

**2020 Qikiqtani Inuit Association and Nunavut Water Board
Annual Report for Operations**

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Water Licence 2AM-MRY-1325 and Commercial Lease Q13C301
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March 31, 2021 | ᐱᑦᑕᑦᑕᑦ 31, 2021

Baffinland Iron Mines Corporation

Mary River Project

2020 QIKIQTANI INUIT ASSOCIATION (QIA) AND NUNAVUT WATER
BOARD (NWB) ANNUAL REPORT FOR OPERATIONS

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2021-03-31	0	<i>A McKenzie</i>	<i>C Murray</i>
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Date	Rev.	Prepared By	Reviewed and Approved By

TABLE 0: REPORT SUBMISSION SUMMARY

Year of Annual Report	2020
Annual Report Submission Date:	March 31, 2021
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2020 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 2020 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 2020 exploration and geotechnical activities conducted for the Mary River Project within the scope of Baffinland's Type 'B' Water Licence - 2BE-MRY1421 (Type 'B' Water Licence) and Commercial Lease, and a separate report for the QIA and NWB to summarize the 2020 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.

In response to the COVID-19 pandemic, additional precautions were applied to the 2020 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 local communities. To protect communities in Nunavut from COVID-19, Baffinland requested that all Nunavummiut remain home on paid leave. 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.

During 2020, mining operations at Deposit No. 1 continued to increase and produced a total of 6.01 million tonnes (Mt) of ore crushed at the Mine Site, representing an increase from the 5.62 Mt of ore crushed in 2019. A total of 6.04 Mt of ore was transported by ore haul trucks along the Milne Inlet Tote Road (Tote Road) from the Mary River Mine Site (Mine Site) and stockpiled at Milne Port. During the 2020 shipping season (July to October), a total of 5.45 Mt of ore was shipped from the Project's Milne Port to international markets. In 2020, marine ore shipments involved 72 individual ore carrier vessel voyages during the open-water shipping season. Following the shipping season, ore continued to be stockpiled at Milne Port to be shipped to market in 2021.

Mining operations along with development of Project infrastructure continued throughout 2020. 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;
- Extraction of aggregates from the QMR2 Quarry;
- 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;
- 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 water to Crusher Facility Pond MS-06;
- Construction of the KM 106 Run-of-Mine Stockpile and Sedimentation Pond; and,
- Expansion of the Waste Rock Facility pond and continued operation of a dedicated water treatment plant to ensure effluent water quality compliance.

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 (TREEP) 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 a new dust suppression alternative under the commercial name DustStop.

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 2020 shipping season;
- Marine shipment of ore to international markets via the Milne Port shiploader and ore carrier vessels;
- Extraction of aggregates from the Q1 Quarry;
- Milne Port Ore Stockpile #1 expansion and water management structure upgrades; 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 2020, 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.

In 2020, Baffinland revised the Phase 1 Waste Rock Management Plan (Revision 3, BAF-PH1-830-P16-0029) and received approval of the plan from the NWB. Key updates to the plan included updated deposition strategy based on thermal modelling and geochemistry modelling, and incorporation of adaptive management strategies into the plan to address concerns raised during the Plan review process.

Thermal monitoring in 2020 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. The WRF Pond repair and expansion was completed in early 2020, and 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 2020 included:

- Modification No.12 – Expansion of the Milne Port Ore Stockpile #1 and Water Management Structures.

Spills

During 2020, thirteen (13) spills were reported to the Northwest Territories-Nunavut (NT-NU) Spill Line, CIRNAC and QIA by the Project. Overall, this represented a frequency decrease of 48% when compared to the frequency of reportable spills in 2019. In addition to the original spill report submitted within 24 hours of each spill event in 2020, 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 2020 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 2020 to sustain three (3) key activities at the Project: potable water supply (domestic), dust suppression, and other industrial purposes. During 2020, total daily water volume withdrawal limits for dust suppression purposes were exceeded thirty-one (31) times at approved Project water sources. The water use exceedances were caused due to inadequate controls for tracking daily water use at the individual water sources with respect to the daily limits. To prevent similar incidents from re-occurring, Baffinland has installed signs at dust suppression water sources that indicate the daily water use limits in number of truckloads, and implemented 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.

Throughout 2020, 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 2020 SNP results reported to the NWB, CIRNAC and the QIA, exceedances of applicable discharge criteria in 2020 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 2020 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

Baffinland had to make changes to its engagement approach in 2020 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. Public engagement has been most affected by the COVID-19 restrictions. 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, the Company 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.

Summary of Plans for 2021

The 2021 Work Plan was prepared and provided by Baffinland to relevant parties on November 6, 2020 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 2021 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 preparing a Long Term Water Management Plan for the Mine Site that will require the construction and implementation of new water management infrastructure. Some of this infrastructure is significant and will require detailed geotechnical and engineering design prior to submission of a modification request to the Nunavut Water Board.

The Project's Phase 2 Expansion 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 2021.

RAPPORT ANNUEL DES OPÉRATIONS 2020 DE L'ASSOCIATION INUITE QIKIQTANI (AIQ) ET DE L'OFFICE DES EAUX DU NUNAVUT (OEN)

RÉSUMÉ EXÉCUTIF

Ce rapport destiné à l'Association inuite de Qikiqtani (AIQ) et à l'Office des eaux du Nunavut (OEN) a été préparé pour résumer les activités et la surveillance du projet de la rivière Mary en 2020 (le projet) menées en vertu du permis d'utilisation de l'eau de type « A » 2AM-MRY1325 – modification no 1 (permis d'utilisation de l'eau de type « A ») de la Baffinland Iron Mines Corporation (Baffinland) et du bail commercial no Q13C301 (bail commercial) entre l'AIQ et Baffinland. Un rapport annuel distinct a été préparé pour l'AIQ et l'ONF afin de résumer les activités d'exploration et de géotechnique de 2020 menées pour le projet de Mary River dans le cadre du permis d'utilisation de l'eau de type « B » de Baffinland – 2BE-MRY1421 (permis d'utilisation de l'eau de type « B ») et du bail commercial, et un rapport distinct pour l'AIQ et l'OEN résumant les activités d'exploration 2020 menées dans le cadre du programme d'exploration de la baie Ege, conformément au permis d'utilisation de l'eau de type B 2BE-EQE1926 et au permis d'utilisation des terres QL2-1910 de Baffinland.

En réponse à la pandémie de COVID-19, des précautions supplémentaires ont été appliquées aux programmes de surveillance environnementale de 2020. Baffinland et ses consultants ont mis en place des plans et des protocoles de sécurité complets afin de minimiser le risque d'exposition à la COVID-19 pour leurs employés et les communautés locales. Pour protéger les communautés du Nunavut contre la COVID-19, Baffinland a demandé à tous les Nunavummiut de rester chez eux en congé payé. Grâce aux précautions et aux protocoles étendus mis en place par Baffinland, le risque d'exposition à la COVID-19 pour les communautés du Nunavut a été minimisé, et les programmes de surveillance environnementale ont été menés à bien avec un risque minimal. Le maintien d'un programme de surveillance continue pour toutes les années d'étude est essentiel pour détecter les effets et les tendances du projet de la rivière Mary sur l'environnement, pour assurer un ensemble de données statistiquement solides et pour se conformer aux conditions décrites dans le permis d'utilisation des eaux et le bail commercial.

En 2020, les opérations minières du gisement no 1 ont continué à augmenter et ont produit un total de 6,01 millions de tonnes (Mt) de minerai broyé sur le site minier, ce qui représente une augmentation par rapport aux 5,62 Mt de minerai broyé en 2019. Un total de 6,04 Mt de minerai a été transporté par des camions de transport de minerai le long de la route charretière de Milne Inlet (route charretière) depuis le site minier de Mary River (site minier) et stocké au Port de Milne. Au cours de la saison d'expédition 2020 (juillet à octobre), un total de 5,45 Mt de minerai a été expédié du Port de Milne du projet vers les marchés internationaux. En 2020, les expéditions maritimes de minerai ont impliqué 72 voyages individuels de navires minéraliers pendant la saison d'expédition en eau libre. Après la saison d'expédition, le minerai a continué à être stocké au port de Milne pour être expédié sur le marché en 2021.

Les opérations minières, ainsi que le développement de l'infrastructure du projet, se sont poursuivies tout au long de 2020. Une description des principales activités du projet exécutées dans le cadre du permis d'utilisation des eaux de type A et du bail commercial est présentée ci-dessous par zone de projet.

Site minier

Sur le site minier, les principales activités du projet ont été les suivantes:

- L'exploitation du gisement no 1, ainsi que le concassage et le stockage du minerai à l'usine de traitement du minerai KM 106 et à l'usine de concassage du site minier;
- L'extraction d'agrégats de la carrière QMR2;
- La poursuite du dépôt de déchets non dangereux à la décharge de déchets non dangereux du site minier (décharge);
- La poursuite du dépôt des stériles générés par les opérations du projet à l'installation de stériles;
- L'entretien de l'infrastructure de drainage des eaux de surface du site (c'est-à-dire les ponceaux) pour répondre aux problèmes de sédimentation et améliorer le drainage des eaux de surface;
- La mise en œuvre de la stratégie de reclassement de la plate-forme du concasseur de minerai pour empêcher l'accumulation d'eau sur et autour de la plate-forme de l'installation de concassage et l'installation d'un système de pompage pour transférer l'eau collectée vers le bassin MS-06 de l'installation de concassage;
- La construction de la pile de stockage et du bassin de sédimentation de l'exploitation minière KM 106; et,
- L'agrandissement du bassin de l'installation de traitement des stériles et la poursuite de l'exploitation d'une station de traitement des eaux spécialisée pour assurer la conformité de la qualité des effluents.

Route charretière

Le long de la route charretière, les principales activités du projet ont été les suivantes:

- Le transport du minerai à l'aide de camions de transport de minerai du site de la mine au Port de Milne pour le stockage;
- Le transport par camion du carburant et d'autres fournitures du Port de Milne au site de la mine pour soutenir les opérations et le développement du projet;
- La poursuite de l'entretien de la route charretière pour améliorer le drainage des eaux de surface et répondre aux préoccupations en matière de sécurité et d'exploitation, y compris les travaux proposés dans le plan d'exécution des travaux de terrassement de la route charretière (TREEP) et la mise en œuvre sélective de la conception Hatch (2013);
- La mise en œuvre de mesures préventives et correctives (c'est-à-dire des barrages de retenue, des clôtures à limon, l'excavation des ponceaux de la neige et de la glace, etc.) pour répondre aux problèmes de sédimentation pendant les périodes de débit élevé;
- La remise en état progressive et continue des sources d'emprunt historiques prioritaires;

- La poursuite du développement de la source d'emprunt du km 97 pour soutenir l'entretien des routes; et,
- L'application continue d'une nouvelle solution de dépoussiérage sous le nom commercial de DustStop.

Port de Milne

Au Port de Milne, les principales activités du projet ont été les suivantes:

- La poursuite du stockage du minerai dans l'installation de stockage de minerai du Port de Milne avant et après la saison d'expédition 2020;
- L'expédition maritime du minerai vers les marchés internationaux via le chargeur de navires du Port de Milne et les navires transporteurs de minerai;
- L'extraction d'agrégats de la carrière Q1;
- L'expansion du stock de minerai no 1 du Port de Milne et la modernisation de la structure de gestion de l'eau; et
- Plusieurs transports maritimes, y compris le retour d'équipements et de déchets vers le sud du Canada et la livraison de carburant, d'équipements, de consommables et de matériaux pour soutenir la poursuite des opérations et du développement du projet.

Gestion des installations de traitement des déchets rocheux

En 2020, Baffinland a continué de caractériser les roches stériles du dépôt no 1 générées par les opérations du Projet et d'optimiser les stratégies de dépôt et de gestion des roches stériles afin de répondre aux préoccupations en suspens identifiées à l'installation de roches stériles (IRS) concernant le drainage rocheux acide et la lixiviation des métaux. Baffinland a continué d'effectuer des tests géochimiques sur les roches stériles afin d'élargir l'ensemble de données analytiques, et de surveiller les températures à l'intérieur de l'IRS pour confirmer que la stratégie de gestion garantissait que les conditions de congélation pouvaient être atteintes et maintenues à l'intérieur du tas de roches stériles.

En 2020, Baffinland a révisé le plan de gestion des stériles de la phase 1 (révision 3, BAF-PH1-830-P16-0029) et a reçu l'approbation du plan de l'OEN. Les principales mises à jour du plan comprenaient une stratégie de dépôt actualisée basée sur la modélisation thermique et la modélisation géochimique, ainsi que l'incorporation de stratégies de gestion adaptative dans le plan pour répondre aux préoccupations soulevées au cours du processus de révision du plan.

La surveillance thermique en 2020 a continué à démontrer que le WRF est gelé à l'exception d'une couche saisonnière peu profonde, qui est active. La surveillance de la qualité de l'eau du WRF a démontré des conditions de pH neutre tout au long de la saison estivale, et n'a généralement pas nécessité de traitement à la station de traitement de l'eau du WRF pour répondre aux critères de rejet applicables du permis d'utilisation de l'eau et du MDMER. La réparation et l'expansion du bassin du WRF ont été achevées au

début de 2020, et aucun suintement n'a été identifié à partir de l'installation, ce qui indique que les travaux correctifs ont été efficaces pour atténuer le rejet incontrôlé identifié pour la première fois en 2017.

Baffinland continuera à surveiller les conditions de l'installation de gestion des déchets afin de s'assurer qu'une gestion efficace permet d'atteindre les objectifs de fermeture définitifs 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 pour déterminer si les critères de séparation des déchets et les stratégies de placement restent valables ou si des mises à jour sont nécessaires.

Principales modifications de l'infrastructure du projet

Les modifications approuvées mises en œuvre dans le cadre du projet en 2020 sont les suivantes:

- Modification n° 12 – Agrandissement du stock de minerai no 1 du Port de Milne et des structures de gestion des eaux.

Déversements

En 2020, treize (13) déversements ont été signalés à la ligne de déversement des Territoires du Nord-Ouest-Nunavut (TN-NU), au CIRNAC et à l'AIQ par le Projet. Dans l'ensemble, ce chiffre représente une baisse de fréquence de 48 % par rapport à la fréquence des déversements à signaler en 2019. En plus du rapport original sur les déversements soumis dans les 24 heures suivant chaque événement de déversement en 2020, un rapport de suivi détaillé a été soumis dans les trente (30) jours suivant chaque déversement signalé. Baffinland a continué à enquêter sur les causes fondamentales de tous les déversements qui se sont produits sur le site en 2020 afin que des mesures correctives efficaces à long terme puissent être mises en œuvre pour réduire la fréquence des déversements sur les sites du projet.

Utilisation de l'eau et surveillance de l'eau douce

En vertu de l'autorisation du permis d'utilisation de l'eau de type « A », de l'eau douce a été prélevée en 2020 pour soutenir trois (3) activités clés du projet : l'approvisionnement en eau potable (domestique), la suppression des poussières et d'autres objectifs industriels. Au cours de l'année 2020, les limites quotidiennes totales de prélèvement d'eau à des fins de dépoussiérage ont été dépassées trente et une (31) fois aux sources d'eau approuvées du projet. Les dépassements de l'utilisation de l'eau ont été causés par des contrôles inadéquats pour suivre l'utilisation quotidienne de l'eau aux sources d'eau individuelles par rapport aux limites quotidiennes. Pour éviter que des incidents similaires ne se reproduisent, Baffinland a installé des panneaux aux sources d'eau pour le dépoussiérage qui indiquent les limites quotidiennes d'utilisation de l'eau en nombre de chargements de camion, et a mis en place un registre amélioré pour les opérateurs de camions-citernes qui indique quand le volume quotidien maximal d'eau a été prélevé de chaque source en fonction du nombre de chargements de camion-citerne remplis.

Tout au long de 2020, Baffinland a continué à mettre en œuvre le programme du réseau de surveillance (PRS) décrit à l'annexe I du permis d'utilisation de l'eau de type « A », en analysant les effluents (c.-à-d. les eaux usées traitées, les eaux huileuses traitées) rejetés dans le milieu récepteur et en surveillant la

qualité des eaux de surface dans les zones spécifiques du projet (c.-à-d. les eaux de ruissellement en aval des zones du projet). Sur la base d'un examen des résultats du PRS 2020 communiqués à l'OEN, au CIRNAC et à l'AIQ, les dépassements des critères de rejet applicables en 2020 concernaient principalement le ruissellement des eaux de surface et les effluents présentant des niveaux élevés de matières en suspension (MES) totales. Dans chaque cas, des mesures de contrôle appropriées ont été mises en œuvre pour rétablir les niveaux de MES en dessous des critères de rejet applicables. Baffinland continue d'évaluer et de mettre en œuvre les mesures correctives et d'atténuation appropriées pour résoudre les problèmes de sédimentation en cours au projet.

En plus du PRS, la surveillance environnementale continue et les études sur les effets, y compris le plan de surveillance des effets aquatiques (PSEA) et le programme de surveillance de la route de remorquage (PSRR) du projet, ont été menées en 2020 conformément aux engagements pris dans le PGI et dans l'étude d'impact environnemental (EIE) finale approuvée dans le cadre du certificat de projet.

Consultations et engagement de la communauté

Baffinland a dû apporter des changements à son approche d'engagement en 2020 en raison de la pandémie de COVID-19. Les restrictions de voyage et l'attention accrue portée à la santé et à la sécurité de la communauté et des employés ont fait en sorte que de nombreux engagements ont été réalisés en ligne (téléconférence/vidéoconférence) plutôt qu'en personne. Bien que ces types d'engagement ne soient pas idéaux du point de vue de la culture inuite ou de l'établissement de relations, ils se sont avérés fructueux, car ils ont permis aux intervenants et aux représentants communautaires de poursuivre le dialogue avec Baffinland tout au long de la pandémie. L'engagement du public a été le plus affecté par les restrictions relatives à la COVID-19. En réponse, Baffinland a augmenté l'utilisation des médias sociaux et de la radio locale afin de s'assurer que les informations sur la société et ses activités soient partagées avec un public plus large. Les restrictions de voyage et les ordonnances de santé publique étant en constante évolution, la société évalue continuellement les moyens d'engagement qui permettront d'adopter une approche efficace, tout en veillant à ce que la santé et la sécurité des personnes et des collectivités demeurent la priorité absolue. Cette évaluation continue et cette approche adaptative de l'engagement devraient se poursuivre jusqu'à ce que la pandémie de COVID-19 et les ordres et conseils de santé publique connexes permettent aux engagements en personne d'être à nouveau la technique d'engagement la plus utilisée.

Résumé des plans pour 2021

Le plan de travail pour 2021 a été préparé et fourni par Baffinland aux parties concernées le 6 novembre 2020, comme l'exige la section 6.1 du bail commercial et la partie J, article 3 du permis d'utilisation de l'eau de type « A », aux fins d'un examen annuel de la sécurité pour les activités entreprises sur une base annuelle.

Le plan de travail 2021 décrit le développement et l'exploitation prévus de la mine, le concassage du minerai et le transport terrestre, le stockage et l'expédition maritime du minerai, ainsi que la poursuite du développement et de la construction des infrastructures nécessaires au Port de Milne, à la route

charretière et au site de la mine. Baffinland prépare actuellement un plan de gestion de l'eau à long terme pour le site minier qui nécessitera la construction et la mise en œuvre de nouvelles infrastructures de gestion de l'eau. Certaines de ces infrastructures sont importantes et nécessiteront une conception géotechnique et technique détaillée avant la présentation d'une demande de modification à l'Office des eaux du Nunavut.

La proposition d'expansion de la phase 2 du projet continue de progresser dans le processus d'examen et d'approbation facilité par la CNER et l'OEN. Les programmes de surveillance environnementale du projet prescrits par le certificat de projet, les permis d'utilisation des eaux, les autorisations, les plans de gestion et les plans de surveillance des effets environnementaux se poursuivront jusqu'en 2021.

TABLE OF CONTENTS

EXECUTIVE SUMMARY (ENGLISH)	II
EXECUTIVE SUMMARY (INUKTITUT)	VIII
EXECUTIVE SUMMARY (FRENCH)	XIV
1 INTRODUCTION	1
1.1 PURPOSE AND SCOPE	1
1.2 REGULATORY FRAMEWORK	1
1.3 COVID-19 SUMMARY	1
2 PROJECT ACTIVITIES, MODIFICATIONS AND INFRASTRUCTURE CHANGES	3
2.1 OVERVIEW OF PROJECT	3
2.2 SUMMARY OF 2020 PROJECT ACTIVITIES	4
2.3 MODIFICATIONS	5
2.3.1 Modification Applications Summary	5
2.3.2 Modifications Implemented	5
2.4 OTHER CONSTRUCTION ACTIVITIES	6
2.5 INBOUND AND OUTBOUND SHIPMENTS TO AND FROM THE PROJECT	6
3 MINING AND EXPLORATION ACTIVITIES	8
3.1 EXPLORATION AND GEOTECHNICAL DRILLING ACTIVITIES.....	8
3.2 MINING ACTIVITIES	8
3.3 SHIPPING ACTIVITIES	8
3.4 SPECIFIED SUBSTANCES EXTRACTED FROM QUARRIES AND BORROW SOURCES.....	8
4 WATER USE	9
4.1 VOLUMES OF FRESHWATER USED FOR DOMESTIC AND INDUSTRIAL PURPOSES.....	9
4.2 VOLUMES OF FRESHWATER USED FOR DUST SUPPRESSION	10
4.3 VOLUMES OF RECLAIMED AND RECYCLED WATER	11
5 WASTE MANAGEMENT	12
5.1 WASTEWATER MANAGEMENT	12
5.1.1 Quantities of Sewage Effluent and Sludge from STPs and PWSPs.....	12
5.1.2 Quantities of Effluent from Containment Areas.....	13
5.1.3 Quantities of Effluent from Surface Water Management Ponds	13
5.2 SOLID AND HAZARDOUS WASTE MANAGEMENT	14
5.2.1 Site Incinerators.....	15
5.2.2 Open Burning.....	15
5.2.3 Mine Site Landfill Facility	15
5.2.4 Milne Port Landfarm Facility.....	16
5.2.5 Hazardous Waste Storage and 2020 Backhaul Sealift	17
5.3 WASTE ROCK MANAGEMENT	18
5.3.1 Mine Site Waste Rock Facility	18
6 REPORTED INCIDENTS	19

6.1	SPILLS	19
6.2	HEALTH & SAFETY INCIDENTS	20
7	MONITORING	21
7.1	SEWAGE DISPOSAL	21
7.1.1	2020 Mine Site PWSP Effluent Discharge to Sheardown Lake NW	23
7.1.2	2020 Milne Port PWSP Effluent Discharge to Milne Inlet.....	23
7.2	STORMWATER FROM CONTAINMENT AREAS	24
7.3	SURFACE WATER RUNOFF AND SEEPAGE.....	26
7.3.1	Milne Port Ore Stockpile Facility	26
7.3.2	Mine Site Landfill Facility	26
7.3.3	Mine Site Waste Rock Facility	27
7.3.4	Mine Site Crusher Facility	28
7.3.5	Deposit No. 1	30
7.3.6	Tote Road Monitoring Program.....	30
7.3.7	Snow Stockpile Monitoring.....	31
7.4	SURFACE WATER RUNOFF DOWNSTREAM OF PROJECT AREAS AND QUARRIES	31
7.5	NATURAL SEDIMENTATION EVENTS	32
7.6	AQUATIC EFFECTS MONITORING PLAN (AEMP)	33
7.7	2020 GROUNDWATER MONITORING PROGRAM	35
7.8	QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC)	36
8	RECLAMATION, CLOSURE AND FINANCIAL SECURITY	38
8.1	PROGRESSIVE AND FINAL RECLAMATION	38
8.2	CURRENT RESTORATION LIABILITY	39
9	PLANS, REPORTS AND STUDIES	40
9.1	SUMMARY OF STUDIES REQUESTED BY THE NUNAVUT WATER BOARD	40
9.2	REVISIONS TO PLANS, REPORTS AND MANUALS	40
9.3	SUMMARY OF FUEL STORAGE	40
9.4	RESULTS OF CHEMICAL ANALYSIS OF INCINERATOR BOTTOM ASH	41
9.5	SUMMARY OF GEOCHEMICAL ANALYSIS FOR OPERATED QUARRIES.....	42
9.6	WASTE ROCK STUDIES AND OPERATIONAL TESTING RESULTS.....	42
9.6.1	WRF QA/QC Program.....	43
9.6.2	Geochemistry Monitoring Program.....	43
9.6.3	Water Quality Monitoring Program.....	44
9.6.4	Thermal Monitoring Program	44
9.7	RECLAMATION RESEARCH	45
10	REGULATORY INSPECTIONS AND COMPLIANCE	46
10.1	REGULATORY INSPECTIONS	46
10.1.1	CIRNAC Inspections.....	46
10.1.2	QIA Inspections.....	46
10.1.3	ECCC Inspections	46
10.1.4	Workers' Safety and Compensation Commission (WSSC) Mine Inspections and Visits.....	46

10.2	REGULATORY ENFORCEMENT ACTIONS	47
10.2.1	Waste Rock Facility	47
11	AMENDMENTS – PENDING AND COMPLETED	49
11.1	TYPE ‘A’ WATER LICENCE	49
11.2	COMMERCIAL LEASE	49
11.2.1	Options Exercise Notices	49
11.2.2	Tote Road Adjustment Notices	49
12	PUBLIC CONSULTATIONS.....	50
13	SUMMARY OF PROJECT PLANS FOR 2021.....	51
14	REFERENCES.....	52

LIST OF TABLES

Table 0	Report Submission Summary
Table 1.1	Current Approvals, Permits and Authorizations - 2020
Table 2.1	Summary of Project Activities, Modifications and Infrastructure Changes – 2020
Table 2.2	Type ‘A’ Water Licence Modifications Summary and Approvals Status
Table 2.3	Equipment and Materials Shipped off the Property – 2020
Table 2.4	Equipment and Materials Shipped to and Stored on the Property – 2020
Table 3.1	Monthly and Annual Quantities of Ore Generated by the Project – 2020
Table 3.2	Monthly and Annual Quantities of Ore Shipped by the Project - 2020
Table 3.3	Quantities of Specified Substances Removed from Borrowes and Quarries (BCMs) by Quarter and Calendar Year – 2020
Table 3.4	Quantities of Specified Substances Removed from Borrowes and Quarries (BCMs) September 1, 2018 to August 31, 2020 Reporting Period
Table 4.1	Annual Volumes of Water Used for Project Activities on Inuit-Owned and Crown Lands by Source – 2020
Table 4.2	Daily, Monthly, and Annual Volumes of Water Used for Domestic and Industrial Purposes on Inuit-Owned Land and Crown Lands – 2020
Table 4.3	Daily, Monthly, and Annual Volumes of Water Used for Dust Suppression Purposes on Inuit-Owned and Crown Lands – 2020
Table 4.4	Exceedances of Volume Criteria for Water Use Authorized for Domestic and Industrial Purposes on Inuit-Owned and Crown Lands - 2020
Table 4.5	Exceedances of Maximum Volume Criterial for Water Use Authorized for Dust Suppression on Inuit-Owned and Crown Lands - 2020
Table 5.1	Monthly and Annual Quantities - Sewage Management - 2020
Table 5.2	Summary of Monthly and Annual Quantities - Sewage Management - 2020

Table 5.3	Daily, Monthly, and Annual Quantities of Discharge Stormwater - Containment Areas - 2020
Table 5.4	Daily, Monthly, and Annual Quantities of Discharge Stormwater - Surface Water Management Ponds - 2020
Table 5.5	Locations of Temporary and Permanent Storage Areas for Wastes - 2020
Table 5.6	Monthly and Annual Quantities of Waste Deposited - Landfill Facility - 2020
Table 5.7	Monthly and Annual Quantities of Hydrocarbon Impacted Soil, Water, and Snow Deposited - Milne Port Landfarm Facility - 2020
Table 5.8	Monthly and Annual Quantities - Deposit No. 1 Waste Rock Management – 2020
Table 6.1	Summary of Unauthorized Discharge by Area and Product - 2020
Table 6.2	List of Reported Spills and Unauthorized Discharges - 2020
Table 6.3	List of Reported Health & Safety Incidents - 2020
Table 7.1	Water Licence Water Quality Monitoring Locations - 2020
Table 7.2	Water Quality Results for Water Licence Monitoring Location
Table 7.3	Field QA/QC Water Quality Data Analysis - Field Duplicates – 2020
Table 7.4	Field QA/QC Water Quality Data Analysis - Field Blanks and Travel Blanks - 2020
Table 7.5	Summary - QA/QC Analysis of Duplicates with an RPD > 30% - 2020
Table 7.6	Water Quality Monitoring Results - Natural Sedimentation Events - 2020
Table 7.7	Surface Water Quality Results - 2020
Table 8.1	Reclamation Works Related to Project Operations on Inuit-Owned and Crown Lands - 2020
Table 8.2	Mary River Project Total Closure and Reclamation Security Summary - 2020
Table 9.1	Management and Monitoring Plan Updates - 2020
Table 9.2	Sample Results from 2020 QA/QC Sample Program - 2020
Table 11.1	Pending and Completed Amendments to Provisions of the Commercial Lease – 2020
Table 12.1	Meetings with the Public, Government, and Inuit Organizations – 2020
Table 12.2	Site Visits to the Mary River Project – 2020

LIST OF FIGURES

Figure 1	Baffinland Iron Mines Project Location
Figure 2	Mary River Project Activities Overview
Figure 3	Milne Port Site Layout
Figure 4	Northern Corridor
Figure 5	Mine Site Layout
Figure 6	Mid Rail Camp Location
Figure 7	Steensby Port Layout
Figure 8	Bruce Head Camp
Figure 9	2020 Unauthorized Discharge Locations

Figure 10 Deposit 1 Waste Rock Facility

APPENDICES

APPENDIX A CONCORDANCE TABLES

APPENDIX B NWB ANNUAL REPORT FORMS

APPENDIX C AS BUILT AND INFRASTRUCTURE MONITORING REPORTS

C.1 AS BUILT DOCUMENTATION

C.1.1 KM 106 RUN OF MINE STOCKPILE AND SEDIMENTATION POND

C.1.2 CAMP LAKE SEDIMENT AND EROSION CONTROL MEASURES

C.1.3 MILNE PORT FUEL MODULE

C.2 GEOTECHNICAL INSPECTION REPORT

C.3 DFO TOTE ROAD ANNUAL REPORT

C.4 TOTE ROAD PRIORITY ACTION SCHEDULE

APPENDIX D PHOTO JOURNAL

D.1 MINE SITE PHOTO SHEET

D.2 TOTE ROAD PHOTO SHEET

D.3 MILNE PORT PHOTO SHEET

D.4 STEENSBY PORT, MID-RAIL AND BRUCE HEAD CAMPS PHOTO SHEET

D.5 COMMUNITY CONSULTATION PHOTO SHEET

APPENDIX E OTHER SUPPORTING DOCUMENTS

E.1 WASTE BACKHAUL REPORT

E.2 INCINERATOR ASH TESTING RESULTS

E.3 SNP HYDROMETRIC MONITORING LOCATIONS

E.4 SHIPPING MANIFESTS (INBOUND AND OUTBOUND)

E.5 2020 MANAGEMENT PLAN UPDATES

E.5.1 SNOW MANAGEMENT PLAN

E.5.2 SPILL CONTINGENCY PLAN

E.5.3 SURFACE WATER AND AQUATIC ECOSYSTEMS MANAGEMENT PLAN

E.5.4 FRESH WATER SUPPLY, SEWAGE AND WASTEWATER MANAGEMENT PLAN

E.5.5 SAMPLING PROGRAM – QUALITY ASSURANCE QUALITY CONTROL PLAN

E.5.6 EMERGENCY RESPONSE PLAN

E.6 WASTE ROCK GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS

E.7 QUARRY GEOCHEMISTRY ANALYTICAL SAMPLING RESULTS

E.8 REGULATORY CORRESPONDENCE

E.8.1 CIRNAC INSPECTION REPORTS AND BAFFINLAND RESPONSES

E.8.2 QIA INSPECTION REPORTS AND BAFFINLAND RESPONSES

E.8.3 WSCC INSPECTION REPORTS

E.8.4 INITIAL AND FOLLOW-UP SPILL REPORTS

- E.9 AQUATIC EFFECTS MONITORING REPORTS
 - E.9.1 2020 CREMP MONITORING REPORT
 - E.9.2 2020 LAKE SEDIMENTATION MONITORING REPORT
 - E.9.3 2020 AEMP HYDROMETRIC MONITORING REPORT
 - E.9.4 SECOND ENVIRONMENTAL EFFECTS MONITORING (2020) INTERPRETIVE REPORT
- E.10 RECLAMATION RESEARCH STUDIES
- E.11 2020 FRESHET MONITORING REPORT
- E.12 2020 GROUNDWATER MONITORING REPORT
- E.13 SNP CHANGES APPLICATION
- E.14 RESPONSE TO OUTSTANDING 2019 ANNUAL REPORT COMMENTS
- E.15 RESPONSE TO OUTSTANDING 2020 INSPECTION REPORTS
- E.16 MDMER ANNUAL REPORT SUBMISSION
- E.17 UPDATE TO THERMAL ASSESSMENT FOR THE WASTE ROCK FACILITY

ABBREVIATIONS

ABA.....	Acid Base Accounting
AEMP.....	Aquatic Effects Monitoring Plan
ARD.....	Acid Rock Drainage
Baffinland.....	Baffinland Iron Mines Corporation
CCME.....	Canadian Council of Ministers of the Environment
CIRNAC.....	Crown Indigenous Relations and Northern Affairs Canada
Commercial Lease.....	Commercial Lease No. Q13C301
CREMP.....	Core Receiving Environment Monitoring Program
DAF.....	Dissolved Air Flotation
ECCC.....	Environment and Climate Change Canada
EEM.....	Environmental Effects Monitoring
ERP.....	Early Revenue Phase
ERP.....	Emergency Response Plan
FEIS.....	Final Environmental Impact Statement
HWB.....	Hazardous Waste Berms
MBR.....	Membrane Bioreactor
LDL.....	Lowest Detection Limit
MDL.....	Minimum Detection Limit
MDMER.....	Metal and Diamond Mining Effluent Regulations
ML.....	Metal Leaching
NIRB.....	Nunavut Impact Review Board
Non-AG.....	Non-Potentially Acid Generating
NPR.....	Neutralization Potential Ratio
NWB.....	Nunavut Water Board
OEN.....	Options Exercise Notice
OHS.....	Occupational Health & Safety
OPEP.....	Oil Pollution Emergency 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
SCP.....	Spill Contingency Plan
SFE.....	Shake Flask Extraction
SNP.....	Surveillance Network Program

STP.....	Sewage Treatment Plants
TCLP.....	Toxicity Characteristic Leaching Procedure
TDGA	Transportation of Dangerous Goods Act
TOG	Total Oil and Grease
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-MRY1421
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 2020 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 2020, are included within this report. A separate annual report has been prepared for the QIA and NWB to summarize the 2020 exploration and geotechnical activities conducted within the scope of Baffinland's Type 'B' Water Licence - 2BE-MRY1421 (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 2020 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 2020. The Bruce Head camp, shown in Figure 2, was occupied throughout 2020 in support of the marine monitoring studies conducted in Milne Inlet and along the shipping route.

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 2020 is presented in Table 1.1.

1.3 COVID-19 SUMMARY

In response to the COVID-19 pandemic, additional precautions were applied to the 2020 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.

To minimize risk of exposure during travel, Baffinland chartered private flights to ferry employees and contractors to Mary River from a series of flight hubs across Canada and screened all travellers for symptoms before flying.

All consultants followed the same procedures and precautions as the rest of the Baffinland staff who travel to Mary River from across Canada. Proper hand washing, sanitizing, and mask use is being followed. Physical distancing is maintained during travel and on site at Mary River, as per Baffinland protocols. Baffinland has implemented numerous mitigation measures to facilitate physical distancing and minimize and sanitize shared surfaces on site.

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 is currently in the Early Revenue Phase (ERP), which consists of a mining rate of up to 4.2 million tonnes per annum (Mtpa) at Deposit No. 1. A temporary approval for the Production Increase Proposal to haul and ship 6.0 Mtpa from Milne Port was granted in 2018, and extended in 2020. The temporary approval of the Production Increase expires on December 31, 2021. For the purposes of this report, this is considered a temporary expansion of the ERP phase. The operation has the potential to last for generations; representing an important long-term opportunity for economic development in the North Baffin region.

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

- Mary River Mine Site (the Mine Site);
- Milne Inlet Tote Road (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;
- Loading and shipping of ore from Milne Port;
- Stakeholder and Inuit community engagement; and
- Environmental monitoring and reporting.

The Project currently consists of four main locations: The Mine Site, the Tote Road, the Port Site (Figure 2), and the approved but yet to be built Southern Railway and Steensby Port. The operation includes open pit mining, crushing and transportation of ore overland 12 months of the year along the Tote Road from the Mine Site to the Port Site. Ore in the form of lump and fines is shipped during the shipping season to international markets. With such high grade iron ore, there are no concentrators, tailings, or tailings ponds associated with production activities.

During 2020 (the sixth shipping season), the efficiency and productivity of the mining operations at Deposit No. 1 continued to increase and resulted in a total of 6.01 million tonnes (Mt) of ore crushed, which was an increase from the 5.62 Mt crushed in 2019. A total of 6.04 Mt of ore was transported by ore haul trucks along the Tote Road and stockpiled at Milne Port. Between July 20 to October 16, a total of 5.45 Mt of ore was shipped from the Project's Milne Port to international markets. This included ore mined and stockpiled after the previous 2019 shipping season ended. In 2020, marine ore shipments involved 72 individual ore carrier vessel round trip voyages during the shipping season.

2.2 SUMMARY OF 2020 PROJECT ACTIVITIES

The Project activities undertaken in 2020 were conducted at Milne Port, the Mine Site and along the Tote Road. The general Project activities conducted during 2020 included the following:

- The continued development and construction of Project infrastructure required at Milne Port and the Mine Site;
- Mining operations at Deposit No. 1, including the crushing, trucking and shipping of ore to international markets;
- 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;
- 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;
- 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;
- Completion of environmental studies and monitoring programs identified in the 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 described in the 2020 Work Plan, and discussed previously with the NWB, a portion of the equipment and materials that arrived on sealift during the 2020 summer season are currently stored on site in anticipation that they will be used by Baffinland during the construction and operation of the Phase 2 Expansion Project, should an amended Project Certificate be issued by the Nunavut Impact Review Board and an amended Type 'A' Water Licence be issued by the NWB. This approach was necessary in light of the constraints presented by the short Arctic construction and shipping season.

As required by the Commercial Lease and Type 'A' Water Licence, Baffinland submitted to the NWB, QIA and CIRNAC a 2021 Work Plan on November 6, 2020. Table 2 reconciles the activities, construction and infrastructure changes completed in 2020 to the works proposed in 2020 Work Plan.

2.3 MODIFICATIONS

2.3.1 Modification Applications Summary

During 2020, no modification applications were 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 2020 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 and cross cut, which was initiated in 2019 and was on-going in 2020.

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). The Mine Site Landfill Facility will continue to be developed as outlined in Modification No. 10 to support continued Project operations, including the development of the Mine Site Landfarm.

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 will be ongoing in 2020, with the second stage planned to proceed on approval from DFO.

2.4 OTHER CONSTRUCTION ACTIVITIES

Other construction activities completed in 2020, not outlined in Sections 2.1 and 2.2, were either carry over items from prior workplans, such as the construction of the KM106 ROM Stockpile, or 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.

Work completed since the previous 2019 Annual Report included remedial works at six (6) culvert crossings at fish bearing sites (CV-129, CV-114, CV-111, CV-106, CV-30 and CV-225). Details of these works are presented in Appendix C.3, 2020 DFO Tote Road Monitoring Report. Table 5 of Appendix C.3 includes details of this work and a photo summary is presented in Appendix C of the report. Future Tote Road improvements/realignments required in support of on-going operations and future expansion projects will continue to follow the historical LOAs, original Hatch 2013 drawings and the TREEP. Baffinland will work with 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, 2020. In 2020 inbound marine shipments included:

- Four (4) cargo sealifts to Milne Port delivering equipment, materials, and consumables; and
- Four (4) 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 2020 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 2020. 2020 outbound marine shipments included:

- Four (4) cargo sealifts to the Ports of Valleyfield, Cote St Catherine and Becancour in Quebec.

Equipment, materials, and wastes shipped off the Project in 2020 are summarized in Table 2.3 and listed in Appendix E.4. All wastes backhauled in 2020 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 2020, 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 2020 exploration and geotechnical activities conducted within the scope of Baffinland's Type 'B' Water Licence and Commercial Lease, please refer to Baffinland's 2020 QIA & NWB Annual Report for Exploration and Geotechnical Activities. Additionally, exploration activities for the Ege Bay Exploration Program are captured in the 2020 QIA & NWB Annual Report for the Ege Bay Exploration.

3.2 MINING ACTIVITIES

During 2020, mining operations at Deposit No. 1 continued to advance and produced a total of 6.01 million tonnes (Mt) of ore. Total ore produced increased compared to the 5.62 Mt of ore produced in 2019. A total of 6.04 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 2020 are provided in Table 3.1.

3.3 SHIPPING ACTIVITIES

During the 2020 shipping season, a total of 5.45 Mt of ore was shipped from the Project's Milne Port to international markets. This required a total of seventy-two (72) individual ore carrier voyages. Following the shipping season, ore continued to be stockpiled at Milne Port for subsequent shipment to markets in 2020.

Monthly and annual quantities of ore shipped to international markets from the Project's Milne Port during 2020 are provided in Table 3.2.

3.4 SPECIFIED SUBSTANCES EXTRACTED FROM QUARRIES AND BORROW SOURCES

During 2020, Baffinland operated several quarries and borrow sources to support Project road maintenance and infrastructure construction. Quarries and borrow sources in operation during 2020 included the Q1 Quarry at Milne Port, the QMR2 Quarry at the Mine Site 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 (September 1 – August 31), broken down by individual quarry and borrow source. It should be noted that while specified substances were crushed and removed from the quarries Q1 and QMR2 in 2020, there were no blasting activities to support this extraction, as blasting had been completed in 2019.

4 WATER USE

During 2020, 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 2020 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 2020 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 2020 to sustain three (3) key activities: potable water supply for camp use, dust suppression and other industrial purposes. The following subsections describe water use at the Project during 2020.

4.1 VOLUMES 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 380p 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 2020 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 2020. As Steensby Port and Mid-Rail camps were not operated in 2020, water was not withdrawn and/or used at these Project sites in 2020.

Although the total daily water withdrawal limit for Camp Lake (355.4 m³/day) was not exceeded in 2020, there was one (1) incident where the daily water volume withdrawn for domestic purposes exceeded domestic daily water withdrawal limit for Camp Lake (203.8 m³/day). This is a significant improvement over 2019 when twelve (12) exceedances of the daily water volume for domestic use exceeded the domestic daily water withdrawal limit for Camp Lake, and is attributed to improved documentation and categorization of water volumes withdrawn to support Project activities. Baffinland completed a root

cause investigation for all exceedances of the domestic water use limits stipulated in the Type 'A' Water Licence to determine the root causes of daily water use exceedance events and identify effective corrective actions to prevent re-occurrences. The findings of the root cause investigation of the incident that occurred in 2020, which is detailed in Table 4.4, determined that it was caused by a lack of contingency water storage for a period when one or both of the water treatment plants (WTPs) are down for maintenance or repairs resulting in the raw water tank for the Mine Site Camp (MSC) WTP having to be refilled on September 20, 2020 after being emptied on September 19, 2020 to perform maintenance. A corrective action that Baffinland will take to prevent similar incidents from re-occurring is to repurpose an existing fire water storage tank or install a new water storage tank in 2021 to provide contingency water storage for the MSC and Saliivik Camp WTPs to meet water demands during periods of equipment outages and maintenance shut downs. The same root cause investigation determined that lack of contingency water storage was also the root cause for the twelve (12) exceedances of the domestic daily water withdrawal limit for Camp Lake that occurred in 2019. No other water withdrawal incidents or exceedances for domestic and industrial water uses were noted in 2020.

4.2 VOLUMES 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 2020 for dust suppression purposes are outlined in Tables 4.1 and 4.3.

As identified in Table 4.3, total daily water volume withdrawal limits, for dust suppression purposes were exceeded thirty-one (31) times at approved Project water sources in 2020, including; one (1) exceedance at Camp Lake, two (2) at KM 32 Lake, eight (8) at BG50, and twenty (20) at CV217. Baffinland completed a root cause investigation for all exceedances of the daily dust suppression water use limits stipulated in the Type 'A' Water Licence to determine the root causes of water use exceedance events and identify effective corrective actions. The findings of the root cause investigation of the water use exceedances, detailed in Table 4.5, determined that they were caused due to inadequate controls for tracking daily water use at the individual water sources with respect to the daily limits. 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 (refer to Photo 14 in Appendix D.2), 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. Prior to the start of the summer 2021 dust suppression season, an additional corrective action will be implemented to install waterproof storage systems at each water source to house daily water use logs. Baffinland is committed to continue to improving the enforcement of source specific daily water withdrawal limits and maintaining effective record keeping practices for the approved dust suppression water sources.

