No
BAF-PH1-840-P16-0002	Emergency Response Plan	08-Dec-2020	No
Site Specific Quarry Management Plans			
BAF-PH1-830-P16-0030	Borrow Source Management Plan - KM 2	25-Oct-2014	No
BAF-PH1-830-P16-0032	Borrow Source Management Plan - KM 97	25-Oct-2014	No
BAF-PH1-830-P16-0035	KM104 Borrow Source Management Plan	20-Mar-2014	No
BAF-PH1-830-P16-0017	Q1 Quarry Management Plan	28-Jul-2017	No
BAF-PH1-830-P16-0053	Q5 Quarry Management Plan	15-Dec-2020	No
BAF-PH1-830-P16-0040	QMR2 Quarry Management Plan	30-July-2021	Yes

Table 9.2: Sample Results from 2021 Waste Rock Facility QA/QC Sample Program - 2021

SAMPLE ID	Sulfur (%) by X-Ray Diffraction ¹	Carbon (%) by LECO ²	Sulfur (%) by LECO ²	Paste pH	Sampling Location (UTM NAD83 Zone 17W)		Waste Deposition Area
					Easting	Northing	
WRD21-2234	0.11	NA	NA	8.40	563135	7915673	NAG
WRD21-2342	0.02	NA	NA	8.90	563132	7915819	NAG
WRD21-2396	0.01	NA	NA	9.10	563044	7915589	NAG
WRD21-2324	0.004	NA	NA	8.50	563239	7916521	NAG
WRD21-2288	0.16	NA	NA	9.40	562998	7915706	NAG
WRD21-2378	0.04	NA	NA	8.40	563326	7916004	NAG
WRD21-2270	0.01	NA	NA	8.30	563352	7915735	NAG
WRD21-2252	0.003	NA	NA	9.20	562962	7915775	NAG
WRD21-2306	<0.003	NA	NA	9.10	563295	7915703	NAG
WRD21-2360	0.003	NA	NA	8.90	563281	7916412	NAG
WRD21-11	0.004	NA	NA	8.60	563188	7916571	NAG
WRD21-12	0.07	NA	NA	9.10	563115	7916654	NAG

Notes:

¹ Measured by XRF (X-Ray Diffraction) in % and by Direct Combustion and Infrared Absorption with LECO instrument.

² Measured in % by Direct Combustion and Infrared Absorption with LECO instrument. "NA" Due to Instrument down during time of sample analysis.

Table 12.1: Public Meetings and Events - 2021

Engagement Date	Group	Location	Description
01-Jan-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
05-Jan-21	Public Radio Show - Clyde Radio	Radio Show	BIM Public Phone-in Radio Show with Public Q&A Session- Update on Phase 2 Review Process and Project Benefits to Hamlet of Clyde River
05-Jan-21	Hamlet of Clyde River and Nangmoutaq Hunters and Trappers Association (Clyde River)	Clyde River	Joint Meeting with Hamlet Council and HTO - Update on Phase 2 Review Process and Project Benefits to Hamlet of Clyde River
05-Jan-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
06-Jan-21	Public Radio Show - Igloolik	Radio Show	2021-01-06 - Igloolik - Radio Station - Phase 2 Review Process and Community Direct Benefits - Phone In Show
07-Jan-21	Igloolik Working Group	Igloolik	Meeting with the Igloolik Mary River Working Group - Update on Phase 2 Review Process and Project Benefits to Hamlet of Igloolik
08-Jan-21	Qikiqtani Inuit Association	Teleconference	Inuit Certainty Agreement (ICA) Work Plan Management
08-Jan-21	Qikiqtani Inuit Association	Teleconference	ICA Project Scope Change Procedure Review
08-Jan-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Meeting
11-Jan-21	Qikiqtani Inuit Association	Reply to Letter	Employment Committee
13-Jan-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
15-Jan-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
21-Jan-21	Nunavut Water Board, Qikiqtani Inuit Association, Crown Indigenous Relations and Northern Affairs Canada	Teleconference	2021 Annual Security Review Teleconference
22-Jan-21	Qikiqtani Inuit Association	Teleconference	Reclamation Securities
22-Jan-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
22-Jan-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
27-Jan-21	Nunavut Public Health	Teleconference	Ongoing consultation regarding COVID-19 with the Public Health Authorities and Nunavut Government.
27-Jan-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
29-Jan-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
31-Jan-21	Nunavut Public Health	Teleconference	Ongoing consultation regarding COVID-19 with the Public Health Authorities and Nunavut Government.
02-Feb-21	Qikiqtani Inuit Association	Teleconference	Contracting Committee Meeting
03-Feb-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
05-Feb-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
08-Feb-21	Qikiqtani Inuit Association	Teleconference	Reclamation Securities Work Plan Development
10-Feb-21	Qikiqtani Inuit Association	Teleconference	CRLU Working Group
12-Feb-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
12-Feb-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
13-Feb-21	Nunavut Public Health	Teleconference	Ongoing consultation regarding COVID-19 with the Public Health Authorities and Nunavut Government.
16-Feb-21	Nunavut Public Health	Teleconference	Ongoing consultation regarding COVID-19 with the Public Health Authorities and Nunavut Government.
17-Feb-21	Government of Nunavut - Deputy Minister and Minister of Economic Development & Transport	Minister's office - Iqaluit	Phase 2 Project Proposal, Phase 2 Review Process
17-Feb-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
18-Feb-21	Mittimatalik Hunters and Trappers Organization	Teleconference	Milne Inlet Freshwater Fish Monitoring Program
18-Feb-21	Qikiqtani Inuit Association, ESDC, Kakivak, GN Family Services	Teleconference	Project Advisory Committee Meeting - Q-STEP
19-Feb-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
19-Feb-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
22-Feb-21	Qikiqtani Inuit Association	Iqaluit	Phase 2 Project Proposal, Phase 2 Review Process
23-Feb-21	Qikiqtani Inuit Association	Teleconference	Joint Executive Committee Meeting
24-Feb-21	Qikiqtani Inuit Association	Teleconference	CRLU Working Group
25-Feb-21	Qikiqtani Inuit Association	Teleconference	ICRP Adaptive Management integration
26-Feb-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
26-Feb-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
01-Mar-21	Fisheries and Oceans Canada	Teleconference	Ore Dock Fisheries Act Authorization
04-Mar-21	Hamlet of Pond Inlet	Pond Inlet	Phase 2 Project Proposal, Phase 2 Review Process

Table 12.1: Public Meetings and Events - 2021

Engagement Date	Group	Location	Description
05-Mar-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
05-Mar-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
08-Mar-21	Office of the Premier of Nunavut	Iqaluit	Phase 2 Project Proposal, Phase 2 Review Process
09-Mar-21	Qikiqtani Inuit Association	Iqaluit	Phase 2 Project Proposal, Phase 2 Review Process
09-Mar-21	Hamlet of Pond Inlet	Teleconference	Phase 2 Project Proposal, Phase 2 Review Process
09-Mar-21	Qikiqtani Inuit Association	Teleconference	Employment Committee
10-Mar-21	Environment and Climate Change Canada	Teleconference	Phase 2 Project Proposal, Phase 2 Review Process
10-Mar-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
11-Mar-21	Fisheries and Oceans Canada	Teleconference	Freshwater (Railway) Fisheries Act Authorization
12-Mar-21	Qikiqtani Inuit Association	Teleconference	Contracting Committee Meeting
12-Mar-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
12-Mar-21	Mayor - Hamlet of Pond Inlet	Teleconference	Phase 2 Project Proposal, Phase 2 Review Process
12-Mar-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
15-Mar-21	North Baffin MLAs	Iqaluit	Phase 2 Project Proposal, Phase 2 Review Process
18-Mar-21	Qikiqtani Inuit Association	Teleconference	Type B Water License Renewal review
19-Mar-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
19-Mar-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
22-Mar-21	Hamlet Council of Sanirajak	Sanirajak	Phase 2 Project Proposal, Phase 2 Review Process
22-Mar-21	Hamlet of Sanirajak	Sanirajak	Public Town Hall
22-Mar-21	Sanirajak Baffinland Employees	Sanirajak	Sanirajak Employee Town Hall
24-Mar-21	Qikiqtani Inuit Association	Teleconference	CRLU Working Group
25-Mar-21	Hamlet Council of Igloolik	Igloolik	Phase 2 Project Proposal, Phase 2 Review Process
25-Mar-21	Hamlet of Igloolik	Igloolik	Public Town Hall
25-Mar-21	Igloolik Working Group	Igloolik	Phase 2 Project Proposal, Phase 2 Review Process
26-Mar-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
29-Mar-21	Hamlet Council of Clyde River	Clyde River	Phase 2 Project Proposal, Phase 2 Review Process
29-Mar-21	Hamlet of Clyde River	Clyde River	Public Town Hall
29-Mar-21	Clyde River Baffinland Employees	Clyde River	Clyde River Employee Town Hall
30-Mar-21	Hamlet of Pond Inlet	Pond Inlet	Phase 2 Project Proposal, Phase 2 Review Process
30-Mar-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
31-Mar-21	Hamlet Council of Arctic Bay	Arctic Bay	Phase 2 Project Proposal, Phase 2 Review Process
31-Mar-21	Ikajutit Hunters and Trappers Organization (Arctic Bay)	Arctic Bay	Phase 2 Project Proposal, Phase 2 Review Process
31-Mar-21	Arctic Bay Baffinland Employees	Arctic Bay	Arctic Bay Employee Town Hall
31-Mar-21	Fisheries and Oceans Canada	Teleconference	Phase 2 Project Proposal, Phase 2 Review Process
31-Mar-21	Qikiqtani Inuit Association	Teleconference	Joint Executive Committee Meeting
01-Apr-21	Nunavut Public Health	Teleconference	Ongoing consultation regarding COVID-19 with the Public Health Authorities and Nunavut Government.
01-Apr-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
02-Apr-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
04-Apr-21	Nunavut Public Health	Teleconference	Ongoing consultation regarding COVID-19 with the Public Health Authorities and Nunavut Government.
06-Apr-21	Hamlet Council and Iviq Hunters and Trappers Organization (Grise Fiord)	Grise Fiord	Phase 2 Project Proposal, Phase 2 Review Process
07-Apr-21	Hamlet Council of Pond Inlet	Pond Inlet	Phase 2 Project Proposal, Phase 2 Review Process
07-Apr-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
09-Apr-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
09-Apr-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
16-Apr-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
23-Apr-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
23-Apr-21	Qikiqtani Inuit Association	Teleconference	Contracting Committee Meeting

Table 12.1: Public Meetings and Events - 2021

Engagement Date	Group	Location	Description
23-Apr-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
27-Apr-21	Qikiqtani Inuit Association	Teleconference	ICA and IIBA Guide Review
28-Apr-21	Qikiqtani Inuit Association	Teleconference	Employment Committee
30-Apr-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
30-Apr-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
07-May-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
10-May-21	Government of Nunavut - Economic Development and Transportation	Teleconference	Socio-Economic Closure Planning
11-May-21	Qikiqtani Inuit Association	Phone call	ICA implementation
12-May-21	Public Radio Show - Igloodik	Radio Show	Ege Bay Project 2021 Exploration Update
13-May-21	Public Radio Show - Sanirajak	Radio Show	Ege Bay Project 2021 Exploration Update
13-May-21	Marine Environment Working Group (MEWG)	Teleconference	MEWG Meeting: 2020 Marine Mammal Preliminary Results Memo and Seal Aerial Survey Design
14-May-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
14-May-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
20-May-21	Hall Beach Hunters and Trapper Association (HBHTA)	Phone call	Discussion regarding VHF radio repeaters
25-May-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
26-May-21	World Wildlife Fund	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
26-May-21	Qikiqtani Inuit Association	Teleconference	Employment Committee
27-May-21	Northern Project Management Office (NPMO)	Phone call	ESPOO Convention
28-May-21	Hamlet of Pond Inlet and Mittimatalik Hunters and Trappers Organization	Teleconference	2020 Shipping Season Wrap Up and 2021 Pre Shipping Season Meeting
28-May-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
28-May-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting
28-May-21	Qikiqtani Inuit Association	Teleconference	ICA implementation
31-May-21	Hamlet Council of Sanirajak	Teleconference	Ege Bay 2021 Exploration Update
01-Jun-21	Mary River Socio-Economic Monitoring Working Group Meeting (MRSEMWG)	Teleconference	Annual MRSEMWG Meeting
02-Jun-21	Public Radio Show - Pond Inlet	Radio Show	2020 Shipping Season Wrap Up and 2021 Pre Shipping Season Meeting
04-Jun-21	Hamlet of Grise Fiord & HTO	Grise Fiord	Mary River Project Update
07-Jun-21	Public Radio Show - Clyde River	Radio Show	Mary River Project Update
08-Jun-21	Public Radio Show - Sanirajak	Radio Show	Mary River Project Update
09-Jun-21	Public Radio Show - Clyde River	Radio Show	Mary River Project Update
10-Jun-21	Qikiqtani Inuit Association	Teleconference	Contracting Committee Meeting
11-Jun-21	Community Radio Show - Clyde River	Radio Show	Mary River Project Update
11-Jun-21	Qikiqtani Inuit Association	Teleconference	Dust Audit Discussion- overview of draft audit plan, Update to QIA dust Investigation on site
14-Jun-21	Public Radio Show - Igloodik	Radio Show	Mary River Project Update
14-Jun-21	Public Radio Show - Pond Inlet	Radio Show	Employment and Training Information Session with Baffinland and QIA
17-Jun-21	Public Radio Show - Arctic Bay	Radio Show	Employment and Training Information Session with Baffinland and QIA
17-Jun-21	Qikiqtani Inuit Association	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
17-Jun-21	Natural Resources Canada	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
21-Jun-21	Government of Nunavut	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
22-Jun-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
22-Jun-21	Environment and Climate Change Canada - Canadian Centre for Climate Services	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
23-Jun-21	Legislative Assembly of Nunavut	Videoconference	Standing Committee on Legislation- Bill 55
23-Jun-21	Public Radio Show - Clyde River	Radio Show	Employment and Training Information Session with Baffinland and QIA
24-Jun-21	Legislative Assembly of Nunavut	Videoconference	Standing Committee on Legislation- Bill 55
25-Jun-21	Public Radio Show - Igloodik	Radio Show	Employment and Training Information Session with Baffinland and QIA