4.3 VOLUMES 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. Water quality monitoring for water recycled at KM 97 is provided in Table 7.2.37 (TR-BP-01). Water quality monitoring for water recycled from Mine Site and Milne Port locations is provided in Tables 7.2.47 through 7.2.50. A summary of reclaimed and recycled water used during 2020 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 2020.

Steensby Port and the Mid-Rail camp remained closed in 2020 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 2020 were managed in accordance with the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010).

5.1.1 Quantities of Sewage Effluent and Sludge from STPs and PWSPs

Throughout 2020, 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 2020 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 & 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 No. 2, 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 daily and transported to site incinerators for disposal. Cake that could not be incinerated onsite during 2020 was shipped off site during the Milne Port backhaul sealift and disposed at a licensed waste disposal facility in Southern Canada.

During 2020, 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 2020, approximately 410 m³ of treated wastewater was discharged from the Milne Port PWSP to the approved discharge point near Milne Inlet. Additionally, approximately 1,521 m³ of treated wastewater was discharged from the Mine Site PWSP 2 (MS-MRY-04B) to the receiving environment.

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.

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 2020, 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 August to early September at the Bulk Fuel Storage Facility Stormwater (MP-03) and the Contaminated Snow Containment Facility (MP-04), referred to as MP-04A. At the Mine Site, the OWTS was operated at the Fuel Storage Facility (MS-03). During 2020, a total of approximately 3,435 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 2020.

Figures 3 and 5 show the locations of the Milne Port and Mine Site containment areas associated with the Bulk Fuel Storage Facility (stormwater) and Contaminated Snow Containment Facility (MP-04A), respectively.

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 four (4) surface water management ponds have been established at the Project:

Mine Site

- Crusher Facility Pond (CF Pond; MS-06);

- 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 63,919 m³ was actively discharged from the WRF Pond (MS-08) to an approved final discharge point (FDP) within the catchment of Mary River Tributary F (Figure 5) using pumps and rigid hose in 2020. A total of approximately 263 m³ was actively discharged from the CF Pond (MS-06) in 2020. Effluent from MS-06 was discharged using a pump and a direct-discharge pipeline to the approved FDP near the Mary River.

At Milne Port, approximately 6,712 m³ (3,990 m³ at MP-05 and 2,722 m³ at MP-06) of effluent was actively discharged from the Milne Port Ore Stockpile Ponds to Milne Inlet during 2020. Effluent from MP-05 and MP-06 was discharged to Milne Inlet using pumps and non-rigid hose.

Table 5.4 provides the daily, monthly and annual quantities of effluent discharged from Project surface water management ponds during 2020. 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 2020, 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 (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 2020 and as a result no wastes were generated and/or managed at these Project sites.

The following subsections describe the waste management and disposal activities conducted at the Project during 2020.

5.2.1 Site Incinerators

In 2020, 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 2020 monitoring activities completed for incinerator bottom ash generated at the Project.

5.2.2 Open Burning

Open burning was conducted throughout 2020 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 2020, 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 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 weekly throughout 2020 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.

In addition to ongoing employee training around waste management, in January 2020, the Environment Department assessed the life cycle of waste, from source control to segregation and final disposal of products across the Project. Through this assessment, items requiring corrective action were identified and follow up actions implemented. Findings from the waste assessment were shared with employees across the site through the departmental bi-weekly safety meetings.

A total of approximately 12,676 m³ of waste was deposited at the Landfill Facility in 2020. Table 5.6 provides the monthly and annual quantities of waste deposited at the Landfill Facility during 2020. Since the commissioning of the Landfill Facility, a total volume of approximately 73,974 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 2020, the OWTS was used to treat water at the Landfarm Facility. Prior to discharge, water retained in the Landfarm 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 5.7 for volumes of water discharged from the Landfarm Facility in 2020.

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 2020, 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 continued to clean up and remove intermingled debris from soils stored at the Landfarm Facility in 2020. Table 5.7 provides the estimated monthly and annual quantities of soil and contaminated water deposited at the Milne Port Landfarm Facility during 2020. It is noted that a survey error resulted in the quarterly waste report to QIA for Q2 2020 incorrectly reporting a volume of material

deposited at the landfarm. Subsequent review of the survey data confirms that no material was deposited at the Landfarm in 2020.

5.2.5 Hazardous Waste Storage and 2020 Backhaul Sealift

During 2020, there were two (2) sealift backhaul events for Project waste. The backhaul sealift vessels departed Milne Port in August and September 2020 carrying non-hazardous and hazardous waste materials generated and stored on site by the Project since the previous sealift backhaul in 2019. Prior to the 2020 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 2020 waste backhaul program, including inventories and shipping manifests identifying materials shipped off the Project in 2020 for disposal, treatment and/or recycling in Southern Canada. No Project wastes were transported and deposited in communities located in Nunavut during 2020.

Hazardous waste materials backhauled off the Project in 2020 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
- Empty corrosive liquid acidic 20 L pails – UN 3264
- Waste alkaline batteries – UN 3028
- Waste diesel fuel - UN 1202
- Waste flammable aerosol cans - UN 1950
- Waste gasoline – UN 1203
- Waste Jet Fuel – UN 1863
- Waste methanol – UN 1230
- Waste wet lead-acid batteries – UN 2794

Non-hazardous and hazardous waste materials backhauled off the Project in 2020 that were not regulated by the TDGA included (in alphabetical order):

- Antifreeze - coolant
- Broken glass
- Calcium chloride
- Decommissioned equipment and/or parts
- Diesel Exhaust Fluid (DEF)

- Electronic waste (E-Waste)
- Empty lime bags
- Grease
- Hazardous ash
- Hydrocarbon contaminated soil
- Kitchen grease
- Light bulbs and lamps
- Mixed garbage, filtration cakes and berm liner debris
- Mixed laboratory waste
- Oil
- Oil filters
- Scrap steel and metal
- Sewage liquid
- Used paper (for recycling)
- Water and fire fighting foam mixture
- Water treatment solid residuals

Hazardous waste and waste material generated after the 2020 backhaul sealift continues to be sorted and stored in designated waste storage areas at the Project. Wastes that cannot be treated, recycled or disposed at the Project will be packaged and prepared for the next backhaul sealift in 2021.

5.3 WASTE ROCK MANAGEMENT

5.3.1 Mine Site Waste Rock Facility

Mining operations at Deposit No. 1 (Nuluujaak Pit) continued throughout 2020. A total of approximately 4.36 Mt of waste rock was generated during 2020. 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 2020 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 2020 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 2020, thirteen (13) 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. Overall, this represented a frequency decrease of 48% when compared to the frequency of reportable spills in 2019. Sewage (untreated) was the most commonly spilled product at four (4) spills in 2020.

In addition to the original spill report submitted within 24 hours of each spill event in 2020, 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 2020 and planned in future years to address the sediment releases reported during freshet 2020, Baffinland has submitted the 2020 Freshet Monitoring Report, provided as Appendix E.11.

All spills reported to the NT-NU Spill Line in 2020 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 2020 spills are also presented in Figure 9. The follow-up spill reports and original spill reports are provided in Appendix E.8.4. It should be noted that one (1) of the reported spills occurred within secondary containment and did not result in hazardous materials (diesel) being released to the receiving environment. This spill, along with the twelve (12) other spills that did not occur in an engineered lined facility, are identified in Table 6.2. Table 6.2 also highlights the spill's proximity to waterbodies in which ten (10) of the reported spills occurred over 100 m away from a waterbody.

A basic analysis of the spills reported in 2020 indicated that the most common causes for the spills were equipment failure (component malfunction, preventive maintenance), improper operation of equipment, and procedural issues (inadequate procedure or training). Baffinland continues to work to identify basic causes so that effective long term corrective actions can be implemented. In 2020, Baffinland initiated a 5 WHYS analysis for all spills that are 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. Mandatory spill reporting is enforced at all levels in the organization; and, in addition, improved preventive maintenance plans, daily pre-operational checks of all equipment, spill tray usage bulletins, tool box meetings, prescribed training sessions, specific product handling and spill reduction plans are all examples of initiatives undertaken by Baffinland to reduce the frequency spills at the Project.

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 2020 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 Milne Inlet Oil

Pollution Emergency Plan (OPEP; BAF-PH1-830-P16-0013) 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 2020. 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 5.2, 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 2020.

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. Appendix E.13 includes an application of proposed 2020 changes to the SNP stations.

7.1 SEWAGE DISPOSAL

Sewage generated and managed by the Project in 2020 was managed as described in the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010) and in accordance with the Type 'A' Water Licence (Part F, Items 17 - 19).

During 2020, 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 2020, there were five (5) exceedances of the effluent discharge criteria for treated sewage effluent generated by Project operations which were reported in the respective monthly water licence SNP reports including four (4) exceedances at the Mine Site STP (MS-01B) servicing the Sallivik Camp and one (1) at the Milne Port STP (MP-01B) servicing the 380p Camp. Details on the nature of the five (5) exceedances are provided below.

On January 15, 2020, a treated sewage effluent sample from the Mine Site STP (MS-01B) servicing the Sallivik Camp exceeded the applicable discharge criteria for fecal coliforms of 1,000 colony-forming units per 100 milliliters (CFU/100 ml). The elevated fecal coliforms (1,300 CFU/100 ml) is believed to be the result of either sampling error or external laboratory error, as the STP was operating as designed at the time the sample was collected. As a precaution, the ultraviolet (UV) bulbs used to disinfect effluent prior to discharge were replaced following receipt of the external laboratory results on February 6, 2020. The subsequent monthly effluent discharge sample for February 2020 was collected and sent for external laboratory analysis on February 4, 2020, prior to the replacement of the UV bulbs. The external laboratory results for the February 4, 2020 sample indicated a fecal coliform value of 0 CFU/100 ml, confirming the STP was functioning as designed prior to the UV bulb replacement.

On April 7, 2020, a treated sewage effluent sample from the Mine Site STP (MS-01B) servicing the Sallivik Camp exceeded the applicable discharge criteria for fecal coliforms of 1,000 CFU/100 ml. The elevated fecal coliforms (2,600 CFU/100 ml) was caused by a breakthrough on one of the effluent treatment membranes on Membrane Bioreactor (MBR) Train No. 2 that occurred on April 7, 2020. Upon observing the breakthrough, the STP Operator immediately stopped the effluent discharge and isolated the affected line from the overall STP system. Measurements taken for Total Suspended Solids (TSS), turbidity, phosphorus and ammonia following the isolation on April 7, 2020 were all within acceptable operating levels, indicating that the effluent quality was compliant with discharge criteria, prior to resuming effluent discharge later that day. Subsequent to the affected membrane being isolated and the discharge being restarted on April 7, 2020, the monthly effluent sample that exceeded the effluent discharge criteria had been collected. It is believed that the presence of fecal coliforms in the April 7, 2020 effluent sample indicated the presence of short lived residual fecal coliform remaining from the membrane breakthrough. The external laboratory result for a subsequent effluent sample collected on May 12, 2020 had a fecal coliform value of 0 CFU/100 ml, confirming that fecal coliforms in treated effluent from the MS-01B STP were back in compliance with the discharge criteria.

On June 9, 2020, a treated sewage effluent sample from the Mine Site STP (MS-01B) servicing the Sallivik Camp was outside the applicable criteria range for pH (6.0 – 9.5 pH units) and exceeded the applicable discharge criteria for ammonia (4 mg/L). The low pH (5.34 pH units) and elevated ammonia concentration (14.9 mg/L) are believed to be the result of either sampling error or external laboratory error, as the STP was operating as designed at the time the sample was collected. Internal effluent quality measurements conducted prior to the collection of the June 9, 2020 sample indicated that the pH (7.23 pH units) and ammonia (0.06 mg/L) were in compliance with the discharge criteria. Following receipt of the external laboratory results for the June 9, 2020 sample on June 18, 2020, the accuracy of the pH and ammonia meters in STP MS-01B were verified by comparing pH and ammonia measured in a treated effluent sample with measurements of pH and ammonia in the same sample using the effluent quality meters at the MS-01 STP. External laboratory results for a subsequent treated effluent sample collected from the MS-01B STP on June 23, 2020, confirmed that the pH (8.17 pH units) and ammonia (0.20 mg/L) were in compliance with the discharge criteria.

On September 16, 2020, a treated sewage effluent sample from the Milne Port STP (MP-01B) servicing the 380-Person Camp exceeded the applicable discharge criteria for fecal coliforms of 10,000 CFU/100 ml (Table 7.2.3). The elevated fecal coliform value (18,900 CFU/100 ml) is believed to be the result of sampling error as the STP was operating as designed at the time the sample was collected. The external laboratory result for a subsequent effluent sample collected from the MP-01B STP on September 30, 2020 had a fecal coliform value of 0 CFU/100 ml, confirming that fecal coliforms in treated effluent from the MP-01B STP were in compliance with the discharge criteria.

Table 5.1 provides the daily, monthly and annual quantities of treated sewage effluent discharged to the receiving environment in 2020. Table 7.2 (7.2.1, 7.2.3, 7.2.15, 7.2.16) provides the effluent quality

monitoring results for treated sewage effluents discharged from Project STPs (MP-01, MP01B and MS-01, MS-01B) to the receiving environment during 2020.

7.1.1 2020 Mine Site PWSP Effluent Discharge to Sheardown Lake NW

In accordance with the PWSP Effluent Discharge Plan, provided in the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010), wastewater stored at the Mine Site PWSP No. 2 (MS-MRY-04B) was discharged to Sheardown Lake NW in June 2020.

Table 5.1 provides the daily, monthly and annual quantities of effluent discharged from the Mine Site PWSP MS-MRY-04B in 2020. Table 7.2.19 presents the water quality results for the 2020 discharge. There was one (1) in field monitoring exceedance of ammonia during the field monitoring completed in 2020. The measured ammonia concentration (4.1 mg/L) exceeded the applicable water quality discharge criteria (4.0 mg/L) in an in-field sample collected on June 20. The discharge was immediately stopped in accordance with the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010), and was not resumed in 2020. There were no other indicated exceedances of the applicable water quality discharge criteria during the 2020 discharge from the external laboratory results or in field monitoring completed in 2020. Three (3) effluent quality monitoring requirements were not fulfilled due to an unexpected flight delay during transport of an effluent sample collected from the MS-MRY-04B effluent discharge on June 16, 2020 for the annual acute lethality analysis and the monthly BOD and Faecal Coliform analysis requirements specified in the Type 'A' Water Licence (Schedule I, Table 12, Group 3 and Group 2). As a result of the flight delay, the acute lethality sample was not received at the external laboratory within the five (5) day maximum allowable sample hold time for the results of the acute lethality analysis to be valid and the analysis was not completed. Similarly, the water quality sample was not received at the external laboratory within the allowable hold times for the results of the BOD (4-day maximum) and Faecal Coliform (48 hours' maximum) analysis to be valid and the analysis was not completed. Upon receipt of notification from the external laboratory of the hold time exceedances on June 24, 2020, discharge from the MS-MRY-04B pond had ceased, preventing the opportunity for resampling and the annual acute lethality analysis and monthly BOD and Faecal Coliform analysis from being completed. To prevent similar incidents from re-occurring, Baffinland is committed to scheduling effluent sampling dates for acute lethality and water quality samples to coincide with the earliest day that outbound flights are scheduled on any given week to allow the opportunity for resampling and transporting new samples on the next available flight. Baffinland also requested shipping companies to notify the Environment Department immediately when there is flight or ground transport delays that could potentially result in a sample hold time exceedance, to allow an opportunity for resampling to be performed.

7.1.2 2020 Milne Port PWSP Effluent Discharge to Milne Inlet

In accordance with the PWSP Effluent Discharge Plan, provided in the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010), wastewater stored at the Milne Port PWSP (MP-01A) was discharged to Milne Inlet in August 2020.

During the August 8-17, 2020 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 410 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 2020. Table 7.2.2 presents the water quality results for the 2020 discharge. There were no indicated exceedances of the applicable water quality discharge criteria during the 2020 discharge from external laboratory results or in field monitoring.

7.2 STORMWATER FROM CONTAINMENT AREAS

During 2020, 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) 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 treated using the mobile OWTS and discharged to the Milne Inlet receiving environment using pumps and non-rigid hose on an intermittent basis during the June 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 August 26, 2020. The elevated concentration of total lead (0.00117 mg/L) is believed to be the result of either sampling error or external laboratory error, as the concentrations of total lead in three (3) pre-discharge samples collected from MP-03 on August 19, 2020 were all below the discharge criteria of 0.001 mg/L. Table 5.3 provides the daily, monthly and annual quantities of stormwater discharged from the Milne Port Bulk Fuel Storage Facility in 2020. Table 7.2.4 presents the water quality results for the 2020 stormwater discharge from MP-03. Aside from the total lead exceedance in the August 26, 2020 sample, there were no other indicated exceedances of the applicable water quality discharge criteria during the 2020 discharge from MP-03 from external laboratory results or in field monitoring.

Stormwater from the Mine Site Bulk Fuel Storage Facilities (MS-03 and MS-03B) was treated using the mobile OWTS and discharged to the Sheardown Lake receiving environment using pumps and non-rigid hoses on an intermittent basis. Stormwater was discharged from MS-03 during July to August and stormwater was discharged from MS-03B in August. Stormwater discharge grab samples were collected from MS-03 and 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. Measured total lead in a grab sample collected from the MS-03 stormwater discharge on July 22, 2020

was 0.00105 mg/L while measured total lead in a duplicate sample (MS-0301) collected at the same time had a total lead concentration of 0.000811 mg/L. The average total lead concentration for the MS-03 and MS-0301 field duplicate sample (0.00093 mg/L) was compliant with the discharge criteria of 0.001 mg/L. Upon receipt of the external laboratory results for the July 22, 2020 samples on July 28, 2020, the MS-03 discharge was re-sampled on July 30 and July 31, 2020. The external laboratory results for the grab sample collected on July 30, 2020 had a total lead concentration of 0.000465 mg/L and the results for the grab sample collected on July 31, 2020 had a total lead concentration of 0.000316 mg/L, indicating that the stormwater was compliant with the discharge criteria. Table 5.3 provides the daily, monthly and annual quantities of stormwater discharged from the Mine Site Bulk Fuel Storage Facilities in 2020. Table 7.2.17 presents the water quality results for the 2020 stormwater discharge from MS-03 and Table 7.2.18 presents the results for the 2020 stormwater discharge from MS-03B. There were no indicated exceedances of the applicable water quality discharge criteria during the 2020 discharge from MS-03 and MS-03B from external laboratory results or in field monitoring.

Treated water was discharged from the Milne Port Landfarm Facility (MP-04) to a ditch near Milne Inlet on September 6 and 9-12, 2020. 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, 1-micron, and 0.45-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 were no indicated exceedances of the applicable water quality discharge criteria during the 2020 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 Landfarm Facility in 2020 and Table 7.2.5 presents the water quality results for the 2020 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 during the August 29-31, 2020 period. 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 no indicated exceedances of the applicable water quality discharge criteria during the 2020 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 2020 and Table 7.2.6 presents the water quality results for the 2020 treated water discharge from MP-04A.

7.3 SURFACE WATER RUNOFF AND SEEPAGE

In accordance with the terms of the Type 'A' Water Licence (Part I), surface run-off/seepage from 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 2020 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 2020 and is summarized in Section 7.3.6 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 2020, 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 2020.

Volumes of effluent discharged from the east (MP-05) and west (MP-06) ponds in 2020 are presented in Table 5.4. Water quality monitoring results for the 2020 discharges are provided in Tables 7.2.11 and 7.2.12.

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 2020, surface water runoff from the Landfill Facility was initially sampled in June and continued to be sampled until freeze-up in September.

During 2020, 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 7.2.24 and 7.2.25.

Surface flow volumes continued to be monitored at MS-MRY-13A in 2020 using an existing weir and a pressure transducer logger installed in early June 2020. Daily surface flows at MS-MRY-13A during 2020 are presented in Appendix E.3.

Baffinland continued the groundwater monitoring program at the Landfill Facility and expanded the number of monitoring locations in 2020. During September 2020, Baffinland installed additional 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 the pre-existing and new well locations where groundwater was detected. For a complete discussion of the 2020 groundwater monitoring program at the Landfill Facility, refer to Section 7.5 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 WTP at the WRF to treat surface water runoff retained by the WRF Pond, when necessary in 2020. 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 updated Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010).

During 2020, the water quality of the WRF Pond was found to be compliant with the applicable water quality effluent criteria stipulated by the Type 'A' Water Licence and MDMER in June and July without any treatment being required. In August, operation of the WRF WTP was effective at mitigating any water quality concerns for the effluent to be compliant with the applicable criteria.

Beginning in June 2020, controlled discharges of effluent from the WRF Pond were conducted and resulted in no exceedances of the water licence water quality discharge criteria in 2020 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 2020 MDMER annual effluent monitoring report for the Mary River Mine Site in Appendix E.16.

Controlled effluent discharges from the WRF in 2020 involved pumping retained surface water runoff from the WRF Pond through the WRF WTP and releasing the treated effluent at an established Final Discharge Point (FDP) 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 FDP to ensure the water quality was

compliant with effluent discharge criteria. As outlined in the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (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.

Volumes and water quality results associated with the 2020 controlled effluent discharges from the WRF are provided in Tables 5.2 and 7.2.21, respectively. Locations of the WRF effluent monitoring and discharge points are shown in Figure 5 and provided in Table 7.1.

In June 2020, water from the WRF was observed bypassing the WRF's west collection ditch in the southwest corner and flowing to the tundra. A rain event triggered the increased runoff observed within the WRF and surrounding area, and material that was placed in the southwest corner due to operator error changed the interim flow path. The runoff leaving the facility (sample point MS-WRF-01W) was subsequently tested and submitted for analysis to an external laboratory. An acute lethality sample could not be collected as the flow level was too low for a representative sample. The external laboratory water quality results confirmed the water was compliant with effluent discharge criteria; as previously determined by field readings. Water samples in the west ditch were also collected down-gradient (MS-D1-02) on July 1st and July 2nd and the results were compliant. The WRF ring road allows for access to the west ditch and also acts as a clean water diversion as per Baffinland's Phase 1 Waste Rock Management Plan (BAF-PH1-830-P16-0029). A swale on the east side of the ring road was constructed to divert water to the west ditch. An excavator was dispatched to ensure all contact water reported to the west ditch. The swale is functional and conveying water to the WRF Pond.

The release was reported by Baffinland to relevant regulators and is documented in the NT-NU Spill Report 20-199. Copies of the original and follow-up spill reports for the release are provided in Appendix E.8.4 and provide additional details on the release and the corrective actions taken by Baffinland.

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) footprint. Surface water runoff from the Crusher Facility's footprint is currently 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 during August 2020. Controlled effluent discharges from the Crusher Facility in 2020 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 2020 Crusher Facility effluent discharges. The results of sampling completed to satisfy MDMER requirements are detailed in Baffinland's 2020 MDMER annual effluent monitoring report for the Mary River Mine Site in Appendix E.16.

Volumes and water quality results associated with the 2020 controlled effluent discharges from the Crusher Facility are provided in Tables 5.2 and 7.2.20, respectively. Locations of the Crusher Facility effluent monitoring and discharge points are shown in Figure 5 and provided in Table 7.1.

To address the concerns regarding the integrity of the ditch network identified in 2019 at the CF, a rhodamine dye test was conducted with the water on the Crusher Facility Pad in July 2020. Rhodamine dye was detected at the southwest corner of the pad, suggesting that contact water from the pad may have been seeping through the pad and being released to the tundra down gradient of the facility. Following this discovery, all water on the pad was pumped directly from the pad to the CF Pond.

Subsequent water quality monitoring at CP-SEEPAGE-03 confirmed the seepage was compliant with all applicable water licence and MDMER criteria, with the exception of TSS. It is suspected that the high TSS value is not representative of the actual water quality as there was limited water flow that prevented the collection of a representative sample. The toxicity sample collected at CP-SEEPAGE-03 was compromised during shipping and as a result only contained sufficient volume for *Daphnia magna* analysis, which found the seepage water was not acutely toxic. Subsequent water quality monitoring at the SNP monitoring station MS-C-E downstream of the CF Pond confirmed the receiving environment water quality was compliant with all applicable water licence and MDMER criteria, and was found to be not acutely toxic.

Emergency sumps have been strategically installed at the foot of the downstream toe of the collection ditch where seepage was identified, as an interim remedial measure, in accordance with Part H Item 8 and 11 of the Type 'A' Water Licence and consistent with the Project's Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010) and MDMER Emergency Response Plan (BAF-PH1-830-P16-0047). Baffinland will continue to implement the Ore Crusher Pad Regrading Strategy to prevent the pooling of water on and around the Crusher Facility pad. A pumping system has been installed to transfer collected seepage water from these temporary emergency sumps to Crusher Facility Pond MS-06. Further investigation is being conducted to determine the appropriate corrective actions to effectively address the causes of the seepage. All water on the Crusher Facility pad and in the emergency sumps is pumped directly to the CF Pond as a mitigation measure to prevent water from entering the collection ditch to prevent potential seepage to the tundra. Baffinland is evaluating additional water management measures for the CF as part of the Long Term Water Management Plan to be finalized in 2021. In accordance with the Type 'A' Water Licence, Part G, Baffinland will submit a Modification Request for any new structures designed to contain or divert water from the CF pad.

The release was reported by Baffinland to relevant regulators and is documented in the NT-NU Spill Report 20-208. Copies of the original and follow-up spill reports for the release are provided in Appendix E.8.4 and provide additional details on the release and the corrective actions taken by Baffinland.

7.3.5 Deposit No. 1

Monitoring stations MS-MRY-9, MS-MRY-10, MS-MRY-11 and MP-MRY-12 under 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 developed and infrastructure changes at the Project, these monitoring stations have 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-9, 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.

During 2020, there were no exceedances of the applicable water quality criteria involving surface water runoff downstream of Deposit 1. Water quality monitoring results for MS-MRY-9 and MS-MRY-10 are presented in Tables 7.2.22 and 7.2.23. Locations of the Deposit 1 monitoring are shown in Figure 5 and provided in Table 7.1.

7.3.6 Tote Road Monitoring Program

During 2020, 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 2020, 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 concentrations to downstream 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 2020, a total of 290 samples were collected for water quality under the TRMP. Based on the water quality monitoring completed in 2020 under the TRMP, there were eleven (11) sampling events 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 25 to June 15, 2020 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. Where required, Baffinland implemented mitigation measures consistent with the Surface Water and Aquatic Ecosystem Management Plan (BAF-PH1-830-P16-0026). 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 2021, and confirm if Project related changes persist at these locations. There were no additional sampling events during the remainder of the TRMP monitoring period between June 16 and September 13, 2020 when a downstream sample had a TSS concentration greater than the screening criteria.

The TRMP is included as Appendix D of the Project's Roads Management Plan (BAF-PH1-830-P16-0023). Water quality results for the 2020 TRMP monitoring are presented in Table 7.7.

7.3.7 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 2020. Grab samples were taken at each active location weekly during periods of flow and submitted to an external lab for analyses. There were twelve (12) weekly sampling events that resulted in TSS concentrations that were greater than the Type 'A' Water Licence criteria for grab samples of 30 mg/L and six (6) sampling locations that had monthly average TSS concentrations that were greater than the criteria for monthly average TSS of 15 mg/L. It is suspected that the high TSS value in four (4) of the twelve (12) grab sample exceedances (June 9 TR-SN-02, June 18 TR-SN-3, June 27 TR-SN-03, and June 10 TR-SN-05) 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. All of the grab samples that exceeded the criteria for TSS concentrations and all of the monthly average TSS concentrations occurred in June 2020 when 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 mitigation measures, such as coir logs and silt fences, were installed and maintained where necessary in accordance with Baffinland's Surface Water and Aquatic Ecosystem Management Plan (BAF-PH1-830-P16-0026) to mitigate sediment impacts in the runoff water from the snow stockpile areas. Water quality results for the 2020 snow stockpile monitoring locations (MS-SN-01, MS-SN-02, MS-SN-03, TR-SN-01, TR-SN-02, TR-SN-03, TR-SN-04, TR-SN-05, TR-SN-KM92.5) are presented in Table 7.2 (Tables 7.2.38 to 7.2.46).

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 2019, 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 Surface Water and Aquatic Ecosystem Management Plan (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 borrow sources and quarries was conducted during 2020. During 2020, there were three (3) incidents where water samples collected downstream of quarry locations exceeded the applicable grab sample criterion of 15 mg/L for TSS. Two (2) exceedances occurred on June 6 and June 30, 2020 at MQ-C-B downstream of the QMR2 Quarry, and one (1) exceedance occurred on June 22, 2020 at MP-Q1-01 downstream of the MP-Q1 Quarry. All three (3) exceedances are believed to be a result of high flows and rapid snow melt during freshet and demonstrated to be short-lived events with subsequent sampling events showing that TSS levels had returned to acceptable concentrations. 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 2020. During 2020, all acute toxicity samples collected downstream of active quarries (Q1 and QMR2) were demonstrated to be non-acutely toxic.

2020 water quality monitoring results for stations MP-Q1-01, MP-Q1-02, MQ-C-A, MQ-C-B, and MQ-C-D representing surface water runoff from developed quarries are provided in Table 7.2 (Table 7.2.34 to Table 7.2.36) 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 also measured at or near most of these surface water monitoring locations and are detailed in Appendix E.3.

To address the 2020 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 (TREEP; Golder, 2017). Corrective actions and mitigation measures implemented to address sedimentation concerns at the Project in 2020 are fully discussed in the 2020 Freshet Monitoring Report provided in Appendix E.11. The reader is referred to the Project's Surface Water and Aquatic Ecosystem Management Plan (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.

7.5 NATURAL SEDIMENTATION EVENTS

During 2020, multiple natural sedimentation events were observed and documented in various locations across Baffin Island. All observed natural sedimentation events occurred during the summer months of June 2020 to August 2020, analytical results for TSS are presented in Table 7.6.

On June 17, 2020, while commuting back from Bruce Head, the environment crew observed turbid water in an undisturbed tributary northwest of Milne Port. Crews returned to the area later that day and

collected upstream and downstream samples at three different locations to determine the source location. The first set of samples named MP-NS-20-01-US and MP-NS-20-01-DS were taken in a braided stream and demonstrated an elevated TSS concentration of 209 mg/L downstream. The crew then flew downstream to where the stream was starting to enter a small lake. These samples, named MP-NS-20-02-US and MP-NS-20-02-DS, demonstrated an elevated TSS concentration of 346 mg/L downstream. Lastly, the crew flew further downstream and collected samples named MP-NS-20-03-US and MP-NS-20-03-DS which demonstrated an elevated TSS of 168 mg/L downstream. Following the sampling events, a flight was conducted overhead of the locations and it was discovered that slopes of slumping glacial till were entering the tributary at various locations potentially due to increased snowmelt.

On June 30th, 2020, the environment department at Milne Port documented a natural sedimentation event. The event was occurring in an undisturbed tributary north of Milne Port. The river was observed to be turbid and an upstream and downstream sample was collected and named MP-NS-20-04-US and MP-NS-20-04-DS. The lab results indicated TSS concentrations of 11.8 mg/L and 222 mg/L. The event was followed up twice with photos documenting the source location which was not project-related.

While the environment crew was conducting field work via helicopter on July 15, 2020, two natural sedimentation events were occurring approximately 8 km northeast of Deposit 1. At the first location, an upstream and downstream sample were collected and named MR-NATSED-1-US and MR-NATSED-1-DS, which demonstrated TSS concentrations of 10.8 mg/L and 18.6 mg/L. The crew then flew 6 km downstream and collected two more samples: MR-NATSED-2-US and MR-NATSED-2-DS. These samples demonstrated TSS concentrations of 15.5 mg/L and 18.1 mg/L. The cause of the events was attributed to snowmelt causing the bank slope to erode into the river at the two locations.

On July 19, 2020, the environment crew revisited the location where the natural sedimentation event named MR-NATSED-2 was occurring and collected another set of upstream and downstream samples. The results demonstrated TSS concentrations of 6.4 mg/L and 16.8 mg/L. The crew then flew downstream and collected another set of samples named MR-NATSED-3-US and MR-NATSED-3-DS. These demonstrated TSS concentrations of 3.9 mg/L and 11.8 mg/L indicating another location between the upstream and downstream sample locations where snowmelt was causing the bank slope to erode and enter the water.

On August 3, 2020, a natural sedimentation event was documented approximately 16 km east of Deposit 1 during AEMP stream sampling. The event was caused by a large area of slumping hills that were entering a tributary that joins the Mary River. An upstream and downstream sample were collected and named MR-NATSED-4-US and MR-NATSED-4-DS. The samples demonstrated TSS concentrations of 4.4 mg/L and 328 mg/L indicating that the slumping hills was the source and the event was not project related.

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 2020 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 2020 study report is provided as Appendix E.9.1.
- Lake Sedimentation Monitoring Program evaluates baseline and Project-influenced lake sedimentation rates at Sheardown Lake NW. The 2020 study report is provided as Appendix E.9.2.
- Hydrometric Monitoring Program assesses flow in several streams and rivers near Project sites and supports the AEMP. The 2020 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.
- 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.
- Environmental Effects Monitoring (EEM) Program, as required under the MDMER. The first biological EEM study for the Project, Phase 1, was conducted in August 2017 and submitted to ECCC during January 2018. The second biological EEM study for the Project was conducted in August 2020 and submitted to ECCC in January 2021, and is provided in Appendix E.9.4.

On November 8 and 9, 2017, Baffinland chaired the 2017 Freshwater Workshop in Iqaluit, NU with regulators and stakeholders (ECCC, CIRNAC, 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 2020 Baffinland worked with QIA on the integration of a formal Adaptive Management framework, utilizing the existing AEMP Data Assessment Approach and Response Framework.

7.7 2020 GROUNDWATER MONITORING PROGRAM

Baffinland continued to conduct groundwater monitoring at the Project in 2020. Groundwater consultants, specialized in Arctic environments, were retained to further assess the current program and provide 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 identify any trends in groundwater quality, groundwater flow, and any discernable information about the condition of subsurface and stratigraphy of the investigated area, and reviewed methodologies used in the execution of the previous monitoring programs including the use of drive-point piezometers and low-flow sampling techniques. Following this review, the consultants made recommendations on the implementation of the groundwater monitoring program for 2020 and subsequently executed the recommendations during the 2020 field season and completed the groundwater monitoring program. The 2020 monitoring program was expanded to include the installation of three (3) additional temporary shallow monitoring wells around the Landfill Facility to further establish and validate background conditions and further assess down-gradient groundwater quality. The 2020 monitoring program used a similar methodology to the 2018 and 2019 Groundwater Monitoring Programs, and the 2017 Groundwater Pilot Program, establishing shallow groundwater wells up-gradient and down-gradient of the Landfill Facility using drive-point piezometers and collecting water samples near the depth of the active layer (approximately 1.1 to 1.8 metres) during 2020. The expanded program involved sampling three (3) groundwater wells up-gradient of the Landfill Facility and five (5) groundwater wells down-gradient of the Landfill Facility.

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 2020 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, boron, cadmium, iron, lead, mercury, nickel, silver and uranium. Several parameters were also detected in reference (up gradient) locations, suggesting naturally occurring sources of some contaminants of concern. Preliminary trend analysis indicates an increasing trend for select parameters, including nickel and uranium. 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 2020 groundwater monitoring program conducted at the Landfill Facility, refer to Appendix E.12 of this report.

Baffinland will continue the groundwater monitoring program in 2021, and will continue to retain consultants to execute the program which will be implemented based on the assessment and recommendations from the 2020 groundwater monitoring report. 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. Baffinland is committed to expanding the groundwater monitoring program 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 2020 as required by Schedule I of the Type 'A' Water Licence are presented in Table 7.2. Samples collected for analysis in 2020 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; 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 465 discrete sets of Type 'A' Water Licence regulatory samples collected in 2020, field QA/QC samples (43 duplicates, 12 field blanks and 15 travel blanks) comprised 14.8 % 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 7.5. The results for the field QA/QC program are mostly acceptable, however, there was some variations observed in field duplicates that had relative percent differences (RPD) 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 7.3. In addition, a total of twenty two (22) parameters in the field and travel blanks with result values greater than their respective parameter LDL were identified in 2020, however all were within three (3) times the value of their respective LDLs, with the exception of; turbidity in travel blank MP-C-B03 on September 14th, total dissolved solids in travel blank MP-C-B0103 on August 24th, turbidity in field blank MS-0602 on August 4th, dissolved organic carbon and dissolved magnesium in field blank MS-0802 on August 4th, total dissolved solids and turbidity in field blank MS-C-E02 on August 10th and turbidity in field blank MS-C-G02

on August 5th. The results of the field and travel blanks are presented in Table 7.4. 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 eight (8) accredited analytical laboratories during 2020, an increase from previous years to accommodate logistical changes due to Covid-19. A laboratory operated by ALS Environmental located in Waterloo, ON and run by ALS Canada Ltd. (ALS) performed the majority of sample analyses in 2020. An on-site accredited field laboratory, located at the Mine Site and also operated by ALS, performed select analyses in 2020 (i.e. pH, TSS, TDS, turbidity), reducing logistical costs while providing timely results.

Other laboratories operated by ALS Environmental located in Vancouver, BC and Yellowknife, NT performed sample analyses in 2020 for Baffinland. Taiga Environmental Laboratory located in Yellowknife, NT performed select analyses (BOD, bacteria) in 2020, subcontracted by ALS. Acute and chronic toxicity testing was conducted by Aquatox Testing & Consulting Inc. (Aquatox), located in Guelph, ON, and Nautilus Environmental, located in Burnaby, BC, and Calgary, AB, who were subcontracted by ALS.

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 2021, throughout 2020, many progressive reclamation activities were completed according to the action plan including the following:

- Completion of reclamation works on historical sections of the Tote Road, specifically near KM 72.4. To curtail further thawing and potential road collapse, bulk fill was added to the pits and grading was completed to lessen the potential for sediment release. Materials were sourced from KM 74 - 76 old road alignments.
- Completion of reclamation works for slope stabilization at Km 89.8 using fill from stockpiled material from erosion stabilization work completed in 2017.
- Completion of reclamation works at KM 19.8, 20.7, and 21.9. Over 23,000 m³ of material fill was sourced from decommissioned road at KM 23.5. Pits were backfilled and graded to enhance stability at these locations.
- 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 2020, 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 2021.
- 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 2020, a total of \$8,683,342 CAD of additional security was posted with the QIA, and \$142,199 of additional security with CIRNAC for activities outlined in the 2020 Work Plan (Rev. 1). 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, 2020 is summarized in Table 8.2.

9 PLANS, REPORTS AND STUDIES

9.1 SUMMARY OF STUDIES REQUESTED BY THE NUNAVUT WATER BOARD

In 2020, 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 2019 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 2020, 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 2020, 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, 2020 consisted of 39.37 ML of Arctic Diesel and 2.05 ML Jet-A1. No significant modifications to the fuel management infrastructure at Milne Port were completed in 2020.

At the end of 2020, 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 CCME "Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products" (2015). Fuel inventories at the Mine Site on December 31, 2020

consisted of 15.88 ML of Arctic Diesel at the Mine Site Bulk Fuel Storage Facility and 56,902 L of Jet-A1 at the Mine Site Aerodrome. No significant modifications to the fuel management infrastructure at the Mine Site were completed in 2020.

During 2020, 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 2020 were supplied using day tanks and 205 L drums.

As described in the 2020 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 2020. As of December 31, 2020, there were 974 drums (205 L) or 199,670 L of fuel (624 drums or 127,920 L of Arctic Diesel and 350 drums or 71,750 L of Jet-A1) stored at Steensby Port, 692 drums (205 L) or 141,860 L of fuel (406 drums or 83,230 L of Jet-A1 and 286 drums or 58,630 L of gasoline) at the Mine Site, 337 drums (205 L) or 69,085 L of fuel (gasoline) at Milne Port, and 7 drums (205 L) or 1,435 L of fuel (5 drums of diesel and 2 drums of gasoline) at Bruce Head. No fuel was stored at the Mid-Rail camp in 2020.

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.

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/July and September 2020. Reports for the geotechnical inspections were submitted to the NWB within 60 days of each inspection. Copies of the 2020 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 2020. 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 2020 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. In 2020, a total volume of 71.67 m³ of compliant incinerator ash was disposed in the Landfill Facility, including 35.11 m³ generated from the Mine Site incinerator and 36.56 m³ generated from the Milne Port incinerator as presented in Table E.2. Summary tables detailing the disposal method for ash generated by Project incinerators and analytical results screened for the applicable waste criteria in 2020, 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 2020 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 2020 were blasted in 2019, therefore there was no borehole drilling and analysis of borehole samples. All results for materials used in 2020 were previously reported in the 2019 Annual Report for Operations, however they are provided in Appendix E.7 for clarity.

As no additional sampling was completed in 2020 at Project quarries, further evaluation of the potential for Acid Rock Drainage and Metal Leaching (ARD/ML) was not completed. In 2021, 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 2020 continued to demonstrate neutral pH conditions and

9.6 WASTE ROCK STUDIES AND OPERATIONAL TESTING RESULTS

Throughout 2020, Baffinland continued to characterize Deposit No. 1 waste rock generated by 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 2020 included:

- QA/QC sampling on the WRF;
- Operational geochemical 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.

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 2020 in accordance to Phase 1 Waste Rock Management Plan – (BAF-PH1-830-P16-0029). This sampling program was implemented to verify that 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. Non-AG materials were found on the dump limits in samples WRD-2314, WRD-2422, WRD-2278, WRD-2268, WRD-2386, WRD-2350, WRD-2440, WRD-2404, with <0.2% Sulphur and an average paste pH value of 8.74, and samples taken within the dump locations where PAG is deposited in samples WRD-2296 and WRD-2332 yielded similar results to the former with <0.2% Sulphur and an average paste pH value of 8.30. Adherence to the plan with respect to material placement at the WRF is supported by the results presented in Table 9.2.

9.6.2 Geochemistry Monitoring Program

Operational testing of waste rock generated by mining operations at Deposit No. 1 continued to be conducted throughout 2020 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. The operational testing results provide the basis for determining the appropriate waste rock classification between PAG or Non-AG. Waste rock analyzed to have a paste pH value greater than 6 and a sulphur concentration less than 0.20% was classified as Non-AG material while waste rock analyzed to have a sulphur concentration greater than 0.20% and/or paste pH less than 6 was classified as PAG material. All PAG waste rock generated in 2020 was deposited at the WRF in accordance with the Phase 1 Waste Rock Management Plan, and the WRF QA/QC program. The 2020 operational testing results for waste rock material generated in 2020 are provided in Appendix E.6.1 through E.6.3.

Additionally, samples of waste rock collected on a frequency of 1 hole per 40,000 tonnes of blasted waste material were sent for analysis of full Acid Base Accounting (ABA) parameters including Neutralization Potential Ratio (NPR), as well as Shake Flask Extraction (SFE). The results of the ABA and SFE sampling were compiled to develop a comprehensive geochemical database for the WRF for the review and potential refinement of waste rock segregation practices, and increase the level of confidence in the

geochemical dataset. Samples sent for analysis were a composite of two blastholes per 40,000 tonnes from the same 'block' of material, to allow for better spatial coverage with the waste mining area and ensure sufficient sample quantity for analysis.

The results of this monitoring indicate that waste rock segregation criteria and practices remain effective at screening for PAG and Non-AG material. Heterogeneity within the sample material resulted in slight variations between the results of the operational sampling analysis and the 1:40,000 sampling analysis for the same borehole locations. The results of the 1:40,000 sampling are presented in Appendix E.6.4. Results of this dataset will be compiled in future updates to the Waste Rock Management Plan, including further analysis of the screening criteria efficacy.

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 2020, 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 Table E.6.5 and E.6.6. A total of thirty-one (31) samples, including one (1) field duplicate, were collected between June 25, 2020 and September 1, 2020. Water quality of runoff from the WRF reporting to the WRF Pond demonstrated neutral pH conditions through the entire 2020 season.

Samples of the drainage/seepage at the tow of the WRF are presented in Table E.6.7. A total of seventy-nine (79) samples, including five (5) field duplicates were collected between July 22, 2020 and August 31, 2020. Generally, water quality demonstrated neutral pH conditions, with the exception of four (4) samples below a pH of 6. Subsequent sampling events demonstrated that these locations returned to neutral conditions, suggesting that any observation of low pH conditions was localized and short lived. These may be attributed to reactivity in the seasonal active layer of the WRF prior to freeze back.

Results of the water quality monitoring show that runoff from the WRF generally demonstrates 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, temporary, 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. Thermal data as well as oxygen and pressure monitoring data has been continuously acquired from each of these instruments throughout 2020.

In 2020, Baffinland retained Golder Associates Ltd. (Golder) to complete a review of the thermal monitoring to date, and update the thermal modelling completed in 2019 to support updates to Phase 1 Waste Rock Management Plan (BAF-PH1-830-P16-0029). Data collected from the thermistors indicates that the WRF is still frozen at depth, with only a shallow seasonal active layer. The data demonstrates that the placement of waste rock to date has promoted the aggradation of permafrost and is consistent with the long term management and closure objectives of the WRF. Details of the thermal model update completed by Golder are provided in Appendix E.17.

9.7 RECLAMATION RESEARCH

In 2020, Baffinland initiated the first task under the Open Pit Runoff Water Quality reclamation research program (Appendix D1, Interim Closure and Reclamation Plan BAF-PH1-830-P16-0012). This task involved the execution of a literature review to assess if long term meromictic conditions would be anticipated for the Mary River Project, based on experience from other mines in northern climates. The Pit Lake Literature Review was completed by Golder Associates Ltd. and is provided in Appendix E.10.

The results of the literature review demonstrated that development of meromictic conditions can occur at northern Canadian sites, but is dependent on site specific conditions such as salinity, groundwater inflow, and factors affecting mixing conditions such as weather. Monitoring to develop a long term record of site conditions, including water quality and meteorology, will be required to develop hydrodynamic and water quality models to predict pit lake stratification and water quality in post-closure. Future tasks under this reclamation research program will focus on this work, but will not be fully initiated until the current hilltop outcrop mining area is reduced to a grade that the open pit begins to form and water quality can be monitored.

Reclamation research work planned for 2021 includes the continuation and expansion of the re-vegetation program initiated in 2019.

10 REGULATORY INSPECTIONS AND COMPLIANCE

10.1 REGULATORY INSPECTIONS

Throughout 2020, Baffinland hosted numerous inspections and audits from CIRNAC, QIA, and NIRB, as well as the WSCC Mines Inspector. Due to the on-going Covid-19 pandemic, site visits were completed physically on site and virtually throughout the year. Table 12.2 summarizes the 2020 site visits to the Project by the various agencies in 2020. Appendix E.15 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 2020. The date of the inspections is as follows:

- February 17-18, and
- October 13-15.

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 2020 CIRNAC Water Licence Inspection Report and Baffinland's responses are provided in Appendix E.8.1.

10.1.2 QIA Inspections

The QIA conducted one (1) inspection/visit of the Project in 2020 under the Commercial Lease. The date of the inspection is as follows:

- March 10-13

In addition to the inspection, the QIA conducted one (1) environmental audit from September 3 to 11, 2020.

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 2020.

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

The Workers' Safety & Compensation Commission (WSCC) conducted two (2) inspections of the Project through virtual visits in 2020. The dates of the inspections and visits are as follows:

- February 19-20; and
- August 17-21.

In lieu of a site inspection, the WSCC conducted a desktop geotechnical review for Baffinland Mary River Mine from December 7-11, 2020.

Reports generated from these inspections and visits were distributed to Baffinland management as well as Baffinland's Occupational Health & Safety (OHS) Committee. The 2020 inspections and visits resulted in directives being issued to the Company over the course of the year. All directives were reviewed by the management team and responses were sent to the Mines Inspector within a timely manner. The results of the inspections are provided in Appendix E.8.3.

10.2 REGULATORY ENFORCEMENT ACTIONS

During 2020, there were no enforcement actions issued to the Project by federal or territorial regulators. However, in 2020 legal proceedings were initiated under the Nunavut Court of Justice related to the fatality that occurred at the Mary River Mine Site on December 16, 2018.

10.2.1 Waste Rock Facility

During the summer of 2017, the development of Acid Rock Drainage and Metal Leaching (ARD/ML) at the WRF in combination with the WRF Pond liner becoming compromised resulted in non-compliant effluent discharges at the WRF

As a result of the concerns identified and non-compliant effluent discharges at the WRF in 2017, CIRNAC issued an Inspector's Direction to Baffinland on September 5, 2017 followed by the QIA and ECCC issuing notifications to Baffinland on September 7, 2017 and September 13, 2017, respectively, that both parties had initiated investigations into the 2017 events at the WRF.

In response to the concerns identified and non-compliant discharges, Baffinland developed and implemented several immediate corrective actions in 2017 to ensure compliance regarding the management of waste rock and effluent at the WRF. These immediate actions were summarized and provided to regulators in the Project's 2017, 2018 and 2019 QIA and NWB Annual Report for Operations.

Baffinland continues to remain committed to addressing the identified concerns and maintaining compliance in the management of waste rock and effluent at the WRF. Industry best practices and procedures planned for the WRF to maintain compliance are detailed in the Project's most recent revisions of the Phase 1 Waste Rock Management Plan (June 2020; Appendix E.5), MDMER Emergency Response Plan (BAF-PH1-830-P16-0047) and Fresh Water Supply, Sewage and Wastewater Management Plan (BAF-PH1-830-P16-0010). Key corrective actions executed in 2020 included the completion of the repair and expansion of the WRF Pond in January 2020 to mitigate the inferred source of the seepage.

On February 20, 2020, Baffinland received email correspondence from ECCC Environmental Enforcement Division informing Baffinland that ECCC had concluded its investigation in regards to the WRF, specifically in regards to:

1. Fisheries Act subsection 36(3) - An effluent seepage and overflow identified during an ECCC on-site inspection on August 23-24, 2017 from the Waste Rock Stockpile Sedimentation Pond (MS-08) located at the BIMC, Mary River Project.
2. Metal Mining Effluent Regulations - Failing to comply with requirements under sections 4 to 31 set out in the Regulations. This notification information was received from Spill Reports 2017-289, 2017-312, 2017-328, 2017-361 and 2017-361 that were submitted to the NT/NU spills line.

Based on the information collected during the course of the investigation and consistent with the Compliance and Enforcement Policy for the Habitat Protection and Pollution Prevention Provisions of the Fisheries Act, Baffinland was informed that ECCC has decided to close the investigation and not take any enforcement actions related to the investigation that was opened on September 13, 2017 under the Fisheries Act and the Metal and Diamond Mining Effluent Regulations.

11 AMENDMENTS – PENDING AND COMPLETED

11.1 TYPE 'A' WATER LICENCE

Although no amendments to the Type 'A' Water Licence were completed in 2020, on August 16, 2018, Baffinland submitted an application to the NWB to amend the Type 'A' Water Licence to support the Project's Phase 2 Proposal. On May 5, 2019 Baffinland submitted updated documentation to the NWB for the Phase 2 Proposal, including updated monitoring and management plans, as well as issued for construction drawings. At the end of 2020, the Project's Phase 2 Final Environmental Impact Statement (FEIS) and associated Type 'A' Water Licence amendment application continued to proceed through the review and approvals process facilitated by the NIRB and NWB.

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. During 2020, Baffinland submitted one (1) Options Exercise Notice to the QIA for review and approval. Details of the submissions are summarized in Table 11.1 and discussed below:

- KM 76 Snow Stockpile Land Classification Amendment – An OEN was submitted to QIA on December 18, 2020 for the Kilometer 76.5 Snow Stockpile located immediately adjacent to the Tote Road which connects the Mary River Mine Site to Milne Port. The area was previously disturbed as the Tote Road was historically located here, but was re-aligned in 2018. The stockpile has encroached on the 50m undisturbed buffer to the edge of the surveyed impact area. As a result of this encroachment of project activities, an extension of the commercial lease boundary at kilometer 76.5 of 7,317 m² was proposed.

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 2020.

12 PUBLIC CONSULTATIONS

Baffinland had to make changes to its engagement approach in 2020 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 2020 are presented in Tables 12.1 and 12.2.

13 SUMMARY OF PROJECT PLANS FOR 2021

The 2021 Work Plan was prepared and provided by Baffinland to relevant parties on November 6, 2020 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 2021 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 2021 Work Plan will require a 2021 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 2021. 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 2021.

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 2021 to support wildlife monitoring programs during the shipping season.

14 REFERENCES

- Baffinland Iron Mines Corporation (Baffinland), 2012. Mary River Project – Final Environmental Impact Statement. February 2012.
- Baffinland Iron Mines Corporation (Baffinland), 2021a. 2020 Qikiqtani Inuit Association (QIA) and Nunavut Water Board (NWB) Annual Report for Exploration and Geotechnical Activities– Water Licence 2BE-MRY1421. March 31.
- Baffinland Iron Mines Corporation (Baffinland), 2021b. 2020 Qikiqtani Inuit Association (QIA) and Nunavut Water Board (NWB) Annual Report for Ege Bay Exploration – Water Licence 2BE-EQE1926. March 31.
- Baffinland Iron Mines Corporation (Baffinland), 2021a. Mary River Mine Site – Annual Effluent Monitoring Report – Version 1 – 2020. March 31, 2021.
- Baffinland Iron Mines Corporation (Baffinland), 2021b. Mary River Mine Site – Information related to effluent and water quality monitoring studies – Version 1 – 2020. March 31, 2020.
- Canadian Council of Ministers of the Environment (CCME), 2015. Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products. March 31.
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), 1996. 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. July 1996.
- Golder Associates Ltd. (Golder), 2016a. Mary River Project – Sedimentation Mitigation Action Plan, Rev. 1. Ref. No. 1661774 (5000), September 29.
- Golder Associates Ltd. (Golder), 2016b. Mary River Project – Dust Mitigation Action Plan, Rev 1. Ref. No. 1661774 (5000), September 29.
- Golder Associates Ltd. (Golder), 2017. Mary River Project – Tote Road Earthworks Execution Plan and Design Report. Ref. No.1667708 (Rev. 0), April 2017.
- Government of Canada. (Government of Canada), 2019. Canadian Environmental Protection Act, 1999. S.C. 1999, c.33. Minister of Justice.
- Government of Nunavut. (Government of Nunavut), 2011. Environmental Guideline for Industrial Waste Discharges into Municipal Solid Waste and Sewage Treatment Facilities.
- Nunavut Water Board (NWB), 2015. Type A Water Licence 2AM-MRY1325, Amendment No. 1. July 30.
- Qikiqtani Inuit Association (QIA), 2013. Commercial Lease for Inuit Owned Lands between Qikiqtani Inuit Association and Baffinland Iron Mines Corporation. Commercial Lease No. Q13C301. September 6.

TABLES

Table 1.1: Current Approvals, Permits and Authorizations - 2020

Permit or Licence No.	Licence Name	Status Update for 2020	Expiry
Nunavut Impact Review Board			
No. 005	Amended Project Certificate	All works and activities have been screened by the Nunavut Impact Review Board (NIRB) and have been considered in the Project Certificate amendments issued by the NIRB in May 2014 (ERP) and October 2018 (Production Increase). A NIRB Annual Report is submitted each year that summarizes the status of the Project relative to the conditions outlined in the Project Certificate.	N/A
Nunavut Water Board			
2AM-MRY1325	Type 'A' Water Licence – Amendment No. 1	In good standing; no amendments were issued by the NWB in 2020.	10-Jun-25
2BE-MRY1421	Type 'B' Water Licence	In good standing; a licence renewal application was initiated in 2020.	16-Apr-21
Qikiqtani Inuit Association			
Q13C301	Inuit Owned Land Commercial Lease	Compliance with the lease is outlined in the <i>2020 QIA and NWB Annual Reports</i> submitted by March 31 st of each year.	31-Dec-43
-	Inuit Impact and Benefit Agreement (IIBA)	Compliance with the agreement is outlined in the Annual IIBA Implementation Report submitted by March 31 st of each year.	N/A
QL2-2012	Land Use Permit - Parcels PI-14 and PI-15	New land use permit issued in 2020 to allow for a legal survey to be conducted on IOL parcels PI-14 and PI-15. Issued on August 18, 2020.	31-Dec-20
Crown Land Use Permits and Quarry Permits			
47H16-1-2	Foreshore Area for Milne Port Ore Dock Lease	In good standing. Amendment to the lease currently under review.	30-Jun-35
N2019Q0011	Tote Road and Borrow Area Land Use Permit	New lease issued in 2019, replaces prior permit N2014Q0016.	29-Jun-24
N2019C0009	Steensby Land Use Permit	New lease issued in 2019, replaces prior permit N2014C0013.	29-Jun-24
N2019J0010	Bruce Head Land Use Permit	New lease issued in 2019, replaces prior permit N2014J0011.	29-Jun-24
Authorizations under the Fisheries Act			
06-HCAA-CA7-0084	Crossings along the Milne Inlet Tote Road Authorization	The authorization remains valid and has been amended over the years. A monitoring report for the water crossings was submitted to DFO on December 31, 2020.	N/A
NU-06-0084	Fisheries Authorization – Tote Road	-	N/A
18-HCAA-00160	Fisheries Authorization – Freight Dock	-	N/A
Various Letter of Advice	Project crossings along Tote Road and at quarries, culvert extensions and replacements.	-	N/A
Approvals under the Navigable Waters Protection Act (Transport Canada)			
8200-07-10273, 10267, 10269, 10268, 10274, 10272, 10266, 10271	Construction of Watercourse Crossings (Bridges and Culverts)	In good standing, no changes from previous year.	Until complete
Licence under the Explosives Act			
F76068/E	Division 1 Factor Licence	Held by explosives contractor for the Project.	N/A

Table 2.1: Summary of Project Activities, Modifications and Infrastructure Changes - 2020

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			
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. Total of 250 m pipe.	Not constructed in 2020, deferred to 2021.	N/A
2	Mine Site	Impact Area	-	560631	7913321	Installation of a mine dry facility at the Sailiivik Camp.	Not constructed in 2020, deferred to 2021.	N/A
3	Mine Site and Milne Port	Impact Area	-	558420	7914780	Installation of two (2) new waste incineration units; one (1) at the Mine Site, one (1) at Milne Port.	Not initiated in 2020, deferred to 2021.	N/A
4		Impact Area	-	503774	7975973			
5	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.	Installation completed.	N/A
6	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.	
7	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 a footprint of 10,000 m ² .	To be initiated in 2021 as part of the Long Term Water Management Plan.	N/A
8	Mine Site	Impact Area	-	7914428	E563192	Implementation of a water management plan for Deposit 1, including berms and ditching to manage surface water.	To be initiated in 2021 as part of the Long Term Water Management Plan.	N/A
9	Mine Site	Impact Area	HD Shop - 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.	Not constructed in 2020, deferred to 2021.	N/A
			MR Shop - 120 m ²	5612525	7913295			N/A
			Wash Bay - 120 m ²	561645	7913213			N/A
			110 Laydown - 144 m ²	563454	7915177			N/A
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 initiated in 2020, deferred to 2021.	N/A
11	Tote Road	Impact Area	600 m	559330	7914137	Installation of permanent lighting for port and logistics. Total of 600 m of electrical cabling.	Installation completed.	N/A
12	Tote Road	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.	Repair and replacement work continued throughout 2020.	N/A
13	Tote Road	Impact Area	KM 26	518576	7959689	Addition of washroom facilities/refuge stations at KM 26 and KM80 IT Towers.	Not initiated in 2020, deferred to 2021.	N/A
			KM 80	542130	7922308			
14	Tote Road, Milne Port	Impact Area	Q1 (222,000 m ² + 4,000 m ²)	504289	7975563	Development and expansion of quarries, consisting of; four (4) new quarries along the Tote Road with 8m wide access roads, expansion of previously proposed but not constructed quarry Q5, and expansion of the working limits of existing quarry Q1.	Baffinland continued to utilize quarry material from Q1. Newly proposed quarries have not been developed, pending submission and/or review of Quarry Management Plans.	N/A
			Q5 (1,225,600 m ²)	506000	7972300			
			PQ2a (345,500 m ²)	522130	7955289			
			PQ4a (105,000 m ²)	523552	7942972			
			PQ6a (194,000 m ²)	528240	7929733			
			PQ12a (232,300 m ²)	539158	7920935			
15	Tote Road	Impact Area	Laydown 2 (55,800 m ²)	505637	7972166	Development of six (6) laydowns adjacent to the existing Tote Road for material stockpiling and storage. The laydowns will be constructed by filling directly over undisturbed ground and 31m away from the high water mark of local water bodies. The laydowns will be constructed of 500 mm thickness quarried rock with granular surfacing, free draining to appropriate ditches and water courses. All laydowns to cover approximately 2 ha, with one laydown at km 7 laydown covering approximately 7.5 ha	Tote Road Laydowns were not constructed in 2020, and were deferred to 2021.	N/A
			Laydown 4 (66,300 m ²)	518164	7960605			
			Laydown 7 (28,900 m ²)	524119	7940427			
			Laydown 9 (92,500 m ²)	527833	7929681			
			Laydown 10 (34,500 m ²)	540249	7921358			
			Laydown 13 (7,000 m ²)	557599	7915170			

Table 2.1: Summary of Project Activities, Modifications and Infrastructure Changes - 2020

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			
16	Tote Road	Impact Area	KM 8	506250	7971100	Grade adjustments at KM 8 and KM 97 to improve safety and drainage. No new culvert installations required.	Grade adjustments at KM8 and KM97 were not completed in 2020 as TRAN process is yet to be finalized with QIA.	N/A
			KM 97	554750	7914750			
17	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 2021.	Modification Request No. 12
18	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 initiated in 2020, deferred to 2021.	N/A
19	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 initiated in 2020, deferred to 2021.	N/A
20	Milne Port	Impact Area	(2,700 m ²)	503779	7975481	New contaminated water/snow containment pond adjacent to existing pond at Milne Port	Not initiated in 2020, deferred to 2021.	N/A
21	Milne Port	Impact Area	(200 m ²)	504128	7976466	Desalination Plant (Seawater reverse Osmosis System).	Not initiated in 2020, deferred to 2021.	N/A
22	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 initiated in 2020, deferred to 2021.	N/A
	Mine Site		(360 m ²)	503874	7976251			
23	Mine Site	Impact Area	(91,000 m ²)	564007	7914015	Laydown area for parking and equipment storage at KM 107.5	Not initiated in 2020, deferred to 2021.	N/A
24	Mine Site	Impact Area	(180,000 m ²)	563181	7915590	New KM110.5 Laydown for additional equipment storage and maintenance shop installation	Not initiated in 2020, deferred to 2021.	N/A
25	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 m2.	Not initiated in 2020, deferred to 2021.	N/A
26	Mine Site	Impact Area	-	558150	7914500	Decommissioning and repurposing of Weatherhaven structures for storage and workspace.	Not initiated in 2020, deferred to 2021.	N/A
27	Mine Site	Impact Area	(12,000 m ²)	560450	7913450	Expansion of the 800 person camp pad to the north by approximately 12,000 m2 to accommodate additional support offices and buildings.	Not initiated in 2020, deferred to 2021.	N/A
28	Mine Site	Impact Area	(925 m ²)	560450	7913450	Addition of offices/trailers/buildings at the 800p Camp. Total footprint is 925 m2, including approximately 500 m2 for a new fire hall and emergency response building.	Not initiated in 2020, deferred to 2021.	N/A
29	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 m2. Disturbed area included in 2018 Addendum, new lined area requires security allocation.	Not initiated in 2020, deferred to 2021.	N/A
30	Mine Site	Impact Area	-	561092	7913410	Installation of second 15 ML tank at Mine Site bulk fuel storage facility.	Not initiated in 2020, deferred to 2021.	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).

Notes

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

Table 2.3: Equipment and Materials Shipped off the Property - 2020

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	775	775
Project-Wide	Hazardous Waste Materials ^{a,c,d}	Baffinland	2933	2,933
Project-Wide	Miscellaneous Equipment and Materials	Baffinland & Third Party	5,856	14,349
TOTAL			9,564	18,057

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 - 2020

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	57,473	N/A
Project-Wide	Jet-A1 ^b	Baffinland	2,459	N/A
Project-Wide	Pre-Packaged Explosives ^{c,d}	Explosives Contractor	0	N/A
Project-Wide	Explosives ^e	Explosives Contractor	0	N/A
Project-Wide	Food Stuffs	Baffinland	865	1,881
Project-Wide	Miscellaneous Equipment and Materials	Baffinland & Third Party	10,624	16,416
TOTAL			71,421	18,297

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 - 2020

Month	Quantity of Ore Generated (Wet Metric Tonnes)		
	Lump	BHL ¹	Fines
January	116,218	0	219,136
February	100,010	123,829	231,501
March	247,569	157,998	163,531
April	48,548	157,248	213,179
May	111,171	95,802	294,977
June	139,032	36,624	362,453
July	0	82,941	450,906
August	157,513	48,195	482,759
September	52,936	66,990	444,915
October	30,038	135,583	250,698
November	150,695	19,726	293,907
December	147,131	7,940	370,150
SUB-TOTAL	1,300,862	932,875	3,778,111
TOTAL	6,011,848		

Notes

¹ BHL = Baffinland Hematite Lump.

Table 3.2: Monthly and Annual Quantities of Ore Shipped by the Project - 2020

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	72,529	-	0	-	649,058	-	721,587	-
August	584,349	-	308,513	-	1,162,618	-	2,055,480	-
September	374,495	-	536,477	-	1,092,195	-	2,003,167	-
October	92,607	-	170,848	-	413,338	-	676,793	-
November	-	-	-	-	-	-	-	-
December	-	-	-	-	-	-	-	-
SUB-TOTAL	1,123,980	0	1,015,838	0	3,317,209	0	5,457,027	0
TOTAL	1,123,980		1,015,838		3,317,209		5,457,027	

Notes
¹ BHL = Baffinland Hematite Lump.

Table 3.3: Quantities of Specified Substances Removed from Borrowes and Quarries (BCMs) by Quarter and Calendar Year - 2020

Quarter	Quarry - QMR2			Survey Dates		Notes
	Rock	Unconsolidated Material	Organics	Start	End	
Jan-March 2020	-	-	-	December 31, 2019	March 31, 2020	No activity in the quarry.
April-June 2020	12,885	-	-	March 31, 2020	June 30, 2020	Survey performed using drone.
July-Sept 2020	-	-	-	June 30, 2020	September 30, 2020	No activity in the quarry.
Oct-Dec 2020	-	-	-	September 30, 2020	December 31, 2020	No activity in the quarry.
TOTAL	12,885	0	0			
Quarter	Quarry - Q01			Survey Dates		Notes
	Rock	Unconsolidated Material	Organics	Start	End	
Jan-March 2020	-	-	-	December 31, 2019	March 31, 2020	No activity in the quarry.
April-June 2020	67,360	-	-	March 31, 2020	June 30, 2020	Survey performed using drone.
July-Sept 2020	27,852	-	-	June 30, 2020	September 30, 2020	Survey performed using drone.
Oct-Dec 2020	-	-	-	September 30, 2020	December 31, 2020	No activity in the quarry.
TOTAL	95,212	0	0			
Quarter	Borrow Source - Km 97			Survey Dates		Notes
	Rock	Unconsolidated Material	Organics	Start	End	
Jan-March 2020	-	-	-	December 31, 2019	March 31, 2020	No activity in the borrow pit.
April-June 2020	-	-	-	March 31, 2020	June 30, 2020	No activity in the borrow pit.
July-Sept 2020	-	7,897	-	June 30, 2020	September 30, 2020	Survey performed using drone.
Oct-Dec 2020	-	-	-	September 30, 2020	December 31, 2020	No activity in the borrow pit.
TOTAL	0	7,897	0			

Notes

BCM - Banked Cubic Metres.

Table 3.4: Quantities of Specified Substances Removed from Borrows and Quarries (BCMs) September 1, 2019 to August 31, 2020 Reporting Period

Specified Substances	Quarry - QMR2	Quarry - Q01	Borrow Source - Km 97	Total - All Quarry and Borrow Sources
Rock	12,885	204,701	-	217,586
Unconsolidated Material	-	-	7,897	7,897
Organics	-	-	-	0
TOTAL	12,885	204,701	7,897	225,483

Notes

Annual volumes calculated using the following equation:

Annual Volume Removed (Sept. 1, 2019 to Aug. 31, 2020) = 2019 Q4 + 2020 Q1 + 2020 Q2 + 2020 Q3

BCM - Banked Cubic Metres.

Table 4.1: Annual Volumes of Water Used for Project Activities on Inuit-Owned and Crowns Lands by Source - 2020

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	49,953	55.4%
Milne Inlet	Km 32 Lake (MP-MRY-3) ^c	521547	7953735	27,109	30.1%
Milne Inlet	Phillips Creek (MP-MRY-2)	514503	7964579	0	0.0%
Tote Road	CV128 (Km 17)	513568	7965904	2,431	2.7%
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	4,092	4.5%
Tote Road	BG32 (Km 78)	540738	7921595	91	0.1%
Tote Road	CV217 (Km 80)	542323	7922178	6,363	7.1%
Tote Road	Muriel Lake	542343	7922224	121	0.1%
Tote Road	BG17 (Km 90)	550715	7917654	0	0.0%
Tote Road	CV233 (Km 97)	555712	7914680	0	0.0%
TOTAL				90,160	100%

Notes

^a Refer to Tables 4.2 and 4.3 for the 2020 daily and monthly volumes withdrawn by water source.

^b Includes all volumes withdrawn from Camp Lake during 2020 for domestic, industrial and dust suppression purposes.

^c Includes all volumes withdrawn from Km 32 Lake during 2020 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 - 2020

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	163	9	172	38	0	38	133	23	156	31	0	31	139	14	153	41	0	41
2	104	0	104	41	0	41	146	4	150	54	0	54	151	6	158	40	0	40
3	137	0	137	30	0	30	157	4	161	38	0	38	144	13	157	39	0	39
4	73	0	73	36	0	36	142	13	155	38	0	38	132	25	157	53	0	53
5	109	0	109	31	0	31	150	0	150	38	0	38	171	0	171	35	0	35
6	149	0	149	34	0	34	157	32	189	43	0	43	125	13	138	43	0	43
7	118	0	118	35	20	55	142	9	152	48	0	48	125	12	138	46	0	46
8	135	0	135	40	0	40	145	8	153	30	0	30	116	20	136	53	0	53
9	149	0	149	38	0	38	102	20	122	43	0	43	125	0	125	36	0	36
10	88	0	88	24	0	24	145	0	145	43	0	43	119	26	144	43	0	43
11	108	11	119	53	0	53	156	14	170	42	0	42	143	13	156	34	0	34
12	129	22	151	43	0	43	158	12	170	32	0	32	99	0	99	42	0	42
13	119	0	119	40	0	40	154	4	159	43	0	43	145	19	164	38	0	38
14	152	25	178	35	0	35	140	18	159	44	0	44	116	17	133	37	2	39
15	133	0	133	35	0	35	145	10	155	42	0	42	137	14	151	37	17	55
16	132	7	139	37	0	37	164	47	212	35	61	96	125	4	129	38	17	55
17	166	9	175	39	0	39	137	50	187	36	0	36	142	0	142	43	0	43
18	93	7	100	50	0	50	150	49	199	51	2	53	114	13	127	43	0	43
19	122	0	122	55	0	55	180	37	218	52	0	52	119	3	121	42	0	42
20	152	0	152	43	0	43	145	9	154	37	0	37	114	0	114	48	0	48
21	137	13	150	52	0	52	152	0	152	41	0	41	126	3	129	56	0	56
22	106	11	117	46	0	46	149	14	163	38	0	38	113	0	113	39	0	39
23	113	0	113	37	2	39	150	4	154	36	0	36	116	10	126	39	0	39
24	107	0	107	51	0	51	144	7	151	47	0	47	129	0	129	43	5	48
25	136	11	147	37	0	37	157	0	157	37	0	37	109	0	109	33	0	33
26	72	5	78	44	0	44	155	0	155	43	0	43	107	0	107	44	0	44
27	153	9	163	48	0	48	125	12	137	31	0	31	115	14	128	41	0	41
28	189	0	189	44	2	46	155	14	169	38	0	38	143	0	143	43	0	43
29	168	7	175	52	0	52	144	14	158	44	0	44	80	14	93	34	0	34
30	146	0	146	42	0	42	-	-	-	-	-	-	169	0	169	45	0	45
31	140	25	164	36	0	36	-	-	-	-	-	-	195	13	208	56	0	56
TOTAL	3,997	172	4,169	1,265	24	1,290	4,280	430	4,711	1,176	63	1,239	4,001	265	4,266	1,302	42	1,343

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 - 2020

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	151	6	157	51	20	71	120	0	120	50	0	50	100	11	112	86	0	86
2	137	5	141	64	0	64	100	0	100	44	0	44	110	15	124	57	0	57
3	102	2	103	76	0	76	80	21	101	54	0	54	118	1	119	40	0	40
4	112	0	112	43	0	43	98	0	98	43	0	43	105	8	113	56	0	56
5	108	25	132	60	0	60	121	5	126	61	0	61	117	24	141	55	0	55
6	95	0	95	30	0	30	130	3	133	52	0	52	117	7	124	94	0	94
7	122	9	132	59	0	59	104	0	104	52	0	52	130	50	180	74	0	74
8	125	0	125	18	0	18	113	14	126	45	0	45	90	6	97	87	0	87
9	97	6	103	29	0	29	110	15	125	53	0	53	104	19	123	78	0	78
10	129	0	129	48	0	48	124	7	131	39	0	39	103	10	113	92	0	92
11	121	0	121	26	0	26	133	30	163	52	0	52	125	7	132	105	0	105
12	71	31	102	20	0	20	122	19	141	47	0	47	109	0	109	97	0	97
13	81	10	91	65	0	65	80	3	83	57	0	57	124	7	130	79	1	80
14	98	10	108	73	0	73	120	6	125	45	4	49	145	5	150	70	0	70
15	82	5	87	40	0	40	124	14	138	57	0	57	112	21	133	82	6	88
16	117	3	120	53	0	53	96	3	99	52	2	54	117	12	129	71	0	71
17	137	3	141	61	0	61	124	21	145	51	0	51	130	9	140	61	0	61
18	132	2	134	60	0	60	103	17	120	44	4	48	101	13	114	66	0	66
19	124	3	127	70	0	70	132	23	154	71	3	74	122	17	139	41	3	44
20	131	10	141	51	0	51	119	29	148	61	4	65	66	14	80	57	0	57
21	102	14	116	64	0	64	117	26	143	44	4	48	180	9	188	79	0	79
22	125	2	127	64	0	64	132	13	145	70	12	82	116	4	120	61	0	61
23	120	0	120	30	0	30	138	10	148	34	4	38	77	7	84	85	3	88
24	65	19	84	43	0	43	128	17	145	49	0	49	125	14	139	41	0	41
25	124	5	129	27	0	27	118	21	140	69	0	69	127	0	127	50	0	50
26	108	31	138	37	0	37	104	15	118	31	0	31	114	0	114	73	0	73
27	112	4	117	46	0	46	112	23	136	64	0	64	139	4	144	71	0	71
28	69	17	86	41	0	41	114	7	121	56	0	56	133	3	136	51	0	51
29	89	5	94	64	0	64	119	0	119	66	0	66	130	2	131	69	0	69
30	112	7	119	16	0	16	68	22	90	46	0	46	106	12	118	48	0	48
31	-	-	-	-	-	-	139	26	165	96	0	96	-	-	-	-	-	-
TOTAL	3,296	233	3,529	1,429	20	1,449	3,541	412	3,953	1,653	37	1,690	3,492	312	3,804	2,078	13	2,091

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 - 2020

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				
1	151	10	161	68	7	75	116	15	131	83	0	83	108	23	130	63	0	63
2	165	18	183	62	0	62	96	12	108	78	0	78	158	3	162	68	2	70
3	105	0	105	55	0	55	112	0	112	68	0	68	127	0	127	69	0	69
4	151	8	159	54	2	56	133	17	150	61	0	61	185	16	201	45	0	45
5	127	27	154	58	2	60	127	0	127	67	0	67	187	7	194	64	0	64
6	144	1	145	39	0	39	111	19	131	66	0	66	109	15	124	71	0	71
7	102	13	115	98	2	100	115	11	125	58	0	58	164	16	180	45	0	45
8	121	0	121	44	4	48	124	3	127	56	0	56	117	18	135	80	0	80
9	107	0	107	71	0	71	153	45	198	40	0	40	135	11	147	63	0	63
10	108	21	129	56	2	58	168	48	216	33	0	33	140	9	149	61	0	61
11	171	3	173	64	4	68	113	131	245	72	0	72	139	9	148	65	2	67
12	58	4	62	57	12	69	152	114	266	58	0	58	113	22	135	75	2	77
13	138	14	152	36	0	36	175	79	255	89	0	89	110	9	119	44	0	44
14	129	12	141	98	0	98	135	104	239	58	0	58	114	9	123	88	1	89
15	82	5	86	55	6	61	105	44	149	43	0	43	152	3	155	45	0	45
16	125	11	136	48	6	54	94	43	136	67	0	67	153	7	160	58	0	58
17	90	16	106	54	3	57	144	87	232	51	0	51	109	5	114	95	0	95
18	150	0	150	49	6	55	128	68	196	89	0	89	135	5	140	46	0	46
19	100	5	106	59	0	59	120	0	120	83	0	83	130	6	135	55	0	55
20	145	9	153	76	0	76	120	16	136	101	0	101	210	9	219	59	0	59
21	159	13	173	47	1	48	106	3	109	87	6	93	120	3	123	67	0	67
22	135	3	139	73	0	73	124	4	128	85	0	85	188	12	200	69	0	69
23	128	12	140	67	0	67	113	0	113	46	0	46	149	23	172	57	0	57
24	154	12	165	44	8	51	145	0	145	48	0	48	115	21	137	81	0	81
25	133	0	133	55	0	55	109	13	122	56	0	56	138	1	139	64	0	64
26	180	26	206	72	0	72	147	6	153	57	0	57	130	6	137	126	0	126
27	139	0	139	61	0	61	125	3	129	60	0	60	83	3	87	66	0	66
28	143	13	156	51	0	51	144	3	147	52	0	52	150	9	159	91	0	91
29	110	7	117	63	0	63	134	0	134	56	0	56	156	19	174	52	0	52
30	120	0	120	48	0	48	115	23	138	64	1	65	186	0	186	75	0	75
31	109	22	131	55	0	55	130	12	141	68	0	68	-	-	-	-	-	-
TOTAL	3,981	283	4,264	1,835	65	1,900	3,932	926	4,859	2,001	7	2,008	4,213	298	4,510	2,005	6	2,011

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 - 2020

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	169	0	169	62	0	62	122	6.0	128	84	0	84	122	3	125	43	0	43
2	188	0	188	69	0	69	131	3.4	134	54	0	54	129	6	135	45	0	45
3	194	0	194	43	0	43	105	2.2	107	95	0	95	127	0	127	38	0	38
4	144	0	144	55	0	55	113	4.3	117	41	0	41	113	4	117	51	0	51
5	134	8	141	68	0	68	140	5.2	145	86	1	87	129	3	131	52	0	52
6	136	8	144	90	0	90	127	4.3	132	63	0	63	119	2	120	31	0	31
7	132	12	144	63	0	63	143	3.4	146	58	32	90	131	3	134	61	0	61
8	147	4	151	51	0	51	118	2.6	120	67	0	67	113	6	119	34	0	34
9	122	16	138	77	0	77	137	8.6	145	70	0	70	107	3	110	61	0	61
10	168	16	184	50	0	50	102	2.6	105	72	0	72	121	2	123	88	0	88
11	132	23	155	67	0	67	125	10.6	136	83	0	83	164	15	178	43	0	43
12	148	4	152	52	0	52	113	5.2	118	85	0	85	87	3	91	79	0	79
13	88	9	97	62	0	62	124	2.6	127	71	0	71	129	5	134	76	7	83
14	52	2	54	64	0	64	95	2.6	98	82	0	82	115	18	132	67	0	67
15	168	0	168	60	0	60	96	2.6	99	60	0	60	104	2	106	62	0	62
16	162	4	166	62	0	62	106	3.4	109	47	0	47	143	17	159	89	0	89
17	124	0	124	57	0	57	130	3.4	133	50	0	50	114	2	115	52	0	52
18	127	0	127	51	3	54	114	3.4	117	55	0	55	97	8	105	80	2	82
19	120	0	120	62	0	62	124	7.7	132	48	0	48	124	3	127	63	0	63
20	122	10	131	53	0	53	108	4.3	112	33	0	33	89	5	94	88	0	88
21	134	0	134	49	0	49	110	0.0	110	41	0	41	115	2	116	42	0	42
22	114	5	120	62	0	62	80	7.7	88	31	0	31	80	2	81	91	0	91
23	107	18	124	52	0	52	117	0.0	117	37	0	37	97	2	98	40	0	40
24	120	22	142	52	0	52	91	8.6	99	40	0	40	113	4	117	73	13	86
25	138	2	139	46	3	49	123	0.0	123	48	0	48	81	3	84	82	0	82
26	124	20	144	57	0	57	103	12.9	116	40	0	40	101	2	103	47	5	52
27	118	0	118	39	0	39	118	1.3	119	40	0	40	99	2	100	75	10	85
28	128	11	139	96	0	96	97	7.7	105	43	0	43	129	0	129	62	0	62
29	127	0	127	76	0	76	111	7.7	119	36	0	36	106	2	108	39	0	39
30	106	0	106	43	0	43	100	17.2	117	48	0	48	132	0	132	49	0	49
31	123	0	123	100	0	100	-	-	-	-	-	-	135	0	135	42	0	42
TOTAL	4,114	192	4,306	1,893	6	1,899	3,421	152	3,572	1,706	33	1,739	3,562	125	3,686	1,845	37	1,882

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 - 2020

Date ^a	Approved Water Sources for Dust Suppression ^b												Recycled Water ^c					
	Camp Lake	CV128 (Km 17)	Km 32 Lake	CV099 (Km 37)	Katiktok Lake (Km 52 - 58)	BG50 (Km 62)	BG32 (Km 78)	CV217 (Km 80)	Muriel Lake (Km 81)	BG17 (Km 90)	CV233 (Tom River Km 97)	Daily Total	KM 97 Borrow Pond (TR-BP-01)	KM 57 Borrow Pond	Warehouse Pond (MS-RW-01)	Mag Road Pond Km 105 (HR-CD-05)	Q1 Ditch	Matrix Ditch
Daily Limit (m ³)	86	579.5	364	110	318	150	120	130	212	75	135	1,500	N/A	N/A	N/A	N/A	N/A	N/A
28-May-20	53	0	0	0	0	0	0	0	0	0	0	53	0	0	0	0	0	0
29-May-20	91	0	0	0	0	0	0	0	0	0	0	91	182	0	0	0	0	0
30-May-20	0	0	30	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0
02-Jun-20	0	0	91	0	0	0	0	0	0	0	0	91	0	0	0	0	0	0
03-Jun-20	0	0	30	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0
04-Jun-20	61	0	242	0	0	0	0	0	0	0	0	303	91	0	0	0	0	0
05-Jun-20	0	0	454	0	0	0	0	727	0	0	0	1,181	61	53	0	0	0	0
06-Jun-20	0	0	242	0	0	0	0	697	0	0	0	939	0	8	0	0	0	0
07-Jun-20	0	0	318	0	0	0	0	454	0	0	0	772	0	23	30	31	0	0
08-Jun-20	0	0	8	0	0	0	0	151	0	0	0	159	0	45	212	0	0	0
09-Jun-20	0	0	15	0	0	0	0	363	0	0	0	379	0	0	121	0	0	0
10-Jun-20	0	0	182	0	0	0	0	273	0	0	0	454	0	61	333	0	0	0
11-Jun-20	0	0	545	0	0	0	0	242	0	0	0	787	0	0	303	0	0	0
12-Jun-20	0	0	333	0	0	0	0	212	0	0	0	545	0	0	121	0	0	0
13-Jun-20	0	0	242	0	0	0	0	394	0	0	0	636	0	30	197	0	0	0
14-Jun-20	0	0	242	0	0	0	0	242	0	0	0	485	0	424	212	0	0	0
15-Jun-20	0	0	91	0	0	0	0	333	0	0	0	424	0	61	91	0	0	0
16-Jun-20	0	0	0	0	0	0	0	212	0	0	0	212	0	91	394	0	0	0
17-Jun-20	0	0	0	0	0	0	0	273	0	0	0	273	0	30	424	0	0	0
18-Jun-20	0	0	0	0	0	30	0	182	0	0	0	212	182	30	151	0	0	0
19-Jun-20	0	0	0	0	0	0	0	182	0	0	0	182	91	0	91	0	0	0
22-Jun-20	0	0	0	0	0	0	0	61	0	0	0	61	61	0	0	0	0	0
23-Jun-20	0	0	0	0	0	0	0	0	0	0	0	0	0	61	61	0	0	0
24-Jun-20	0	0	0	0	0	0	0	151	0	0	0	151	30	121	121	0	0	0
25-Jun-20	0	0	0	0	0	0	0	121	0	0	0	121	273	91	91	0	0	0
03-Jul-20	0	0	0	0	0	0	0	0	0	0	0	0	303	0	0	0	0	0
04-Jul-20	0	0	61	0	0	454	0	0	0	0	0	515	30	0	0	0	0	0
05-Jul-20	0	0	0	0	0	0	0	0	0	0	0	0	121	0	91	0	0	0
06-Jul-20	0	0	0	0	0	0	0	151	0	0	0	151	121	0	212	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 and .

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 - 2020

Date ^a	Approved Water Sources for Dust Suppression ^b												Recycled Water ^c					
	Camp Lake	CV128 (Km 17)	Km 32 Lake	CV099 (Km 37)	Katiktok Lake (Km 52 - 58)	BG50 (Km 62)	BG32 (Km 78)	CV217 (Km 80)	Muriel Lake (Km 81)	BG17 (Km 90)	CV233 (Tom River Km 97)	Daily Total	KM 97 Borrow Pond (TR-BP-01)	KM 57 Borrow Pond	Warehouse Pond (MS-RW-01)	Mag Road Pond Km 105 (HR-CD-05)	Q1 Ditch	Matrix Ditch
Daily Limit (m ³)	86	579.5	364	110	318	150	120	130	212	75	135	1,500	N/A	N/A	N/A	N/A	N/A	N/A
07-Jul-20	0	0	0	0	0	30	0	151	0	0	0	182	121	0	91	0	0	0
08-Jul-20	0	0	0	0	0	273	0	0	0	0	0	273	303	0	212	0	0	0
09-Jul-20	0	0	0	0	0	242	0	0	0	0	0	242	273	0	61	0	0	0
10-Jul-20	0	0	0	0	0	91	0	0	0	0	0	91	182	0	0	0	0	0
12-Jul-20	0	0	0	0	0	0	0	0	0	0	0	0	242	0	0	0	0	0
13-Jul-20	0	121	0	0	0	0	0	0	0	0	0	121	242	0	0	0	0	0
16-Jul-20	0	151	0	0	0	0	0	0	0	0	0	151	30	0	0	0	0	0
20-Jul-20	0	182	30	0	0	0	0	0	0	0	0	212	0	0	0	0	0	0
21-Jul-20	0	182	212	0	0	0	0	0	0	0	0	394	0	0	0	0	0	0
22-Jul-20	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0
24-Jul-20	0	0	0	0	0	0	0	0	0	0	0	0	91	0	0	0	0	0
25-Jul-20	0	0	30	0	0	0	0	0	0	0	0	30	151	0	0	0	0	0
26-Jul-20	0	89	61	0	0	0	0	0	0	0	0	150	121	0	0	61	206	0
27-Jul-20	0	184	123	0	0	0	0	0	0	0	0	307	121	0	0	61	91	0
28-Jul-20	0	151	153	0	0	93	0	121	0	0	0	519	151	0	0	0	61	0
29-Jul-20	68	309	309	0	0	184	91	91	0	0	0	1,050	91	0	0	0	121	0
30-Jul-20	0	61	61	0	0	91	0	30	0	0	0	242	0	0	0	0	30	0
31-Jul-20	0	0	121	0	0	61	0	0	0	0	0	182	91	0	0	0	91	0
01-Aug-20	0	0	218	0	0	95	0	0	0	0	0	312	212	0	0	121	182	0
02-Aug-20	51	0	191	0	0	97	0	0	0	0	0	339	30	0	0	0	91	0
03-Aug-20	0	0	129	0	0	64	0	30	0	0	0	223	61	0	0	121	212	0
04-Aug-20	0	0	32	0	0	64	0	0	0	0	0	97	0	0	0	212	157	0
05-Aug-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91	286	0
06-Aug-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	333	64	0
07-Aug-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	515	0	0
08-Aug-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	333	0	0
09-Aug-20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	151	0	0
10-Aug-20	0	32	64	0	0	0	0	0	0	0	0	97	0	0	0	0	64	0
11-Aug-20	0	61	218	0	0	312	0	64	61	0	0	715	151	0	0	363	91	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 - 2020

Date ^a	Approved Water Sources for Dust Suppression ^b												Recycled Water ^c					
	Camp Lake	CV128 (Km 17)	Km 32 Lake	CV099 (Km 37)	Katiktok Lake (Km 52 - 58)	BG50 (Km 62)	BG32 (Km 78)	CV217 (Km 80)	Muriel Lake (Km 81)	BG17 (Km 90)	CV233 (Tom River Km 97)	Daily Total	KM 97 Borrow Pond (TR-BP-01)	KM 57 Borrow Pond	Warehouse Pond (MS-RW-01)	Mag Road Pond Km 105 (HR-CD-05)	Q1 Ditch	Matrix Ditch
Daily Limit (m ³)	86	579.5	364	110	318	150	120	130	212	75	135	1,500	N/A	N/A	N/A	N/A	N/A	N/A
12-Aug-20	0	61	121	0	0	0	0	0	0	0	0	182	61	0	0	151	242	0
14-Aug-20	0	91	157	0	0	129	0	0	0	0	0	377	0	0	0	0	121	0
15-Aug-20	0	61	212	0	0	150	0	0	0	0	0	423	0	0	0	0	30	0
16-Aug-20	0	0	242	0	0	30	0	0	0	0	0	273	61	0	0	0	61	0
19-Aug-20	0	61	30	0	0	30	0	0	0	0	0	121	0	0	0	0	0	0
20-Aug-20	0	0	30	0	0	30	0	0	0	0	0	61	61	0	0	0	0	0
21-Aug-20	0	0	182	0	0	333	0	0	0	0	0	515	121	0	0	0	0	0
22-Aug-20	0	30	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0
24-Aug-20	0	91	30	0	0	91	0	0	0	0	0	212	91	0	0	0	30	0
25-Aug-20	0	61	91	0	0	150	0	61	0	0	0	362	242	0	0	0	0	0
26-Aug-20	0	61	91	0	0	182	0	0	61	0	0	394	61	0	0	0	30	0
28-Aug-20	0	61	30	0	0	30	0	0	0	0	0	121	0	0	0	0	0	0
29-Aug-20	0	91	61	0	0	91	0	0	0	0	0	242	91	0	0	0	61	0
30-Aug-20	0	0	0	0	0	150	0	0	0	0	0	150	0	0	0	0	0	0
3-Sep-20	0	182	121	0	0	121	0	0	0	0	0	424	394	0	0	0	0	0
4-Sep-20	0	61	91	0	0	212	0	0	0	0	0	363	394	0	0	0	0	0
5-Sep-20	0	0	0	0	0	30	0	0	0	0	0	30	121	0	0	0	0	0
6-Sep-20	0	0	0	0	0	91	0	0	0	0	0	91	485	0	0	0	0	0
7-Sep-20	0	0	0	0	0	61	0	30	0	0	0	91	424	0	0	0	0	0
8-Sep-20	0	0	0	0	0	0	0	182	0	0	0	182	303	0	0	0	0	0
9-Sep-20	0	0	0	0	0	0	0	182	0	0	0	182	273	0	0	0	0	0
Monthly Totals												Monthly Totals						
May 2020	144	0	30	0	0	0	0	0	0	0	0	174	182	0	0	0	0	0
June 2020	61	0	3,036	0	0	30	0	5,269	0	0	0	8,396	787	1,129	2,953	31	0	0
July 2020	68	1,429	1,160	0	0	1,518	91	545	0	0	0	4,812	2,816	0	666	121	600	0
August 2020	51	759	2,129	0	0	2,029	0	155	121	0	0	5,244	1,242	0	0	2,392	1,722	0
September 2020	0	242	212	0	0	515	0	394	0	0	0	1,363	2,392	0	0	0	0	0
Annual Totals	324	2,431	6,568	0	0	4,092	91	6,363	121	0	0	19,989	7,420	1,129	3,619	2,544	2,322	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 4.4: Exceedances of Volume Criteria for Water Use Authorized for Domestic and Industrial Purposes on Inuit-Owned and Crown Lands - 2020

Date ^a	Approved Source ^b	Water Use and Location	Daily Limit for Approved Source and Use (m ³)	Daily Withdrawal (m ³)	Exceedance Verification Status (Verified or Mis-categorization)	Immediate Cause(s) of Exceedance	Root Cause of Exceedance	Lessons Learned	Preventative Measures
20-Sep-20	Camp Lake (MS-MRY-1)	Domestic water at Mine Site (Mary River)	203.8	210.4	Verified	Water Treatment Plant (WTP) Operator for the Mine Site Camp (MSC) WTP refilled the raw water tank following tank being emptied on September 19, 2020 to perform maintenance repairs. The water needed to refill the water tank combined with normal water use for the Sailiivik WTP exceeded the daily limit for domestic water use.	Lack of contingency raw water storage to supply WTP during periods of equipment outages and maintenance shut downs.	Additional contingency water storage is needed for periods of equipment outages and maintenance shut downs.	Repurpose an existing fire water storage tank or install a new water storage tank to provide contingency water storage for the MSC and Sailiivik Camp WTPs to supply water demands during periods of equipment outages and maintenance shut downs.