Table 12.1: Public Meetings and Events - 2021

Engagement Date	Group	Location	Description
28-Jun-21	Public Radio Show - Sanirajak	Radio Show	Employment and Training Information Session with Baffinland and QIA
28-Jun-21	Nunavut Tunngavik Incorporated	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
29-Jun-21	Qikiqtani Inuit Association	Teleconference	Phase 2 Baffinland Office Centre Commitments, IIBA Baffinland Inuit Training Centre Project
29-Jun-21	Marine Environment Working Group (MEWG)	Teleconference	MEWG Meeting: 2021 Marine Environment Monitoring Program Overview
30-Jun-21	Mayor of Pond Inlet (and Hamlet Technical Advisor)	Teleconference	<ul style="list-style-type: none"> • Drinking Water Memo • Mary River Dust Audit • 2021 Narwhal Mitigation and Monitoring
30-Jun-21	Terrestrial Environment Working Group (TEWG)	Teleconference	TEWG Meeting: 2021 Terrestrial Environment Monitoring Program Overview
02-Jul-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-Step Meeting via Zoom
04-Jul-21	Hamlet of Pond Inlet & Mittimatalik Hunters and Trappers Organization (MHTO)	Pond Inlet	Meeting with Hamlet & MHTO
04-Jul-21	Residents of Pond Inlet	Pond Inlet	Pond Inlet Town Hall
04-Jul-21	Pond Inlet Baffinland Employees	Pond Inlet	Pond Inlet Employee Town Hall
05-Jul-21	Environment and Climate Change Canada	Teleconference	MDMER Sampling Schedule
06-Jul-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
06-Jul-21	Acting Mayor of Igloolik	Teleconference	Mary River Dust Audit Update
06-Jul-21	Nunavut Public Health	Teleconference	General COVID-19 Updates
07-Jul-21	Mayor of Pond Inlet and Hamlet Council	Teleconference	Shipping Season Mitigations
08-Jul-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting via Zoom
12-Jul-21	Pond Inlet Baffinland Employees	Pond Inlet	Pond Inlet Employee Town Hall
13-Jul-21	Arctic Bay Baffinland Employees	Arctic Bay	Arctic Bay Employee Town Hall
14-Jul-21	Sanirajak Baffinland Employees	Sanirajak	Sanirajak Employee Town Hall
15-Jul-21	Igloolik Baffinland Employees	Igloolik	Igloolik Employee Town Hall
16-Jul-21	Clyde River Baffinland Employees	Clyde River	Clyde River Employee Town Hall
16-Jul-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting via Zoom
19-Jul-21	Public Radio Show - Sanirajak	Radio Show	Mary River Project Update
20-Jul-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
21-Jul-21	Mayor of Pond Inlet (and Hamlet Technical Advisor)	Teleconference	2021 Shipping Season Update
22-Jul-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-Step Meeting via Zoom
23-Jul-21	Hamlet of Sanirajak Chief Administrative Officer	Sanirajak Hamlet Office	Return to work plan, Phase 2, Community Engagement Planning
23-Jul-21	Hall Beach Hunters and Trapper Association (HBHTA; Sanirajak)	Sanirajak (HBHTA Office)	Discussion regarding VHF radio repeaters including updates on land use applications, Nunavut Planning Commission screening
23-Jul-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-Step Meeting via Zoom
24-Jul-21	Meeting with Sanirajak Hamlet Councillors	Sanirajak Baffinland Office	Updates on Repeater Tower Project, Phase 2, and COVID-19 at the Mary River Project
24-Jul-21	Public Question and Answer Session	Sanirajak (Co-op Store)	Baffinland staff Q&A session at the Sanirajak Co-op Store
26-Jul-21	Qikiqtani Inuit Association, Crown Indigenous Relations and Northern Affairs Canada, Nunavut Water Board	Teleconference	Water License Modification Request No. 13
26-Jul-21	Sanirajak Hamlet Council	Sanirajak (Hamlet Chambers)	Return to work plan, Repeater Tower Project, Community Sponsorships, Phase 2, Community Engagement Planning
28-Jul-21	Government of Nunavut - Economic Development & Transport	Teleconference	2020 NIRB Annual Report Comments
28-Jul-21	Hamlet of Pond Inlet Executive Council	Pond Inlet (Hamlet Chambers)	Update on 2021 Shipping Season, Phase 2, Community Engagement Planning
28-Jul-21	Qikiqtani Inuit Association	Teleconference	July Employment Committee Meeting
29-Jul-21	Mittimatalik Hunters and Trappers Organization	Pond Inlet	Tasiuqtiit Working Group, IIBA Harvesters Enabling Program, Future engagement opportunities
29-Jul-21	Mr. David Qamaniq, MLA for Tununig	Pond Inlet (MLA Office)	Engagement Planning, Human Resources Concerns, Inuit Hiring, Monitoring Programs
29-Jul-21	Mayor of Pond Inlet	Pond Inlet (Hamlet Office)	Discussion of existing Bylot Island repeater issues (channel 26) and new Bruce Head repeater station installation
30-Jul-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-Step Meeting via Zoom
03-Aug-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management

Table 12.1: Public Meetings and Events - 2021

Engagement Date	Group	Location	Description
04-Aug-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-Step Meeting via Zoom
05-Aug-21	Qikiqtani Inuit Association	Zoom Video Meeting	Kick Off Meeting- MiHR LMA and SEAT SOW
05-Aug-21	Qulliq Energy Corporation	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
06-Aug-21	Government of Nunavut - Regional Biologist	Teleconference	Monitoring Program Permit Review
10-Aug-21	Nunavut Public Health	Teleconference	General COVID-19 Updates
11-Aug-21	Mayor of Pond Inlet	Pond Inlet	Phase 2, Community Engagement Planning
11-Aug-21	Minister of Northern Affairs Canada	Pond Inlet	Phase 2, Existing Project, Inuit Employment, Education and Training
11-Aug-21	Transport Canada	Teleconference	Call to discuss site visit
11-Aug-21	Nunavut Public Health	Teleconference	General COVID-19 Updates
12-Aug-21	Qikiqtani Inuit Association	Zoom Video Meeting	EC Meeting - Annual Work Plan
13-Aug-21	Environment and Climate Change Canada	Teleconference	Disposal at Sea Sampling Plan (Permit Consultation)
13-Aug-21	Nunavut Public Health	Teleconference	General COVID-19 Updates
17-Aug-21	Nunavut Public Health	Teleconference	General COVID-19 Updates
19-Aug-21	Qikiqtani Inuit Association	Teleconference	August Employment Committee Meeting
20-Aug-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-Step Meeting via Zoom
22-Aug-21	Residents of Clyde River	Clyde River	Clyde River Recruitment Tour
23-Aug-21	Nunavut Public Health	Teleconference	General Update Meeting
24-Aug-21	Pond Inlet Executive Council	Pond Inlet (Hamlet Chambers)	Update on Phase 2, Phase 2 Commitment List
25-Aug-21	Residents of Sanirajak	Sanirajak	Sanirajak Recruitment Tour
26-Aug-21	Mittimatalik Hunters and Trappers Organization	Pond Inlet	Project Certificate Conditions related to underwater sounds monitoring (underwater recorders), Mary River Project Dust Audit Update, Future engagements related to Phase 2 leading up to November 1, 2021
27-Aug-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-Step Meeting via Zoom
30-Aug-21	Residents of Pond Inlet	Pond Inlet	Pond Inlet Recruitment Tour
03-Sep-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
09-Sep-21	Clyde River Mayor and Hamlet Council	Clyde River	Phase 2 Update
09-Sep-21	Public Radio Show - Clyde Radio	Clyde River	Update on Phase 2, ICA, and NIRB review process
09-Sep-21	Illsarivik Society	Clyde River	Inuit benefits discussion
09-Sep-21	Qikiqtani Inuit Association	Zoom Video Meeting	EC Meeting - Annual Work Plan
10-Sep-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
10-Sep-21	Ittaq Heritage and Health Centre	Clyde River	Community Donations Tour
10-Sep-21	Pond Inlet Residents	Pond Inlet	Shipping Season Mitigations
14-Sep-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
16-Sep-21	Qikiqtani Inuit Association	Teleconference	Contracting Committee Meeting
17-Sep-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
21-Sep-21	Mittimatalik Hunters and Trappers Organization	Pond Inlet	Phase 2 Updates, Tote Road Use, Future Engagement Planning
21-Sep-21	Qikiqtani Inuit Association	Ottawa	EC Workshop - Management and Advanced Skills Training Opportunities
21-Sep-21	Qikiqtani Inuit Association	Ottawa	EC Workshop - Skill Classification Training Opportunities
21-Sep-21	Qikiqtani Inuit Association	Ottawa	EC Workshop - Management and Advanced Skills Training Opportunities & Skill Classification Training Opportunities
22-Sep-21	Hamlet of Arctic Bay	Arctic Bay	Introductory meeting with new Hamlet Chief Administrative Officer
22-Sep-21	Hamlet of Arctic Bay and Ikajutit Hunters and Trappers Association (Arctic Bay)	Arctic Bay	Phase 2 Update
22-Sep-21	Hamlet of Arctic Bay	Arctic Bay	Community Donations Tour
23-Sep-21	Pond Inlet Search and Rescue Committee	Pond Inlet	Search and Rescue Coordination
23-Sep-21	Hamlet of Pond Inlet Executive Council	Pond Inlet	Phase 2 Updates and new Phase 2 Commitments
23-Sep-21	Public Radio Show - Pond Inlet	Radio Show	Acoustic Monitoring Program and Devices
23-Sep-21	Hamlet of Pond Inlet	Pond Inlet	Community Donations Tour
23-Sep-21	Qikiqtani Inuit Association Community Director	Pond Inlet	Phase 2 Updates and new Phase 2 Commitments
23-Sep-21	Qikiqtani Inuit Association	Ottawa	EC Workshop - Career Development Template Mock Trial
23-Sep-21	Qikiqtani Inuit Association	Ottawa	September Employment Committee Meeting