Notes:

All volumes in cubic metres (m³).

^a No volume withdrawal exceedances occurred during dates not listed.

^b Domestic and industrial water source as shown in Table 2-3 of the Type 'A' Water Licence.

Table 4.5: Exceedances of Maximum Volume Criteria for Water Use Authorized for Dust Suppression on Inuit-Owned and Crown Lands - 2020

Date ^a	Approved Source for Dust Suppression Use ^b	Daily Limit for Approved Source (m ³)	Daily Withdrawal (m ³)	Exceedance Verification Status (Verified or Mis-categorization)	Immediate Cause of Exceedance	Root Cause of Exceedance	Lessons Learned	Preventative Measures
29-May-20	Camp Lake	86	91	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log.
05-Jun-20	Km 32 Lake	364	454	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log.
05-Jun-20	CV217	130	727	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log.
06-Jun-20	CV217	130	697	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log.
07-Jun-20	CV217	130	454	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log.
08-Jun-20	CV217	130	151	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log.
09-Jun-20	CV217	130	363	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log.
10-Jun-20	CV217	130	273	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log.
11-Jun-20	Km 32 Lake	364	545	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log.

Notes:

All volumes in cubic metres (m³).

^a No volume withdrawal exceedances occurred during dates not listed.

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

Table 4.5: Exceedances of Maximum Volume Criteria for Water Use Authorized for Dust Suppression on Inuit-Owned and Crown Lands - 2020

Date ^a	Approved Source for Dust Suppression Use ^b	Daily Limit for Approved Source (m ³)	Daily Withdrawal (m ³)	Exceedance Verification Status (Verified or Mis-categorization)	Immediate Cause of Exceedance	Root Cause of Exceedance	Lessons Learned	Preventative Measures
11-Jun-20	CV217	130	242	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
12-Jun-20	CV217	130	212	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
13-Jun-20	CV217	130	394	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
14-Jun-20	CV217	130	242	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
15-Jun-20	CV217	130	333	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
16-Jun-20	CV217	130	212	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
17-Jun-20	CV217	130	273	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
18-Jun-20	CV217	130	182	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .

Notes:

All volumes in cubic metres (m³).

^a No volume withdrawal exceedances occurred during dates not listed.

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

Table 4.5: Exceedances of Maximum Volume Criteria for Water Use Authorized for Dust Suppression on Inuit-Owned and Crown Lands - 2020

Date ^a	Approved Source for Dust Suppression Use ^b	Daily Limit for Approved Source (m ³)	Daily Withdrawal (m ³)	Exceedance Verification Status (Verified or Mis-categorization)	Immediate Cause of Exceedance	Root Cause of Exceedance	Lessons Learned	Preventative Measures
19-Jun-20	CV217	130	182	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
24-Jun-20	CV217	130	151	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
04-Jul-20	BG50	150	454	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
06-Jul-20	CV217	130	151	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
07-Jul-20	CV217	130	151	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
08-Jul-20	BG50	150	273	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
09-Jul-20	BG50	150	242	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
29-Jul-20	BG50	150	184	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
11-Aug-20	BG50	150	312	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .

Notes:

All volumes in cubic metres (m³).

^a No volume withdrawal exceedances occurred during dates not listed.

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

Table 4.5: Exceedances of Maximum Volume Criteria for Water Use Authorized for Dust Suppression on Inuit-Owned and Crown Lands - 2020

Date ^a	Approved Source for Dust Suppression Use ^b	Daily Limit for Approved Source (m ³)	Daily Withdrawal (m ³)	Exceedance Verification Status (Verified or Mis-categorization)	Immediate Cause of Exceedance	Root Cause of Exceedance	Lessons Learned	Preventative Measures
21-Aug-20	BG50	150	333	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
26-Aug-20	BG50	150	182	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
04-Sep-20	BG50	150	212	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
08-Sep-20	CV217	130	182	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .
09-Sep-20	CV217	130	182	Verified	Operator error	Existing controls for managing daily water use are inadequate	Improved controls are needed to prevent exceedances of the daily water use limits	Signs were installed at the water sources to indicate maximum daily water use limits. Improved water truck logs have been implemented to indicate daily limits for approved sources, allowing water truck operators to identify when the daily water use is reached. In 2021, a water proof storage system will be installed at each water source to house the water truck filling log .

Notes:

All volumes in cubic metres (m³).

^a No volume withdrawal exceedances occurred during dates not listed.

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

Table 5.1: Monthly Quantities - Sewage Management - 2020

Day	Treated Sewage Effluent																	
	January						February						March					
	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d
1	36.0	86.2	0	61.0	0	0	37.0	116.5	0	53.0	0	0	39.0	81.6	0	50.0	0	0
2	36.0	98.1	0	60.0	0	0	38.0	109.5	0	51.0	0	0	39.0	110.0	0	50.0	0	0
3	35.0	83.3	0	52.0	0	0	37.0	98.5	0	53.0	0	0	39.0	115.3	0	52.0	0	0
4	21.0	72.2	0	53.0	0	0	39.0	110.5	0	52.0	0	0	35.0	116.0	0	51.0	0	0
5	37.0	75.3	0	57.0	0	0	41.0	101.4	0	52.0	0	0	25.0	100.0	0	48.0	0	0
6	17.0	82.4	0	55.0	0	0	44.0	113.0	0	51.0	0	0	39.0	110.0	0	50.0	0	0
7	15.0	84.5	0	54.0	0	0	42.0	119.5	0	49.0	0	0	39.0	102.1	0	50.0	0	0
8	42.0	72.6	0	57.0	0	0	41.0	99.6	0	50.0	0	0	38.0	90.7	0	54.0	0	0
9	33.0	106.1	0	59.0	0	0	39.0	93.7	0	48.0	0	0	44.0	99.2	0	52.0	0	0
10	17.0	83.1	0	57.0	0	0	39.0	85.3	0	51.0	0	0	40.0	65.1	0	50.0	0	0
11	32.0	93.3	0	58.0	0	0	39.0	73.4	0	48.0	0	0	39.0	83.4	0	50.0	0	0
12	31.0	73.5	0	55.0	0	0	39.0	87.7	0	51.0	0	0	39.0	77.6	0	53.0	0	0
13	31.0	104.5	0	54.0	0	0	38.0	96.5	0	49.0	0	0	39.0	77.6	0	48.0	0	0
14	32.0	85.6	0	61.0	0	0	31.0	82.6	0	39.0	0	0	39.0	106.3	0	48.0	0	0
15	32.0	88.2	0	60.0	0	0	39.0	99.8	0	50.0	0	0	38.0	87.8	0	48.0	0	0
16	32.0	101.7	0	54.0	0	0	39.0	115.6	0	49.0	0	0	35.0	93.0	0	46.0	0	0
17	31.0	89.8	0	58.0	0	0	39.0	120.9	0	49.0	0	0	39.0	107.2	0	51.0	0	0
18	28.0	94.6	0	63.0	0	0	37.0	119.7	0	52.0	0	0	39.0	86.8	0	53.0	0	0
19	37.0	72.8	0	67.0	0	0	35.0	126.9	0	53.0	0	0	39.0	64.0	0	50.0	0	0
20	37.0	85.7	0	70.0	0	0	39.0	126.7	0	54.0	0	0	39.0	80.3	0	53.0	0	0
21	37.0	85.7	0	67.0	0	0	39.0	104.9	0	49.0	0	0	39.0	86.6	0	58.0	0	0
22	41.0	82.0	0	66.0	0	0	39.0	118.2	0	49.0	0	0	39.0	96.6	0	55.0	0	0
23	40.0	84.1	0	64.0	0	0	39.0	106.2	0	50.0	0	0	39.0	78.4	0	51.0	0	0
24	35.0	66.3	0	67.0	0	0	31.0	101.0	0	47.0	0	0	38.0	88.4	0	49.0	0	0
25	36.0	76.4	0	63.0	0	0	28.0	112.7	0	51.0	0	0	39.0	82.8	0	51.0	0	0
26	37.0	66.6	0	60.0	0	0	39.0	124.0	0	50.0	0	0	35.0	52.8	0	57.0	0	0
27	37.0	98.7	0	63.0	0	0	30.0	127.6	0	49.0	0	0	39.0	83.7	0	59.0	0	0
28	37.0	81.7	0	59.0	0	0	34.0	128.3	0	48.0	0	0	33.0	94.1	0	57.0	0	0
29	37.0	106.6	0	61.0	0	0	39.0	68.7	0	47.0	0	0	24.0	108.7	0	55.0	0	0
30	35.0	106.9	0	59.0	0	0	-	-	-	-	-	-	39.0	110.8	0	62.0	0	0
31	37.0	95.0	0	50.0	0	0	-	-	-	-	-	-	39.0	127.4	0	61.0	0	0
Monthly Total	1,021	2,684	0	1,844	0	0	1,090	3,089	0	1,444	0	0	1,165	2,864	0	1,622	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 MS-MRY-04B Polishing Waste Stabilization Pond (PWSP) discharged to approved location near Sheardown Lake NW.

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

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

Table 5.1: Monthly Quantities - Sewage Management - 2020

Day	Treated Sewage Effluent																	
	April						May						June					
	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d
1	34.0	126.0	0	65.0	0	0	39.0	88.4	0	59.0	0	0	33.0	72.6	0.0	55.0	0.0	0
2	32.0	103.7	0	69.0	0	0	36.0	86.2	0	56.0	0	0	33.0	72.6	0.0	70.0	0.0	0
3	35.0	89.4	0	69.0	0	0	37.0	69.6	0	64.0	0	0	29.0	76.3	0.0	63.0	0.0	0
4	30.0	69.0	0	64.0	0	0	37.0	62.4	0	70.0	0	0	33.0	69.9	0.0	60.0	0.0	0
5	38.0	75.8	0	56.0	0	0	37.0	70.2	0	71.0	0	0	33.0	86.4	0.0	71.0	6.9	0
6	39.0	62.8	0	53.0	0	0	38.0	53.6	0	72.0	0	0	33.0	126.5	0.0	67.0	12.0	0
7	39.0	59.1	0	54.0	0	0	39.0	62.7	0	57.0	0	0	33.0	127.5	0.0	70.0	8.6	0
8	39.0	54.6	0	50.0	0	0	37.0	61.5	0	65.0	0	0	31.0	86.0	0.0	69.0	20.3	0
9	39.0	58.8	0	47.0	0	0	32.0	75.6	0	70.0	0	0	33.0	84.5	0.0	70.0	20.0	0
10	37.0	58.3	0	54.0	0	0	38.0	61.8	0	73.0	0	0	33.0	84.9	0.0	53.0	27.0	0
11	39.0	58.3	0	50.0	0	0	39.0	68.5	0	64.0	0	0	33.0	85.2	0.0	55.0	24.0	0
12	39.0	64.4	0	58.0	0	0	37.0	70.7	0	70.0	0	0	27.0	89.6	0.0	52.0	19.0	0
13	39.0	60.9	0	53.0	0	0	38.0	61.2	0	71.0	0	0	23.0	84.1	0.0	61.0	25.0	0
14	38.0	60.9	0	64.0	0	0	38.0	50.4	0	71.0	0	0	30.0	82.6	0.0	52.0	23.0	0
15	37.0	55.2	0	60.0	0	0	38.0	77.0	0	71.0	0	0	33.0	79.4	0.0	46.0	27.0	0
16	35.0	80.6	0	51.0	0	0	38.0	57.3	0	72.0	0	0	34.0	100.8	0.0	52.0	27.0	0
17	39.0	83.6	0	58.0	0	0	38.0	46.9	0	67.0	0	0	34.0	102.3	365.0	44.0	23.0	0
18	39.0	103.7	0	63.0	0	0	38.0	82.0	0	71.0	0	0	33.0	91.8	370.0	45.0	24.1	0
19	38.0	88.4	0	62.0	0	0	38.0	90.1	0	71.0	0	0	30.0	76.0	733.0	50.0	30.7	0
20	37.0	77.6	0	69.0	0	0	38.0	76.6	0	70.0	0	0	36.0	75.3	53.0	42.0	15.0	0
21	36.0	66.8	0	70.0	0	0	38.0	79.2	0	70.0	0	0	34.0	74.3	0.0	50.0	24.0	0
22	36.0	94.9	0	59.0	0	0	38.0	97.5	0	70.0	0	0	30.0	72.6	0.0	60.0	24.0	0
23	36.0	94.3	0	70.0	0	0	38.0	73.7	0	69.0	0	0	33.0	70.2	0.0	42.0	27.8	0
24	36.0	77.0	0	69.0	0	0	35.0	104.1	0	44.0	0	0	38.0	85.5	0.0	48.0	15.7	0
25	36.0	77.0	0	70.0	0	0	33.0	81.7	0	35.0	0	0	33.0	84.2	0.0	51.0	24.0	0
26	35.0	72.1	0	63.0	0	0	33.0	87.1	0	65.0	0	0	31.0	71.5	0.0	53.0	24.0	0
27	34.0	79.1	0	58.0	0	0	33.0	74.9	0	69.0	0	0	31.0	101.3	0.0	52.0	27.2	0
28	35.0	77.6	0	61.0	0	0	33.0	68.9	0	71.0	0	0	36.0	105.9	0.0	49.0	30.0	0
29	31.0	69.2	0	65.0	0	0	33.0	76.1	0	71.0	0	0	42.0	69.3	0.0	51.0	35.0	0
30	24.0	67.2	0	58.0	0	0	33.0	76.0	0	70.0	0	0	28.0	72.8	0.0	50.0	26.0	0
31	-	-	-	-	-	-	33.0	69.1	0	68.0	0	0	-	-	-	-	-	-
Monthly Total	1,081	2,266	0	1,812	0	0	1,130	2,261	0	2,057	0	0	973	2,562	1,521	1,653	590	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 MS-MRY-04B Polishing Waste Stabilization Pond (PWSP) discharged to approved location near Sheardown Lake NW.

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

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

Table 5.1: Monthly Quantities - Sewage Management - 2020

Day	Treated Sewage Effluent																	
	July						August						September					
	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d
1	33.0	106.5	0	52.0	26.0	0	32.0	82.6	0	30.0	36.3	0	33	83.4	0	29.0	36.2	0
2	49.0	74.3	0	44.0	46.0	0	32.0	69.4	0	31.0	44.2	0	37	80.6	0	31.0	37.0	0
3	47.0	81.0	0	33.0	34.0	0	36.0	66.3	0	30.0	28.7	0	41	105.4	0	26.0	31.6	0
4	38.0	96.1	0	27.0	30.0	0	37.0	67.6	0	31.0	25.3	0	40	102.2	0	25.0	38.3	0
5	28.0	78.6	0	37.0	31.0	0	37.0	68.9	0	40.0	32.5	0	30	125.0	0	25.0	31.7	0
6	41.0	52.2	0	29.0	33.0	0	37.0	80.8	0	37.0	35.5	0	22	98.0	0	24.0	37.6	0
7	44.0	63.2	0	30.0	22.0	0	11.0	78.2	0	33.0	49.4	0	37	87.1	0	25.0	34.1	0
8	38.0	71.2	0	34.0	35.0	0	23.0	80.8	0	48.0	64.1	24.7	20	111.4	0	21.0	24.9	0
9	33.0	77.1	0	39.0	44.0	0	32.0	80.4	0	0	45.7	45.7	29	95.5	0	20.0	26.4	0
10	37.0	72.7	0	32.0	31.0	0	21.0	94.2	0	0	54.7	45.3	39	83.3	0	27.0	37.7	0
11	37.0	80.1	0	25.0	30.0	0	37.0	94.2	0	0	56.1	45.9	36	78.1	0	26.0	35.5	0
12	37.0	62.1	0	29.0	17.0	0	36.0	97.1	0	0	55.7	36.9	38	94.7	0	34.0	25.0	0
13	35.0	56.0	0	28.0	29.7	0	35.0	97.1	0	0	54.1	42.8	39	84.5	0	31.0	38.3	0
14	37.0	81.8	0	33.0	32.3	0	32.0	105.9	0	0	50.4	37.6	39	81.3	0	28.0	19.4	0
15	37.0	46.5	0	38.0	28.0	0	32.0	106.4	0	0	54.3	45.6	40	73.9	0	58.0	12.8	0
16	37.0	66.2	0	34.0	29.1	0	37.0	92.2	0	0	60.6	42.6	43	71.9	0	40.0	31.4	0
17	37.0	67.2	0	33.0	29.5	0	33.0	86.1	0	0	50.9	43.3	40	80.3	0	50.0	35.0	0
18	37.0	102.9	0	33.0	28.7	0	30.0	86.1	0	0	47.0	0	39	95.0	0	33.0	43.4	0
19	37.0	70.7	0	29.0	33.6	0	35.0	93.6	0	0	28.6	0	36	89.6	0	26.0	29.2	0
20	37.0	101.9	0	32.0	33.1	0	38.0	72.6	0	11.0	31.7	0	39	89.6	0	25.0	35.9	0
21	34.0	112.2	0	28.0	34.2	0	22.0	86.2	0	36.0	21.5	0	39	76.2	0	26.0	36.9	0
22	36.0	75.0	0	37.0	32.4	0	31.0	89.7	0	38.0	28.1	0	38	92.3	0	26.0	0.0	0
23	37.0	88.2	0	38.0	35.4	0	23.0	92.3	0	38.0	26.0	0	37	90.7	0	29.0	0.0	0
24	37.0	111.8	0	39.0	43.9	0	35.0	102.2	0	31.0	27.7	0	37	104.0	0	26.0	45.1	0
25	37.0	112.9	0	33.0	30.2	0	44.0	89.2	0	35.0	32.7	0	38	105.2	0	31.0	26.0	0
26	37.0	111.8	0	36.0	28.1	0	31.0	120.0	0	31.0	29.8	0	39	97.3	0	29.0	40.2	0
27	37.0	94.1	0	34.0	38.2	0	37.0	104.0	0	22.0	25.4	0	35	96.3	0	23.0	43.1	0
28	37.0	110.5	0	33.0	31.1	0	31.0	113.2	0	23.0	24.3	0	36	67.0	0	22.0	33.2	0
29	35.0	91.0	0	35.0	32.6	0	30.0	98.5	0	25.0	30.4	0	39	44.4	0	26.0	29.5	0
30	37.0	80.7	0	32.0	38.2	0	30.0	92.2	0	30.0	28.4	0	47	122.8	0	21.0	42.4	0
31	35.0	82.6	0	31.0	42.6	0	30.0	68.6	0	25.0	30.4	0	-	-	-	-	-	-
Monthly Total	1,155	2,579	0	1,047	1,010	0	987	2,757	0	625	1,210	410	1,102	2,707	0	863	938	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 MS-MRY-04B Polishing Waste Stabilization Pond (PWSP) discharged to approved location near Sheardown Lake NW.

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

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

Table 5.1: Monthly Quantities - Sewage Management - 2020

Day	Treated Sewage Effluent																	
	October						November						December					
	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d
1	47.0	129.6	0	18.0	18.5	0	37.0	76.1	0	25.0	25.7	0	36.0	103.2	0	21.0	13.3	0
2	44.0	127.7	0	25.0	42.3	0	37.0	67.5	0	25.0	21.1	0	31.0	70.9	0	22.0	24.4	0
3	55.0	129.6	0	25.0	18.6	0	36.0	89.4	0	24.0	25.7	0	36.0	92.7	0	25.0	19.0	0
4	25.0	120.4	0	25.0	39.5	0	36.0	81.1	0	25.0	23.9	0	32.0	85.3	0	23.0	18.2	0
5	42.0	128.3	0	25.0	34.0	0	37.0	74.0	0	26.0	23.5	0	36.0	83.8	0	8.0	15.6	0
6	44.0	99.6	0	25.0	37.9	0	37.0	74.0	0	26.0	20.4	0	31.0	89.9	0	27.0	21.1	0
7	46.0	70.1	0	25.0	38.0	0	37.0	79.2	0	23.0	20.0	0	36.0	92.9	0	33.0	20.4	0
8	44.0	74.2	0	23.0	48.3	0	41.0	80.6	0	25.0	22.3	0	36.0	87.7	0	24.0	17.8	0
9	45.0	71.6	0	24.0	58.2	0	41.0	87.1	0	25.0	20.3	0	36.0	87.9	0	23.0	22.0	0
10	44.0	85.6	0	22.0	22.6	0	36.0	91.6	0	21.0	28.6	0	38.0	88.3	0	25.0	14.9	0
11	47.0	92.4	0	25.0	39.5	0	36.0	86.1	0	25.0	15.3	0	38.0	83.8	0	25.0	28.9	0
12	33.0	106.9	0	25.0	28.9	0	40.0	76.2	0	25.0	28.8	0	39.0	101.4	0	25.0	17.4	0
13	31.0	107.4	0	23.0	40.7	0	43.0	84.2	0	21.0	25.0	0	33.0	96.0	0	25.0	19.8	0
14	34.0	78.3	0	23.0	34.9	0	38.0	77.3	0	21.0	11.6	0	22.0	70.2	0	22.0	18.5	0
15	39.0	96.5	0	25.0	29.8	0	34.0	70.9	0	25.0	27.5	0	36.0	92.2	0	21.0	12.9	0
16	31.0	96.0	0	25.0	26.4	0	36.0	69.7	0	25.0	24.2	0	30.0	99.4	0	25.0	17.4	0
17	17.0	103.3	0	23.0	25.7	0	36.0	60.7	0	25.0	24.3	0	36.0	96.6	0	36.0	0.0	0
18	20.0	96.0	0	25.0	19.4	0	36.0	75.5	0	25.0	24.1	0	35.0	78.0	0	50.0	0.0	0
19	26.0	96.0	0	23.0	27.5	0	43.0	88.9	0	25.0	14.1	0	32.0	70.9	0	39.0	0.0	0
20	25.0	97.1	0	20.0	35.1	0	46.0	86.6	0	26.0	26.9	0	36.0	76.8	0	23.0	0.0	0
21	22.0	96.0	0	19.0	30.1	0	44.0	90.2	0	25.0	8.6	0	28.0	71.8	0	54.0	0.0	0
22	34.0	66.3	0	23.0	32.7	0	41.0	85.8	0	20.0	14.4	0	36.0	69.4	0	47.0	0.0	0
23	19.0	67.4	0	24.0	27.1	0	40.0	79.3	0	17.0	23.3	0	30.0	68.1	0	50.0	0.0	0
24	24.0	108.4	0	18.0	28.8	0	38.0	75.5	0	10.0	6.2	0	31.0	69.3	0	46.0	0.0	0
25	14.0	96.0	0	27.0	32.2	0	34.0	75.5	0	25.0	23.7	0	31.0	67.0	0	41.0	0.0	0
26	12.0	116.1	0	9.0	25.4	0	22.0	96.8	0	25.0	14.8	0	33.0	57.3	0	40.0	0.0	0
27	20.0	101.2	0	20.0	29.3	0	33.0	86.9	0	21.0	13.9	0	33.0	65.3	0	42.0	0.0	0
28	20.0	89.6	0	25.0	27.6	0	13.0	83.4	0	25.0	13.9	0	34.0	68.3	0	43.0	0.0	0
29	28.0	76.5	0	26.0	23.2	0	22.0	85.4	0	25.0	12.7	0	32.0	44.7	0	41.0	0.0	0
30	35.0	73.5	0	25.0	20.2	0	36.0	84.7	0	19.0	16.0	0	34.0	78.0	0	44.0	0.0	0
31	36.0	76.1	0	25.0	23.5	0	-	-	-	-	-	-	25.0	104.7	0	47.0	0.0	0
Monthly Total	1,003	2,973	0	715	966	0	1,086	2,420	0	700	601	0	1,032	2,512	0	1,017	302	0

2020	Treated Sewage Effluent					
	MS-01 ^a	MS-01B ^a	MS-MRY-04B ^b	MP-01 ^c	MP-01B ^c	MP-01A ^d
Annual Total	12,825	31,674	1,521	15,399	5,616	410

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 MS-MRY-04B Polishing Waste Stabilization Pond (PWSP) discharged to approved location near Sheardown Lake NW.

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

^d 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 - 2020

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	33.9	0	0	0	9.4	0.0	6.0	0.0	0.0
February	11.1	29.9	0	0	0	10.3	0.0	10.5	0.0	0.0
March	12.5	24.6	0	0	0	10.2	0.0	8.0	0.0	0.0
April	9.5	8.3	0	0	0	7.7	0.0	3.5	25.3	5.7
May	9.3	17.3	0	0	0	8.6	0.0	8.6	99.4	0.0
June	10.7	14.8	0	0	0	6.4	25.0	2.3	15.7	5.7
July	11.6	20.3	0	0	0	7.7	36.5	1.0	0.0	0.0
August	12.9	16.3	0	0	0	1.1	13.0	0.0	0.0	0.0
September	11.6	23.7	46.0	0	0	4.3	8.5	0.0	45.0	0.0
October	10.6	26.9	0	0	0	4.4	7.0	1.0	0.0	0.0
November	13.0	20.0	44.0	0	0	6.7	6.0	0.0	0.0	0.0
December	10.3	14.6	0	0	0	5.9	0.0	8.7	0.0	0.0
TOTAL	133	251	90	0	0	83	96	50	185	11

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 - 2020

Day	June	July		August				September
	MP-03 ^a	MS-03 ^b	MP-03 ^a	MS-03 ^b	MS-03B ^c	MP-03 ^a	MP-04A ^d	MP-04 ^d
1	0.0	0.0	0.0	16.8	0.0	43.0	0.0	0.0
2	0.0	0.0	0.0	18.3	0.0	128.0	0.0	0.0
3	0.0	0.0	0.0	18.7	0.0	197.0	0.0	0.0
4	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	10.9	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	18.5	0.0	0.0	0.0	16.9
7	0.0	0.0	0.0	17.4	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	18.5	0.0	0.0	0.0	0.0
9	0.0	0.0	0.0	16.2	0.0	0.0	0.0	57.7
10	0.0	0.0	0.0	16.4	0.0	0.0	0.0	53.1
11	0.0	0.0	0.0	4.7	0.0	0.0	0.0	56.2
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.4
13	0.0	0.0	0.0	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
15	0.0	0.0	0.0	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
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	15.9	0.0	0.0	0.0
21	39.0	0.0	0.0	0.0	61.3	0.0	0.0	0.0
22	94.0	10.7	0.0	0.0	0.0	0.0	0.0	0.0
23	93.4	18.3	0.0	0.0	0.0	0.0	0.0	0.0
24	80.0	19.5	0.0	0.0	249.6	0.0	0.0	0.0
25	65.7	24.0	0.0	0.0	152.3	0.0	0.0	0.0
26	111.9	22.2	0.0	0.0	287.9	78.9	0.0	0.0
27	73.7	0.0	0.0	0.0	0.0	34.8	0.0	0.0
28	77.6	2.2	0.0	0.0	38.5	0.0	0.0	0.0
29	94.3	0.0	0.0	0.0	51.0	0.0	2.2	0.0
30	74.2	11.8	154.0	0.0	131.0	0.0	3.4	0.0
31	-	18.0	327.0	0.0	137.3	0.0	7.4	-
Sub-Total	803.8	126.7	481.0	164.2	1125.2	481.7	13.0	239.3
Monthly Total	804	608		1,784				239

2020	MP-03 ^a	MP-04 ^d	MP-04A ^d	MS-03 ^b	MS-03B ^c	MP Total	MS Total	Combined Total
Annual Total	1767	239	13	291	1,125	2,019	1,416	3,435

Notes:

All volumes in cubic metres (m³).

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

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

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

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

Table 5.4: Daily, Monthly, and Annual Quantities of Discharge Stormwater - Surface Water Management Ponds - 2020

Day	June		July		August				September	
	MS-08 ^a	MP-06 ^c	MS-08 ^a	MP-06 ^c	MS-06 ^b	MS-08 ^a	MP-05 ^c	MP-06 ^c	MP-05 ^c	MP-06 ^c
1	0	0	2,760	0	0	0	0	0	0	0
2	0	0	3,360	0	0	0	1	0	0	0
3	0	0	4,560	0	0	537	0	0	0	0
4	0	0	3,928	0	21	252	350	0	0	0
5	0	0	3,648	0	0	0	639	0	0	0
6	0	0	2,528	0	0	0	0	0	0	0
7	0	0	2,544	0	44	0	0	0	0	0
8	0	0	2,750	0	29	0	0	0	0	0
9	0	0	1,503	0	39	38	0	0	0	0
10	0	0	191	0	56	0	0	0	0	0
11	0	0	0	0	33	33	0	0	0	0
12	0	0	0	0	31	0	0	0	0	0
13	0	0	0	0	10	0	0	0	0	173
14	0	0	0	0	0	0	0	0	157	33
15	0	0	898	0	0	0	0	125	157	0
16	0	0	1,180	0	0	0	358	419	39	0
17	0	0	2,235	0	0	361	0	0	0	0
18	0	0	3,280	0	0	467	0	0	0	0
19	0	0	3,087	37	0	537	217	0	0	0
20	0	0	3,456	878	0	0	16	417	0	0
21	0	0	680	9	0	1,181	0	0	0	0
22	0	0	0	0	0	1,207	99	0	0	0
23	0	631	0	0	0	3,720	369	0	0	0
24	0	0	0	0	0	3,552	822	0	0	0
25	0	0	0	0	0	1,490	348	0	0	0
26	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	270	0	0	0
28	0	0	0	0	0	227	148	0	0	0
29	1,464	0	0	0	0	940	0	0	0	0
30	2,688	0	0	0	0	1,179	0	0	0	0
31	-	-	0	0	0	1,460	0	0	-	-
Sub-Total	4,152	631	42,587	924	263	17,180	3,637	961	353	206
Monthly Total	4,783		43,511		22,041				559	

2020	MS-08 ^a	MS-06 ^b	MP-05 ^c	MP-06 ^c	MS Total	MP Total	Combined Total
Annual Total	63,919	263	3,990	2,722	64,182	6,712	70,894

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.

Table 5.5: Locations of Temporary and Permanent Storage Areas for Wastes - 2020

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 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 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 Waste Management Building	561369	7913338	71° 18' 52.0"	79° 17' 00.7"
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' 1"

Notes:

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 - 2020

Quarter	Month	Volume of Waste Deposited in Landfill	Comments
Q1	January	1,203	Quarterly survey conducted on March 31, 2020.
	February	1,203	
	March	1,203	
Q2	April	1,258	Quarterly survey conducted on June 30, 2020.
	May	1,258	
	June	1,258	
Q3	July	1,234	Quarterly survey conducted on September 30, 2020.
	August	1,234	
	September	1,234	
Q4	October	530	Quarterly survey conducted on December 31, 2020.
	November	530	
	December	530	
TOTAL (BCMs)		12,676	

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 - 2020

Quarter	Month	Soil Deposited in Landfarm (m ³)	Water Deposited in Contaminated Snow Containment Berm (m ³)	Comments
Q1	January	0	4	
	February	0	10	
	March	0	17	
Q2	April	0	45	
	May	0	7	
	June	0	28	
Q3	July	0	0	
	August	0	0	
	September	0	0	
Q4	October	0	0	
	November	0	19	
	December	0	65	
TOTAL		0	195	

Notes:

There was no contaminated soil deposited in the landfarm in 2020, all contaminated soil was shipped offsite.

Table 5.8: Monthly and Annual Quantities - Deposit No. 1 Waste Rock Management - 2020

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	6,884	239,697	1,530	248,111
February	109,129	209,376	129,285	447,790
March	17,662	76,393	32,555	126,610
April	0	138,798	3,570	142,368
May	56,455	248,984	21,913	327,352
June	236,034	198,720	807	435,561
July	246,550	147,427	0	393,977
August	320,158	133,488	16,752	470,398
September	278,507	89,335	0	367,842
October	321,062	253,092	42,108	616,262
November	201,685	210,432	62,473	474,590
December	101,615	146,505	65,359	313,479
TOTAL	1,895,740	2,092,247	376,352	4,364,339

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 - 2020

Product	Number of 2020 Reported Spills by Location		
	Mine Site	Tote Road	Milne Port
Diesel Exhaust Fluid (DEF)	-	-	1
Arctic Diesel (P50)	1	-	-
Gasoline	-	-	1
Compliant Effluent Waste Rock Facility	1	-	-
Compliant Effluent Crusher Facility Pad	1	-	-
Sediment	2	-	-
Sewage (Untreated)	3	-	1
Oil	1	-	1
Sub-Total	9	-	4
Annual Total	13		

Table 6.2: List of Reported Spills and Unauthorized Discharges - 2020

Date	Quantity (m ³)	Material Spilled	Approximate Location (UTM NAD83 Zone 17W)		Project Area	Specific Location	Proximity to Water Body	Spill Line ID	Occurred within a Engineered Lined Facility?	Clean-up Details	Corrective Actions
			Easting	Northing							
13-Jan-20	0.2	Arctic Diesel	561366	7913338	Mine Site	Diesel Fueling Module	>100 m	20-009	Yes	The operator immediately shut off the fuel pump, closed the valves and laid down spill pads, booms and spill trays to contain the spill. The contaminated material was removed and properly disposed of in two quatex bags to be back hauled offsite.	The maximum fill level label at 85% was added to prevent overflowing of the tank.
10-Feb-20	15	Sewage	560731	7913289	Mine Site	Sailiivik Complex C Wing	>100 m	20-044	No	Vacuum truck was used to clean up and remove the released sewage from the area. Following removal, the sewage and disposed of in the Polishing Waste Stabilization Ponds.	Increased frequency of routine inspections of the system and routine checks for system alarms. Replaced the external alarm indicator light at the water treatment plant.
3-Mar-20	0.2	Hydraulic Oil	561724	791276	Mine Site	Crusher B	>100 m	20-068	No	The unit was shut off, spill pads were placed over the spill, and a skid steer removed the contaminated material and placed it into quatex bags to be back hauled offsite.	The hydraulic line was replaced and a preventative maintenance inspection was scheduled for all similar crushing systems. The frequency of preventative maintenance inspections was increased.
26-Apr-20	0.6	Motor Oil	505246	7971526	Milne Port	R3 Laydown	>100 m	20-115	No	The tote was immediately placed on its side to stop any further release to the ground. A berm was constructed from the surrounding snow to prevent any further migration of the spill and spill pads were placed over the contaminated area. The contaminated material was removed and placed into quatex bags to be back hauled offsite.	A tool box meeting was presented which focused on the importance of a spotter and communication.
18-May-20	Unquantified	Sediment-laden water	557805	7914795	Mine Site	Camp Lake and Sheardown Lake	0 m	20-141	No	Installed sedimentation mitigation measures including check dams, silt fences, sand bags and coir logs 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 implemented and reinforced, including the maintenance of check dams up slope of the Camp Lake Sedimentation Pond (CLSP) outfall, and rip rapping of high risk areas, including the sandy slope upstream of the CLSP outfall. Snow pack around the inlets and outlets of select culvert locations was excavated to reduce the volume of snow melt and thus, the amount of overland flow present to mobilize sediment.
14-Jun-20	Unquantified	Sediment-laden water	564406	7913024	Mine Site	Mine Haul Road to Mary River and Mary River Tributary	0 m	20-179	No	Implemented sedimentation mitigation measures, including ditch maintenance to ensure all runoff reported to the ditches and reduced interaction with impacted road surfaces. Check dams were maintained and silt fences added in an attempt to settle sediments before reaching the receiving environment.	In the days leading up to freshet, snow pack around the Mine Haul Road culverts and ditches was excavated to reduce the volume of snowmelt and thus, reduce the amount of overland flow present to mobilize sediment. Rip rap and check dams were also maintained at strategic locations. Water diversion and pumping strategies were implemented to reduce potential erosion and sedimentation.
30-Jun-20	Unquantified	Surface Water	562946	7916049	Mine Site	Waste Rock Facility and Surrounding Area	>3 km	20-199	No	A swale on the east side of the ring road was constructed to divert water to the west ditch. An excavator was dispatched to ensure all contact water reported to the west ditch.	Ensured the operators are aware of appropriate locations to place fill that do not interrupt the flow path. Continued routine inspections.

Table 6.2: List of Reported Spills and Unauthorized Discharges - 2020

Date	Quantity (m ³)	Material Spilled	Approximate Location (UTM NAD83 Zone 17W)		Project Area	Specific Location	Proximity to Water Body	Spill Line ID	Occurred within a Engineered Lined Facility?	Clean-up Details	Corrective Actions
			Easting	Northing							
4-Jul-20	Unknown	Surface Water	561497	7912908	Mine Site	Crusher Facility Pad (Southwest Corner)	>1 km	20-208	No	Sumps were strategically installed at the foot of the downstream toe of the collection ditch where seepage was present, as an interim remedial measure, in accordance with Part H Section 8 of the Water License. Baffinland will continue to implement the Ore Crusher Pad Regrading Strategy to prevent the pooling of water on and around the Crusher Facility pad. A pumping system was installed to transfer collected seepage water from these sumps to Crusher Facility Pond MS-06.	The interim corrective actions to resolve the seepage will continue to be implemented until permanent remedial measures are completed during the implementation of the Long Term Water Management Plan.
6-Aug-20	0.5	Sewage	560791	7913291	Mine Site	Sailiivik Waste Water Treatment Plant (WWTP)	>100 m	20-261	No	The pumps were immediately set to manual mode to arrest the release. An excavator collected and properly disposed of the contaminated material.	Routine inspections of system and routine checks for system alarms until the operation of the PLC (logic controller) is inspected and verified.
11-Sep-20	0.1	Diesel Exhaust Fluid (DEF)	503828	7975520	Milne Port	Laydown Pad No. 2	>100 m	20-332	No	Free product was collected using absorbent pads which were disposed of in a lined Quatrex bag. A loader and shovels were used to excavate the contaminated aggregate from the laydown pad. All contaminated fill was packaged into lined Quatrex bags.	A request has been placed for the installation of a new ramp to resolve the issue of a pivot point in the existing ramp and ensure a flat level approach to Seacan. The importance and safety of tote removal was discussed with crew in the tool box meeting.
29-Sep-20	0.6	Sewage	503798	7975954	Milne Port	PSC Waste Water Treatment Plant (WWTP)	>100 m	20-367	No	The lift station pump feeding the main sewage line was shut off. All contaminated material was excavated and collected using a skid steer and placed into Quatrex bags to be back hauled offsite. The area was backfilled with clean fill and compacted gravel.	The main sewage line was inspected and maintenance repairs were completed. The joint was reconnected and sealed using glue for PVC pipe joints in cold climates. It was cured for the appropriate time period and the sewage pipeline was returned to normal operation.
1-Oct-20	0.00025	Gasoline	503229	7976635	Milne Port	Ore Dock #1 at Ship Loader	0 m	20-374	No	All of the spilled product was contained using a boom sock, collected from the water surface using absorbent pads, and placed into a sealed container in the hazardous waste berm for disposal.	The faulty spark plug was replaced in the motor and the motor was checked to confirm that no additional gasoline was released from the exhaust port before the boat was returned to service.
12-Nov-20	1	Sewage	560801	7913291	Mine Site	Sailiivik Waste Water Treatment Plant (WWTP)	>100 m	20-436	No	The pump feeding Membrane Bioreactor (MBR) Tank #2 was immediately shutoff to prevent further sewage release. Released sewage was collected from the ground using a vacuum truck and fed into the Polishing Waste Stabilization Pond (PWSP) and contaminated soil was collected and placed in Quatrex bags in the Hazardous Waste Berm for disposal.	The observation cap on MBR Tank #2 was properly reinstalled and secured. Pumps were installed in floor sumps of the WWTP to collect and transfer water and sewage back to process tanks. Increased frequency of routine inspections and routine checks for system alarms and the operation of the alarm system incorporating sensors and PLC (logic controller) was corrected/verified.

Table 6.3: List of Reported Health & Safety Incidents - 2020

Incident Report Description	Incident Type	Date of Incident
Interaction Between OHT and Flatbed	Dangerous Occurrence	2-Jan-20
Masaba Stacker Collapse	Dangerous Occurrence	22-Jan-20
ART Rolled onto Left Side	Vehicle Accident	28-Jan-20
Interaction Between OHT and Cube Van	Vehicle Accident	9-Feb-20
Wear Plate Broke Off Secondary Screen Deck	Near Miss	20-Feb-20
Upper Lip Laceration	Injury - MAI ¹	9-Mar-20
Left Hand Laceration	Injury - MAI ¹	15-Mar-20
OHT Veered Off Road	Loss of Control	23-Mar-20
Fractured Fingers on Left Hand	Injury - LTI ²	24-Apr-20
Fall from Heights	Injury - FAI ³	30-Apr-20
Interaction Between 740 and LPT	Near Miss	19-May-20
OHT Lost 4th Axle from Lead Trailer	Property Damage	21-May-20
HDPE Pipe Slid Down Hill Blocking Road at KM109	Property Damage	26-May-20
OHT Fell Off Stand	Property Damage	2-Jun-20
Deposit 1 Runoff onto Mountain Tundra	Reportable Exceedance	14-Jun-20
OHT Fire on Tote Road	Dangerous Occurrence	26-Jun-20
Fractured Ankle	Injury - LTI ²	17-Jul-20
2nd Degree Burns to Hands	Injury - MAI ¹	21-Jul-20
Incorrect Weight Balance on Plane	Non-Conformance	21-Jul-20
Brake Failure on OHT	Property Damage	11-Aug-20
Interaction Between Skid Steer and Loader	Property Damage	18-Aug-20
Helicopter Accidentally Released Sling	Property Damage	1-Sep-20
Finger Laceration	Injury - MAI ¹	16-Sep-20
Excavator Fire in Mine	Dangerous Occurrence	20-Sep-20
Interaction Between Service Truck and OHT	Vehicle Accident	24-Sep-20
Upper Lip Laceration	Injury - MAI ¹	9-Oct-20
Puncture to Upper Right Thigh	Injury - MAI ¹	24-Oct-20
Crane Rolled Back when Unattended	Near Miss	3-Nov-20
Metal Shard Penetrated Left Eye	Injury - LTI ²	15-Nov-20
OHT Fire on Tote Road	Dangerous Occurrence	25-Nov-20
Interaction Between Fuel Truck and OHT	Near Miss	6-Dec-20
Left Wrist Injury	Injury - LTI ²	12-Dec-20
Right Ankle Injury	Injury - FAI ³	18-Dec-20
Roll of Lead Line Tied into Blast Pattern	Non-Compliance	24-Dec-20

Notes:

¹ Medical Aid Incident

² Loss Time Incident

³ First Aid Incident

Table 7.1: Water Quality Monitoring Locations - 2020

Monitoring Program	Monitoring Station	Description	Location (UTM NAD83 Zone 17 W)		Location		Status in 2020
			Easting	Northing	Latitude	Longitude	
Milne Port							
SNP	MP-01	Milne Port Sewage Treatment Plant (STP)	503792	7976006	71° 53' 02.6" N	-80° 53' 26.6" 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-B01		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
Other	MP-Q1-P1	Milne Port 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	Surface water drainage downstream of QMR2 Quarry.	560076	7913888	71° 19' 10.9" N	-79° 19' 09.2" W	Active
SNP	MQ-C-D	Surface water drainage downstream of QMR2 Quarry.	559422	7914223	71° 19' 22.3" N	-79° 20' 14.1" W	Active
SNP	MQ-C-E	Surface water drainage downstream of D1Q2 Quarry.	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 Ponds (PWSPs)	-	-	-	-	Inactive ³

Notes:

¹ Exploration Phase infrastructure decommissioned.

² No surface water flows at location in 2020.

³ Not constructed.

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

Table 7.1: Water Quality Monitoring Locations - 2020

Monitoring Program	Monitoring Station	Description	Location (UTM NAD83 Zone 17 W)		Location		Status in 2020
			Easting	Northing	Latitude	Longitude	
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	Inactive
SNP	MS-03	Mine Site Bulk Fuel Storage Facility (stormwater)	561258	7913304	71° 18' 51.0" N	-79° 17' 11.9" W	Active
SNP	MS-04	Mine Site Fuel Unloading Station (stormwater)	-	-	-	-	Inactive ³
SNP	MS-05	Mine Site Landfarm Facility (stormwater)	-	-	-	-	Inactive ³
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	Run of Mine Ore Stockpile Pond - Surface Water Management Pond	563583	7913074	71° 18' 41.4" N	-79° 13' 18.6" W	Active
SNP	MS-08	Waste Rock Facility - Surface Water Management Pond	563218	7916802	71° 20' 24.7" N	-79° 13' 18.3" W	Active
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	Surface water drainage downstream of Mine Site infrastructure.	561454	7913537	71° 18' 58.3" N	-79° 16' 51.5" W	Active
SNP	MS-C-C	Surface water drainage downstream of Mine Site infrastructure.	561110	7913199	71° 18' 47.7" N	-79° 17' 27.1" W	Active
SNP	MS-C-D	Surface water drainage downstream of Mine Site infrastructure.	561008	7913280	71° 18' 50.4" N	-79° 17' 37.1" W	Active
SNP	MS-C-E	Surface water drainage downstream of Mine Site infrastructure.	560980	7913388	71° 18' 53.9" N	-79° 17' 39.6" W	Active
SNP	MS-C-F	Surface water drainage downstream of Mine Site infrastructure.	561797	7913278	71° 18' 49.6" N	-79° 16' 17.7" W	Active
SNP	MS-C-G	Surface water drainage downstream of Mine Site infrastructure.	561813	7911830	71° 18' 02.9" N	-79° 16' 20.3" W	Active
SNP	MS-C-H	Surface water drainage downstream of Mine Site infrastructure.	561162	7912067	71° 18' 11.1" N	-79° 17' 25.1" W	Active
Other	HR-CD-05	Mine Site Haul Road Drainage	563812	7913140	71° 18' 43.3" N	79° 12' 55.4" W	Active
Other	MS-RW-01	Mine Site Recycled Water Pond 1	559348	7914222	71° 19' 22.3" N	79° 20' 21.6" W	Active
Other	MS-RW-02	Mine Site Recycled Water Pond 2	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-4	Mine Site Exploration Camp Sewage Treatment Plant	558134	7914459	71° 19' 31.0" N	-79° 22' 23.2" W	Inactive ¹
SNP	MS-MRY-4A	Mine Site Polishing Waste Stabilization Ponds (PWSPs)	558549	7914112	71° 19' 19.4" N	-79° 21' 42.3" W	Active
SNP	MS-MRY-4B	Mine Site Polishing Waste Stabilization Ponds (PWSPs)	558438	7914310	71° 19' 25.9" N	-79° 21' 53.0" W	Active
SNP	MS-MRY-4C	Mine Site Polishing Waste Stabilization Ponds (PWSPs)	558508	7914264	71° 19' 24.4" N	-79° 21' 46.1" W	Active
SNP	MS-MRY-6	Mine Site Exploration Camp Bulk Fuel Storage Facility (MS-HWB-7)	558341	7914508	71° 19' 32.4" N	-79° 22' 02.2" W	Active
SNP	MS-MRY-9	Mine Site 2008 Bulk Sample Program - Open Pit (surface drainage/seepage)	561083	7915084	71° 19' 48.5" N	-79° 17' 24.5" W	Active
SNP	MS-MRY-10	Deposit No. 1 – Downstream 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 drainage/seepage)	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 drainage/seepage)	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
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

Notes:

¹ Exploration Phase infrastructure decommissioned.

² No surface water flows at location in 2020.

³ Not constructed.

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

Table 7.1: Water Quality Monitoring Locations - 2020

Monitoring Program	Monitoring Station	Description	Location (UTM NAD83 Zone 17 W)		Location		Status in 2020
			Easting	Northing	Latitude	Longitude	
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	Active
SSPM	TR-SN-KM92.5	Tote Road KM 92.5 Snow Stockpile Runoff	551877	7916027	71° 20' 26.8" N	79° 32' 49.5" W	Active
SNP	TR-BP-01	Tote Road Borrow Pit (KM97 Borrow)	556021	7914684	71° 19' 40.1" N	-79° 25' 55.4" 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	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	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 2020.

³ Not constructed.

SNP - Surveillance Network Program ; TRMP - Tote Road Monitoring Program ; SSPM - Snow Stockpile 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			L2406386-1	L2406386-2	L2416532-1	L2424382-1	L2435599-1	L2447380-1	L2459428-1	L2471882-1
	Sample Date & Time			2020-01-15 13:45	2020-01-15 13:45	2020-02-11 13:45	2020-03-03 13:15	2020-04-07 13:15	2020-05-12 8:15	2020-06-09 13:15	2020-07-07 13:45
	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	7.52	7.52	7.93	7.91	7.78	7.53	7.75	8.26
Total Suspended Solids	mg/L	2.0/3.0	120	11.2	8.0	5.4	7.3	4.1	14.4	<2.0	<2.0
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	98	99	580	109	69	89	122	1290
Ammonia, Total (as N)	mg/L	0.010/0.050	-	0.096	0.094	0.064	0.041	0.090	0.472	0.110	0.037
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.95	1.43	1.42	2.31	<0.15	1.23	0.96	0.66
Phosphorus, Total	mg/L	0.0030/0.0045	-	8.61	8.82	8.16	7.55	11.6	10.7	9.03	0.314
Fecal Coliforms	CFU/100 mL	0	10,000	0	1	0	3	0	100	0	0
BOD	mg/L	2.0	100	2.6	<2.0	<2.0	2.4	<2.0	<2.0	<2.0	<2.0
COD	mg/L	10	-	51	47	52	58	48	52	39	25
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	<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	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 7.2.1: Water Quality Results for Water Licence Monitoring Location - MP-01

Analyte	Sample ID			MP-01	MP-01	MP-01	MP-01	MP-01	MP-0101	MP-01
	ALS Laboratory Sample ID			L2485369-1	L2495474-2	L2505075-2	L2516997-2	L2526083-2	L2526083-3	L2541330-2
	Sample Date & Time			2020-08-05 13:15	2020-08-23 8:15	2020-09-16 13:30	2020-10-13 13:15	2020-11-04 13:30	2020-11-04 13:30	2020-12-14 13:30
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹							
pH	pH units	0.10	6.0 - 9.5	7.80	7.48	7.71	7.46	7.69	7.75	7.53
Total Suspended Solids	mg/L	2.0/3.0	120	<3.0	1.3	<3.0	<3.0	<3.0	<3.0	<3.0
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	77	42.8	72	61	88	90	55
Ammonia, Total (as N)	mg/L	0.010/0.050	-	0.047	0.0207	0.104	0.086	0.020	0.020	0.051
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.39	1.10	0.73	5.00	1.34	1.19	1.02
Phosphorus, Total	mg/L	0.0030/0.0045	-	12.1	10.2	8.93	12.8	9.30	9.18	12.6
Fecal Coliforms	CFU/100 mL	0	10,000	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
COD	mg/L	10	-	26	42	29	23	34	31	35
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	<5.0	<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	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 7.2.2: Water Quality Results for Water Licence Monitoring Location - MP-01A

Analyte	Sample ID			MP-01A
	ALS Laboratory Sample ID			L2486009-1
	Sample Date & Time			2020-08-09 10:00
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.10	6.0 - 9.5	8.15
Total Suspended Solids	mg/L	1.0	120	15.7
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	210
Ammonia, Total (as N)	mg/L	0.13	-	5.58
Total Kjeldahl Nitrogen	mg/L	0.25	-	9.68
Phosphorus, Total	mg/L	0.020	-	0.345
Fecal Coliforms	CFU/100mL	1	10,000	<1
BOD	mg/L	2.0	100	2.0
COD	mg/L	20	-	108
Oil and Grease, Total	mg/L	5.0	-	<5.0
	-	-	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-01B	MP-01B	MP-01B
	ALS Laboratory Sample ID			L2451062-2	L2459427-1	L2471849-1	L2485422-1	L2490574-1	L2505065-2
	Sample Date & Time			2020-05-24 7:00	2020-06-09 13:30	2020-07-07 13:30	2020-08-05 13:45	2020-08-18 14:00	2020-09-16 13:45
	QA/QC Sample Type			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	7.71	7.27	7.39	8.31	8.31	7.80
Total Suspended Solids	mg/L	1.0 - 3.0	120	<1.0	<2.0	<2.0	<3.0	<3.0	<3.0
Alkalinity, Total (as CaCO ₃)	mg/L	10/1.0	-	71.8	33	61	297	316	272
Ammonia, Total (as N)	mg/L	0.10/0.005	-	0.0397	0.374	0.078	0.028	0.014	7.43
Total Kjeldahl Nitrogen	mg/L	0.15/0.25	-	3.14	0.89	1.53	1.21	<1.5	15.7
Phosphorus, Total	mg/L	0/0.030/0	-	8.56	2.61	12.7	7.33	8.35	16.3
Fecal Coliforms	CFU/100mL	0/1	10,000	<1	30	7	1	4600	18900
BOD	mg/L	2.0/3.0	100	3.0	4.7	<2.0	<2.0	2.2	4.2
COD	mg/L	10/20	-	31	23	34	38	40	61
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<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
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-01B	MP-01B01
	ALS Laboratory Sample ID			L2511265-1	L2517060-2	L2526112-2	L2541325-2	L2541325-3
	Sample Date & Time			9/30/2020 13:45	2020-10-13 13:45	2020-11-04 13:45	2020-12-15 12:45	2020-12-15 12:45
	QA/QC Sample Type			N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹					
pH	pH units	0.10	6.0 - 9.5	-	7.46	8.62	7.97	8.06
Total Suspended Solids	mg/L	1.0 - 3.0	120	-	4.8	<3.0	<3.0	<3.0
Alkalinity, Total (as CaCO ₃)	mg/L	10/1.0	-	-	58	592	128	117
Ammonia, Total (as N)	mg/L	0.10/0.005	-	-	0.099	0.156	<0.010	0.076
Total Kjeldahl Nitrogen	mg/L	0.15/0.25	-	-	2.20	1.24	1.06	2.87
Phosphorus, Total	mg/L	0/0.030/0	-	-	7.93	6.12	9.48	9.86
Fecal Coliforms	CFU/100mL	0/1	10,000	0	10	3	0	0
BOD	mg/L	2.0/3.0	100	-	<2.0	<2.0	<3.0	<2.0
COD	mg/L	10/20	-	-	26	40	40	78
Oil and Grease, Total	mg/L	2.0/5.0	-	-	<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
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	MP-03	MP-03	MP-0301	MP-03
	ALS Laboratory Sample ID			L2468252-1	L2484293-1	L2482714-1	L2482801-1	L2482801-2	L2495157-1
	Sample Date & Time			2020-06-27 15:35	2020-07-30 19:54	2020-07-31 9:20	2020-07-31 15:10	2020-07-31 15:10	2020-08-26 10:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹						
pH	pH units	0.10	-	8.04	8.39	8.36	8.35	8.37	8.35
Total Suspended Solids	mg/L	1.0	-	<1.0	6.0	9.3	14.9	14.5	26.9
Total Dissolved Solids	mg/L	20	-	200	299	292	325	317	495
Turbidity	NTU	0.10	-	0.91	7.01	8.89	15.0	13.9	24.6
Ammonia, Total (as N)	mg/L	0.010	-	0.596	0.036	-	-	-	0.243
Phosphorus, Total	mg/L	0.0030	-	0.0046	0.014	-	-	-	0.0246
Arsenic (As)-Total	mg/L	0.00010	-	0.00029	<0.0010	-	-	-	0.00088
Copper (Cu)-Total	mg/L	0.0010	-	0.00058	<0.0050	-	-	-	0.00425
Lead (Pb)-Total	mg/L	0.000050	0.001	0.000056	0.000740	-	-	-	0.00117
Nickel (Ni)-Total	mg/L	0.00050	-	<0.00050	<0.0050	-	-	-	0.00144
Zinc (Zn)-Total	mg/L	0.0030	-	<0.0030	<0.030	-	-	-	0.0139
Oil and Grease, Total	mg/L	2.0/5.0	15	<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
Benzene	mg/L	0.00050	370	<0.00050	<0.00050	-	-	-	<0.00050
Ethylbenzene	mg/L	0.00050	90	<0.00050	<0.00050	-	-	-	<0.00050
Toluene	mg/L	0.00045/0.00050	2	<0.00045	<0.00050	-	-	-	<0.00045
F1 (C6-C10)	mg/L	0.1	-	<0.10	<0.10	-	-	-	<0.10
F2 (C10-C16)	mg/L	0.3	-	<0.30	0.28	-	-	-	2.01
F3 (C16-C34)	mg/L	0.30/0.25	-	<0.30	<0.25	-	-	-	1.28
F4 (C34-C50)	mg/L	0.30/0.25	-	<0.30	<0.25	-	-	-	<0.30
Total Hydrocarbons (C6-C50)	mg/L	0.3	-	<0.30	<0.38	-	-	-	3.29

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
	ALS Laboratory Sample ID			L2504399-1
	Sample Date & Time			2020-09-06 12:20
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.10	6.0 - 9.0	8.25
Total Suspended Solids	mg/L	2.0	15	5.8
Total Dissolved Solids	mg/L	20	-	733
Turbidity	NTU	0.10	-	6.07
Lead (Pb)-Total	mg/L	0.00050	0.001	0.000111
Oil and Grease, Total	mg/L	2.0	15	<2.0
	-	-	No Visible Sheen	No Visible Sheen
Benzene	ug/L	0.50	370	<0.5
Ethylbenzene	ug/L	0.50	90	<0.5
Toluene	ug/L	0.50	2	<0.5
F1 (C6-C10)	ug/L	100	-	<100
F2 (C10-C16)	ug/L	100	-	400
F3 (C16-C34)	ug/L	250	-	<250
F4 (C34-C50)	ug/L	250	-	<250
Total Hydrocarbons (C6-C50)	ug/L	380	-	400

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
	ALS Laboratory Sample ID			L2496368-1
	Sample Date & Time			2020-08-29 18:00
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.10	6.0 - 9.0	7.8
Total Suspended Solids	mg/L	1.0	15	<1.0
Total Dissolved Solids	mg/L	20	-	941
Turbidity	NTU	0.10	-	1.55
Lead (Pb)-Total	mg/L	0.00050	0.001	0.000157
Oil and Grease, Total	mg/L	5.0	15	<5.0
	-	-	No Visible Sheen	No Visible Sheen
Benzene	mg/L	0.0005	370	<0.00050
Ethylbenzene	mg/L	0.0005	90	<0.00050
Toluene	mg/L	0.0050	2	0.00077
F1 (C6-C10)	mg/L	0.1	-	<0.10
F2 (C10-C16)	mg/L	0.3	-	<0.30
F3 (C16-C34)	mg/L	0.25	-	0.92
F4 (C34-C50)	mg/L	0.3	-	<0.30
Total Hydrocarbons (C6-C50)	mg/L	0.38	-	0.92

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-C-B

Analyte	Sample ID			MP-C-B	MP-C-B	MP-C-B	MP-C-B	MP-C-B	MP-C-B	MP-C-B	MP-C-B
	ALS Laboratory Sample ID			L2453047-1	L2454616-1	L2459408-1	L2461573-1	L2466718-2	L2467735-2	L2471866-2	L2478539-4
	Sample Date & Time			2020-05-25 14:35	2020-06-01 9:40	2020-06-08 9:40	2020-06-15 15:10	2020-06-22 9:55	2020-06-29 10:50	2020-07-06 10:15	2020-07-20 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								
Conductivity	umhos/cm	3.0	-	309	-	476	-	-	-	550	586
pH	pH units	0.10	6.0 - 9.5	7.93	8.07	8.16	8.21	8.21	8.30	8.15	8.33
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	13.4	7.9	3.3	3.7	2.9	2.0	2.0	<2.0
Total Dissolved Solids	mg/L	10	-	168	200	266	190	242	275	289	356
Turbidity	NTU	0.10	-	45.7	19.8	6.97	10.9	11.9	4.63	1.25	2.36
Ammonia, Total (as N)	mg/L	0.010	-	0.487	-	0.192	-	-	-	0.021	0.267
Nitrate (as N)	mg/L	0.020	-	0.552	-	1.01	-	-	-	4.00	5.01
Oil and Grease, Total	mg/L	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	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 7.2.7: 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-B	MP-C-B	MP-C-B
	ALS Laboratory Sample ID			L2480180-3	L2484595-1	L2486374-1	L2490512-1	L2493980-1	L2499492-2	L2500073-3	L2504436-4
	Sample Date & Time			2020-07-27 9:05	2020-08-03 9:30	2020-08-10 10:50	2020-08-17 12:20	2020-08-24 13:20	2020-09-01 10:40	2020-09-07 12:35	2020-09-14 16:40
	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	3.0	-	-	776	-	-	-	523	-	960
pH	pH units	0.10	6.0 - 9.5	8.26	8.33	8.25	8.24	9.19	8.32	8.27	8.35
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	5.1	<3.0	<2.0	<2.0	<2.0	<3.0	<2.0	<3.0
Total Dissolved Solids	mg/L	10	-	401	438	453	499	221	260	541	533
Turbidity	NTU	0.10	-	2.1	1.69	0.82	3.00	0.93	2.15	0.16	0.74
Ammonia, Total (as N)	mg/L	0.010	-	-	0.132	-	-	-	0.077	-	0.101
Nitrate (as N)	mg/L	0.020	-	-	6.12	-	-	-	2.64	-	4.26
Oil and Grease, Total	mg/L	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	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 7.2.8: Water Quality Results for Water Licence Monitoring Location - MP-C-B01

Analyte	Sample ID			MP-C-B01	MP-C-B01	MP-C-B0101	MP-C-B01	MP-C-B01	MP-C-B01
	ALS Laboratory Sample ID			L2454616-2	L2459408-2	L2459408-6	L2461573-2	L2466718-3	L2467735-3
	Sample Date & Time			2020-06-01 10:10	2020-06-08 9:55	2020-06-08 9:55	2020-06-15 15:25	2020-06-22 10:05	2020-06-29 11:00
	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	3.0	-	-	707	705	-	-	-
pH	pH units	0.10	6.0 - 9.5	8.08	8.16	8.17	8.23	8.25	8.28
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	4.1	2.3	3.3	2.9	<2.0	<2.0
Total Dissolved Solids	mg/L	20	-	294	409	402	260	359	339
Turbidity	NTU	0.10	-	7.76	4.67	4.60	3.71	0.86	1.08
Ammonia, Total (as N)	mg/L	0.010	-	-	0.061	0.052	-	-	-
Nitrate (as N)	mg/L	0.020	-	-	1.18	1.2	-	-	-
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	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 7.2.8: Water Quality Results for Water Licence Monitoring Location - MP-C-B01

Analyte	Sample ID			MP-C-B01	MP-C-B01	MP-C-B01	MP-C-B01	MP-C-B01	MP-C-B01
	ALS Laboratory Sample ID			L2471866-3	L2476158-2	L2478539-3	L2480180-1	L2484595-2	L2486374-2
	Sample Date & Time			2020-07-06 10:30	2020-07-13 12:20	2020-07-20 11:45	2020-07-27 7:50	2020-08-03 9:50	2020-08-10 11:00
	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	3.0	-	749	-	944	-	1300	-
pH	pH units	0.10	6.0 - 9.5	8.27	8.12	8.1	8.07	8.22	8.03
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	2.1	<2.0	<2.0	<2.0	<3.0	4.6
Total Dissolved Solids	mg/L	20	-	459	558	649	639	909	775
Turbidity	NTU	0.10	-	0.61	0.73	0.82	0.47	0.35	0.26
Ammonia, Total (as N)	mg/L	0.010	-	0.552	-	0.706	-	0.283	-
Nitrate (as N)	mg/L	0.020	-	7.82	-	5.75	-	3.19	-
Oil and Grease, Total	mg/L	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

Notes:

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

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

Table 7.2.8: Water Quality Results for Water Licence Monitoring Location - MP-C-B01

Analyte	Sample ID			MP-C-B01	MP-C-B01	MP-C-B01	MP-C-B01	MP-C-B01	MP-C-B01
	ALS Laboratory Sample ID			L2490512-2	L2493980-2	L2499492-3	L2500073-4	L2504436-3	L2506231-3
	Sample Date & Time			2020-08-17 12:10	2020-08-24 9:35	2020-09-01 10:50	2020-09-07 13:05	2020-09-14 16:25	2020-09-21 14:35
	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	3.0	-	-	-	1470	-	1520	-
pH	pH units	0.10	6.0 - 9.5	8.15	8.01	8.24	8.15	8.13	7.49
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	2.0	2.0	<3.0	<2.0	<3.0	<2.0
Total Dissolved Solids	mg/L	20	-	812	711	1200	976	963	811
Turbidity	NTU	0.10	-	0.6	0.23	0.87	0.15	0.79	<0.10
Ammonia, Total (as N)	mg/L	0.010	-	-	-	0.096	-	0.026	-
Nitrate (as N)	mg/L	0.020	-	-	-	1.71	-	1.80	-
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	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-H

Analyte	Sample ID			MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H	MP-C-H
	ALS Laboratory Sample ID			L2454616-3	L2459408-3	L2461573-3	L2466718-1	L2467735-1	L2471866-1	L2476158-5	L2478539-1	L2480180-2	L2484595-6
	Sample Date & Time			2020-06-01 8:35	2020-06-08 8:40	2020-06-15 14:45	2020-06-22 9:30	2020-06-29 10:25	2020-07-06 12:15	2020-07-13 14:35	2020-07-20 8:40	2020-07-27 8:30	2020-08-03 16:30
	QA/QC Sample Type			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										
Conductivity	umhos/cm	3.0	-	-	314	-	-	-	232	-	331	-	396
pH	pH units	0.10	6.0 - 9.5	8.01	7.95	7.94	8.05	8.17	8.17	8.37	8.21	8.25	8.32
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	38.5	4.8	<2.0	<2.0	2.6	<2.0	<2.0	15.8	2.6	<3.0
Total Dissolved Solids	mg/L	20	-	158	164	66	91	95	116	235	198	236	206
Turbidity	NTU	0.10	-	76.7	9.37	1.15	0.61	2.83	1.63	6.46	23.7	1.97	0.81
Ammonia, Total (as N)	mg/L	0.010	-	-	0.083	-	-	-	0.017	-	0.135	-	0.014
Nitrate (as N)	mg/L	0.020	-	-	0.582	-	-	-	0.272	-	1.48	-	0.428
Oil and Grease, Total	mg/L	2.0	-	-	<2.0	-	-	-	91.9	-	<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	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 7.2.9: 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	MP-C-H	
	ALS Laboratory Sample ID			L2486374-4	L2490512-4	L2493980-5	L2499492-5	L2500073-1	L2500073-2	L2504436-1	L2506231-1	
	Sample Date & Time			2020-08-10 10:30	2020-08-17 11:25	2020-08-24 11:50	2020-09-01 10:05	2020-09-07 11:50	2020-09-07 11:50	2020-09-14 11:30	2020-09-21 10:05	
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹									
Conductivity	umhos/cm	3.0	-	-	-	-	402	-	-	413	-	
pH	pH units	0.10	6.0 - 9.5	8.32	8.22	8.25	8.36	8.27	8.30	8.32	8.08	
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	<2.0	<2.0	<2.0	<3.0	<2.0	<2.0	<3.0	<2.0	
Total Dissolved Solids	mg/L	20	-	208	297	387	179	214	214	205	229	
Turbidity	NTU	0.10	-	0.45	0.99	0.22	0.76	0.19	0.19	0.43	<0.10	
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	<0.010	-	-	<0.010	-	
Nitrate (as N)	mg/L	0.020	-	-	-	-	0.234	-	-	0.145	-	
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	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-J

Analyte	Sample ID			MP-C-J	MP-C-J01	MP-C-J	MP-C-J	MP-C-J	MP-C-J	MP-C-J	MP-C-J
	ALS Laboratory Sample ID			L2454615-1	L2454615-2	L2457745-1	L2466718-4	L2467735-4	L2471866-4	L2476158-6	L2478539-2
	Sample Date & Time			2020-06-01 10:25	2020-06-01 10:25	2020-06-08 13:15	2020-06-22 10:20	2020-06-29 11:05	2020-07-06 14:40	2020-07-13 16:15	2020-07-20 11:05
	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								
Conductivity	umhos/cm	3.0	-	-	-	-	403	-	504	-	529
pH	pH units	0.10	6.0 - 9.5	7.98	7.97	8.15	8.36	8.28	8.03	8.13	8.11
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	4.2	4.2	2.9	<2.0	3.2	2.6	<2.0	<2.0
Total Dissolved Solids	mg/L	20	-	200	190	247	215	209	246	360	312
Turbidity	NTU	0.10	-	5.88	5.89	2.49	0.53	0.54	0.32	<0.10	0.34
Ammonia, Total (as N)	mg/L	0.010	-	-	-	-	<0.010	-	<0.010	-	<0.010
Nitrate (as N)	mg/L	0.020	-	-	-	-	0.03	-	0.065	-	0.364
Oil and Grease, Total	mg/L	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	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-J

Analyte	Sample ID			MP-C-J	MP-C-J	MP-C-J	MP-C-J	MP-C-J	MP-C-J	MP-C-J	MP-C-J
	ALS Laboratory Sample ID			L2480180-4	L2484595-3	L2486374-3	L2490512-3	L2493980-4	L2499492-4	L2500073-5	L2504436-2
	Sample Date & Time			2020-07-27 9:35	8/3/2020 11:00	2020-08-10 11:50	2020-08-17 12:35	2020-08-24 13:00	2020-09-01 11:00	2020-09-07 14:10	2020-09-14 12:15
	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	3.0	-	-	527	-	-	-	452	-	499
pH	pH units	0.10	6.0 - 9.5	7.88	8.05	8.44	8.31	8.31	8.41	8.18	8.22
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	<2.0	<3.0	<2.0	<2.0	2.4	<3.0	<2.0	<3.0
Total Dissolved Solids	mg/L	20	-	297	276	254	257	164	203	276	255
Turbidity	NTU	0.10	-	0.45	0.52	1.00	1.06	0.69	0.98	0.19	1.09
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	-	-	<0.010	-	<0.010
Nitrate (as N)	mg/L	0.020	-	-	0.292	-	-	-	<0.020	-	0.032
Oil and Grease, Total	mg/L	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	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-05

Analyte	Sample ID			MP-05	MP-05
	ALS Laboratory Sample ID			L2484674-1	L2504433-1
	Sample Date & Time			2020-08-04 8:30	2020-09-14 10:00
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Hardness (as CaCO ₃)	mg/L	0.50	-	779	533
pH	pH units	0.10	6.0 - 9.5	8.10	8.38
Total Suspended Solids	mg/L	3.0	15.0	<3.0	4.0
Total Dissolved Solids	mg/L	20	-	1170	887
Turbidity	NTU	0.10	-	2.53	4.92
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	171	212
Ammonia, Total (as N)	mg/L	0.010	-	0.124	0.068
Chloride (Cl)	mg/L	0.50	-	161	199
Fluoride (F)	mg/L	0.020	-	0.24	0.21
Nitrate (as N)	mg/L	0.020	-	6.42	3.95
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.43	0.53
Phosphorus, Total	mg/L	0.0030	-	0.0053	0.0039
Sulfate (SO ₄)	mg/L	0.30	-	524	232
Dissolved Organic Carbon	mg/L	0.50	-	5.49	5.99
Total Organic Carbon	mg/L	0.50	-	5.89	8.21
Aluminum (Al)-Total	mg/L	0.005/0.05	-	<0.050	0.0485
Arsenic (As)-Total	mg/L	0.0001/0.001	0.50	<0.0010	0.00027
Cadmium (Cd)-Total	mg/L	0.0000050	-	<0.000050	<0.0000050
Calcium (Ca)-Total	mg/L	0.50	-	113	93.2
Copper (Cu)-Total	mg/L	0.0050	0.30	<0.0050	0.0018
Iron (Fe)-Total	mg/L	0.10	-	<0.10	0.132
Lead (Pb)-Total	mg/L	0.00005/0.0005	0.20	<0.00050	0.000096
Magnesium (Mg)-Total	mg/L	0.050	-	112	67
Manganese (Mn)-Total	mg/L	0.00050	-	0.945	0.134
Mercury (Hg)-Total	mg/L	0.0000050	-	0.0000051	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050	-	0.00476	0.00329
Nickel (Ni)-Total	mg/L	0.0005/0.005	0.50	<0.0050	0.00234
Potassium (K)-Total	mg/L	0.050	-	10.00	9.35
Selenium (Se)-Total	mg/L	0.000050	-	0.00119	0.000323
Sodium (Na)-Total	mg/L	0.050	-	61.6	84.1
Thallium (Tl)-Total	mg/L	0.000010	-	<0.00010	0.000012
Uranium (U)-Total	mg/L	0.000010	-	0.0917	0.0627
Zinc (Zn)-Total	mg/L	0.003/0.03	0.50	<0.030	0.0077
Aluminum (Al)-Dissolved	mg/L	0.0500	-	<0.050	0.0073
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	0.0003
Cadmium (Cd)-Dissolved	mg/L	0.000005/0.00005	-	<0.000050	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.050	-	119	97.1
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	0.00185
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	<0.10	0.027
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	<0.000050
Magnesium (Mg)-Dissolved	mg/L	0.050	-	117	70.5
Manganese (Mn)-Dissolved	mg/L	0.00050	-	0.895	0.134
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	0.00474	0.00327
Nickel (Ni)-Dissolved	mg/L	0.00050	-	0.0056	0.0023
Potassium (K)-Dissolved	mg/L	0.050	-	10.5	9.79
Selenium (Se)-Dissolved	mg/L	0.000050	-	0.00106	0.000458
Sodium (Na)-Dissolved	mg/L	0.50	-	64.2	88.2
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	0.000014
Uranium (U)-Dissolved	mg/L	0.000010	-	0.0940	0.0613
Zinc (Zn)-Dissolved	mg/L	0.0010	-	0.018	0.0068
Oil and Grease, Total	-	-	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 10.

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 7.2.11: Water Quality Results for Water Licence Monitoring Location - MP-05

Analyte	Sample ID		MP-0501	
	ALS Laboratory Sample ID		L2504433-2	
	Sample Date & Time		2020-09-14 10:00	
	QA/QC Sample Type		Field Duplicate	
	Units	LOR	Water Licence Criteria ¹	
Hardness (as CaCO ₃)	mg/L	0.50	-	525
pH	pH units	0.10	6.0 - 9.5	8.39
Total Suspended Solids	mg/L	3.0	15.0	5.6
Total Dissolved Solids	mg/L	20	-	884
Turbidity	NTU	0.10	-	5.39
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	212
Ammonia, Total (as N)	mg/L	0.010	-	0.069
Chloride (Cl)	mg/L	0.50	-	204
Fluoride (F)	mg/L	0.020	-	0.18
Nitrate (as N)	mg/L	0.020	-	3.99
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.57
Phosphorus, Total	mg/L	0.0030	-	0.0068
Sulfate (SO ₄)	mg/L	0.30	-	238
Dissolved Organic Carbon	mg/L	0.50	-	6.17
Total Organic Carbon	mg/L	0.50	-	8.53
Aluminum (Al)-Total	mg/L	0.005/0.05	-	0.0891
Arsenic (As)-Total	mg/L	0.0001/0.001	0.50	0.00029
Cadmium (Cd)-Total	mg/L	0.0000050	-	<0.0000050
Calcium (Ca)-Total	mg/L	0.50	-	92.2
Copper (Cu)-Total	mg/L	0.0050	0.30	0.00199
Iron (Fe)-Total	mg/L	0.10	-	0.226
Lead (Pb)-Total	mg/L	0.00005/0.0005	0.20	0.000131
Magnesium (Mg)-Total	mg/L	0.050	-	67.9
Manganese (Mn)-Total	mg/L	0.00050	-	0.138
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.000050	-	0.00319
Nickel (Ni)-Total	mg/L	0.0005/0.005	0.50	0.0025
Potassium (K)-Total	mg/L	0.050	-	9.52
Selenium (Se)-Total	mg/L	0.000050	-	0.000343
Sodium (Na)-Total	mg/L	0.050	-	84.9
Thallium (Tl)-Total	mg/L	0.000010	-	0.000013
Uranium (U)-Total	mg/L	0.000010	-	0.0615
Zinc (Zn)-Total	mg/L	0.003/0.03	0.50	0.0084
Aluminum (Al)-Dissolved	mg/L	0.0500	-	0.0083
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	0.00028
Cadmium (Cd)-Dissolved	mg/L	0.000005/0.00005	-	<0.0000050
Calcium (Ca)-Dissolved	mg/L	0.050	-	97.7
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	0.00189
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	0.029
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	<0.000050
Magnesium (Mg)-Dissolved	mg/L	0.050	-	68.1
Manganese (Mn)-Dissolved	mg/L	0.00050	-	0.133
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	0.00334
Nickel (Ni)-Dissolved	mg/L	0.00050	-	0.00231
Potassium (K)-Dissolved	mg/L	0.050	-	9.63
Selenium (Se)-Dissolved	mg/L	0.000050	-	0.000343
Sodium (Na)-Dissolved	mg/L	0.50	-	86.7
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	0.000012
Uranium (U)-Dissolved	mg/L	0.000010	-	0.0607
Zinc (Zn)-Dissolved	mg/L	0.0010	-	0.0072
Oil and Grease, Total	-	-	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 10.

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 7.2.12: Water Quality Results for Water Licence Monitoring Location - MP-06

Analyte	Sample ID			MP-06	MP-06	MP-06	MP-06
	ALS Laboratory Sample ID			L2466563-1	L2478536-1	L2489339-1	L2504432-1
	Sample Date & Time			2020-06-23 13:50	2020-07-21 10:00	2020-08-15 17:10	2020-09-14 9:20
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Hardness (as CaCO ₃)	mg/L	0.50	-	465	1040	649	686
pH	pH units	0.10	6.0 - 9.5	8.00	8.23	8.03	7.95
Total Suspended Solids	mg/L	2.0	15.0	<2.0	<2.0	<2.0	3.8
Total Dissolved Solids	mg/L	20	-	720	1500	1040	1010
Turbidity	NTU	0.10	-	1.65	4.49	1.55	2.38
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	76	123	80	80
Ammonia, Total (as N)	mg/L	0.010	-	0.367	0.297	0.017	<0.010
Chloride (Cl)	mg/L	0.50	-	140	144	89.9	90.7
Fluoride (F)	mg/L	0.020	-	0.14	0.21	0.14	0.11
Nitrate (as N)	mg/L	0.020	-	2.91	6.28	4.92	5.09
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.03	0.66	0.44	0.2
Phosphorus, Total	mg/L	0.0030	-	0.0049	<0.0030	<0.0030	<0.0030
Sulfate (SO ₄)	mg/L	0.30	-	318	809	564	576
Dissolved Organic Carbon	mg/L	0.50	-	3.84	4.04	1.75	2.16
Total Organic Carbon	mg/L	0.50	-	4.35	4.45	2.3	3.96
Aluminum (Al)-Total	mg/L	0.0050	-	0.0192	0.091	<0.050	0.0226
Arsenic (As)-Total	mg/L	0.0001/0.001	0.50	0.00018	<0.0010	<0.0010	0.0012
Cadmium (Cd)-Total	mg/L	0.000005/0.00005	-	0.0000082	<0.000050	<0.000050	<0.000005
Calcium (Ca)-Total	mg/L	0.50	-	59.1	127	86.8	79.3
Copper (Cu)-Total	mg/L	0.0050	0.30	0.001	<0.0050	<0.0050	<0.00050
Iron (Fe)-Total	mg/L	0.01/0.1	-	0.021	0.12	<0.10	0.053
Lead (Pb)-Total	mg/L	0.00005/0.0005	0.20	<0.000050	<0.00050	<0.00050	<0.00005
Magnesium (Mg)-Total	mg/L	0.050	-	76.6	165	125	119
Manganese (Mn)-Total	mg/L	0.00050	-	1.220	3.51	0.615	0.048
Mercury (Hg)-Total	mg/L	0.0000050	-	<0.0000050	<0.0000050	<0.0000050	<0.000005
Molybdenum (Mo)-Total	mg/L	0.000050	-	0.00433	0.00505	0.00278	0.00212
Nickel (Ni)-Total	mg/L	0.0050	0.50	0.00705	0.00960	<0.0050	0.00128
Potassium (K)-Total	mg/L	0.050	-	8.19	10.7	6.96	7.14
Selenium (Se)-Total	mg/L	0.000050	-	0.000607	0.00201	0.00147	0.00135
Sodium (Na)-Total	mg/L	0.050	-	57.1	55.1	38.6	36.8
Thallium (Tl)-Total	mg/L	0.00001/0.0001	-	0.000021	<0.00010	<0.00010	0.000017
Uranium (U)-Total	mg/L	0.000010	-	0.0372	0.0942	0.0394	0.0353
Zinc (Zn)-Total	mg/L	0.003/0.03	0.50	0.0245	<0.030	<0.030	<0.0030
Aluminum (Al)-Dissolved	mg/L	0.005/0.05	-	0.0068	<0.050	<0.050	<0.050
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	0.00017	<0.0010	<0.0010	<0.0010
Cadmium (Cd)-Dissolved	mg/L	0.00001/0.00005	-	0.000012	<0.000050	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.050	-	59	130	77.7	81.5
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	0.00079	<0.0020	<0.0020	<0.0020
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	<0.010	<0.10	<0.10	<0.10
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	<0.000050	<0.00050	<0.00050	<0.00050
Magnesium (Mg)-Dissolved	mg/L	0.050	-	77	172	110	117
Manganese (Mn)-Dissolved	mg/L	0.00050	-	1.21	3.35	0.498	0.0315
Mercury (Hg)-Dissolved	mg/L	0.0000050	-	0.0000058	<0.0000050	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.000050	-	0.00431	0.00519	0.00262	0.00214
Nickel (Ni)-Dissolved	mg/L	0.0005/0.005	-	0.00673	0.009	<0.0050	<0.0050
Potassium (K)-Dissolved	mg/L	0.050	-	8.6	10.8	6.44	6.35
Selenium (Se)-Dissolved	mg/L	0.000050	-	0.000714	0.0018	0.00135	0.00119
Sodium (Na)-Dissolved	mg/L	0.050	-	58.3	55.9	34.9	37.1
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	0.000021	<0.00010	<0.00010	<0.00010
Uranium (U)-Dissolved	mg/L	0.000010	-	0.0371	0.0927	0.0348	0.0354
Zinc (Zn)-Dissolved	mg/L	0.001/0.01	-	0.0029	<0.010	<0.010	<0.010
Oil and Grease, Total	-	-	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 10.

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	MP-Q1-01	MP-Q1-01	MP-Q1-01	MP-Q1-0101	MP-Q1-01
	ALS Laboratory Sample ID			L2454616-4	L2459408-5	L2461573-5	L2466718-7	L2467735-5	L2467735-6	L2471866-5
	Sample Date & Time			2020-06-01 11:30	2020-06-09 9:15	2020-06-15 17:00	2020-06-22 12:10	2020-06-29 11:50	2020-06-29 11:50	2020-07-06 11:40
	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	3.0	-	-	147	-	-	-	-	202
pH	pH units	0.10	6.0 - 9.5	7.97	7.97	7.96	8.05	7.91	7.95	8.07
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	16.7	13.0	15.8	<2.0	3.3	5.1	7.7
Total Dissolved Solids	mg/L	20	-	122	99	72	119	107	107	96
Turbidity	NTU	0.10	-	37.9	39.1	15.2	2.87	2.92	2.78	3.89
Ammonia, Total (as N)	mg/L	0.010	-	-	0.162	-	-	-	-	<0.010
Nitrate (as N)	mg/L	0.020	-	-	0.596	-	-	-	-	0.452
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	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 7.2.13: 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-Q1-0101
	ALS Laboratory Sample ID			L2476158-4	L2478539-5	L2480180-6	L2484595-4	L2484595-5
	Sample Date & Time			2020-07-13 13:20	2020-07-20 15:00	2020-07-27 11:50	2020-08-03 12:00	2020-08-03 12:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	3.0	-	-	205	-	248	249
pH	pH units	0.10	6.0 - 9.5	8.00	7.91	7.94	7.98	7.96
Total Suspended Solids	mg/L	2.0/3.0	Grab 30, Average 15	2.5	5.8	2.9	<3.0	<3.0
Total Dissolved Solids	mg/L	20	-	130	205	123	152	151
Turbidity	NTU	0.10	-	3.82	12.6	4.33	2.49	2.44
Ammonia, Total (as N)	mg/L	0.010	-	-	<0.010	-	0.017	0.018
Nitrate (as N)	mg/L	0.020	-	-	0.274	-	0.723	0.721
Oil and Grease, Total	mg/L	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
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			L2459408-4	L2461573-4	L2466718-9	L2467735-7	L2471866-6	L2476158-3	L2478540-1
	Sample Date & Time			2020-06-09 8:45	2020-06-15 17:20	2020-06-22 11:40	2020-06-29 13:40	2020-07-07 7:50	2020-07-13 12:35	2020-07-21 8:45
	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	3.0	-	191	-	-	-	555	-	586
pH	pH units	0.10	6.0 - 9.5	7.99	8.04	8.11	8.04	8.05	7.98	7.97
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30, Average 15	16.7	19.5	57.0	8.3	<2.0	<2.0	24.1
Total Dissolved Solids	mg/L	20	-	126	154	290	248	347	422	378
Turbidity	NTU	0.10	-	50.7	25.1	99.8	14.6	1.94	1.6	35.8
Ammonia, Total (as N)	mg/L	0.010	-	0.179	-	-	-	3.91	-	3.95
Nitrate (as N)	mg/L	0.020	-	1.54	-	-	-	19.9	-	20.3
Oil and Grease, Total	mg/L	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	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.

²Average TSS for June exceeded maximum average TSS concentration discharge limits.