Table 12.1: Public Meetings and Events - 2021

Engagement Date	Group	Location	Description
23-Sep-21	Qikiqtani Inuit Association	Ottawa	EC Workshop - Career Development Template Mock Trial & September EC Meeting
24-Sep-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
28-Sep-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
29-Sep-21	Qikiqtani Inuit Association	Teleconference	ICA and Measurable Objectives
29-Sep-21	Qikiqtani Inuit Association	Teleconference	Follow-up on Measurable Objectives Submissions
01-Oct-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-Step Meeting via Zoom
01-Oct-21	Fisheries and Oceans Canada	Teleconference	Ore Dock Fisheries Act Authorization
02-Oct-21	Hall Beach Hunters and Trappers Association (Sanirajak)	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
04-Oct-21	Hamlet of Resolute Bay	Resolute Bay	Resolute Bay Hamlet and Recruitment
04-Oct-21	SmartIce	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
05-Oct-21	Hamlet of Resolute Bay	Resolute Bay	Phase 2 Update, Recruitment, Employment and Training Information
05-Oct-21	North Baffin Community Economic Development Officers	Teleconference	Call with Clyde River, Arctic Bay, and Pond Inlet to discuss updated closure plans for the Mary River Project
06-Oct-21	Hamlet of Grise Fiord	Grise Fiord	Phase 2 Update, Recruitment, Employment and Training Information
06-Oct-21	Arctic Bay Community Economic Development Officer	Teleconference	Follow-up call with Arctic Bay and Baffinland on closure plans for the Mary River Project
06-Oct-21	Hamlet of Grise Fiord	Grise Fiord	Grise Fiord Hamlet and Recruitment
06-Oct-21	Hamlet of Clyde River	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
08-Oct-21	Ikajutit Hunters and Trappers Organization (Arctic Bay)	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
08-Oct-21	Pond Inlet Residents	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
12-Oct-21	Qikiqtani Inuit Association	Teleconference	ICA Work Plan Management
12-Oct-21	City of Iqaluit Mayor and Council	Iqaluit	Phase 2 Update
13-Oct-21	Mary River Socio-Economic Monitoring Working Group Meeting (MRSEMWG)	Teleconference	Updated Closure Planning, 2021 Inuit Employee Survey, Follow-up to 2020 Monitoring Report
15-Oct-21	Qikiqtani Inuit Association	Zoom Video Meeting	Q-STEP Meeting via Zoom
19-Oct-21	Mayor and Deputy Mayor Hamlet of Sanirajak		Meeting to discuss Phase 2 Review Process
19-Oct-21	Mayor Hamlet of Igloodik		Meeting to discuss Phase 2 Review Process
21-Oct-21	Pond Inlet Hamlet Council		Meeting to discuss Phase 2 Review Process
21-Oct-21	Hamlet of Clyde River		Meeting to discuss Phase 2 Review Process
22-Oct-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
24-Oct-21	North Baffin Youth - Towards a Bright Future for Youth in North Baffin	Pond Inlet	Youth forum organized by Baffinland
25-Oct-21	Qikiqtani Inuit Association	Teleconference	October Employment Committee Meeting
26-Oct-21	City of Iqaluit Mayor and Council	Iqaluit Chambers	Meeting to discuss Phase 2 Review Process
28-Oct-21	Baffinland Inuit Employee Meeting with Mayor Hamlet of Pond Inlet	Pond Inlet	Baffinland employees discussed Phase 2 with the Mayor of Pond Inlet
28-Oct-21	Qikiqtani Inuit Association	Zoom Video Meeting	Meeting to discuss Phase 2 Review Process
29-Oct-21	Hamlet Council of Igloodik		Meeting to discuss Phase 2 Review Process
29-Oct-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
05-Nov-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
09-Nov-21	Qikiqtani Inuit Association	Teleconference	Contracting Committee Meeting
09-Nov-21	Crown Indigenous Relations and Indigenous Affairs	Teleconference	Phase 2 Water Licence Amendment
09-Nov-21	Pond Inlet resident	Teleconference	Third-party (Stratos) External Engagement - Baffinland's latest draft of the Climate Change Strategy
10-Nov-21	Qikiqtani Inuit Association	Teleconference	Joint Executive Committee Meeting
10-Nov-21	Environment and Climate Change Canada (ECCC)	Teleconference	Phase 2 Water Licence Amendment
10-Nov-21	Qikiqtani Inuit Association	Teleconference	November Employment Committee Meeting

Table 12.1: Public Meetings and Events - 2021

Engagement Date	Group	Location	Description
12-Nov-21	Nunavut Water Board, Crown Indigenous Relations and Indigenous Affairs, Fisheries and Oceans Canada, Environment and Climate Change Canada	Iqaluit	Technical Meeting on the Phase 2 Proposal Water Licence Amendment
12-Nov-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
19-Nov-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
24-Nov-21	Government of Nunavut - Economic Development and Transportation	Iqaluit	Meeting to discuss Phase 2 Review Process
25-Nov-21	Iglolik Hamlet Council	Zoom Video Meeting	Meeting to discuss Phase 2 Review Process
26-Nov-21	Iglolik Working Group	Zoom Video Meeting	Meeting to discuss Phase 2 Review Process
29-Nov-21	Public Radio Show - Pond Inlet	Radio Show	BIM Public Phone-in Radio Show with Public Q&A Session - General history of the Nunavut Agreement, the Mary River Project and proposed Phase 2
29-Nov-21	Pond Inlet Residents	Pond Inlet	Meeting to discuss Phase 2
29-Nov-21	Mayor of Pond Inlet	Pond Inlet	Meeting to discuss Phase 2 Review Process
30-Nov-21	Nasivik High School Visit	Pond Inlet	General History of the Nunavut Agreement, the Mary River Project and proposed Phase 2
02-Dec-21	Mayor Hamlet of Pond Inlet	Iqaluit	Meeting to discuss Phase 2 Review Process
02-Dec-21	Mayor Hamlet of Pond Inlet	Iqaluit	Meeting to discuss Phase 2 Review Process
03-Dec-21	Government of Nunavut - Economic Development and Transportation	Iqaluit	Meeting to discuss Phase 2 Review Process
03-Dec-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
08-Dec-21	Iglolik Working Group	Zoom Video Meeting	Meeting to discuss Phase 2 Review Process
10-Dec-21	Qikiqtani Inuit Association	Teleconference	December Employment Committee Meeting
10-Dec-21	Qikiqtani Inuit Association	Teleconference	Q-STEP Weekly Meeting - Community Based Training
13-Dec-21	Meeting with community resident	Pond Inlet	General Phase 2 meeting with future MHTO Chairperson
13-Dec-21	Public Radio Show - Pond Inlet	Radio Show	BIM Public Phone-in Radio Show with Public Q&A Session - General history of the Mary River Project and proposed Phase 2; gas vouchers and food vouchers, questions about Steensby, marine mammals and shipping, benefits
13-Dec-21	Meeting with Community residents/Mittimatalik Hunters and Trappers Organization	Pond Inlet	Community and direct benefits
14-Dec-21	Qikiqtani Inuit Association	Ottawa	Meeting to discuss Phase 2 Review Process
14-Dec-21	Qikiqtani Inuit Association	Teleconference	Phase 2 Water Licence Amendment

Table 12.2: Site Visits to the Mary River Project - 2021

Date	Agency
July 17 to 19, 2021	QIA - Regulatory Inspection
September 16 and 17, 2021	CIRNAC - Water Licence Inspection
September 28 to October 2, 2021	QIA Environmental Audit
October 17 to 20, 2021	QIA - Regulatory Inspection

Notes:

QIA - Qikiqtani Inuit Association.

NIRB - Nunavut Impact Review Board.

CIRNAC - Crown Indigenous Relations Northern Affairs Canada.

FIGURES

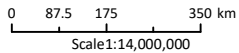


- LEGEND**
- ⊙ Project Facility Location
 - North Baffin Planning Region
 - - - Nunavut Settlement Area
 - Qikiqtani Region

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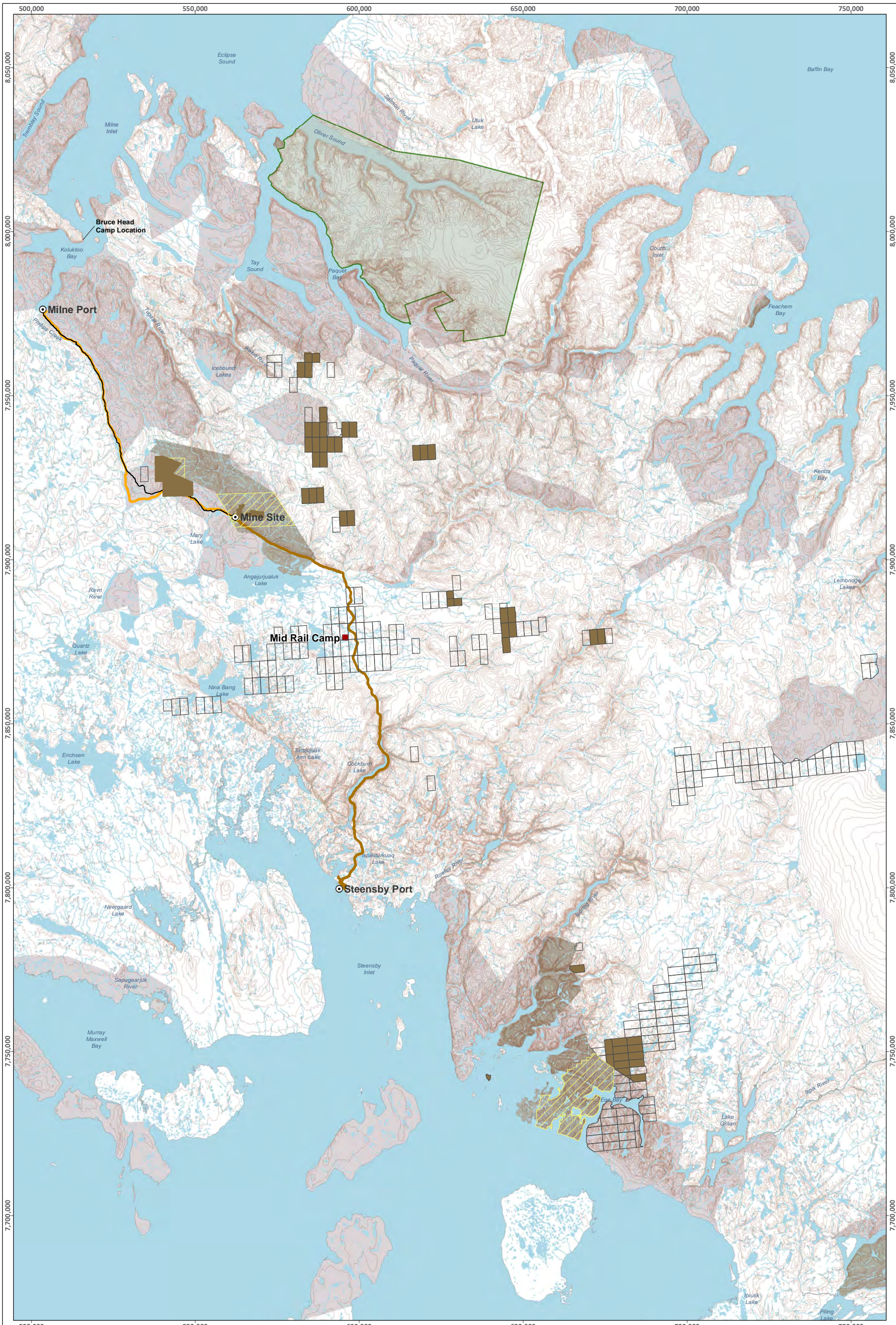
Baffinland Iron Mines Project Location

Projection: NAD 1983 STATISTICS CANADA LAMBERT.
Base Map: © Queen's Printer for Ontario, 2022.