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

⁴Acute 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			L2480180-7	L2484595-7	L2486374-5	L2490512-5	L2493980-6	L2499492-1	L2500073-6
	Sample Date & Time			2020-07-27 12:10	2020-08-03 9:20	2020-08-10 14:10	2020-08-17 10:50	2020-08-24 11:15	2020-09-02 9:20	2020-09-07 16:20
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	3.0	-	-	619	-	-	-	451	-
pH	pH units	0.10	6.0 - 9.5	7.96	8.06	8.13	8.04	8.02	8.19	8.24
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30, Average 15	2.1	<3.0	<2.0	14.9	<2.0	<3.0	<2.0
Total Dissolved Solids	mg/L	20	-	369	375	247	266	486	232	250
Turbidity	NTU	0.10	-	3.03	1.09	1.46	8.87	0.68	1.02	1.23
Ammonia, Total (as N)	mg/L	0.010	-	-	0.628	-	-	-	0.066	-
Nitrate (as N)	mg/L	0.020	-	-	19.6	-	-	-	4.41	-
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	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 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 7.2.15: 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	MS-01
	ALS Laboratory Sample ID			L2406388-1	L2406388-2	L2414018-1	L2424375-1	L2435755-1	L2447382-1	L2459438-1	L2471923-1
	Sample Date & Time			2020-01-15 15:00	2020-01-15 15:00	2020-02-04 15:00	2020-03-03 15:00	2020-04-07 15:00	2020-05-12 15:00	2020-06-09 15:00	2020-07-07 15:00
	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	0.1	6.0 - 9.5	7.75	7.77	7.78	7.45	8.11	7.54	7.65	7.69
Total Suspended Solids	mg/L	2.0/3.0	35	6.4	6.2	4.5	2.1	3.2	2.0	2.8	<2.0
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	108	110	100	49	109	58	58	65
Ammonia, Total (as N)	mg/L	0.01	4	0.115	0.113	0.386	0.206	0.340	0.086	0.135	0.859
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.38	1.20	0.36	1.46	0.98	1.19	0.34	5.5
Phosphorus, Total	mg/L	0.003	4	1.10	1.10	0.991	0.818	1.54	1.72	1.43	1.65
Fecal Coliforms	CFU/100 mL	0	1,000	110	80	41	1	0	0	0	1
BOD	mg/L	2	30	<2.0	<2.0	<2.0	<2.0	2.6	<2.0	<2.0	<2.0
COD	mg/L	10	-	42	44	43	44	47	30	32	41
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	<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	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 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 7.2.15: Water Quality Results for Water Licence Monitoring Location - MS-01

Analyte	Sample ID			MS-01	MS-01	MS-01	MS-01	MS-0101	MS-01
	ALS Laboratory Sample ID			L2485339-1	L2504195-1	L2516989-1	L2526115-1	L2526115-3	L2540878-1
	Sample Date & Time			2020-08-05 15:00	2020-09-16 15:00	2020-10-13 15:00	2020-11-04 15:00	2020-11-04 15:00	2020-12-15 15:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹						
pH	pH units	0.1	6.0 - 9.5	7.42	7.59	7.59	7.60	7.63	7.71
Total Suspended Solids	mg/L	2.0/3.0	35	3.4	<2.0	<3.0	<3.0	<3.0	<3.0
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	58	58	51	63	68	43
Ammonia, Total (as N)	mg/L	0.01	4	0.024	0.026	0.174	0.100	0.103	0.94
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.28	0.39	0.810	4.80	0.610	1.48
Phosphorus, Total	mg/L	0.003	4	1.03	1.70	0.296	0.675	0.660	0.839
Fecal Coliforms	CFU/100 mL	0	1,000	0	0	0	0	0	0
BOD	mg/L	2	30	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
COD	mg/L	10	-	34	33	21	26	30	35
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<5.0	<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
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 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 7.2.16: Water Quality Results for Water Licence Monitoring Location - MS-01B

Analyte	Sample ID			MS-01B	MS-01B	MS-01B01	MS-01B	MS-01B	MS-01B	MS-01B	MS-01B
	ALS Laboratory Sample ID			L2406402-1	L2414001-1	L2414001-3	L2424379-1	L2435598-1	L2446562-1	L2459469-1	L2466572-1
	Sample Date & Time			2020-01-15 15:00	2020-02-04 15:00	2020-02-04 15:00	2020-03-03 15:00	2020-04-07 14:15	2020-05-12 14:25	2020-06-09 14:50	2020-06-23 14:50
	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								
pH	pH units	0.1	6.0 - 9.5	8.01	7.29	7.36	8.25	8.72	8.11	5.34	8.17
Total Suspended Solids	mg/L	2.0/3.0	35	<2.0	<2.0	<2.0	<2.0	17.7	<2.0	<2.0	<2.0
Alkalinity, Total (as CaCO3)	mg/L	10	-	174	43	44	218	413	212	<10	162
Ammonia, Total (as N)	mg/L	0.02	4	0.059	0.132	0.71	0.337	0.099	0.064	14.9	0.20
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.09	0.45	0.98	1.05	1.53	0.90	13.4	0.20
Phosphorus, Total	mg/L	0.003	4	1.54	0.0216	0.0195	0.135	3.00	0.978	0.184	1.59
Fecal Coliforms	CFU/100 mL	0	1,000	1300	0	0	0	2600	0	0	0
BOD	mg/L	2	30	<2.0	<2.0	<2.0	<2.0	2.6	<2.0	<2.0	<2.0
COD	mg/L	10	-	38	26	33	25	62	19	68	27
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	<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	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 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 7.2.16: Water Quality Results for Water Licence Monitoring Location - MS-01B

Analyte	Sample ID			MS-01B	MS-01B	MS-01B	MS-01B	MS-01B	MS-01B
	ALS Laboratory Sample ID			L2471925-1	L2485392-1	L2504318-1	L2517025-1	L2526128-1	L2540886-1
	Sample Date & Time			2020-07-07 14:30	2020-08-05 14:30	2020-09-16 14:30	2020-10-13 15:40	2020-11-04 15:30	2020-12-15 15:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
pH	pH units	0.1	6.0 - 9.5	6.55	8.64	7.87	8.27	7.93	7.18
Total Suspended Solids	mg/L	2.0/3.0	35	<2.0	<3.0	4.0	3.3	<3.0	<3.0
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	<10	555	109	218	110	19
Ammonia, Total (as N)	mg/L	0.02	4	0.035	0.579	0.118	0.047	0.078	0.181
Total Kjeldahl Nitrogen	mg/L	0.15	-	<0.15	1.87	0.81	3.60	0.840	1.12
Phosphorus, Total	mg/L	0.003	4	0.265	0.892	0.675	0.261	1.06	0.559
Fecal Coliforms	CFU/100 mL	0	1,000	0	12	0	0	1	0
BOD	mg/L	2	30	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
COD	mg/L	10	-	15	37	35	11	27	20
Oil and Grease, Total	mg/L	2.0/5.0	-	<2.0	<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 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 7.2.17: Water Quality Results for Water Licence Monitoring Location - MS-03

Analyte	Sample ID			MS-03	MS-0301	MS-03	MS-0301	MS-03	MS-0301	MS-03
	ALS Laboratory Sample ID			L2478360-1	L2478360-2	L2482115-1	L2482115-2	L2484837-1	L2484837-2	L2482800-1
	Sample Date & Time			2020-07-22 17:45	2020-07-22 17:45	2020-07-30 17:45	2020-07-30 17:45	2020-07-31 16:55	2020-07-31 16:55	2020-08-01 17:00
	QA/QC Sample Type			N/A	Field Duplicate	N/A	Field Duplicate	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹							
pH	pH units	0.10	6.0 - 9.5	8.42	8.40	8.28	8.33	-	-	8.24
Total Suspended Solids	mg/L	2.0	-	2.6	2.5	<2.0	<2.0	-	-	<2.0
Total Dissolved Solids	mg/L	10	-	162	157	206	206	-	-	215
Turbidity	NTU	0.10	-	12.6	12.8	6.54	6.65	-	-	4.21
Lead (Pb)-Total ²	mg/L	0.000050	0.001	0.00105	0.000811	0.000465	0.000313	0.000316	0.000320	0.000247
Oil and Grease, Total	mg/L	5.0	15.0	<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
Benzene	mg/L	0.00050	0.370	<0.00050	<0.00050	<0.00050	<0.00050	-	-	<0.00050
Ethylbenzene	mg/L	0.00050	0.090	<0.00050	<0.00050	<0.00050	<0.00050	-	-	<0.00050
Toluene	mg/L	0.00045/0.0005	0.002	<0.00050	<0.00050	<0.00045	<0.00045	-	-	<0.00050
F1 (C6-C10)	mg/L	0.10	-	<0.10	<0.10	<0.10	<0.10	-	-	<0.10
F2 (C10-C16)	mg/L	0.10/0.30	-	<0.10	<0.10	<0.30	<0.30	-	-	<0.10
F3 (C16-C34)	mg/L	0.25/0.30	-	<0.25	<0.25	<0.30	<0.30	-	-	<0.25
F4 (C34-C50)	mg/L	0.25/0.30	-	<0.25	<0.25	<0.30	<0.30	-	-	<0.25
Total Hydrocarbons (C6-C50)	mg/L	0.30/0.38	-	<0.38	<0.38	<0.30	<0.30	-	-	<0.38

Notes:

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

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

² The results of an external laboratory analysis of a stormwater discharge grab sample collected on July 22, 2020 had a total lead concentration of 0.00105 mg/L, but the field duplicate sample collected at the same time had a total lead concentration of 0.000811 indicating that the elevated lead in the July 22, 2020 sample was the result of sampling error or external laboratory error.

Table 7.2.18: Water Quality Results for Water Licence Monitoring Location - MS-03B

Analyte	Sample ID			MS-03B	MS-03B	MS-03B01
	ALS Laboratory Sample ID			L2486012-1	L2491466-1	L2491466-2
	Sample Date & Time			2020-08-09 11:35	2020-08-18 16:05	2020-08-18 16:05
	QA/QC Sample Type			N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹			
pH	pH units	0.10	6.0 - 9.5	8.18	8.18	8.18
Total Suspended Solids	mg/L	1.0	-	<1.0	5.2	5.2
Total Dissolved Solids	mg/L	10	-	318	266	285
Turbidity	NTU	0.10	-	1.15	5.12	5.04
Lead (Pb)-Total	mg/L	0.000050	0.001	0.000258	0.00095	0.000910
Oil and Grease, Total	mg/L	5.0	15.0	<5.0	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
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	0.00045/0.0005	0.002	<0.00045	<0.00050	<0.00050
F1 (C6-C10)	mg/L	0.10	-	<0.10	<0.10	<0.10
F2 (C10-C16)	mg/L	0.10/0.30	-	<0.30	<0.10	<0.10
F3 (C16-C34)	mg/L	0.25/0.30	-	<0.30	<0.25	<0.25
F4 (C34-C50)	mg/L	0.25/0.30	-	<0.30	<0.25	<0.25
Total Hydrocarbons (C6-C50)	mg/L	0.30/0.38	-	<0.30	<0.38	<0.38

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 7.2.19: Water Quality Results for Water Licence Monitoring Location - MS-MRY-04B

Analyte	Sample ID			MS-MRY-04B	MS-MRY-04B	MS-MRY-04B	MS-MRY-04B
	ALS Laboratory Sample ID			L2465602-12	L2463012-1	L2463013-1	L2463618-1
	Sample Date & Time			2020-06-16 15:45	2020-06-17 8:00	2020-06-18 8:00	2020-06-19 7:50
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
pH	pH units	0.10	6.0 - 9.5	7.14	7.36	7.24	7.19
Total Suspended Solids	mg/L	2.0	35	20.5	20.4	22.0	21.3
Total Dissolved Solids	mg/L	10	-	103	118	107	-
Turbidity	NTU	0.100	-	8.40	9.67	9.42	9.32
Ammonia, Total (as N)	mg/L	0.025	4	1.74	-	-	-
Phosphorus, Total	mg/L	0.020	4	0.444	-	-	-
Fecal Coliforms	CFU/100 mL	0	1,000	Sample Hold Time Exceedance ⁴	-	-	-
BOD	mg/L	2	30	Sample Hold Time Exceedance ⁴	-	-	-
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
Acute Lethality ^{2,3}	-	-	Not Acutely Toxic	Sample Hold Time Exceedance ⁴	-	-	-

Notes:

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

¹ Type 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).

⁴ Due to an unexpected flight delay during transport of an effluent sample collected from the MS-MRY-04B discharge for water quality and acute lethality analysis on June 18, 2020, the sample was not received at the external laboratory within the allowable sample hold times for the results of the acute lethality (5 day maximum), BOD (4 day maximum) and Faecal Coliform (48 hour maximum) analyses to be valid. Upon receipt of notification from the external laboratory of the hold time exceedance on June 24, 2020, the discharge from the MS-MRY-04B pond had ceased preventing resampling from being possible.

Table 7.2.20: Water Quality Results for Water Licence Monitoring Location - MS-06

Analyte	Sample ID			MS-06	MS-06
	ALS Laboratory Sample ID			L2485407-1	L2485989-1
	Sample Date & Time			2020-08-04 11:15	2020-08-09 10:05
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence and MMR Criteria ¹		
Conductivity	umhos/cm	3	-	1590	1740
Hardness (as CaCO3)	mg/L	10	-	917	-
pH	pH units	0.1	6.0 - 9.5	7.26	7.28
Total Suspended Solids	mg/L	2	15	6.0	1.9
Total Dissolved Solids	mg/L	13	-	1520	1500
Turbidity	NTU	0.1	-	7.08	3.85
Acidity (as CaCO3)	mg/L	2	-	2.3	-
Alkalinity, Total (as CaCO3)	mg/L	10	-	13	-
Ammonia, Total (as N)	mg/L	0.02	-	0.272	0.169
Chloride (Cl)	mg/L	0.5	-	22.8	-
Fluoride (F)	mg/L	0.02	-	<0.10	-
Nitrate (as N)	mg/L	0.02	-	14.9	-
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.82	-
Phosphorus, Total	mg/L	0.003	-	0.0302	-
Sulfate (SO4)	mg/L	0.3	-	952	-
Dissolved Organic Carbon	mg/L	0.5	-	1.17	-
Total Organic Carbon	mg/L	0.5	-	2.06	-
Aluminum (Al)-Total	mg/L	0.005	-	0.068	0.0267
Antimony (Sb)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.00020
Arsenic (As)-Total	mg/L	0.0001-0.001	0.5	<0.0010	<0.00020
Barium (Ba)-Total	mg/L	0.0001	-	0.0164	0.0163
Beryllium (Be)-Total	mg/L	0.0001/0.001	-	<0.0010	<0.00020
Bismuth (Bi)-Total	mg/L	0.00005/0.0005	-	<0.00050	<0.00010
Boron (B)-Total	mg/L	0.01/0.1	-	<0.10	0.048
Cadmium (Cd)-Total	mg/L	0.000005	-	0.000206	0.000166
Calcium (Ca)-Total	mg/L	0.05	-	77.9	76.8
Cesium (Cs)-Total	mg/L	0.00001/0.0001	-	<0.00010	0.000038
Chromium (Cr)-Total	mg/L	0.0002-0.005	-	<0.0050	<0.00020
Cobalt (Co)-Total	mg/L	0.0001/0.01	-	0.01	0.00899
Copper (Cu)-Total	mg/L	0.0005-0.005	0.3	<0.0050	<0.0010
Iron (Fe)-Total	mg/L	0.01	-	0.16	0.068
Lead (Pb)-Total	mg/L	0.000005-0.0005	0.2	<0.00050	<0.00010
Lithium (Li)-Total	mg/L	0.001	-	0.037	0.0372
Magnesium (Mg)-Total	mg/L	0.05	-	197	213
Manganese (Mn)-Total	mg/L	0.0005	-	7.87	8.08
Mercury (Hg)-Total	mg/L	0.000005	-	<0.0000050	0.00122
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00113	0.0349
Nickel (Ni)-Total	mg/L	0.0005/0.10	0.5	0.0361	<0.10
Phosphorus (P)-Total	mg/L	0.05/0.50	-	<0.50	12.6
Potassium (K)-Total	mg/L	0.05	-	11.3	0.0238
Rubidium (Rb)-Total	mg/L	0.0002	-	0.0222	0.00236
Selenium (Se)-Total	mg/L	0.00005	-	0.0021	1.72
Silicon (Si)-Total	mg/L	0.00002/0.10	-	1.7	<0.000020
Silver (Ag)-Total	mg/L	0.00005/0.0005	-	<0.00050	9.97
Sodium (Na)-Total	mg/L	0.05	-	8.98	0.131
Strontium (Sr)-Total	mg/L	0.001	-	0.128	359
Sulfur (S)-Total	mg/L	0.00040/0.50	-	325	<0.00040
Tellurium (Te)-Total	mg/L	0.0002/0.002	-	<0.0020	0.000093
Thallium (Tl)-Total	mg/L	0.00001/0.0002	-	0.0001	<0.00020
Thorium (Th)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00020
Tin (Sn)-Total	mg/L	0.0001/0.001	-	<0.0010	0.00078
Titanium (Ti)-Total	mg/L	0.0002-0.003	-	<0.0030	<0.00020
Tungsten (W)-Total	mg/L	0.0001/0.001	-	<0.0010	0.0023
Uranium (U)-Total	mg/L	0.00001/0.001	-	0.00269	<0.0010
Vanadium (V)-Total	mg/L	0.0005-0.006	-	<0.0050	<0.0060
Zinc (Zn)-Total	mg/L	0.0004-0.03	0.5	<0.030	<0.00040
Zirconium (Zr)-Total	mg/L	0.0002	-	<0.0020	-
Aluminum (Al)-Dissolved	mg/L	0.005/0.05	-	<0.050	-
Antimony (Sb)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-
Barium (Ba)-Dissolved	mg/L	0.0001	-	0.0149	-
Beryllium (Be)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-
Bismuth (Bi)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	-
Boron (B)-Dissolved	mg/L	0.01/0.1	-	<0.10	-
Cadmium (Cd)-Dissolved	mg/L	0.000005	-	0.000205	-
Calcium (Ca)-Dissolved	mg/L	0.05	-	67.9	-
Cesium (Cs)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	-
Chromium (Cr)-Dissolved	mg/L	0.0005/0.005	-	<0.0050	-
Cobalt (Co)-Dissolved	mg/L	0.0001	-	0.0088	-
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	-
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	<0.10	-
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	-
Lithium (Li)-Dissolved	mg/L	0.001	-	0.015	-
Magnesium (Mg)-Dissolved	mg/L	0.005	-	182	-
Manganese (Mn)-Dissolved	mg/L	0.0005	-	7.36	-
Mercury (Hg)-Dissolved	mg/L	0.0000005	-	<0.0000050	-
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.00121	-
Nickel (Ni)-Dissolved	mg/L	0.0005	-	0.0324	-

Table 7.2.20: Water Quality Results for Water Licence Monitoring Location - MS-06

Analyte	Sample ID			MS-06	MS-06
	ALS Laboratory Sample ID			L2485407-1	L2485989-1
	Sample Date & Time			2020-08-04 11:15	2020-08-09 10:05
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence and MMR Criteria ¹		
Phosphorus (P)-Dissolved	mg/L	0.05/0.5	-	<0.50	-
Potassium (K)-Dissolved	mg/L	0.05	-	10.2	-
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	0.0198	-
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.00209	-
Silicon (Si)-Dissolved	mg/L	0.05	-	1.31	-
Silver (Ag)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	-
Sodium (Na)-Dissolved	mg/L	0.05	-	7.91	-
Strontium (Sr)-Dissolved	mg/L	0.001	-	0.119	-
Sulfur (S)-Dissolved	mg/L	0.5	-	281	-
Tellurium (Te)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	-
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	-
Thorium (Th)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-
Tin (Sn)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-
Titanium (Ti)-Dissolved	mg/L	0.0003/0.003	-	<0.0030	-
Tungsten (W)-Dissolved	mg/L	0.0001	-	<0.0010	-
Uranium (U)-Dissolved	mg/L	0.00001	-	0.00243	-
Vanadium (V)-Dissolved	mg/L	0.0005/0.005	-	<0.0050	-
Zinc (Zn)-Dissolved	mg/L	0.001/0.01	-	<0.010	-
Zirconium (Zr)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	-
Ra-226	Bq/L	0.0067/0.0095	0.37	<0.0095	0.01
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 10.

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 7.2.21: Water Quality Results for Water Licence Monitoring Location - MS-08

Analyte	Sample ID			MS-08	MS-08	MS-08	MS-0801	MS-08
	ALS Laboratory Sample ID			L2467079-1	L2468306-1	L2469875-1	L2469875-2	L2476393-1
	Sample Date & Time			2020-06-28 10:15	2020-06-30 16:35	2020-07-05 10:00	2020-07-05 10:00	2020-07-18 9:15
	QA/QC Sample Type			N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	3.0	-	473	-	739	744	1370
Hardness (as CaCO3)	mg/L	0.50	-	225	-	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.16	7.20	7.24	7.26	7.61
Total Suspended Solids	mg/L	2.0/4.0	15	3.9	<2.0	7.0	6.8	5.7
Total Dissolved Solids	mg/L	10	-	343	348	585	599	1090
Turbidity	NTU	0.1	-	4.67	2.96	8.36	9.13	7.86
Acidity (as CaCO3)	mg/L	2.0	-	2.9	-	<2.0	2.7	-
Alkalinity, Total (as CaCO3)	mg/L	10	-	10.6	-	15.4	15.8	-
Ammonia, Total (as N)	mg/L	0.01	-	0.609	-	0.917	0.942	1.63
Bromide (Br)	mg/L	0.05	-	-	-	-	-	-
Chloride (Cl)	mg/L	0.5	-	3.54	-	5.9	6.1	-
Fluoride (F)	mg/L	0.02/0.1	-	0.053	-	<0.10	<0.10	-
Nitrate (as N)	mg/L	0.02	-	3.85	-	7.03	7.07	-
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.965	-	1.37	1.45	-
Phosphorus, Total	mg/L	0.003	-	<0.0020	-	0.0062	0.0402	-
Sulfate (SO4)	mg/L	0.3	-	200	-	329	331	-
Dissolved Organic Carbon	mg/L	0.5	-	1.59	-	1.48	1.85	-
Total Organic Carbon	mg/L	0.5	-	1.27	-	1.38	1.58	-
Aluminum (Al)-Total	mg/L	0.05	-	0.0853	-	0.223	0.160	0.175
Antimony (Sb)-Total	mg/L	0.0001-0.001	-	<0.00010	-	<0.00010	<0.00010	<0.0010
Arsenic (As)-Total	mg/L	0.0001-0.001	0.5	<0.00010	-	<0.00010	<0.00010	<0.0010
Barium (Ba)-Total	mg/L	0.0001	-	0.00934	-	0.0144	0.0136	0.0230
Beryllium (Be)-Total	mg/L	0.0001-0.001	-	<0.00010	-	<0.00010	<0.00010	<0.0010
Bismuth (Bi)-Total	mg/L	0.00005-0.0005	-	<0.000050	-	<0.000050	<0.000050	<0.00050
Boron (B)-Total	mg/L	0.01/0.1	-	0.012	-	0.017	0.017	<0.10
Cadmium (Cd)-Total	mg/L	0.00005/0.00005	-	0.0000375	-	0.0000432	0.0000489	<0.000050
Calcium (Ca)-Total	mg/L	0.05	-	18.1	-	28.3	29.1	54.9
Cesium (Cs)-Total	mg/L	0.00001-0.0001	-	0.000013	-	0.000027	0.000023	<0.00010
Chromium (Cr)-Total	mg/L	0.0005-0.005	-	0.00016	-	0.00054	0.00032	<0.0050
Cobalt (Co)-Total	mg/L	0.0001	-	0.0149	-	0.0187	0.0186	0.0208
Copper (Cu)-Total	mg/L	0.0005/0.005	0.3	0.00151	-	0.00184	0.00182	<0.0050
Iron (Fe)-Total	mg/L	0.01/0.1	-	0.178	-	0.628	0.501	0.47
Lead (Pb)-Total	mg/L	0.00005/0.0005	0.2	0.000151	-	0.000255	0.000255	<0.00050
Lithium (Li)-Total	mg/L	0.001/0.01	-	0.0060	-	0.0091	0.0089	<0.010
Magnesium (Mg)-Total	mg/L	0.005	-	45.7	-	70.9	70.4	144
Manganese (Mn)-Total	mg/L	0.0005	-	0.962	-	1.46	1.45	2.07
Mercury (Hg)-Total	mg/L	0.000005	-	<0.0000050	-	<0.0000050	<0.0000050	-
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00129	-	0.00173	0.00162	0.00203
Nickel (Ni)-Total	mg/L	0.0005	0.5	0.0203	-	0.0245	0.0245	0.0298
Phosphorus (P)-Total	mg/L	0.05/0.1	-	<0.050	-	<0.050	<0.050	<0.50
Potassium (K)-Total	mg/L	0.05	-	2.98	-	4.18	4.10	5.84
Rubidium (Rb)-Total	mg/L	0.0002	-	0.00257	-	0.00417	0.00388	0.0063
Selenium (Se)-Total	mg/L	0.00005	-	0.000926	-	0.00141	0.00134	0.00249
Silicon (Si)-Total	mg/L	0.1	-	0.79	-	1.29	1.15	1.50
Silver (Ag)-Total	mg/L	0.00001-0.0005	-	<0.000010	-	<0.000010	<0.000010	<0.00050
Sodium (Na)-Total	mg/L	0.05	-	1.39	-	2.21	2.21	3.59
Strontium (Sr)-Total	mg/L	0.001	-	0.0354	-	0.0492	0.0467	0.098
Sulfur (S)-Total	mg/L	0.5	-	74.5	-	116	118	224
Tellurium (Te)-Total	mg/L	0.0002-0.002	-	<0.00020	-	<0.00020	<0.00020	<0.0020
Thallium (Tl)-Total	mg/L	0.00001/0.0001	-	0.000011	-	0.000022	0.000022	<0.00010
Thorium (Th)-Total	mg/L	0.0001-0.001	-	<0.00010	-	0.00015	0.00016	<0.0010
Tin (Sn)-Total	mg/L	0.0001-0.001	-	<0.00010	-	<0.00010	<0.00010	0.0015
Titanium (Ti)-Total	mg/L	0.0003/0.003	-	0.00386	-	0.0102	0.00696	0.0052
Tungsten (W)-Total	mg/L	0.0001-0.001	-	<0.00010	-	<0.00010	<0.00010	<0.0010
Uranium (U)-Total	mg/L	0.00001	-	0.000525	-	0.00132	0.00131	0.00282
Vanadium (V)-Total	mg/L	0.0005-0.005	-	<0.00050	-	<0.00050	<0.00050	<0.0050
Zinc (Zn)-Total	mg/L	0.003-0.03	0.5	<0.0030	-	0.0034	<0.0030	<0.030
Zirconium (Zr)-Total	mg/L	0.0002-0.002	-	<0.00020	-	0.00030	0.00024	<0.0020
Aluminum (Al)-Dissolved	mg/L	0.005/0.05	-	0.0036	-	0.0018	0.0016	-
Antimony (Sb)-Dissolved	mg/L	0.0001/0.001	-	<0.00010	-	<0.00010	<0.00010	-
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	<0.00010	-	<0.00010	<0.00010	-
Barium (Ba)-Dissolved	mg/L	0.0001	-	0.00833	-	0.0122	0.0119	-
Beryllium (Be)-Dissolved	mg/L	0.0001/0.001	-	<0.00010	-	<0.00010	<0.00010	-
Bismuth (Bi)-Dissolved	mg/L	0.00005/0.0005	-	<0.000050	-	<0.000050	<0.000050	-
Boron (B)-Dissolved	mg/L	0.01/0.1	-	0.012	-	0.017	0.017	-
Cadmium (Cd)-Dissolved	mg/L	0.00005	-	0.0000337	-	0.0000366	0.0000368	-
Calcium (Ca)-Dissolved	mg/L	0.05	-	18.9	-	29.3	28.0	-
Cesium (Cs)-Dissolved	mg/L	0.00001/0.0001	-	<0.000010	-	<0.000010	<0.000010	-
Chromium (Cr)-Dissolved	mg/L	0.0001-0.005	-	<0.00010	-	<0.00010	<0.00010	-
Cobalt (Co)-Dissolved	mg/L	0.0001	-	0.0141	-	0.0175	0.0175	-
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	0.00106	-	0.00113	0.00109	-
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	<0.010	-	<0.010	<0.010	-
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	<0.000050	-	<0.000050	<0.000050	-
Lithium (Li)-Dissolved	mg/L	0.001/0.01	-	0.0059	-	0.0077	0.0077	-
Magnesium (Mg)-Dissolved	mg/L	0.005	-	43.3	-	72.8	70.8	-
Manganese (Mn)-Dissolved	mg/L	0.0005	-	0.907	-	1.34	1.35	-
Mercury (Hg)-Dissolved	mg/L	0.000005	-	<0.0000050	-	<0.0000050	<0.0000050	-
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.00121	-	0.00149	0.00148	-
Nickel (Ni)-Dissolved	mg/L	0.0005	-	0.0190	-	0.0223	0.0222	-
Phosphorus (P)-Dissolved	mg/L	0.05/0.5	-	<0.050	-	<0.050	<0.050	-
Potassium (K)-Dissolved	mg/L	0.05	-	2.78	-	3.85	3.85	-
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	0.00221	-	0.00325	0.00321	-
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.000863	-	0.00121	0.00137	-
Silicon (Si)-Dissolved	mg/L	0.05	-	0.641	-	0.875	0.834	-
Silver (Ag)-Dissolved	mg/L	0.00001-0.0005	-	<0.000010	-	<0.000010	<0.000010	-
Sodium (Na)-Dissolved	mg/L	0.05	-	1.41	-	2.25	2.17	-
Strontium (Sr)-Dissolved	mg/L	0.001	-	0.0340	-	0.0446	0.0452	-
Sulfur (S)-Dissolved	mg/L	0.5	-	68.7	-	111	107	-
Tellurium (Te)-Dissolved	mg/L	0.0002/0.002	-	<0.00020	-	<0.00020	<0.00020	-
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	<0.000010	-	0.000012	0.000013	-
Thorium (Th)-Dissolved	mg/L	0.0001/0.001	-	<0.00010	-	<0.00010	<0.00010	-
Tin (Sn)-Dissolved	mg/L	0.0001/0.001	-	<0.00010	-	<0.00010	<0.00010	-
Titanium (Ti)-Dissolved	mg/L	0.0003/0.003	-	<0.00030	-	<0.00030	<0.00030	-
Tungsten (W)-Dissolved	mg/L	0.0001/0.001	-	<0.00010	-	<0.00010	<0.00010	-
Uranium (U)-Dissolved	mg/L	0.00001	-	0.000391	-	0.000845	0.000855	-
Vanadium (V)-Dissolved	mg/L	0.0005/0.005	-	<0.00050	-	<0.00050	<0.00050	-
Zinc (Zn)-Dissolved	mg/L	0.001/0.01	-	0.0022	-	0.0017	0.0016	-
Zirconium (Zr)-Dissolved	mg/L	0.0002/0.002	-	<0.00020	-	<0.00020	<0.00020	-
Ra-226	Bq/L	0.0045-0.0097	-	<0.0070	-	0.0081	<0.0091	0.017
Acute Lethality ^{2,3}	N/A	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 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.
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 7.2.21: Water Quality Results for Water Licence Monitoring Location - MS-08

Analyte	Sample ID			MS-0801	MS-08	MS-08	MS-0801
	ALS Laboratory Sample ID			L2476393-2	L2479178-1	L2480818-1	L2480818-2
	Sample Date & Time			2020-07-18 9:15	2020-07-21 11:20	2020-07-28 14:10	2020-07-28 14:10
	QA/QC Sample Type			Field Duplicate	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	3.0	-	1370	1690	2250	2150
Hardness (as CaCO3)	mg/L	0.50	-	-	961	-	-
pH	pH units	0.1	6.0 - 9.5	7.60	7.37	7.68	7.70
Total Suspended Solids	mg/L	2.0/4.0	15	4.5	<4.0	3.3	5.9
Total Dissolved Solids	mg/L	10	-	1090	1420	1980	1990
Turbidity	NTU	0.1	-	7.80	3.88	2.94	3.42
Acidity (as CaCO3)	mg/L	2.0	-	-	2.7	-	-
Alkalinity, Total (as CaCO3)	mg/L	10	-	-	30	-	-
Ammonia, Total (as N)	mg/L	0.01	-	1.65	1.69	1.65	1.70
Bromide (Br)	mg/L	0.05	-	-	-	-	-
Chloride (Cl)	mg/L	0.5	-	-	15.3	-	-
Fluoride (F)	mg/L	0.02/0.1	-	-	<0.10	-	-
Nitrate (as N)	mg/L	0.02	-	-	22.5	-	-
Total Kjeldahl Nitrogen	mg/L	0.15	-	-	1.79	-	-
Phosphorus, Total	mg/L	0.003	-	-	<0.0030	-	-
Sulfate (SO4)	mg/L	0.3	-	-	890	-	-
Dissolved Organic Carbon	mg/L	0.5	-	-	2.73	-	-
Total Organic Carbon	mg/L	0.5	-	-	2.82	-	-
Aluminum (Al)-Total	mg/L	0.05	-	0.223	<0.050	0.0862	0.0864
Antimony (Sb)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.0010	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.0001-0.001	0.5	<0.0010	<0.0010	<0.00020	<0.00020
Barium (Ba)-Total	mg/L	0.0001	-	0.0229	0.0244	0.033	0.0339
Beryllium (Be)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.0010	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	0.00005-0.0005	-	<0.00050	<0.00050	<0.00010	<0.00010
Boron (B)-Total	mg/L	0.01/0.1	-	<0.10	<0.10	0.036	0.036
Cadmium (Cd)-Total	mg/L	0.000005/0.00005	-	<0.000050	0.000065	0.000058	0.000063
Calcium (Ca)-Total	mg/L	0.05	-	55.4	74.9	109	108
Cesium (Cs)-Total	mg/L	0.00001-0.0001	-	<0.00010	<0.00010	<0.000020	0.00002
Chromium (Cr)-Total	mg/L	0.0005-0.005	-	<0.0050	<0.0050	<0.00020	<0.00020
Cobalt (Co)-Total	mg/L	0.0001	-	0.021	0.0257	0.0303	0.0301
Copper (Cu)-Total	mg/L	0.0005/0.005	0.3	<0.0050	<0.0050	0.0029	0.0024
Iron (Fe)-Total	mg/L	0.01/0.1	-	0.55	<0.10	0.346	0.343
Lead (Pb)-Total	mg/L	0.00005/0.0005	0.2	<0.00050	<0.00050	0.00013	0.00014
Lithium (Li)-Total	mg/L	0.001/0.01	-	<0.010	<0.010	0.0139	0.0144
Magnesium (Mg)-Total	mg/L	0.005	-	144	198	288	295
Manganese (Mn)-Total	mg/L	0.0005	-	2.08	2.80	3.33	3.38
Mercury (Hg)-Total	mg/L	0.000005	-	-	<0.0000050	-	-
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00218	0.00221	0.00268	0.00261
Nickel (Ni)-Total	mg/L	0.0005	0.5	0.0271	0.0334	0.0403	0.0402
Phosphorus (P)-Total	mg/L	0.05/0.1	-	<0.50	<0.50	<0.10	<0.10
Potassium (K)-Total	mg/L	0.05	-	5.96	7.02	9.51	8.93
Rubidium (Rb)-Total	mg/L	0.0002	-	0.0057	0.0055	0.00788	0.00773
Selenium (Se)-Total	mg/L	0.00005	-	0.00241	0.00361	0.00499	0.00522
Silicon (Si)-Total	mg/L	0.1	-	1.50	1.60	1.92	1.91
Silver (Ag)-Total	mg/L	0.00001-0.0005	-	<0.00050	<0.00050	0.000021	<0.000020
Sodium (Na)-Total	mg/L	0.05	-	3.59	4.53	6.90	6.77
Strontium (Sr)-Total	mg/L	0.001	-	0.101	0.101	0.122	0.121
Sulfur (S)-Total	mg/L	0.5	-	222	306	456	461
Tellurium (Te)-Total	mg/L	0.0002-0.002	-	<0.0020	<0.0020	<0.00040	<0.00040
Thallium (Tl)-Total	mg/L	0.00001/0.0001	-	<0.00010	<0.00010	0.000039	0.000036
Thorium (Th)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.0010	<0.00020	<0.00020
Tin (Sn)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.0010	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	0.0003/0.003	-	0.0059	<0.0030	0.00421	0.00414
Tungsten (W)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.0010	<0.00020	<0.00020
Uranium (U)-Total	mg/L	0.00001	-	0.00280	0.00424	0.00574	0.00561
Vanadium (V)-Total	mg/L	0.0005-0.005	-	<0.0050	<0.0050	<0.0010	<0.0010
Zinc (Zn)-Total	mg/L	0.003-0.03	0.5	<0.030	<0.030	<0.0060	<0.0060
Zirconium (Zr)-Total	mg/L	0.0002-0.002	-	<0.0020	<0.0020	<0.00040	<0.00040
Aluminum (Al)-Dissolved	mg/L	0.005/0.05	-	-	<0.050	-	-
Antimony (Sb)-Dissolved	mg/L	0.0001/0.001	-	-	<0.0010	-	-
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	-	<0.0010	-	-
Barium (Ba)-Dissolved	mg/L	0.0001	-	-	0.0238	-	-
Beryllium (Be)-Dissolved	mg/L	0.0001/0.001	-	-	<0.0010	-	-
Bismuth (Bi)-Dissolved	mg/L	0.00005/0.0005	-	-	<0.00050	-	-
Boron (B)-Dissolved	mg/L	0.01/0.1	-	-	<0.10	-	-
Cadmium (Cd)-Dissolved	mg/L	0.00005	-	-	<0.000050	-	-
Calcium (Ca)-Dissolved	mg/L	0.05	-	-	68.6	-	-
Cesium (Cs)-Dissolved	mg/L	0.00001/0.0001	-	-	<0.00010	-	-
Chromium (Cr)-Dissolved	mg/L	0.0001-0.005	-	-	<0.0050	-	-
Cobalt (Co)-Dissolved	mg/L	0.0001	-	-	0.0252	-	-
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	-	0.002	-	-
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	-	0.29	-	-
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	-	<0.00050	-	-
Lithium (Li)-Dissolved	mg/L	0.001/0.01	-	-	0.01	-	-
Magnesium (Mg)-Dissolved	mg/L	0.005	-	-	192	-	-
Manganese (Mn)-Dissolved	mg/L	0.0005	-	-	2.67	-	-
Mercury (Hg)-Dissolved	mg/L	0.000005	-	-	<0.0000050	-	-
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	-	0.00226	-	-
Nickel (Ni)-Dissolved	mg/L	0.0005	-	-	0.0337	-	-
Phosphorus (P)-Dissolved	mg/L	0.05/0.5	-	-	<0.50	-	-
Potassium (K)-Dissolved	mg/L	0.05	-	-	6.36	-	-
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	-	0.0056	-	-
Selenium (Se)-Dissolved	mg/L	0.00005	-	-	0.00363	-	-
Silicon (Si)-Dissolved	mg/L	0.05	-	-	1.46	-	-
Silver (Ag)-Dissolved	mg/L	0.00001-0.0005	-	-	<0.00050	-	-
Sodium (Na)-Dissolved	mg/L	0.05	-	-	4.53	-	-
Strontium (Sr)-Dissolved	mg/L	0.001	-	-	0.097	-	-
Sulfur (S)-Dissolved	mg/L	0.5	-	-	283	-	-
Tellurium (Te)-Dissolved	mg/L	0.0002/0.002	-	-	<0.0020	-	-
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	-	<0.00010	-	-
Thorium (Th)-Dissolved	mg/L	0.0001/0.001	-	-	<0.0010	-	-
Tin (Sn)-Dissolved	mg/L	0.0001/0.001	-	-	<0.0010	-	-
Titanium (Ti)-Dissolved	mg/L	0.0003/0.003	-	-	<0.0030	-	-
Tungsten (W)-Dissolved	mg/L	0.0001/0.001	-	-	<0.0010	-	-
Uranium (U)-Dissolved	mg/L	0.00001	-	-	0.00408	-	-
Vanadium (V)-Dissolved	mg/L	0.0005/0.005	-	-	<0.0050	-	-
Zinc (Zn)-Dissolved	mg/L	0.001/0.01	-	-	<0.010	-	-
Zirconium (Zr)-Dissolved	mg/L	0.0002/0.002	-	-	<0.0020	-	-
Ra-226	Bq/L	0.0045-0.0097	-	0.018	<0.0097	0.022	0.022
Acute Lethality ^{2,3}	N/A	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 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

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 7.2.21: Water Quality Results for Water Licence Monitoring Location - MS-08

Analyte	Sample ID			MS-08	MS-08	MS-08	MS-0801
	ALS Laboratory Sample ID			L2485445-1	L2486007-1	L2491370-1	L2491370-2
	Sample Date & Time			2020-08-04 13:10	2020-08-09 9:20	2020-08-18 11:10	2020-08-18 11:10
	QA/QC Sample Type			N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	3.0	-	2110	2230	2890	2880
Hardness (as CaCO3)	mg/L	0.50	-	1360	-	1710	1730
pH	pH units	0.1	6.0 - 9.5	7.42	7.73	7.80	7.84
Total Suspended Solids	mg/L	2.0/4.0	15	3.8	3.8	7.2	8.4
Total Dissolved Solids	mg/L	10	-	1850	2690	2730	2760
Turbidity	NTU	0.1	-	1.74	1.30	3.02	2.68
Acidity (as CaCO3)	mg/L	2.0	-	2.7	-	3.1	3.2
Alkalinity, Total (as CaCO3)	mg/L	10	-	38	-	30	30
Ammonia, Total (as N)	mg/L	0.01	-	1.46	1.33	2.87	2.88
Bromide (Br)	mg/L	0.05	-	-	-	-	-
Chloride (Cl)	mg/L	0.5	-	18.7	-	15.7	16.3
Fluoride (F)	mg/L	0.02/0.1	-	<0.10	-	0.13	0.19
Nitrate (as N)	mg/L	0.02	-	26.9	-	21.7	22.4
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.63	-	3.82	2.55
Phosphorus, Total	mg/L	0.003	-	<0.0030	-	<0.0030	<0.0030
Sulfate (SO4)	mg/L	0.3	-	1190	-	1850	1900
Dissolved Organic Carbon	mg/L	0.5	-	2.84	-	4.14	3.16
Total Organic Carbon	mg/L	0.5	-	2.64	-	2.85	2.90
Aluminum (Al)-Total	mg/L	0.05	-	<0.050	0.0144	<0.050	<0.050
Antimony (Sb)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00020	<0.0010	<0.0010
Arsenic (As)-Total	mg/L	0.0001-0.001	0.5	<0.0010	<0.00020	<0.0010	<0.0010
Barium (Ba)-Total	mg/L	0.0001	-	0.0307	0.0305	0.0120	0.0125
Beryllium (Be)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00020	<0.0010	<0.0010
Bismuth (Bi)-Total	mg/L	0.00005-0.0005	-	<0.00050	<0.00010	<0.00050	<0.00050
Boron (B)-Total	mg/L	0.01/0.1	-	<0.10	0.035	<0.10	<0.10
Cadmium (Cd)-Total	mg/L	0.000005/0.00005	-	0.000069	0.000063	<0.000050	<0.000050
Calcium (Ca)-Total	mg/L	0.05	-	100	98.2	175	182
Cesium (Cs)-Total	mg/L	0.00001-0.0001	-	<0.00010	<0.000020	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	0.0005-0.005	-	<0.0050	<0.00020	<0.0050	<0.0050
Cobalt (Co)-Total	mg/L	0.0001	-	0.0296	0.0283	0.0110	0.0116
Copper (Cu)-Total	mg/L	0.0005/0.005	0.3	<0.0050	0.0013	<0.0050	<0.0050
Iron (Fe)-Total	mg/L	0.01/0.1	-	0.120	0.102	0.57	0.58
Lead (Pb)-Total	mg/L	0.00005/0.0005	0.2	<0.00050	<0.00010	<0.00050	<0.00050
Lithium (Li)-Total	mg/L	0.001/0.01	-	0.014	0.0134	0.012	0.013
Magnesium (Mg)-Total	mg/L	0.005	-	272	272	355	374
Manganese (Mn)-Total	mg/L	0.0005	-	3.41	3.39	1.74	1.85
Mercury (Hg)-Total	mg/L	0.000005	-	<0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00231	0.00228	0.00081	0.00088
Nickel (Ni)-Total	mg/L	0.0005	0.5	0.0398	0.0377	0.0138	0.0145
Phosphorus (P)-Total	mg/L	0.05/0.1	-	<0.50	<0.10	<0.50	<0.50
Potassium (K)-Total	mg/L	0.05	-	7.76	8.33	6.33	6.55
Rubidium (Rb)-Total	mg/L	0.0002	-	0.00660	0.00689	0.0062	0.0063
Selenium (Se)-Total	mg/L	0.00005	-	0.00476	0.00476	0.00281	0.00275
Silicon (Si)-Total	mg/L	0.1	-	1.60	1.58	<1.0	<1.0
Silver (Ag)-Total	mg/L	0.00001-0.0005	-	<0.00050	<0.000020	<0.00050	<0.00050
Sodium (Na)-Total	mg/L	0.05	-	5.82	5.87	5.01	5.09
Strontium (Sr)-Total	mg/L	0.001	-	0.129	0.126	0.808	0.801
Sulfur (S)-Total	mg/L	0.5	-	429	443	622	631
Tellurium (Te)-Total	mg/L	0.0002-0.002	-	<0.0020	<0.00040	<0.0020	<0.0020
Thallium (Tl)-Total	mg/L	0.00001/0.0001	-	<0.00010	0.000033	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00020	<0.0010	<0.0010
Tin (Sn)-Total	mg/L	0.0001-0.001	-	<0.0010	0.00022	0.0058	0.0057
Titanium (Ti)-Total	mg/L	0.0003/0.003	-	<0.0030	<0.00060	<0.0030	<0.0030
Tungsten (W)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00020	<0.0010	<0.0010
Uranium (U)-Total	mg/L	0.00001	-	0.00574	0.00588	0.00109	0.00108
Vanadium (V)-Total	mg/L	0.0005-0.005	-	<0.0050	<0.0010	<0.0050	<0.0050
Zinc (Zn)-Total	mg/L	0.003-0.03	0.5	<0.030	<0.0060	<0.030	<0.030
Zirconium (Zr)-Total	mg/L	0.0002-0.002	-	<0.0020	<0.00040	<0.0020	<0.0020
Aluminum (Al)-Dissolved	mg/L	0.005/0.05	-	<0.050	-	<0.050	<0.050
Antimony (Sb)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	<0.0010	<0.0010
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	<0.0010	<0.0010
Barium (Ba)-Dissolved	mg/L	0.0001	-	0.0301	-	0.0117	0.0116
Beryllium (Be)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	<0.0010	<0.0010
Bismuth (Bi)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	-	<0.00050	<0.00050
Boron (B)-Dissolved	mg/L	0.01/0.1	-	<0.10	0.035	<0.10	<0.10
Cadmium (Cd)-Dissolved	mg/L	0.00005	-	0.000053	-	<0.000050	<0.000050
Calcium (Ca)-Dissolved	mg/L	0.05	-	97.8	-	167	171
Cesium (Cs)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	-	<0.00010	<0.00010
Chromium (Cr)-Dissolved	mg/L	0.0001-0.005	-	<0.0050	-	<0.0050	<0.0050
Cobalt (Co)-Dissolved	mg/L	0.0001	-	0.0283	-	0.0097	0.0097
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	-	<0.0020	<0.0020
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	<0.10	-	<0.10	<0.10
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	-	<0.00050	<0.00050
Lithium (Li)-Dissolved	mg/L	0.001/0.01	-	0.013	-	0.010	0.012
Magnesium (Mg)-Dissolved	mg/L	0.005	-	270	-	314	317
Manganese (Mn)-Dissolved	mg/L	0.0005	-	3.37	-	1.60	1.62
Mercury (Hg)-Dissolved	mg/L	0.000005	-	<0.0000050	-	<0.0000050	<0.0000050
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.00241	-	0.00083	0.00081
Nickel (Ni)-Dissolved	mg/L	0.0005	-	0.0392	-	0.0137	0.0133
Phosphorus (P)-Dissolved	mg/L	0.05/0.1	-	<0.50	-	<0.50	<0.50
Potassium (K)-Dissolved	mg/L	0.05	-	7.78	-	5.95	5.93
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	0.0069	-	0.0062	0.0060
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.00461	-	0.00254	0.00254
Silicon (Si)-Dissolved	mg/L	0.05	-	1.67	-	<0.50	<0.50
Silver (Ag)-Dissolved	mg/L	0.00001-0.0005	-	<0.00050	-	<0.00050	<0.00050
Sodium (Na)-Dissolved	mg/L	0.05	-	6.00	-	4.31	4.26
Strontium (Sr)-Dissolved	mg/L	0.001	-	0.131	-	0.737	0.759
Sulfur (S)-Dissolved	mg/L	0.5	-	426	-	541	543
Tellurium (Te)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	-	<0.0020	<0.0020
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	-	<0.00010	<0.00010
Thorium (Th)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	<0.0010	<0.0010
Tin (Sn)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	0.0052	0.0052
Titanium (Ti)-Dissolved	mg/L	0.0003/0.003	-	<0.0030	-	<0.0030	<0.0030
Tungsten (W)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	<0.0010	<0.0010
Uranium (U)-Dissolved	mg/L	0.00001	-	0.00566	-	0.00100	0.00093
Vanadium (V)-Dissolved	mg/L	0.0005/0.005	-	<0.0050	-	<0.0050	<0.0050
Zinc (Zn)-Dissolved	mg/L	0.001/0.01	-	<0.010	-	<0.010	<0.010
Zirconium (Zr)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	-	<0.0020	<0.0020
Ra-226	Bq/L	0.0045-0.0097	-	0.012	0.013	<0.0064	0.0078
Acute Lethality ^{2,3}	N/A	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 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.
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 7.2.21: Water Quality Results for Water Licence Monitoring Location - MS-08