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FIGURE

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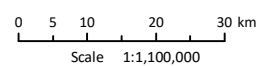
LEGEND

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|--------------------------------|----------------------------------|-----------------------------------|
| Project Facility Location | Proposed North Railway - Route 3 | Crown Land |
| Mid Rail Camp Location | Sirmilik National Park | Mineral Claims Held by Baffinland |
| Milne Inlet Tote Road | Mining Lease Boundary | NTI Exploration Area |
| Contour (20 m Interval) | IOL Surface Only | |
| Future South Railway Alignment | IOL Surface and Subsurface | |

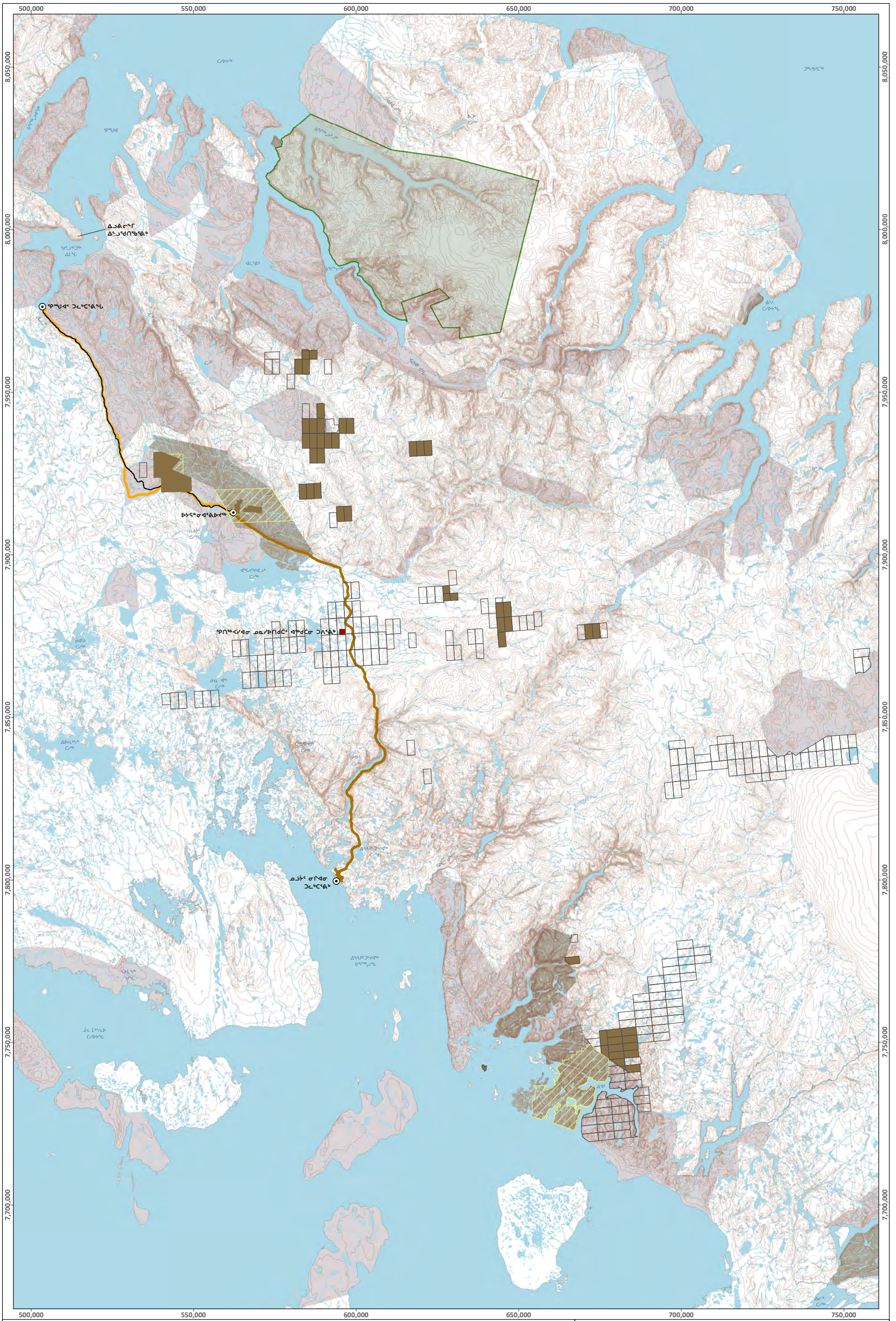
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Mary River Project Activities Overview

Projection: NAD 1983 UTM ZONE 17N.
Base Map: © Queen's Printer for Ontario, 2022



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FIGURE 2



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LEGEND

- Foreshore Lease Boundary
- Project Development Area
- Commercial Lease Boundary
- Borrow Area
- Quarry Area

- Infrastructure
- Domestic and Industrial Water Sources
- SNP Monitoring Location**
- Active
- Inactive

- Monitoring Location**
- Recycled Water Monitoring
- Snow Stockpile Monitoring
- Tote Road Monitoring

MARY RIVER PROJECT

Milne Port Site Layout

Projection: NAD 1983 UTM ZONE 17N.
Base Map: © 2022 Digital Globe, Inc.
Imagery and Infrastructure are representative as of July-September 2021.

0 25 50 100 150 200 Meters
Scale 1:8,000

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Baffinland

FIGURE 3

SAVED: C:\Users\kellam\Documents\1_Areva\1\BIML_Fig 3 MilnePort 2021_Monitoring.mxd, 30-Mar-22



SAV/ED: C:\Users\kellam\Documents\1_Avenue\Types A\2021\BIML_Fig 3_MilePost 2021_Monitoring_1NK.mxd: 30-Apr-22

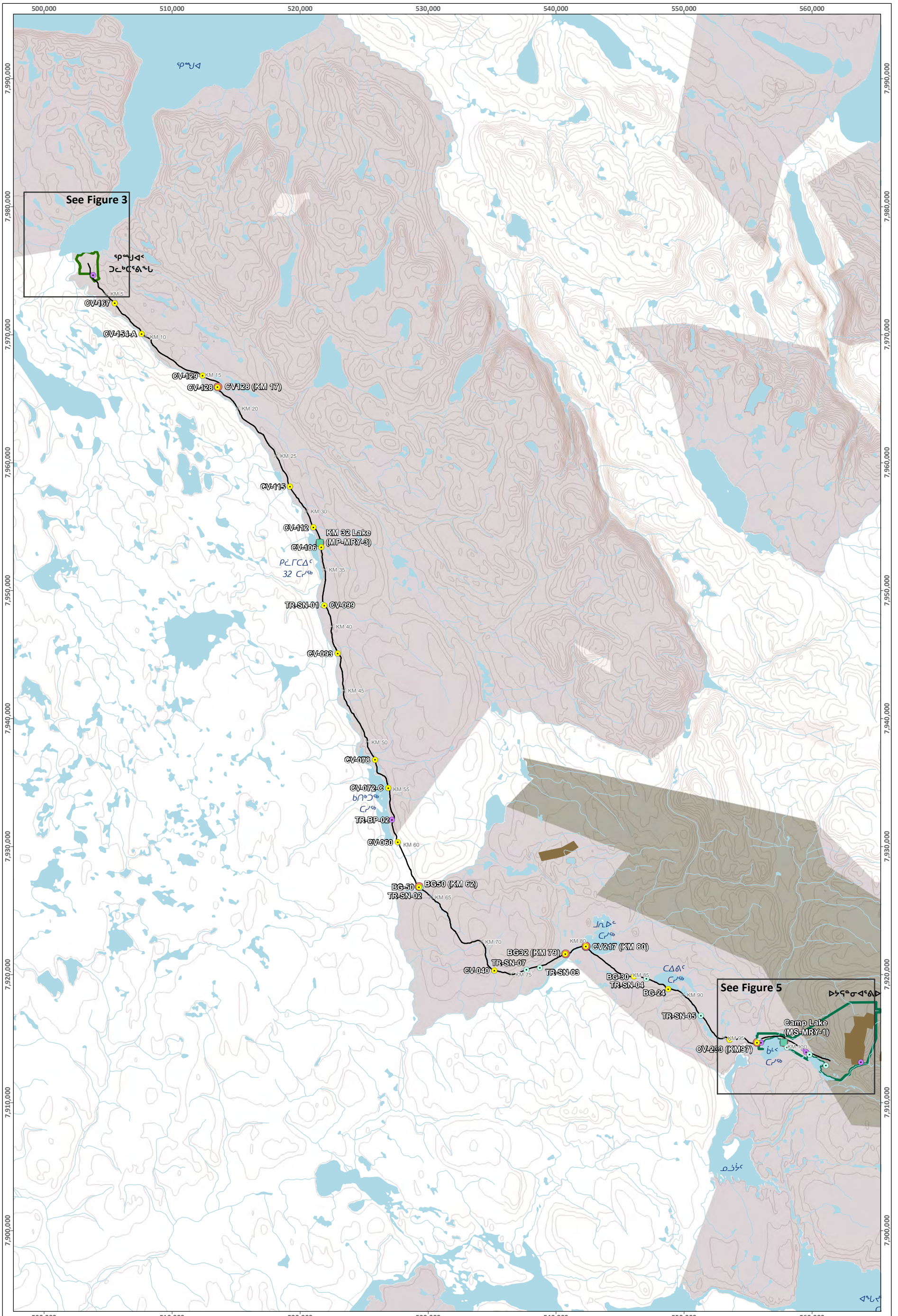
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a.c.p. NAD 1983 UTM ZONE 17N.
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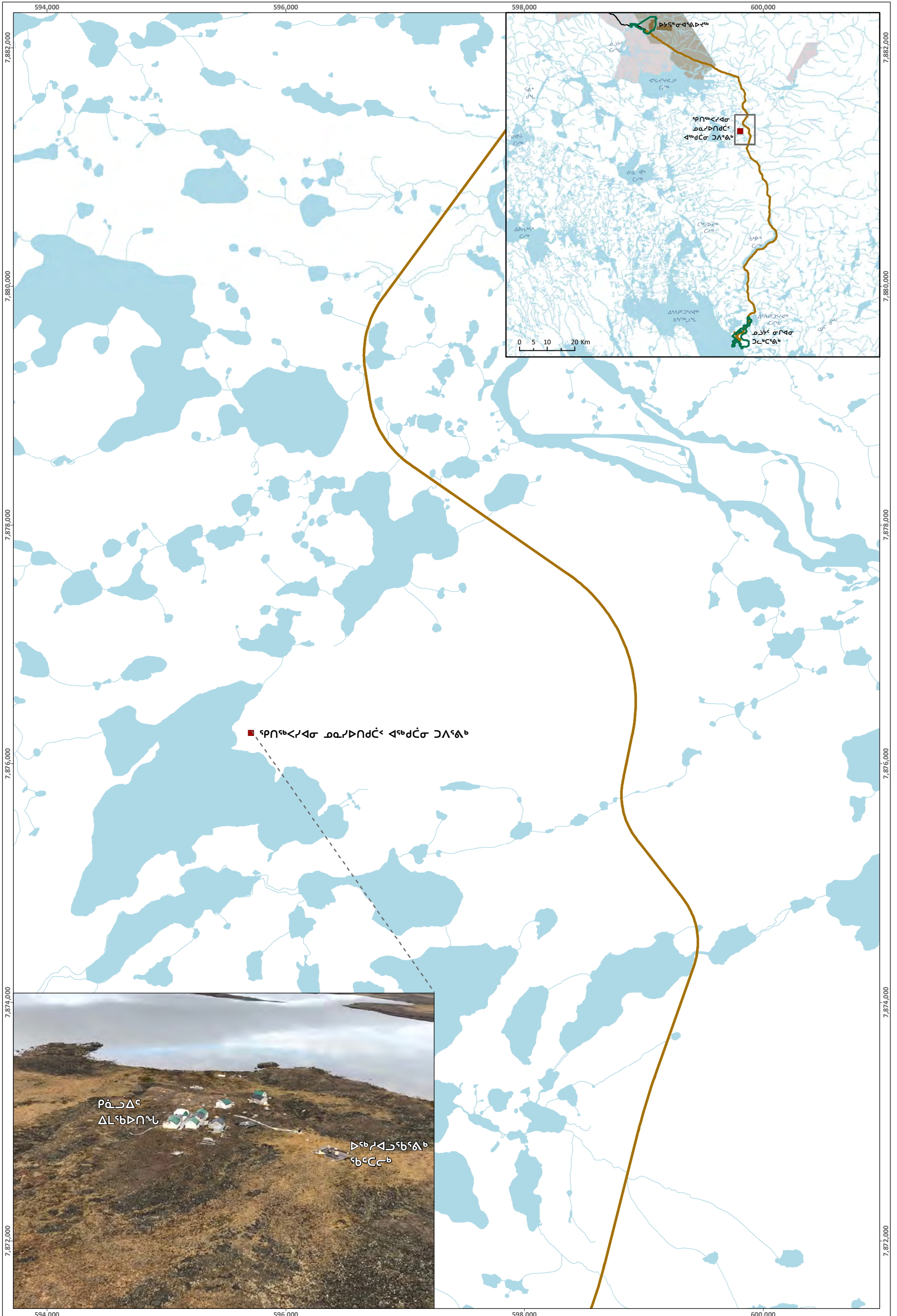
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Baffinland
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SAVED: C:\Users\kellie.mingulof\Documents\1 - Maps\Reporting\1 - Areas\1 Type A\2021\BIML_Fig 4 - Tree Road 2021 Monitoring - INK.mxd; 29-Mar-22

መግቢያ ስምጥር		ማዕከላዊ ስምጥር	
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		ስምጥር ስምጥር FIGURE 4	