Analyte	Sample ID			MS-08	MS-08	MS-0801	MS-08
	ALS Laboratory Sample ID			L2491605-1	L2493959-1	L2493959-2	L2496738-1
	Sample Date & Time			2020-08-19 10:30	2020-08-24 14:15	2020-08-24 14:15	2020-08-31 11:35
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	3.0	-	1800	1890	1890	3790
Hardness (as CaCO3)	mg/L	0.50	-	1050	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.75	7.81	7.81	8.49
Total Suspended Solids	mg/L	2.0/4.0	15	11.2	8.0	8.4	10.7
Total Dissolved Solids	mg/L	10	-	1650	1640	1710	4250
Turbidity	NTU	0.1	-	13.0	13.1	13.1	11.5
Acidity (as CaCO3)	mg/L	2.0	-	3.0	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	10	-	47	-	-	-
Ammonia, Total (as N)	mg/L	0.01	-	0.106	0.72	0.68	6.91
Bromide (Br)	mg/L	0.05	-	-	-	-	-
Chloride (Cl)	mg/L	0.5	-	14.3	-	-	-
Fluoride (F)	mg/L	0.02/0.1	-	<0.10	-	-	-
Nitrate (as N)	mg/L	0.02	-	20.9	-	-	-
Total Kjeldahl Nitrogen	mg/L	0.15	-	<0.15	-	-	-
Phosphorus, Total	mg/L	0.003	-	0.0057	-	-	-
Sulfate (SO4)	mg/L	0.3	-	950	-	-	-
Dissolved Organic Carbon	mg/L	0.5	-	1.83	-	-	-
Total Organic Carbon	mg/L	0.5	-	1.77	-	-	-
Aluminum (Al)-Total	mg/L	0.05	-	0.350	0.365	0.275	0.100
Antimony (Sb)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00010	<0.00010	<0.0010
Arsenic (As)-Total	mg/L	0.0001-0.001	0.5	<0.0010	0.00015	0.00013	<0.0010
Barium (Ba)-Total	mg/L	0.0001	-	0.0254	0.0239	0.0251	0.0191
Beryllium (Be)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00010	<0.00010	<0.0010
Bismuth (Bi)-Total	mg/L	0.00005-0.0005	-	<0.00050	<0.000050	<0.000050	<0.00050
Boron (B)-Total	mg/L	0.01/0.1	-	<0.10	0.029	0.028	<0.10
Cadmium (Cd)-Total	mg/L	0.00005/0.00005	-	<0.000050	0.0000505	0.0000465	0.000065
Calcium (Ca)-Total	mg/L	0.05	-	89.9	89.0	89.7	339
Cesium (Cs)-Total	mg/L	0.00001-0.0001	-	<0.00010	0.000019	0.000016	0.00015
Chromium (Cr)-Total	mg/L	0.0005-0.005	-	<0.0050	0.00176	0.00135	<0.0050
Cobalt (Co)-Total	mg/L	0.0001	-	0.0190	0.0184	0.0185	0.0423
Copper (Cu)-Total	mg/L	0.0005/0.005	0.3	<0.0050	0.00144	0.00136	0.0256
Iron (Fe)-Total	mg/L	0.01/0.1	-	0.62	0.621	0.510	3.91
Lead (Pb)-Total	mg/L	0.00005/0.0005	0.2	<0.00050	0.000128	0.000113	<0.00050
Lithium (Li)-Total	mg/L	0.001/0.01	-	0.012	0.0111	0.0113	0.089
Magnesium (Mg)-Total	mg/L	0.005	-	234	202	207	502
Manganese (Mn)-Total	mg/L	0.0005	-	2.41	2.31	2.24	11.5
Mercury (Hg)-Total	mg/L	0.000005	-	<0.0000050	-	-	-
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.00235	0.00225	0.00226	<0.00050
Nickel (Ni)-Total	mg/L	0.0005	0.5	0.0282	0.0262	0.0265	0.0324
Phosphorus (P)-Total	mg/L	0.05/0.1	-	<0.50	<0.050	<0.050	<0.50
Potassium (K)-Total	mg/L	0.05	-	6.82	6.63	6.66	7.58
Rubidium (Rb)-Total	mg/L	0.0002	-	0.0062	0.00518	0.00537	0.0165
Selenium (Se)-Total	mg/L	0.00005	-	0.00378	0.00408	0.00404	0.00640
Silicon (Si)-Total	mg/L	0.1	-	1.9	1.86	1.74	<1.0
Silver (Ag)-Total	mg/L	0.00001-0.0005	-	<0.00050	<0.000010	<0.000010	<0.00050
Sodium (Na)-Total	mg/L	0.05	-	4.96	4.85	4.69	5.81
Strontium (Sr)-Total	mg/L	0.001	-	0.118	0.106	0.107	1.16
Sulfur (S)-Total	mg/L	0.5	-	355	364	365	949
Tellurium (Te)-Total	mg/L	0.0002-0.002	-	<0.0020	<0.00020	<0.00020	<0.0020
Thallium (Tl)-Total	mg/L	0.00001/0.0001	-	<0.00010	0.000026	0.000025	0.00031
Thorium (Th)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00010	<0.00010	<0.0010
Tin (Sn)-Total	mg/L	0.0001-0.001	-	<0.0010	0.00018	0.00019	<0.0010
Titanium (Ti)-Total	mg/L	0.0003/0.003	-	0.0066	0.00090	0.00667	<0.0030
Tungsten (W)-Total	mg/L	0.0001-0.001	-	<0.0010	<0.00010	<0.00010	<0.0010
Uranium (U)-Total	mg/L	0.00001	-	0.00527	0.00510	0.00505	0.00032
Vanadium (V)-Total	mg/L	0.0005-0.005	-	<0.0050	0.00058	0.00054	<0.0050
Zinc (Zn)-Total	mg/L	0.003-0.03	0.5	<0.030	0.0030	0.0032	<0.030
Zirconium (Zr)-Total	mg/L	0.0002-0.002	-	<0.0020	0.00021	<0.00020	<0.0020
Aluminum (Al)-Dissolved	mg/L	0.005/0.05	-	<0.050	-	-	-
Antimony (Sb)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	-	-
Arsenic (As)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	-	-
Barium (Ba)-Dissolved	mg/L	0.0001	-	0.0240	-	-	-
Beryllium (Be)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	-	-
Bismuth (Bi)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	-	-	-
Boron (B)-Dissolved	mg/L	0.01/0.1	-	<0.10	-	-	-
Cadmium (Cd)-Dissolved	mg/L	0.00005	-	<0.000050	-	-	-
Calcium (Ca)-Dissolved	mg/L	0.05	-	82.0	-	-	-
Cesium (Cs)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	-	-	-
Chromium (Cr)-Dissolved	mg/L	0.0001-0.005	-	<0.0050	-	-	-
Cobalt (Co)-Dissolved	mg/L	0.0001	-	0.0173	-	-	-
Copper (Cu)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	-	-	-
Iron (Fe)-Dissolved	mg/L	0.01/0.1	-	<0.10	-	-	-
Lead (Pb)-Dissolved	mg/L	0.00005/0.0005	-	<0.00050	-	-	-
Lithium (Li)-Dissolved	mg/L	0.001/0.01	-	<0.010	-	-	-
Magnesium (Mg)-Dissolved	mg/L	0.005	-	206	-	-	-
Manganese (Mn)-Dissolved	mg/L	0.0005	-	2.19	-	-	-
Mercury (Hg)-Dissolved	mg/L	0.000005	-	<0.0000050	-	-	-
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.00225	-	-	-
Nickel (Ni)-Dissolved	mg/L	0.0005	-	0.0259	-	-	-
Phosphorus (P)-Dissolved	mg/L	0.05/0.5	-	<0.50	-	-	-
Potassium (K)-Dissolved	mg/L	0.05	-	6.40	-	-	-
Rubidium (Rb)-Dissolved	mg/L	0.0002	-	0.0053	-	-	-
Selenium (Se)-Dissolved	mg/L	0.00005	-	0.00341	-	-	-
Silicon (Si)-Dissolved	mg/L	0.05	-	1.27	-	-	-
Silver (Ag)-Dissolved	mg/L	0.00001-0.0005	-	<0.00050	-	-	-
Sodium (Na)-Dissolved	mg/L	0.05	-	4.50	-	-	-
Strontium (Sr)-Dissolved	mg/L	0.001	-	0.112	-	-	-
Sulfur (S)-Dissolved	mg/L	0.5	-	309	-	-	-
Tellurium (Te)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	-	-	-
Thallium (Tl)-Dissolved	mg/L	0.00001/0.0001	-	<0.00010	-	-	-
Thorium (Th)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	-	-
Tin (Sn)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	-	-
Titanium (Ti)-Dissolved	mg/L	0.0003/0.003	-	<0.0030	-	-	-
Tungsten (W)-Dissolved	mg/L	0.0001/0.001	-	<0.0010	-	-	-
Uranium (U)-Dissolved	mg/L	0.00001	-	0.00460	-	-	-
Vanadium (V)-Dissolved	mg/L	0.0005/0.005	-	<0.0050	-	-	-
Zinc (Zn)-Dissolved	mg/L	0.001/0.01	-	<0.010	-	-	-
Zirconium (Zr)-Dissolved	mg/L	0.0002/0.002	-	<0.0020	-	-	-
Ra-226	Bq/L	0.0045-0.0097	-	0.011	-	-	0.034
Acute Lethality ^{2,3}	N/A	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 10: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.
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 7.2.22: 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	MS-MRY-09	MS-MRY-09	MS-MRY-0901	MS-MRY-09	
	ALS Laboratory Sample ID			L2459150-1	L2459150-2	L2463019-1	L2466533-1	L2468355-1	L2471945-8	L2475703-1	L2475703-2	L2479664-1
	Sample Date & Time			2020-06-10 9:30	2020-06-10 9:30	2020-06-18 10:10	2020-06-23 13:35	2020-07-01 16:35	2020-07-06 12:45	2020-07-15 8:30	2020-07-15 8:30	2020-04-24 8:45
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹									
Hardness	mg/L	0.5	-	10.4	10.4	-	39.3	-	46.4	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.25	7.10	7.45	7.67	7.89	7.67	7.97	7.89	7.90
Total Suspended Solids	mg/L	2.0/3.0	15	<2.0	<2.0	2.5	<2.0	3.9	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	18	<10	66	34	65	41	73	84	79
Turbidity	NTU	0.1	-	5.40	5.32	1.38	1.31	1.11	0.55	0.89	0.89	0.32
Alkalinity, Total (as CaCO3)	mg/L	10	-	<10	<10	-	37	-	45	-	-	-
Ammonia, Total (as N)	mg/L	0.01	-	<0.010	<0.010	-	<0.010	-	<0.010	-	-	-
Chloride (Cl)	mg/L	0.5	-	0.67	0.67	-	1.18	-	1.23	-	-	-
Fluoride (F)	mg/L	0.02	-	<0.020	<0.020	-	<0.020	-	<0.020	-	-	-
Nitrate (as N)	mg/L	0.02	-	0.083	0.055	-	0.035	-	0.098	-	-	-
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.22	<0.15	-	0.32	-	<0.15	-	-	-
Phosphorus, Total	mg/L	0.003	-	<0.0030	<0.0030	-	0.0045	-	0.0039	-	-	-
Sulfate (SO4)	mg/L	0.3	-	0.99	1.00	-	2.01	-	2.76	-	-	-
Dissolved Organic Carbon	mg/L	0.5	-	2.07	2.44	-	2.60	-	2.47	-	-	-
Total Organic Carbon	mg/L	0.5	-	3.64	3.79	-	2.53	-	2.89	-	-	-
Aluminum (Al)-Total	mg/L	0.005	-	0.0606	0.0649	-	0.0586	-	0.0285	-	-	-
Arsenic (As)-Total	mg/L	0.0001	0.5	<0.00010	<0.00010	-	<0.00010	-	<0.00010	-	-	-
Cadmium (Cd)-Total	mg/L	0.000005	-	0.0000071	0.0000067	-	0.0000065	-	<0.0000050	-	-	-
Calcium (Ca)-Total	mg/L	0.5	-	1.92	1.94	-	7.99	-	9.11	-	-	-
Copper (Cu)-Total	mg/L	0.001	0.3	0.0012	0.0011	-	0.0016	-	0.0023	-	-	-
Iron (Fe)-Total	mg/L	0.01	-	0.096	0.108	-	0.074	-	0.035	-	-	-
Lead (Pb)-Total	mg/L	0.00005	0.2	0.000081	0.000076	-	0.000086	-	<0.000050	-	-	-
Magnesium (Mg)-Total	mg/L	0.05	-	1.33	1.33	-	4.88	-	5.74	-	-	-
Manganese (Mn)-Total	mg/L	0.0005	-	0.00317	0.00316	-	0.00157	-	0.00092	-	-	-
Mercury (Hg)-Total	mg/L	0.000005	-	0.0000071	<0.0000050	-	<0.0000050	-	<0.0000050	-	-	-
Molybdenum (Mo)-Total	mg/L	0.00005	-	0.000116	0.000116	-	0.000285	-	0.000665	-	-	-
Nickel (Ni)-Total	mg/L	0.0005	0.5	0.00054	<0.00050	-	<0.00050	-	<0.00050	-	-	-
Potassium (K)-Total	mg/L	0.05	-	0.582	0.572	-	1.02	-	1.54	-	-	-
Selenium (Se)-Total	mg/L	0.00005	-	<0.000050	<0.000050	-	<0.000050	-	0.000053	-	-	-
Sodium (Na)-Total	mg/L	0.05	-	0.293	0.289	-	0.408	-	0.471	-	-	-
Thallium (Tl)-Total	mg/L	0.00001	-	<0.000010	<0.000010	-	0.000015	-	0.000012	-	-	-
Uranium (U)-Total	mg/L	0.00001	-	0.000155	0.000158	-	0.000649	-	0.00144	-	-	-
Zinc (Zn)-Total	mg/L	0.003	0.5	<0.0030	<0.0030	-	<0.0030	-	<0.0030	-	-	-
Aluminum (Al)-Dissolved	mg/L	0.005	-	0.0172	0.0199	-	0.0086	-	0.0074	-	-	-
Arsenic (As)-Dissolved	mg/L	0.0001	-	<0.00010	<0.00010	-	<0.00010	-	<0.00010	-	-	-
Cadmium (Cd)-Dissolved	mg/L	0.00001	-	<0.000010	<0.000010	-	<0.000010	-	<0.000010	-	-	-
Calcium (Ca)-Dissolved	mg/L	0.05	-	2.03	2.01	-	7.64	-	9.10	-	-	-
Copper (Cu)-Dissolved	mg/L	0.0002	-	0.00103	0.00098	-	0.00144	-	0.00226	-	-	-
Iron (Fe)-Dissolved	mg/L	0.01	-	0.020	0.024	-	<0.010	-	<0.010	-	-	-
Lead (Pb)-Dissolved	mg/L	0.00005	-	<0.000050	<0.000050	-	<0.000050	-	<0.000050	-	-	-
Magnesium (Mg)-Dissolved	mg/L	0.05	-	1.30	1.30	-	4.92	-	5.76	-	-	-
Manganese (Mn)-Dissolved	mg/L	0.0005	-	0.00177	0.00182	-	<0.00050	-	0.00124	-	-	-
Mercury (Hg)-Dissolved	mg/L	0.000005	-	<0.0000050	<0.0000050	-	<0.0000050	-	<0.0000050	-	-	-
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	0.000115	0.000115	-	0.000268	-	0.000644	-	-	-
Nickel (Ni)-Dissolved	mg/L	0.0005	-	<0.00050	<0.00050	-	<0.00050	-	<0.00050	-	-	-
Potassium (K)-Dissolved	mg/L	0.05	-	0.564	0.556	-	0.994	-	1.52	-	-	-
Selenium (Se)-Dissolved	mg/L	0.00005	-	<0.000050	<0.000050	-	<0.000050	-	0.000052	-	-	-
Sodium (Na)-Dissolved	mg/L	0.5	-	<0.50	<0.50	-	<0.50	-	<0.50	-	-	-
Thallium (Tl)-Dissolved	mg/L	0.00001	-	<0.000010	<0.000010	-	<0.000010	-	<0.000010	-	-	-
Uranium (U)-Dissolved	mg/L	0.00001	-	0.000117	0.000114	-	0.000553	-	0.00136	-	-	-
Zinc (Zn)-Dissolved	mg/L	0.001	-	0.0024	<0.0010	-	<0.0010	-	<0.0010	-	-	-
Oil and Grease, Total	-	-	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
Acute 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: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

Table 7.2.22: 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	MS-MRY-09	MS-MRY-09	MS-MRY-09	MS-MRY-09
	ALS Laboratory Sample ID			L2480169-4	L2480169-8	L2485627-1	L2486375-16	L2489338-16	L2493952-16	L2499077-1	L2509827-1
	Sample Date & Time			2020-07-27 16:30	2020-07-27 16:30	2020-08-05 8:45	2020-08-10 16:45	2020-08-16 17:05	2020-08-23 8:35	2020-09-02 16:00	2020-09-11 8:50
	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								
Hardness	mg/L	0.5	-	-	-	75.4	-	-	-	102	-
pH	pH units	0.1	6.0 - 9.5	7.97	8.00	7.78	8.08	8.07	8.13	7.99	8.05
Total Suspended Solids	mg/L	2.0/3.0	15	<2.0	<2.0	<3.0	<2.0	<2.0	<2.0	<2.0	2.0
Total Dissolved Solids	mg/L	10	-	60	81	73	108	98	102	138	112
Turbidity	NTU	0.1	-	0.30	0.32	0.28	0.15	0.14	0.13	<0.10	0.22
Alkalinity, Total (as CaCO3)	mg/L	10	-	-	-	86	-	-	-	94	-
Ammonia, Total (as N)	mg/L	0.01	-	-	-	<0.010	-	-	-	<0.010	-
Chloride (Cl)	mg/L	0.5	-	-	-	2.15	-	-	-	3.35	-
Fluoride (F)	mg/L	0.02	-	-	-	0.024	-	-	-	0.024	-
Nitrate (as N)	mg/L	0.02	-	-	-	0.127	-	-	-	0.134	-
Total Kjeldahl Nitrogen	mg/L	0.15	-	-	-	0.38	-	-	-	<0.15	-
Phosphorus, Total	mg/L	0.003	-	-	-	0.0032	-	-	-	<0.0030	-
Sulfate (SO4)	mg/L	0.3	-	-	-	5.22	-	-	-	7.03	-
Dissolved Organic Carbon	mg/L	0.5	-	-	-	2.10	-	-	-	7.23	-
Total Organic Carbon	mg/L	0.5	-	-	-	2.80	-	-	-	3.03	-
Aluminum (Al)-Total	mg/L	0.005	-	-	-	0.0158	-	-	-	0.0143	-
Arsenic (As)-Total	mg/L	0.0001	0.5	-	-	<0.00010	-	-	-	<0.00010	-
Cadmium (Cd)-Total	mg/L	0.000005	-	-	-	<0.0000050	-	-	-	<0.0000050	-
Calcium (Ca)-Total	mg/L	0.5	-	-	-	15.3	-	-	-	19.3	-
Copper (Cu)-Total	mg/L	0.001	0.3	-	-	0.00227	-	-	-	0.00219	-
Iron (Fe)-Total	mg/L	0.01	-	-	-	0.016	-	-	-	0.015	-
Lead (Pb)-Total	mg/L	0.00005	0.2	-	-	<0.000050	-	-	-	<0.000050	-
Magnesium (Mg)-Total	mg/L	0.05	-	-	-	9.2	-	-	-	12.4	-
Manganese (Mn)-Total	mg/L	0.0005	-	-	-	0.0008	-	-	-	0.00081	-
Mercury (Hg)-Total	mg/L	0.000005	-	-	-	<0.0000050	-	-	-	<0.0000050	-
Molybdenum (Mo)-Total	mg/L	0.00005	-	-	-	0.00157	-	-	-	0.00165	-
Nickel (Ni)-Total	mg/L	0.0005	0.5	-	-	<0.00050	-	-	-	<0.00050	-
Potassium (K)-Total	mg/L	0.05	-	-	-	2.44	-	-	-	2.44	-
Selenium (Se)-Total	mg/L	0.00005	-	-	-	0.000085	-	-	-	0.000125	-
Sodium (Na)-Total	mg/L	0.05	-	-	-	0.745	-	-	-	0.88	-
Thallium (Tl)-Total	mg/L	0.00001	-	-	-	0.000014	-	-	-	0.000017	-
Uranium (U)-Total	mg/L	0.00001	-	-	-	0.00629	-	-	-	0.012	-
Zinc (Zn)-Total	mg/L	0.003	0.5	-	-	<0.0030	-	-	-	<0.0030	-
Aluminum (Al)-Dissolved	mg/L	0.005	-	-	-	0.006	-	-	-	0.0058	-
Arsenic (As)-Dissolved	mg/L	0.0001	-	-	-	<0.00010	-	-	-	<0.00010	-
Cadmium (Cd)-Dissolved	mg/L	0.00001	-	-	-	<0.0000050	-	-	-	<0.0000050	-
Calcium (Ca)-Dissolved	mg/L	0.05	-	-	-	14.8	-	-	-	20.8	-
Copper (Cu)-Dissolved	mg/L	0.0002	-	-	-	0.00225	-	-	-	0.00193	-
Iron (Fe)-Dissolved	mg/L	0.01	-	-	-	<0.010	-	-	-	<0.010	-
Lead (Pb)-Dissolved	mg/L	0.00005	-	-	-	<0.000050	-	-	-	<0.000050	-
Magnesium (Mg)-Dissolved	mg/L	0.05	-	-	-	9.3	-	-	-	12	-
Manganese (Mn)-Dissolved	mg/L	0.0005	-	-	-	0.0006	-	-	-	<0.00050	-
Mercury (Hg)-Dissolved	mg/L	0.000005	-	-	-	<0.0000050	-	-	-	<0.0000050	-
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	-	-	0.00153	-	-	-	0.00169	-
Nickel (Ni)-Dissolved	mg/L	0.0005	-	-	-	<0.00050	-	-	-	<0.00050	-
Potassium (K)-Dissolved	mg/L	0.05	-	-	-	2.39	-	-	-	2.59	-
Selenium (Se)-Dissolved	mg/L	0.00005	-	-	-	0.000128	-	-	-	0.000127	-
Sodium (Na)-Dissolved	mg/L	0.5	-	-	-	0.723	-	-	-	0.876	-
Thallium (Tl)-Dissolved	mg/L	0.00001	-	-	-	0.000014	-	-	-	0.000015	-
Uranium (U)-Dissolved	mg/L	0.00001	-	-	-	0.00618	-	-	-	0.0117	-
Zinc (Zn)-Dissolved	mg/L	0.001	-	-	-	<0.0010	-	-	-	<0.0010	-
Oil and Grease, Total	-	-	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 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 7.2.23: 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	MS-MRY-10	MS-MRY-10	MS-MRY-10	MS-MRY-10	MS-MRY-10
	ALS Laboratory Sample ID			L2463019-2	L2467027-1	L2468355-3	L2480812-1	L2482851-2	L2486375-1	L2489338-1	L2493952-1	L2497354-1	L2509827-1
	Sample Date & Time			2020-06-18 15:10	2020-06-24 10:55	2020-07-01 18:45	2020-07-28 15:15	2020-08-03 10:25	2020-08-10 8:35	2020-08-16 8:15	2020-08-24 15:30	2020-09-01 9:35	2020-09-11 8:50
	QA/QC Sample Type			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	0.5	-	-	81.2	-	191	212	-	-	-	212	-
pH	pH units	0.1	6.0 - 9.5	7.66	7.87	8.19	8.32	8.37	8.31	8.27	8.34	8.34	8.05
Total Suspended Solids	mg/L	2	15	4.9	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0
Total Dissolved Solids	mg/L	0.1	-	57	93	122	210	192	220	231	223	237	112
Turbidity	NTU	0.01/0.1	-	4.25	0.27	<0.10	0.13	<0.10	<0.10	<0.1	<0.10	<0.10	0.22
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	-	73	-	172	216	-	-	-	176	-
Ammonia, Total (as N)	mg/L	0.005/0.01	-	-	<0.010	-	<0.0050	<0.010	-	-	-	<0.010	-
Chloride (Cl)	mg/L	0.5	-	-	2.95	-	16.6	17.6	-	-	-	26.0	-
Fluoride (F)	mg/L	0.02	-	-	0.026	-	0.041	0.040	-	-	-	0.040	-
Nitrate (as N)	mg/L	0.02	-	-	0.068	-	0.0310	0.038	-	-	-	<0.020	-
Total Kjeldahl Nitrogen	mg/L	0.15	-	-	<0.15	-	0.121	0.27	-	-	-	0.17	-
Phosphorus, Total	mg/L	0.003	-	-	0.0063	-	0.0037	<0.0030	-	-	-	<0.0030	-
Sulfate (SO ₄)	mg/L	0.3	-	-	4.17	-	14.4	15.1	-	-	-	15.7	-
Dissolved Organic Carbon	mg/L	0.5	-	-	1.70	-	2.38	2.78	-	-	-	3.53	-
Total Organic Carbon	mg/L	0.5	-	-	3.20	-	2.11	3.25	-	-	-	3.48	-
Aluminum (Al)-Total	mg/L	0.005	-	-	0.0123	-	0.0116	0.0167	-	-	-	0.0055	-
Arsenic (As)-Total	mg/L	0.0001	0.5	-	<0.00010	-	0.00011	<0.00010	-	-	-	<0.00010	-
Cadmium (Cd)-Total	mg/L	0.000005	-	-	<0.0000050	-	<0.0000050	<0.0000050	-	-	-	<0.0000050	-
Calcium (Ca)-Total	mg/L	0.5	-	-	16.7	-	39.8	40.5	-	-	-	40.8	-
Copper (Cu)-Total	mg/L	0.001	0.3	-	0.0011	-	0.00132	0.00136	-	-	-	0.00126	-
Iron (Fe)-Total	mg/L	0.01	-	-	0.013	-	0.014	0.022	-	-	-	<0.010	-
Lead (Pb)-Total	mg/L	0.00005	0.2	-	<0.000050	-	<0.000050	<0.000050	-	-	-	<0.000050	-
Magnesium (Mg)-Total	mg/L	0.05	-	-	9.22	-	22.4	26.1	-	-	-	26.2	-
Manganese (Mn)-Total	mg/L	0.0005	-	-	0.00058	-	0.00046	0.00054	-	-	-	<0.00050	-
Mercury (Hg)-Total	mg/L	0.000005	-	-	<0.0000050	-	<0.0000050	<0.0000050	-	-	-	<0.0000050	-
Molybdenum (Mo)-Total	mg/L	0.00005	-	-	0.000258	-	0.000413	0.000427	-	-	-	0.000406	-
Nickel (Ni)-Total	mg/L	0.0005	0.5	-	0.00058	-	<0.00050	0.00078	-	-	-	0.00069	-
Potassium (K)-Total	mg/L	0.05	-	-	1.27	-	2.25	2.15	-	-	-	1.67	-
Selenium (Se)-Total	mg/L	0.00005	-	-	<0.000050	-	<0.000050	<0.000050	-	-	-	<0.000050	-
Sodium (Na)-Total	mg/L	0.05	-	-	1.02	-	4.41	5.3	-	-	-	5.94	-
Thallium (Tl)-Total	mg/L	0.00001	-	-	<0.000010	-	<0.000010	<0.000010	-	-	-	<0.000010	-
Uranium (U)-Total	mg/L	0.00001	-	-	0.000563	-	0.00246	0.00295	-	-	-	0.00313	-
Zinc (Zn)-Total	mg/L	0.003	0.5	-	<0.0030	-	<0.0030	<0.0030	-	-	-	<0.0030	-
Aluminum (Al)-Dissolved	mg/L	0.005	-	-	0.0113	-	0.0047	<0.0050	-	-	-	<0.0050	-
Arsenic (As)-Dissolved	mg/L	0.0001	-	-	<0.00010	-	<0.00010	0.00011	-	-	-	<0.00010	-
Cadmium (Cd)-Dissolved	mg/L	0.000005/0.00001	-	-	<0.000010	-	<0.0000050	<0.0000050	-	-	-	<0.0000050	-
Calcium (Ca)-Dissolved	mg/L	0.05	-	-	16.7	-	39.1	40.6	-	-	-	43.1	-
Copper (Cu)-Dissolved	mg/L	0.0002	-	-	0.00104	-	0.00131	0.00134	-	-	-	0.00121	-
Iron (Fe)-Dissolved	mg/L	0.01	-	-	0.012	-	<0.010	<0.010	-	-	-	<0.010	-
Lead (Pb)-Dissolved	mg/L	0.00005	-	-	<0.000050	-	<0.000050	<0.000050	-	-	-	<0.000050	-
Magnesium (Mg)-Dissolved	mg/L	0.05	-	-	9.59	-	22.6	26.9	-	-	-	25.3	-
Manganese (Mn)-Dissolved	mg/L	0.0005	-	-	0.00062	-	0.00026	<0.00050	-	-	-	<0.00050	-
Mercury (Hg)-Dissolved	mg/L	0.000005	-	-	<0.0000050	-	<0.0000050	<0.0000050	-	-	-	<0.0000050	-
Molybdenum (Mo)-Dissolved	mg/L	0.00005	-	-	0.000296	-	0.000426	0.000425	-	-	-	0.000405	-
Nickel (Ni)-Dissolved	mg/L	0.0005	-	-	0.00054	-	0.00052	0.00051	-	-	-	0.00071	-
Potassium (K)-Dissolved	mg/L	0.05	-	-	1.33	-	2.22	2.25	-	-	-	1.79	-
Selenium (Se)-Dissolved	mg/L	0.00005	-	-	<0.000050	-	<0.000050	0.000063	-	-	-	<0.000050	-
Sodium (Na)-Dissolved	mg/L	0.5	-	-	1.02	-	4.24	5.47	-	-	-	5.59	-
Thallium (Tl)-Dissolved	mg/L	0.00001	-	-	<0.000010	-	<0.000010	<0.000010	-	-	-	<0.000010	-
Uranium (U)-Dissolved	mg/L	0.00001	-	-	0.000564	-	0.0024	0.00282	-	-	-	0.00315	-
Zinc (Zn)-Dissolved	mg/L	0.001	-	-	0.0028	-	0.0017	<0.0010	-	-	-	<0.0010	-
Oil and Grease, Total	-	-	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
Acute 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: Effluent Quality Discharge Limits for Open Pit, Stockpiles, and Sedimentation Ponds.

Table 7.2.24: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A01
	ALS Laboratory Sample ID			L2457153-4	L2457153-5
	Sample Date & Time			2020-06-05 10:35	2020-06-05 10:35
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	3	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.66	7.67
Total Suspended Solids	mg/L	2	15	<2.0	2.1
Total Dissolved Solids	mg/L	10	-	85	75
Turbidity	NTU	0.1	-	22.6	22.8
Alkalinity, Total (as CaCO3)	mg/L	10	-	-	-
Dissolved Organic Carbon	mg/L	1	-	-	-
Total Organic Carbon	mg/L	1	-	-	-
Aluminum (Al)-Total	mg/L	0.05	-	-	-
Antimony (Sb)-Total	mg/L	0.001	-	-	-
Arsenic (As)-Total	mg/L	0.001	0.5	-	-
Barium (Ba)-Total	mg/L	0.0002	-	-	-
Beryllium (Be)-Total	mg/L	0.001	-	-	-
Bismuth (Bi)-Total	mg/L	0.0005	-	-	-
Boron (B)-Total	mg/L	0.01	-	-	-
Cadmium (Cd)-Total	mg/L	0.00005	-	-	-
Calcium (Ca)-Total	mg/L	0.5	-	-	-
Chromium (Cr)-Total	mg/L	0.005	-	-	-
Cobalt (Co)-Total	mg/L	0.001	-	-	-
Copper (Cu)-Total	mg/L	0.005	0.3	-	-
Iron (Fe)-Total	mg/L	0.1	-	-	-
Lead (Pb)-Total	mg/L	0.0005	0.2	-	-
Lithium (Li)-Total	mg/L	0.001	-	-	-
Magnesium (Mg)-Total	mg/L	0.05	-	-	-
Manganese (Mn)-Total	mg/L	0.005	-	-	-
Mercury (Hg)-Total	mg/L	0.000005	-	-	-
Molybdenum (Mo)-Total	mg/L	0.00005	-	-	-
Nickel (Ni)-Total	mg/L	0.0005	0.5	-	-
Potassium (K)-Total	mg/L	0.05	-	-	-
Selenium (Se)-Total	mg/L	0.0005	-	-	-
Silicon (Si)-Total	mg/L	0.1	-	-	-
Silver (Ag)-Total	mg/L	0.0005	-	-	-
Sodium (Na)-Total	mg/L	0.5	-	-	-
Strontium (Sr)-Total	mg/L	0.001	-	-	-
Thallium (Tl)-Total	mg/L	0.0001	-	-	-
Tin (Sn)-Total	mg/L	0.001	-	-	-
Titanium (Ti)-Total	mg/L	0.003	-	-	-
Tungsten (W)-Total	mg/L	0.001	-	-	-
Uranium (U)-Total	mg/L	0.00001	-	-	-
Vanadium (V)-Total	mg/L	0.005	-	-	-
Zinc (Zn)-Total	mg/L	0.03	0.5	-	-
Zirconium (Zr)-Total	mg/L	0.0003	-	-	-
Oil and Grease, Total	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.001	-	-	-
F1 (C6-C10)	ug/L	100	-	-	-
F2 (C10-C16)	ug/L	100	-	-	-
F3 (C16-C34)	ug/L	250	-	-	-
F4 (C34-C50)	ug/L	250	-	-	-
Total Hydrocarbons (C6-C50)	ug/L	380	-	-	-

Notes:

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

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

Table 7.2.24: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A
	ALS Laboratory Sample ID			L2460443-8	L2466533-10
	Sample Date & Time			2020-06-13 11:30	2020-06-22 16:55
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	3	-	-	1500
pH	pH units	0.1	6.0 - 9.5	7.40	7.75
Total Suspended Solids	mg/L	2	15	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	400	1120
Turbidity	NTU	0.1	-	1.71	0.49
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	-	127
Dissolved Organic Carbon	mg/L	1	-	-	9.72
Total Organic Carbon	mg/L	1	-	-	10.5
Aluminum (Al)-Total	mg/L	0.05	-	-	<0.050
Antimony (Sb)-Total	mg/L	0.001	-	-	<0.0010
Arsenic (As)-Total	mg/L	0.001	0.5	-	<0.0010
Barium (Ba)-Total	mg/L	0.0002	-	-	0.129
Beryllium (Be)-Total	mg/L	0.001	-	-	<0.0010
Bismuth (Bi)-Total	mg/L	0.0005	-	-	<0.00050
Boron (B)-Total	mg/L	0.01	-	-	2.37
Cadmium (Cd)-Total	mg/L	0.00005	-	-	0.000055
Calcium (Ca)-Total	mg/L	0.5	-	-	219
Chromium (Cr)-Total	mg/L	0.005	-	-	<0.0050
Cobalt (Co)-Total	mg/L	0.001	-	-	<0.0010
Copper (Cu)-Total	mg/L	0.005	0.3	-	<0.0050
Iron (Fe)-Total	mg/L	0.1	-	-	<0.10
Lead (Pb)-Total	mg/L	0.0005	0.2	-	<0.00050
Lithium (Li)-Total	mg/L	0.001	-	-	0.015
Magnesium (Mg)-Total	mg/L	0.05	-	-	64.9
Manganese (Mn)-Total	mg/L	0.005	-	-	<0.0050
Mercury (Hg)-Total	mg/L	0.000005	-	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00005	-	-	0.00500
Nickel (Ni)-Total	mg/L	0.0005	0.5	-	0.0227
Potassium (K)-Total	mg/L	0.05	-	-	11.3
Selenium (Se)-Total	mg/L	0.0005	-	-	<0.00050
Silicon (Si)-Total	mg/L	0.1	-	-	2.9
Silver (Ag)-Total	mg/L	0.0005	-	-	<0.00050
Sodium (Na)-Total	mg/L	0.5	-	-	21.1
Strontium (Sr)-Total	mg/L	0.001	-	-	0.451
Thallium (Tl)-Total	mg/L	0.0001	-	-	<0.00010
Tin (Sn)-Total	mg/L	0.001	-	-	<0.0010
Titanium (Ti)-Total	mg/L	0.003	-	-	<0.0030
Tungsten (W)-Total	mg/L	0.001	-	-	<0.0010
Uranium (U)-Total	mg/L	0.00001	-	-	0.00674
Vanadium (V)-Total	mg/L	0.005	-	-	<0.0050
Zinc (Zn)-Total	mg/L	0.03	0.5	-	0.037
Zirconium (Zr)-Total	mg/L	0.0003	-	-	<0.0020
Oil and Grease, Total	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.001	-	-	0.0021
F1 (C6-C10)	ug/L	100	-	-	<100
F2 (C10-C16)	ug/L	100	-	-	<100
F3 (C16-C34)	ug/L	250	-	-	<250
F4 (C34-C50)	ug/L	250	-	-	<250
Total Hydrocarbons (C6-C50)	ug/L	380	-	-	<380

Notes:

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

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

Table 7.2.24: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A
	ALS Laboratory Sample ID			L2468308-3	L2471945-15
	Sample Date & Time			2020-06-30 9:10	2020-07-07 9:00
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	3	-	-	1420
pH	pH units	0.1	6.0 - 9.5	7.69	7.94
Total Suspended Solids	mg/L	2	15	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	762	947
Turbidity	NTU	0.1	-	0.15	0.19
Alkalinity, Total (as CaCO3)	mg/L	10	-	-	157
Dissolved Organic Carbon	mg/L	1	-	-	8.69
Total Organic Carbon	mg/L	1	-	-	7.52
Aluminum (Al)-Total	mg/L	0.05	-	-	<0.050
Antimony (Sb)-Total	mg/L	0.001	-	-	<0.0010
Arsenic (As)-Total	mg/L	0.001	0.5	-	<0.0010
Barium (Ba)-Total	mg/L	0.0002	-	-	0.095
Beryllium (Be)-Total	mg/L	0.001	-	-	<0.0010
Bismuth (Bi)-Total	mg/L	0.0005	-	-	<0.00050
Boron (B)-Total	mg/L	0.01	-	-	1.83
Cadmium (Cd)-Total	mg/L	0.00005	-	-	<0.000050
Calcium (Ca)-Total	mg/L	0.5	-	-	150
Chromium (Cr)-Total	mg/L	0.005	-	-	<0.0050
Cobalt (Co)-Total	mg/L	0.001	-	-	<0.0010
Copper (Cu)-Total	mg/L	0.005	0.3	-	<0.0050
Iron (Fe)-Total	mg/L	0.1	-	-	<0.10
Lead (Pb)-Total	mg/L	0.0005	0.2	-	<0.00050
Lithium (Li)-Total	mg/L	0.001	-	-	0.018
Magnesium (Mg)-Total	mg/L	0.05	-	-	86.7
Manganese (Mn)-Total	mg/L	0.005	-	-	0.0067
Mercury (Hg)-Total	mg/L	0.000005	-	-	<0.0000050
Molybdenum (Mo)-Total	mg/L	0.00005	-	-	0.00138
Nickel (Ni)-Total	mg/L	0.0005	0.5	-	0.0202
Potassium (K)-Total	mg/L	0.05	-	-	4.19
Selenium (Se)-Total	mg/L	0.0005	-	-	<0.00050
Silicon (Si)-Total	mg/L	0.1	-	-	3.3
Silver (Ag)-Total	mg/L	0.0005	-	-	<0.00050
Sodium (Na)-Total	mg/L	0.5	-	-	15.9
Strontium (Sr)-Total	mg/L	0.001	-	-	0.182
Thallium (Tl)-Total	mg/L	0.0001	-	-	<0.00010
Tin (Sn)-Total	mg/L	0.001	-	-	<0.0010
Titanium (Ti)-Total	mg/L	0.003	-	-	<0.0030
Tungsten (W)-Total	mg/L	0.001	-	-	<0.0010
Uranium (U)-Total	mg/L	0.00001	-	-	0.00425
Vanadium (V)-Total	mg/L	0.005	-	-	<0.0050
Zinc (Zn)-Total	mg/L	0.03	0.5	-	<0.030
Zirconium (Zr)-Total	mg/L	0.0003	-	-	<0.0020
Oil and Grease, Total	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.001	-	-	<0.0010
F1 (C6-C10)	ug/L	100	-	-	<100
F2 (C10-C16)	ug/L	100	-	-	<100
F3 (C16-C34)	ug/L	250	-	-	<250
F4 (C34-C50)	ug/L	250	-	-	<250
Total Hydrocarbons (C6-C50)	ug/L	380	-	-	<380

Notes:

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

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

Table 7.2.24: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A	MS-MRY-13A
	ALS Laboratory Sample ID			L2473444-15	L2479073-7
	Sample Date & Time			2020-07-13 15:35	2020-07-23 11:20
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	3	-	-	-
pH	pH units	0.1	6.0 - 9.5	8.09	7.91
Total Suspended Solids	mg/L	2	15	3.2	<2.0
Total Dissolved Solids	mg/L	10	-	1140	1060
Turbidity	NTU	0.1	-	0.30	0.19
Alkalinity, Total (as CaCO3)	mg/L	10	-	-	-
Dissolved Organic Carbon	mg/L	1	-	-	-
Total Organic Carbon	mg/L	1	-	-	-
Aluminum (Al)-Total	mg/L	0.05	-	-	-
Antimony (Sb)-Total	mg/L	0.001	-	-	-
Arsenic (As)-Total	mg/L	0.001	0.5	-	-
Barium (Ba)-Total	mg/L	0.0002	-	-	-
Beryllium (Be)-Total	mg/L	0.001	-	-	-
Bismuth (Bi)-Total	mg/L	0.0005	-	-	-
Boron (B)-Total	mg/L	0.01	-	-	-
Cadmium (Cd)-Total	mg/L	0.00005	-	-	-
Calcium (Ca)-Total	mg/L	0.5	-	-	-
Chromium (Cr)-Total	mg/L	0.005	-	-	-
Cobalt (Co)-Total	mg/L	0.001	-	-	-
Copper (Cu)-Total	mg/L	0.005	0.3	-	-
Iron (Fe)-Total	mg/L	0.1	-	-	-
Lead (Pb)-Total	mg/L	0.0005	0.2	-	-
Lithium (Li)-Total	mg/L	0.001	-	-	-
Magnesium (Mg)-Total	mg/L	0.05	-	-	-
Manganese (Mn)-Total	mg/L	0.005	-	-	-
Mercury (Hg)-Total	mg/L	0.000005	-	-	-
Molybdenum (Mo)-Total	mg/L	0.00005	-	-	-
Nickel (Ni)-Total	mg/L	0.0005	0.5	-	-
Potassium (K)-Total	mg/L	0.05	-	-	-
Selenium (Se)-Total	mg/L	0.0005	-	-	-
Silicon (Si)-Total	mg/L	0.1	-	-	-
Silver (Ag)-Total	mg/L	0.0005	-	-	-
Sodium (Na)-Total	mg/L	0.5	-	-	-
Strontium (Sr)-Total	mg/L	0.001	-	-	-
Thallium (Tl)-Total	mg/L	0.0001	-	-	-
Tin (Sn)-Total	mg/L	0.001	-	-	-
Titanium (Ti)-Total	mg/L	0.003	-	-	-
Tungsten (W)-Total	mg/L	0.001	-	-	-
Uranium (U)-Total	mg/L	0.00001	-	-	-
Vanadium (V)-Total	mg/L	0.005	-	-	-
Zinc (Zn)-Total	mg/L	0.03	0.5	-	-
Zirconium (Zr)-Total	mg/L	0.0003	-	-	-
Oil and Grease, Total	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.001	-	-	-
F1 (C6-C10)	ug/L	100	-	-	-
F2 (C10-C16)	ug/L	100	-	-	-
F3 (C16-C34)	ug/L	250	-	-	-
F4 (C34-C50)	ug/L	250	-	-	-
Total Hydrocarbons (C6-C50)	ug/L	380	-	-	-