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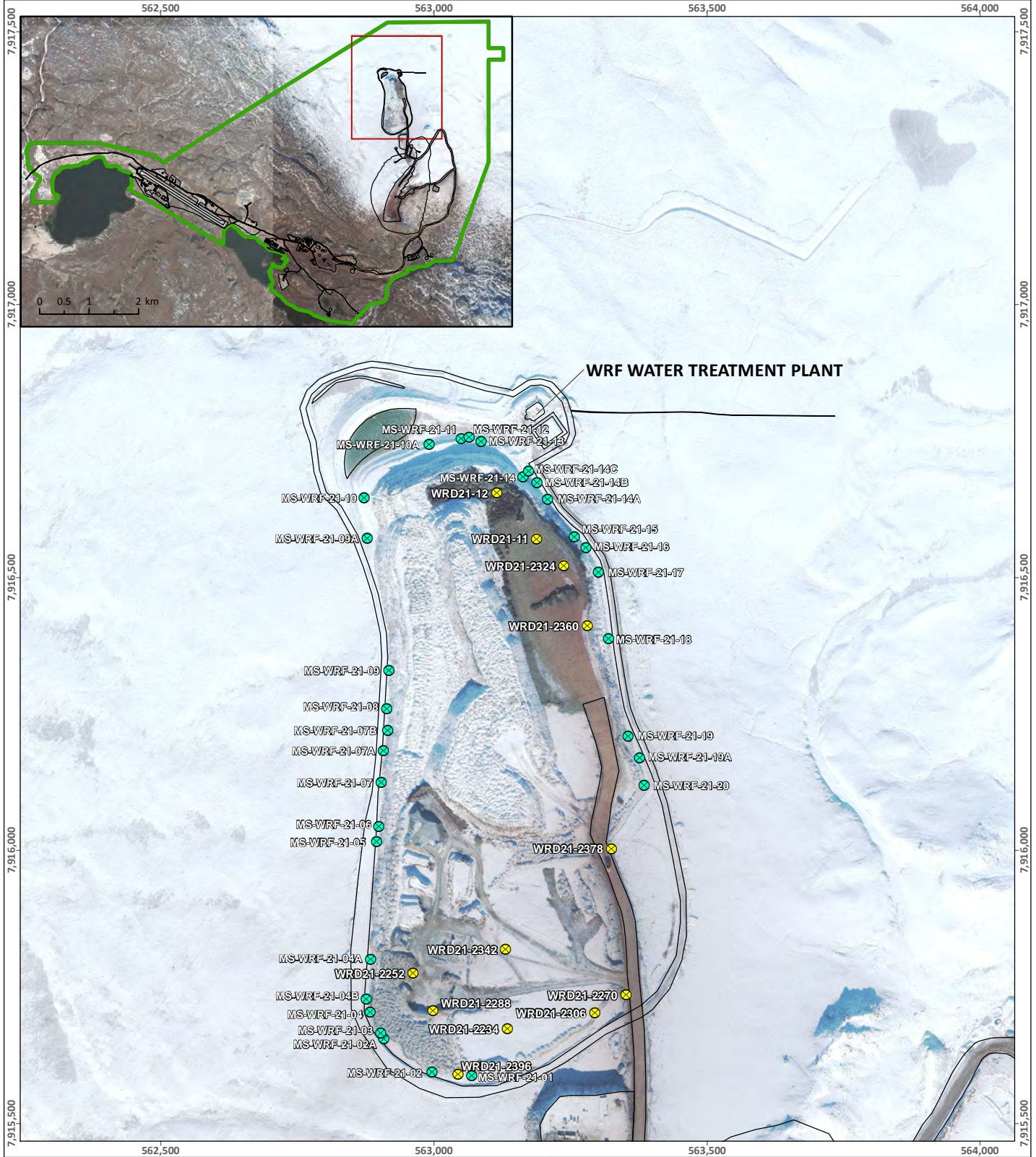
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LEGEND

- WRF Monitoring Station
- QA/QC Sampling Location
- Infrastructure

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Deposit 1 Waste Rock Facility

Projection: NAD 1983 UTM ZONE 17N.
 Base Map: © 2022 Digital Globe, Inc.
 Imagery and Infrastructure are representative as of July-September 2021.

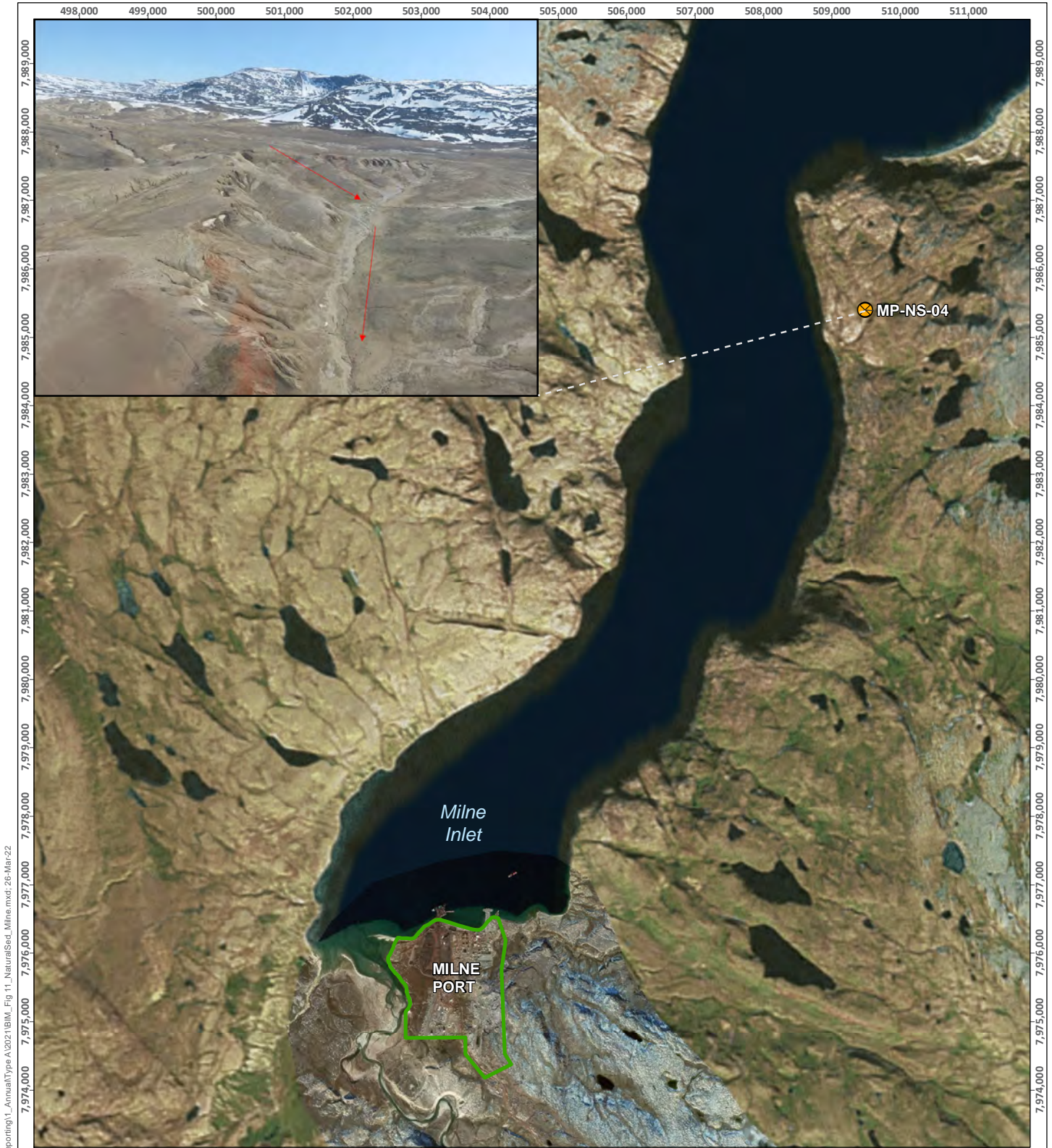
0 65 130 260 Meters

Scale 1:10,000



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FIGURE

10



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LEGEND

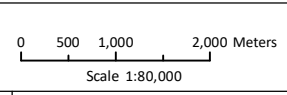
- Project Development Area
- ⊗ 2021 Natural Sedimentation Event

MP-NS-04 Sedimentation Event
 Date: June 12, 2021
 NAD 83 Zone 17 N
 E 509491 N 7985404

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**2021 Natural Sedimentation Events
Milne Port**

Projection: NAD 1983 UTM ZONE 17N.
 Base Map: © 2022 Digital Globe, Inc.
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FIGURE 1