Notes:

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

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

Table 7.2.24: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13A

Analyte	Sample ID			MS-MRY-13A01	MS-MRY-13A
	ALS Laboratory Sample ID			L2479073-8	L2480169-7
	Sample Date & Time			2020-07-23 11:20	2020-07-27 15:45
	QA/QC Sample Type			Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	3	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.91	7.94
Total Suspended Solids	mg/L	2	15	<2.0	2.5
Total Dissolved Solids	mg/L	10	-	1090	1060
Turbidity	NTU	0.1	-	0.19	0.43
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	-	-
Dissolved Organic Carbon	mg/L	1	-	-	-
Total Organic Carbon	mg/L	1	-	-	-
Aluminum (Al)-Total	mg/L	0.05	-	-	-
Antimony (Sb)-Total	mg/L	0.001	-	-	-
Arsenic (As)-Total	mg/L	0.001	0.5	-	-
Barium (Ba)-Total	mg/L	0.0002	-	-	-
Beryllium (Be)-Total	mg/L	0.001	-	-	-
Bismuth (Bi)-Total	mg/L	0.0005	-	-	-
Boron (B)-Total	mg/L	0.01	-	-	-
Cadmium (Cd)-Total	mg/L	0.00005	-	-	-
Calcium (Ca)-Total	mg/L	0.5	-	-	-
Chromium (Cr)-Total	mg/L	0.005	-	-	-
Cobalt (Co)-Total	mg/L	0.001	-	-	-
Copper (Cu)-Total	mg/L	0.005	0.3	-	-
Iron (Fe)-Total	mg/L	0.1	-	-	-
Lead (Pb)-Total	mg/L	0.0005	0.2	-	-
Lithium (Li)-Total	mg/L	0.001	-	-	-
Magnesium (Mg)-Total	mg/L	0.05	-	-	-
Manganese (Mn)-Total	mg/L	0.005	-	-	-
Mercury (Hg)-Total	mg/L	0.000005	-	-	-
Molybdenum (Mo)-Total	mg/L	0.00005	-	-	-
Nickel (Ni)-Total	mg/L	0.0005	0.5	-	-
Potassium (K)-Total	mg/L	0.05	-	-	-
Selenium (Se)-Total	mg/L	0.0005	-	-	-
Silicon (Si)-Total	mg/L	0.1	-	-	-
Silver (Ag)-Total	mg/L	0.0005	-	-	-
Sodium (Na)-Total	mg/L	0.5	-	-	-
Strontium (Sr)-Total	mg/L	0.001	-	-	-
Thallium (Tl)-Total	mg/L	0.0001	-	-	-
Tin (Sn)-Total	mg/L	0.001	-	-	-
Titanium (Ti)-Total	mg/L	0.003	-	-	-
Tungsten (W)-Total	mg/L	0.001	-	-	-
Uranium (U)-Total	mg/L	0.00001	-	-	-
Vanadium (V)-Total	mg/L	0.005	-	-	-
Zinc (Zn)-Total	mg/L	0.03	0.5	-	-
Zirconium (Zr)-Total	mg/L	0.0003	-	-	-
Oil and Grease, Total	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.001	-	-	-
F1 (C6-C10)	ug/L	100	-	-	-
F2 (C10-C16)	ug/L	100	-	-	-
F3 (C16-C34)	ug/L	250	-	-	-
F4 (C34-C50)	ug/L	250	-	-	-
Total Hydrocarbons (C6-C50)	ug/L	380	-	-	-

Notes:

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

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

Table 7.2.25: Water Quality Results for Water Licence Monitoring Location - MS-MRY-13B

Analyte	Sample ID			MS-MRY-13B	MS-MRY-13B	MS-MRY-13B01	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			L2466533-11	L2468308-1	L2468308-2	L2471945-14	L2473444-14	L2479073-6	L2480169-6	L2485627-2	L2486375-3	L2489338-8
	Sample Date & Time			2020-06-22 17:30	2020-06-30 8:45	2020-06-30 8:45	2020-07-07 8:25	2020-07-13 15:20	2020-07-23 11:05	2020-07-27 15:35	2020-08-05 9:05	2020-08-10 11:05	2020-08-16 11:40
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹										
Conductivity	umhos/cm	3	-	1220	-	-	972	-	-	-	1610	-	-
pH	pH units	0.1	6.0 - 9.5	7.94	7.76	7.80	8.18	8.19	8.01	7.99	8.29	8.00	7.95
Total Suspended Solids	mg/L	2.0/3.0	15	<2.0	<2.0	<2.0	<2.0	2.6	<2.0	<2.0	<3.0	3.8	3.0
Total Dissolved Solids	mg/L	10	-	902	400	545	611	767	840	868	1120	1400	1610
Turbidity	NTU	0.1	-	0.15	1.17	0.53	0.15	0.26	0.18	0.19	0.49	0.20	0.15
Alkalinity, Total (as CaCO3)	mg/L	10	-	114	-	-	133	-	-	-	214	-	-
Dissolved Organic Carbon	mg/L	1	-	6.84	-	-	6.26	-	-	-	8.39	-	-
Total Organic Carbon	mg/L	1	-	7.31	-	-	6.61	-	-	-	9.42	-	-
Aluminum (Al)-Total	mg/L	0.05	-	<0.050	-	-	<0.050	-	-	-	<0.050	-	-
Antimony (Sb)-Total	mg/L	0.001	-	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-
Arsenic (As)-Total	mg/L	0.001	0.5	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-
Barium (Ba)-Total	mg/L	0.0002	-	0.109	-	-	0.0649	-	-	-	0.0733	-	-
Beryllium (Be)-Total	mg/L	0.001	-	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-
Bismuth (Bi)-Total	mg/L	0.0005	-	<0.00050	-	-	<0.00050	-	-	-	<0.00050	-	-
Boron (B)-Total	mg/L	0.01	-	1.84	-	-	1.18	-	-	-	3.17	-	-
Cadmium (Cd)-Total	mg/L	0.00005	-	<0.000050	-	-	<0.000050	-	-	-	<0.000050	-	-
Calcium (Ca)-Total	mg/L	0.5	-	162	-	-	105	-	-	-	119	-	-
Chromium (Cr)-Total	mg/L	0.005	-	<0.0050	-	-	<0.0050	-	-	-	<0.0050	-	-
Cobalt (Co)-Total	mg/L	0.001	-	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-
Copper (Cu)-Total	mg/L	0.005	0.3	<0.0050	-	-	<0.0050	-	-	-	<0.0050	-	-
Iron (Fe)-Total	mg/L	0.1	-	<0.10	-	-	<0.10	-	-	-	<0.10	-	-
Lead (Pb)-Total	mg/L	0.0005	0.2	<0.00050	-	-	<0.00050	-	-	-	<0.00050	-	-
Lithium (Li)-Total	mg/L	0.001	-	0.014	-	-	0.020	-	-	-	0.026	-	-
Magnesium (Mg)-Total	mg/L	0.05	-	63.2	-	-	53.6	-	-	-	61.2	-	-
Manganese (Mn)-Total	mg/L	0.005	-	<0.0050	-	-	<0.0050	-	-	-	<0.0050	-	-
Mercury (Hg)-Total	mg/L	0.000005	-	<0.0000050	-	-	<0.0000050	-	-	-	<0.0000050	-	-
Molybdenum (Mo)-Total	mg/L	0.0005	-	0.00220	-	-	0.00062	-	-	-	<0.00050	-	-
Nickel (Ni)-Total	mg/L	0.0005	0.5	0.0169	-	-	0.0123	-	-	-	0.0128	-	-
Potassium (K)-Total	mg/L	0.05	-	7.51	-	-	3.00	-	-	-	2.58	-	-
Selenium (Se)-Total	mg/L	0.0005	-	<0.00050	-	-	<0.00050	-	-	-	<0.00050	-	-
Silicon (Si)-Total	mg/L	0.1	-	2.9	-	-	3.1	-	-	-	3.0	-	-
Silver (Ag)-Total	mg/L	0.0005	-	<0.00050	-	-	<0.00050	-	-	-	<0.00050	-	-
Sodium (Na)-Total	mg/L	0.5	-	18.0	-	-	14.9	-	-	-	18.4	-	-
Strontium (Sr)-Total	mg/L	0.001	-	0.274	-	-	0.131	-	-	-	0.161	-	-
Thallium (Tl)-Total	mg/L	0.0001	-	<0.00010	-	-	<0.00010	-	-	-	<0.00010	-	-
Tin (Sn)-Total	mg/L	0.001	-	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-
Titanium (Ti)-Total	mg/L	0.003	-	<0.0030	-	-	<0.0030	-	-	-	<0.0030	-	-
Tungsten (W)-Total	mg/L	0.001	-	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-
Uranium (U)-Total	mg/L	0.00001	-	0.00443	-	-	0.00381	-	-	-	0.010	-	-
Vanadium (V)-Total	mg/L	0.005	-	<0.0050	-	-	<0.0050	-	-	-	<0.0050	-	-
Zinc (Zn)-Total	mg/L	0.03	0.5	<0.030	-	-	<0.030	-	-	-	<0.030	-	-
Zirconium (Zr)-Total	mg/L	0.002	-	<0.0020	-	-	<0.0020	-	-	-	<0.0020	-	-
Oil and Grease, Total	mg/L	5	-	-	-	-	-	-	-	-	<5.0	-	-
Phenols (4AAP)	mg/L	0.001	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
F1 (C6-C10)	ug/L	100	-	<100	-	-	<100	-	-	-	<100	-	-
F2 (C10-C16)	ug/L	100	-	<100	-	-	<100	-	-	-	<100	-	-
F3 (C16-C34)	ug/L	250	-	<250	-	-	<250	-	-	-	<250	-	-
F4 (C34-C50)	ug/L	250	-	<250	-	-	<250	-	-	-	<250	-	-
Total Hydrocarbons (C6-C50)	ug/L	380	-	<380	-	-	<380	-	-	-	<380	-	-

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

Analyte	Sample ID			MS-MRY-13B	MS-MRY-13B	MS-MRY-13B
	ALS Laboratory Sample ID			L2493952-8	L2497354-5	L2499560-7
	Sample Date & Time			2020-08-23 11:10	2020-09-01 11:50	2020-09-07 10:50
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹			
Conductivity	umhos/cm	3	-	-	2270	-
pH	pH units	0.1	6.0 - 9.5	8.03	8.05	7.95
Total Suspended Solids	mg/L	2.0/3.0	15	3.1	<2.0	2.4
Total Dissolved Solids	mg/L	10	-	1810	1860	1500
Turbidity	NTU	0.1	-	0.15	<0.10	1.16
Alkalinity, Total (as CaCO3)	mg/L	10	-	-	264	-
Dissolved Organic Carbon	mg/L	1	-	-	13.5	-
Total Organic Carbon	mg/L	1	-	-	13.3	-
Aluminum (Al)-Total	mg/L	0.05	-	-	<0.050	-
Antimony (Sb)-Total	mg/L	0.001	-	-	<0.0010	-
Arsenic (As)-Total	mg/L	0.001	0.5	-	<0.0010	-
Barium (Ba)-Total	mg/L	0.0002	-	-	0.144	-
Beryllium (Be)-Total	mg/L	0.001	-	-	<0.0010	-
Bismuth (Bi)-Total	mg/L	0.0005	-	-	<0.00050	-
Boron (B)-Total	mg/L	0.01	-	-	9.13	-
Cadmium (Cd)-Total	mg/L	0.00005	-	-	0.000090	-
Calcium (Ca)-Total	mg/L	0.5	-	-	318	-
Chromium (Cr)-Total	mg/L	0.005	-	-	<0.0050	-
Cobalt (Co)-Total	mg/L	0.001	-	-	0.0017	-
Copper (Cu)-Total	mg/L	0.005	0.3	-	<0.0050	-
Iron (Fe)-Total	mg/L	0.1	-	-	<0.10	-
Lead (Pb)-Total	mg/L	0.0005	0.2	-	<0.00050	-
Lithium (Li)-Total	mg/L	0.001	-	-	0.074	-
Magnesium (Mg)-Total	mg/L	0.05	-	-	114	-
Manganese (Mn)-Total	mg/L	0.005	-	-	<0.0050	-
Mercury (Hg)-Total	mg/L	0.000005	-	-	<0.0000050	-
Molybdenum (Mo)-Total	mg/L	0.0005	-	-	0.00081	-
Nickel (Ni)-Total	mg/L	0.0005	0.5	-	0.0272	-
Potassium (K)-Total	mg/L	0.05	-	-	9.10	-
Selenium (Se)-Total	mg/L	0.0005	-	-	<0.00050	-
Silicon (Si)-Total	mg/L	0.1	-	-	5.1	-
Silver (Ag)-Total	mg/L	0.0005	-	-	<0.00050	-
Sodium (Na)-Total	mg/L	0.5	-	-	49.7	-
Strontium (Sr)-Total	mg/L	0.001	-	-	0.483	-
Thallium (Tl)-Total	mg/L	0.0001	-	-	<0.00010	-
Tin (Sn)-Total	mg/L	0.001	-	-	<0.0010	-
Titanium (Ti)-Total	mg/L	0.003	-	-	<0.0030	-
Tungsten (W)-Total	mg/L	0.001	-	-	<0.0010	-
Uranium (U)-Total	mg/L	0.00001	-	-	0.0397	-
Vanadium (V)-Total	mg/L	0.005	-	-	<0.0050	-
Zinc (Zn)-Total	mg/L	0.03	0.5	-	<0.030	-
Zirconium (Zr)-Total	mg/L	0.002	-	-	<0.0020	-
Oil and Grease, Total	mg/L	5	-	-	<5.0	-
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	No Visible Sheen
Phenols (4AAP)	mg/L	0.001	-	-	0.002	-
F1 (C6-C10)	ug/L	100	-	-	<100	-
F2 (C10-C16)	ug/L	100	-	-	<100	-
F3 (C16-C34)	ug/L	250	-	-	<250	-
F4 (C34-C50)	ug/L	250	-	-	<250	-
Total Hydrocarbons (C6-C50)	ug/L	380	-	-	<380	-

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

Analyte	Sample ID			MS-C-A	MS-C-A	MS-C-A01	MS-C-A	MS-C-A
	ALS Laboratory Sample ID			L2460443-15	L2466533-13	L2466533-14	L2468308-10	L2471945-7
	Sample Date & Time			2020-06-13 13:35	2020-06-22 15:30	2020-06-22 15:30	2020-06-30 11:40	2020-07-06 11:25
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	3	-	-	140	140	-	160
pH	pH units	0.1	6.0 - 9.5	7.57	7.82	7.82	7.82	8.16
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	12.3	2.9	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	91	105	59	76	72
Turbidity	NTU	0.1	-	46.3	25.3	26.4	9.75	2.54
Ammonia, Total (as N)	mg/L	0.01	-	-	0.013	<0.010	-	<0.010
Nitrate (as N)	mg/L	0.02	-	-	4.23	0.458	-	0.210
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-
	-	-	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 7.2.26: Water Quality Results for Water Licence Monitoring Location - MS-C-A

Analyte	Sample ID			MS-C-A	MS-C-A01	MS-C-A	MS-C-A	MS-C-A	MS-C-A
	ALS Laboratory Sample ID			L2473444-10	L2473444-11	L2479073-2	L2480169-2	L2485411-4	L2486375-15
	Sample Date & Time			2020-07-13 14:10	2020-07-13 14:10	2020-07-23 9:00	2020-07-27 16:20	2020-08-04 11:00	2020-08-10 9:10
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	3	-	-	-	-	-	218	-
pH	pH units	0.1	6.0 - 9.5	8.01	8.03	7.86	7.90	7.59	7.91
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<3.0	<2.0
Total Dissolved Solids	mg/L	10	-	99	100	117	101	131	146
Turbidity	NTU	0.1	-	0.34	0.94	0.55	0.54	0.40	0.22
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-	-	<0.010	-
Nitrate (as N)	mg/L	0.02	-	-	-	-	-	0.183	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	<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 7.2.26: Water Quality Results for Water Licence Monitoring Location - MS-C-A

Analyte	Sample ID			MS-C-A	MS-C-A01	MS-C-A	MS-C-A	MS-C-A01
	ALS Laboratory Sample ID			L2489338-3	L2489338-4	L2493952-3	L2497354-11	L2497354-12
	Sample Date & Time			2020-08-16 9:30	2020-08-16 9:30	2020-08-23 13:05	2020-09-01 14:20	2020-09-01 14:20
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	3	-	-	-	-	240	240
pH	pH units	0.1	6.0 - 9.5	7.91	7.90	8.14	8.16	8.17
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	132	128	148	136	133
Turbidity	NTU	0.1	-	0.21	0.22	0.23	0.20	0.21
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-	<0.010	<0.010
Nitrate (as N)	mg/L	0.02	-	-	-	-	0.203	0.207
Oil and Grease, Total	mg/L	2	-	-	-	-	<2.0	<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 7.2.26: Water Quality Results for Water Licence Monitoring Location - MS-C-A

Analyte	Sample ID			MS-C-A	MS-C-A01	MS-C-A
	ALS Laboratory Sample ID			L2499560-10	L2499560-11	L2503076-9
	Sample Date & Time			2020-09-07 13:45	2020-09-07 13:45	2020-09-14 12:10
	QA/QC Sample Type			N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹			
Conductivity	umhos/cm	3	-	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.98	7.98	7.87
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	121	129	137
Turbidity	NTU	0.1	-	3.11	0.19	0.46
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	-
Oil and Grease, Total	mg/L	2	-	-	-	-
	-	-	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 7.2.27: 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	MS-C-B	MS-C-B	
	ALS Laboratory Sample ID		L2457153-9	L2460443-14	L2466533-15	L2468308-11	L2471945-11	L2473444-12	L2479073-3	
	Sample Date & Time		2020-06-05 13:45	2020-06-13 13:45	2020-06-22 16:25	2020-06-30 12:20	2020-07-06 16:05	2020-07-13 14:40	2020-07-23 9:30	
	QA/QC Sample Type		N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	3	-	-	145	-	167	-	-	
pH	pH units	0.1	6.0 - 9.5	7.47	7.61	7.79	7.81	7.18	7.92	7.76
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	2.1	9.9	7.6	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	70	95	87	86	93	107	111
Turbidity	NTU	0.1	-	14.7	42.9	24.8	10.2	2.69	1.01	0.63
Ammonia, Total (as N)	mg/L	0.01	-	-	-	<0.010	-	<0.010	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	0.381	-	0.220	-	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-	-
	-	-	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 7.2.27: 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	MS-C-B
	ALS Laboratory Sample ID			L2480169-3	L2485411-5	L2486375-13	L2489338-5	L2493952-5	L2497354-13
	Sample Date & Time			2020-07-27 16:40	2020-08-04 11:25	2020-08-10 9:40	2020-08-16 9:50	2020-08-23 13:20	2020-09-01 14:50
	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	3	-	-	226	-	-	-	253
pH	pH units	0.1	6.0 - 9.5	7.75	7.64	7.79	7.74	8.08	8.12
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<3.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	105	137	127	137	139	138
Turbidity	NTU	0.1	-	0.64	0.48	0.28	0.30	0.28	0.27
Ammonia, Total (as N)	mg/L	0.01	-	-	<0.010	-	-	-	<0.010
Nitrate (as N)	mg/L	0.02	-	-	0.211	-	-	-	0.248
Oil and Grease, Total	mg/L	2	-	-	<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

Notes:

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

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

Table 7.2.27: Water Quality Results for Water Licence Monitoring Location - MS-C-B

Analyte	Sample ID			MS-C-B	MS-C-B
	ALS Laboratory Sample ID			L2499560-12	L2503076-10
	Sample Date & Time			2020-09-07 14:05	2020-09-14 12:20
	QA/QC Sample Type			N/A	N/A
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	3	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.88	7.74
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	138	147
Turbidity	NTU	0.1	-	0.25	0.22
Ammonia, Total (as N)	mg/L	0.01	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-
Oil and Grease, Total	mg/L	2	-	-	-
	-	-	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 7.2.28: 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
	ALS Laboratory Sample ID			L2457153-8	L2460443-7	L2466533-6	L2468308-9	L2471945-6	L2473444-7
	Sample Date & Time			2020-06-05 11:45	2020-06-13 11:00	2020-06-22 13:45	2020-06-30 11:10	2020-07-06 10:40	2020-07-13 12:00
	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	3	-	-	-	917	-	1100	-
pH	pH units	0.1	6.0 - 9.5	7.83	7.68	7.88	7.87	8.05	7.99
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	84.8	2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	257	448	618	604	740	829
Turbidity	NTU	0.1	-	165	3.75	2.16	1.42	1.23	5.99
Ammonia, Total (as N)	mg/L	0.01	-	-	-	0.022	-	<0.010	-
Nitrate (as N)	mg/L	0.02	-	-	-	5.62	-	9.60	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-
	-	-	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 7.2.28: 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
	ALS Laboratory Sample ID			L2479073-12	L2480169-12	L2485627-5	L2486375-7	L2489338-11	L2493952-11
	Sample Date & Time			2020-07-23 12:15	2020-07-27 13:55	2020-08-05 10:40	2020-08-10 10:35	2020-08-16 12:25	2020-08-23 10:25
	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	3	-	-	-	1220	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.83	7.86	8.32	7.98	7.99	8.14
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	<2.0	<2.0	<3.0	2.0	3.0	<2.0
Total Dissolved Solids	mg/L	10	-	805	834	857	880	918	920
Turbidity	NTU	0.1	-	0.93	0.83	0.55	0.36	0.88	0.24
Ammonia, Total (as N)	mg/L	0.01	-	-	-	<0.010	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	11.5	-	-	-
Oil and Grease, Total	mg/L	2	-	-	-	<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 7.2.29: 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
	ALS Laboratory Sample ID			L2457153-7	L2460443-6	L2466533-8	L2468308-8	L2471945-5	L2473444-6	L2479073-11
	Sample Date & Time			2020-06-05 11:25	2020-06-13 10:50	2020-06-22 13:20	2020-06-30 11:00	2020-07-06 10:20	2020-07-13 11:50	2020-07-23 12:00
	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	3	-	-	-	556	-	874	-	-
pH	pH units	0.1	6.0 - 9.5	7.86	8.04	8.00	8.20	8.29	8.39	8.33
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	72.8	11.5	4.9	3.4	<2.0	<2.0	2.6
Total Dissolved Solids	mg/L	10	-	313	224	364	443	575	639	662
Turbidity	NTU	0.1	-	161	40.3	11.3	4.53	3.49	0.88	6.64
Ammonia, Total (as N)	mg/L	0.02	-	-	-	0.291	-	0.067	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	1.98	-	4.88	-	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-	-
	-	-	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 7.2.29: 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
	ALS Laboratory Sample ID			L2480169-11	L2485627-4	L2486375-6	L2489338-10	L2493952-10	L2497354-6	L2499560-6
	Sample Date & Time			2020-07-27 13:45	2020-08-05 10:20	2020-08-10 10:15	2020-08-16 12:15	08/23/2020 10:15	09/01/2020 11:20	2020-09-07 10:10
	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	3	-	-	1180	-	-	-	1160	-
pH	pH units	0.1	6.0 - 9.5	8.37	8.43	8.38	8.38	8.33	8.37	8.31
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<3.0	7.9	18.0	<2.0	<2.0	4.4
Total Dissolved Solids	mg/L	10	-	634	811	855	846	894	858	776
Turbidity	NTU	0.1	-	4.85	4.63	4.76	10.2	14.4	6.88	8.06
Ammonia, Total (as N)	mg/L	0.02	-	-	0.028	-	-	-	0.020	-
Nitrate (as N)	mg/L	0.02	-	-	8.08	-	-	-	9.32	-
Oil and Grease, Total	mg/L	2	-	-	<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	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 7.2.30: 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-E01	MS-C-E	MS-C-E	MS-C-E
	ALS Laboratory Sample ID			L2451387-1	L2457153-6	L2460443-4	L2460443-5	L2466533-3	L2468308-7	L2471945-4
	Sample Date & Time			2020-05-25 12:05	2020-06-05 11:15	2020-06-13 10:45	2020-06-13 10:45	2020-06-22 13:50	2020-06-30 10:50	2020-07-06 10:05
	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	3	-	85.1	-	-	-	601	-	870
pH	pH units	0.1	6.0 - 9.5	7.68	7.83	7.90	7.91	8.01	7.99	7.95
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30 and Average 15	4.4	35.0	2.1	<2.0	6.5	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	43	238	171	169	400	459	576
Turbidity	NTU	0.1	-	40.6	111	5.09	5.03	2.00	0.89	0.75
Ammonia, Total (as N)	mg/L	0.01	-	0.027	-	-	-	0.017	-	0.013
Nitrate (as N)	mg/L	0.02	-	0.123	-	-	-	1.85	-	3.89
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-	-
	-	-	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 7.2.30: 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-E01	MS-C-E
	ALS Laboratory Sample ID			L2473444-4	L2479073-10	L2480169-10	L2485627-3	L2486375-4	L2486375-5	L2489338-9
	Sample Date & Time			2020-07-13 11:35	2020-07-23 11:50	2020-07-27 13:35	2020-08-05 10:05	2020-08-10 10:10	2020-08-10 10:10	2020-08-16 12:05
	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	3	-	-	-	-	1280	-	-	-
pH	pH units	0.1	6.0 - 9.5	8.07	7.97	7.95	8.36	7.89	7.90	7.92
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<3.0	3.4	2.6	<2.0
Total Dissolved Solids	mg/L	10	-	664	740	875	913	936	922	923
Turbidity	NTU	0.1	-	0.97	1.23	0.88	0.80	0.67	0.72	0.67
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-	<0.010	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	-	8.04	-	-	-
Oil and Grease, Total	mg/L	2	-	-	-	-	<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 7.2.30: 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
	ALS Laboratory Sample ID			L2493952-9	L2497354-3	L2497354-4	L2499560-5	L2503076-5
	Sample Date & Time			08/23/2020 10:10	09/01/2020 11:05	09/01/2020 11:05	2020-09-07 10:05	2020-09-14 9:10
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	3	-	-	1210	1210	-	-
pH	pH units	0.1	6.0 - 9.5	8.14	8.09	8.07	7.81	7.48
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	955	924	923	992	906
Turbidity	NTU	0.1	-	1.76	0.63	0.6	1.66	0.33
Ammonia, Total (as N)	mg/L	0.01	-	-	0.033	<0.010	-	-
Nitrate (as N)	mg/L	0.02	-	-	9.34	9.14	-	-
Oil and Grease, Total	mg/L	2	-	-	<2.0	<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 7.2.31: 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			L2460443-12	L2466533-12	L2468308-12	L2471945-13	L2473444-13	L2479073-1	L2480169-1
	Sample Date & Time			2020-06-13 14:30	2020-06-22 15:00	2020-06-30 12:50	2020-07-06 16:35	2020-07-13 15:00	2020-07-23 8:40	2020-07-27 16:05
	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	3	-	-	147	-	171	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.52	7.77	7.87	7.92	8.12	7.98	8.07
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	18.8	5.0	3.4	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	13	-	96	121	99	91	106	140	108
Turbidity	NTU	0.1	-	46.7	65.5	21.2	10.1	7.16	2.49	1.89
Ammonia, Total (as N)	mg/L	0.01	-	-	0.028	-	<0.010	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	5.88	-	0.242	-	-	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-	-
	-	-	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 7.2.31: 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			L248411-3	L2486375-9	L2486375-14	L2489338-2	L2493952-2	L2497354-8	L2499560-13
	Sample Date & Time			2020-08-04 10:35	2020-08-10 8:50	2020-08-10 8:50	2020-08-16 9:15	2020-08-23 12:45	2020-09-01 8:35	2020-09-07 14:45
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	3	-	228	-	-	-	-	242	-
pH	pH units	0.1	6.0 - 9.5	7.40	8.20	8.16	8.15	8.16	8.18	8.16
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<3.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	13	-	132	155	147	142	147	136	136
Turbidity	NTU	0.1	-	1.29	1.01	1.05	0.73	0.78	0.59	0.67
Ammonia, Total (as N)	mg/L	0.01	-	<0.010	-	-	-	-	<0.010	-
Nitrate (as N)	mg/L	0.02	-	0.217	-	-	-	-	0.230	-
Oil and Grease, Total	mg/L	2	-	<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	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 7.2.31: Water Quality Results for Water Licence Monitoring Location - MS-C-F

Analyte	Sample ID			MS-C-F	MS-C-F01
	ALS Laboratory Sample ID			L2503076-7	L2503076-8
	Sample Date & Time			2020-09-14 11:50	2020-09-14 11:50
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹		
Conductivity	umhos/cm	3	-	-	-
pH	pH units	0.1	6.0 - 9.5	8.13	8.13
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0
Total Dissolved Solids	mg/L	13	-	139	138
Turbidity	NTU	0.1	-	0.71	0.63
Ammonia, Total (as N)	mg/L	0.01	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-
Oil and Grease, Total	mg/L	2	-	-	-
	-	-	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 7.2.32: 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-G	MS-C-G01	MS-C-G	MS-C-G	MS-C-G	MS-C-G	MS-C-G
	ALS Laboratory Sample ID			L2460443-9	L2466533-9	L2468308-4	L2471945-1	L2471945-2	L2473444-8	L2479073-9	L2480169-9	L2485627-6	L2486375-2
	Sample Date & Time			2020-06-13 12:00	2020-06-22 16:20	2020-06-30 9:40	2020-07-06 8:45	2020-07-06 8:45	2020-07-13 12:25	2020-07-23 10:00	2020-07-27 14:35	2020-08-05 11:25	2020-08-10 11:40
	QA/QC Sample Type			N/A	N/A	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	3	-	-	96.0	-	210	211	-	-	-	268	-
pH	pH units	0.1	6.0 - 9.5	7.47	7.71	7.79	7.26	7.71	7.94	7.66	7.67	8.21	7.62
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<3.0	<2.0
Total Dissolved Solids	mg/L	13	-	53	71	73	91	89	105	134	119	152	163
Turbidity	NTU	0.1	-	10.5	1.89	0.68	0.35	0.17	1.37	<0.10	<0.10	0.17	<0.10
Ammonia, Total (as N)	mg/L	0.01	-	-	0.020	-	<0.010	<0.010	-	-	-	0.117	-
Nitrate (as N)	mg/L	0.02	-	-	0.204	-	0.779	0.792	-	-	-	5.18	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-	-	-	<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	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 7.2.32: Water Quality Results for Water Licence Monitoring Location - MS-C-G

Analyte	Sample ID			MS-C-G	MS-C-G	MS-C-G01	MS-C-G	MS-C-G	MS-C-G
	ALS Laboratory Sample ID			L2489338-6	L2493952-6	L2493952-7	L2497354-7	L2499560-8	L2503076-6
	Sample Date & Time			2020-08-16 10:35	2020-08-23 11:45	2020-08-23 11:45	2020-09-01 12:30	2020-09-07 11:30	2020-09-14 10:40
	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	3	-	-	-	-	252	-	-
pH	pH units	0.1	6.0 - 9.5	7.65	8.05	7.96	8.08	7.82	7.76
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	13	-	163	140	148	149	145	148
Turbidity	NTU	0.1	-	<0.10	0.14	0.15	0.14	0.19	0.13
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-	0.489	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	-	3.95	-	-
Oil and Grease, Total	mg/L	2	-	-	-	-	<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 7.2.33: 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-H01	MS-C-H	MS-C-H01	MS-C-H	MS-C-H
	ALS Laboratory Sample ID			L2457153-10	L2460443-10	L2460443-11	L2466533-5	L2466533-4	L2468308-5	L2468308-6	L2471945-3	L2473444-9
	Sample Date & Time			2020-06-05 14:40	2020-06-13 12:20	2020-06-13 12:20	2020-06-22 15:15	2020-06-22 15:15	2020-06-30 10:10	2020-06-30 10:10	2020-07-06 9:25	2020-07-13 12:50
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	Field Duplicate	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹									
Conductivity	umhos/cm	3	-	-	-	-	122	122	-	-	161	-
pH	pH units	0.1	6.0 - 9.5	7.39	7.59	7.63	7.77	7.81	7.92	7.91	7.87	8.14
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	31	65	79	78	76	72	70	69	108
Turbidity	NTU	0.1	-	16.2	6.16	6.42	0.98	1.11	0.98	1.00	0.38	<0.10
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-	<0.010	0.011	-	-	0.012	-
Nitrate (as N)	mg/L	0.02	-	-	-	-	0.082	0.089	-	-	0.089	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-	-	-	-
	-	-	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 7.2.33: 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-H01	MS-C-H	MS-C-H	MS-C-H	MS-C-H	MS-C-H
	ALS Laboratory Sample ID			L2479073-5	L2480169-5	L2485627-8	L2485627-9	L2486375-10	L2489338-7	L2493952-7	L2497354-2	L2499560-9
	Sample Date & Time			2020-07-23 10:30	2020-07-27 15:00	2020-08-05 11:50	2020-08-05 11:50	2020-08-10 12:05	2020-08-16 11:00	2020-08-23 12:15	2020-09-01 13:00	2020-09-07 11:55
	QA/QC Sample Type			N/A	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	3	-	-	-	278	276	-	-	-	267	-
pH	pH units	0.1	6.0 - 9.5	8.03	8.10	8.31	8.39	8.28	8.24	8.06	8.37	8.23
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<3.0	<3.0	<2.0	<2.0	<2.0	<2.0	2.8
Total Dissolved Solids	mg/L	10	-	130	122	143	143	162	150	137	140	160
Turbidity	NTU	0.1	-	0.24	0.44	0.39	0.47	0.33	0.32	0.27	0.22	0.97
Ammonia, Total (as N)	mg/L	0.01	-	-	-	<0.010	<0.010	-	-	-	0.026	-
Nitrate (as N)	mg/L	0.02	-	-	-	0.028	0.031	-	-	-	0.051	-
Oil and Grease, Total	mg/L	2	-	-	-	<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	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 7.2.34: 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	MQ-C-A	MQ-C-A
	ALS Laboratory Sample ID			L2457153-1	L2460443-1	L2466533-2	L2468308-13	L2471945-9	L2473444-1	L2479073-14	L2480169-14	L2485411-1
	Sample Date & Time			2020-06-05 8:40	2020-06-13 8:40	2020-06-22 9:30	2020-06-30 15:00	2020-07-06 15:10	2020-07-13 9:50	2020-07-23 13:30	2020-07-27 11:30	2020-08-04 9:20
	QA/QC Sample Type			N/A	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	3	-	-	184	-	253	-	-	-	-	364
pH	pH units	0.1	6.0 - 9.5	7.57	7.93	8.09	8.17	8.17	8.25	8.13	8.18	7.78
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<3.0
Total Dissolved Solids	mg/L	13	-	72	87	107	132	120	146	174	182	220
Turbidity	NTU	0.1	-	7.15	1.46	0.29	0.23	0.16	<0.10	0.12	<0.10	0.43
Ammonia, Total (as N)	mg/L	0.01	-	-	-	<0.010	-	<0.010	-	-	-	<0.010
Nitrate (as N)	mg/L	0.02	-	-	-	0.026	-	0.044	-	-	-	0.025
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-	-	-	<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	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 7.2.34: 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-A	MQ-C-A	MQ-C-A
	ALS Laboratory Sample ID			L2486375-11	L2489338-14	L2493952-14	L2493952-13	L2497354-10	L2499560-1	L2503076-1	L2507045-1
	Sample Date & Time			2020-08-10 13:55	2020-08-16 13:55	08/23/2020 9:15	08/23/2020 9:15	09/01/2020 9:30	2020-09-07 8:30	2020-09-14 8:25	2020-09-22 8:15
	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								
Conductivity	umhos/cm	3	-	-	-	-	-	409	-	-	-
pH	pH units	0.1	6.0 - 9.5	8.17	8.15	8.20	8.19	8.30	8.17	8.11	7.90
Total Suspended Solids	mg/L	2.0/3.0	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	13	-	215	217	222	219	230	216	228	239
Turbidity	NTU	0.1	-	<0.10	<0.10	<0.10	<0.10	0.12	<0.10	0.21	<0.10
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-	-	0.019	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	-	-	<0.020	-	-	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	<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
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 7.2.35: 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-B
	ALS Laboratory Sample ID			L2457153-3	L2460443-3	L2466533-16	L2467027-2	L2468308-15	L2471945-10	L2473444-3
	Sample Date & Time			2020-06-05 9:00	2020-06-13 10:20	2020-06-22 11:20	2020-06-24 13:55	2020-06-30 15:45	2020-07-06 15:35	2020-07-13 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	-	-	-	205	239	-	411	-
pH	pH units	0.1	6.0 - 9.5	7.81	7.75	7.82	7.89	8.06	8.14	8.18
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30 and Average 15	327	12.4	7.8	6.3	150	3.9	2.5
Total Dissolved Solids	mg/L	10	-	231	93	143	141	176	220	282
Turbidity	NTU	0.1	-	495	37.9	37.1	18.3	111	4.10	3.83
Ammonia, Total (as N)	mg/L	0.01	-	-	-	0.218	0.220	-	0.212	-
Nitrate (as N)	mg/L	0.02	-	-	-	0.381	1.86	-	5.06	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-	-
	-	-	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	-	-	-

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 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 7.2.35: 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-B01	MQ-C-B
	ALS Laboratory Sample ID			L2479073-13	L2480169-13	L2485627-10	L2486375-12	L2489338-12	L2489338-13	L2493952-12
	Sample Date & Time			2020-07-23 12:40	2020-07-27 12:00	2020-08-05 12:15	2020-08-10 14:30	2020-08-16 13:15	2020-08-16 13:15	08/23/2020 9:45
	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	3	-	-	545	-	-	-	-	-
pH	pH units	0.1	6.0 - 9.5	8.11	8.01	8.36	8.19	8.13	8.13	8.12
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30 and Average 15	2.9	2.9	<3.0	2.9	2.0	2.5	2.7
Total Dissolved Solids	mg/L	10	-	304	321	285	313	362	362	286
Turbidity	NTU	0.1	-	3.39	3.46	2.14	2.05	2.39	2.38	0.97
Ammonia, Total (as N)	mg/L	0.01	-	-	-	0.124	-	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	5.42	-	-	-	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-	-	-	-
	-	-	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.

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

² Average TSS for June 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 7.2.35: Water Quality Results for Water Licence Monitoring Location - MQ-C-B

Analyte	Sample ID			MQ-C-B	MQ-C-B	MQ-C-B01	MQ-C-B	MQ-C-B01
	ALS Laboratory Sample ID			L2499077-2	L2499560-3	L2499560-4	L2503076-4	L2503076-5
	Sample Date & Time			2020-09-02 16:00	2020-09-07 9:25	2020-09-07 9:25	2020-09-14 8:55	2020-09-14 8:55
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	3	-	850	-	-	-	-
pH	pH units	0.1	6.0 - 9.5	8.17	8.10	8.05	7.71	7.70
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	294	308	306	281	272
Turbidity	NTU	0.1	-	1.37	1.48	2.00	1.27	1.26
Ammonia, Total (as N)	mg/L	0.01	-	0.065	-	-	-	-
Nitrate (as N)	mg/L	0.02	-	5.83	-	-	-	-
Oil and Grease, Total	mg/L	2	-	<2.0	-	-	-	-
	-	-	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.

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

² Average TSS for June 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 7.2.36: 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	MQ-C-D
	ALS Laboratory Sample ID			L2460443-2	L2466533-7	L2468308-14	L2471945-16	L2473444-2	L2479073-15	L2480169-15	L2485411-2
	Sample Date & Time			2020-06-13 9:00	2020-06-22 10:05	2020-06-30 15:10	2020-07-07 13:10	2020-07-13 10:10	2020-07-23 13:10	2020-07-27 11:40	2020-08-04 9:55
	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								
Conductivity	umhos/cm	3	-	-	228	-	301	-	-	-	373
pH	pH units	0.1	6.0 - 9.5	7.71	8.03	8.03	8.01	8.29	8.36	8.21	7.78
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	22.3	3.5	8.5	6.4	7.1	2.5	<2.0	<3.0
Total Dissolved Solids	mg/L	10	-	105	159	136	168	127	187	184	225
Turbidity	NTU	0.1	-	55.1	24.0	18.1	14.8	10.6	2.19	1.25	2.44
Ammonia, Total (as N)	mg/L	0.01	-	-	0.083	-	0.100	-	-	-	0.028
Nitrate (as N)	mg/L	0.02	-	-	1.24	-	1.41	-	-	-	2.18
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	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 7.2.36: 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			L2486375-8	L2489338-15	L2493952-15	L2497354-9	L2499560-2	L2503076-2	L2507045-2
	Sample Date & Time			2020-08-10 14:05	2020-08-16 14:05	08/23/2020 9:25	09/01/2020 10:10	2020-09-07 8:40	2020-09-14 8:40	2020-09-22 8:30
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	3	-	-	-	-	450	-	-	-
pH	pH units	0.1	6.0 - 9.5	8.40	8.34	8.15	8.28	8.10	8.14	7.85
Total Suspended Solids	mg/L	2.0/3.0	Grab 30 and Average 15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	230	232	250	248	229	253	300
Turbidity	NTU	0.1	-	2.06	2.31	3.88	2.66	8.71	3.29	2.09
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-	0.042	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	-	2.32	-	-	-
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 ^{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 11.

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 7.2.37: 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	TR-BP-01
	ALS Laboratory Sample ID			L2459150-3	L2460443-13	L2467084-1	L2468355-2	L2471979-1	L2475703-3	L2477604-1	L2480169-18
	Sample Date & Time			2020-06-10 9:00	2020-06-13 15:00	2020-06-26 8:10	2020-07-01 17:50	2020-07-07 12:00	2020-07-13 8:15	2020-07-21 13:45	2020-07-27 11:00
	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	3	-	70.6	-	-	-	577	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.17	7.22	7.60	7.59	7.69	7.99	7.94	7.86
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30 and Average 15	22.1	7.0	18.8	8.0	7.6	5.3	3.6	<2.0
Total Dissolved Solids	mg/L	10	-	66	61	319	315	489	468	437	494
Turbidity	NTU	0.1	-	56.5	47.4	23.7	16.4	14.1	1.98	2.42	1.76
Ammonia, Total (as N)	mg/L	0.01	-	0.011	-	-	-	<0.010	-	-	-
Nitrate (as N)	mg/L	0.02	-	0.545	-	-	-	4.13	-	-	-
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
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.

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

² Average TSS for June 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 7.2.37: 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			L2482851-1	L2486376-1	L2496143-1	L2496122-1	L2499097-1	L2499558-1	L2504289-1
	Sample Date & Time			2020-08-03 12:00	2020-08-10 15:45	2020-08-16 18:05	2020-08-26 12:30	2020-09-02 15:00	2020-09-07 7:55	2020-09-16 9:55
	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	-	661	-	-	-	694	-	-
pH	pH units	0.1	6.0 - 9.5	7.23	7.51	7.54	7.48	7.50	7.75	7.77
Total Suspended Solids ²	mg/L	2.0/3.0	Grab 30 and Average 15	5.3	4.8	8.6	<2.0	2.0	<2.0	4.0
Total Dissolved Solids	mg/L	10	-	499	496	600	637	636	631	487
Turbidity	NTU	0.1	-	3.28	2.63	6.28	6.07	3.85	5.36	4.13
Ammonia, Total (as N)	mg/L	0.01	-	0.020	-	-	-	0.023	-	-
Nitrate (as N)	mg/L	0.02	-	2.95	-	-	-	1.68	-	-
Oil and Grease, Total	mg/L	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	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.

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

² Average TSS for June 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 7.2.38: Water Quality Results for Water Licence Monitoring Location - MS-SN-01

Analyte	Sample ID			MS-SN-01	MS-SN-0101	MS-SN-01	MS-SN-01
	ALS Laboratory Sample ID			L2455938-1	L2455938-2	L2463694-4	L2467028-1
	Sample Date & Time			2020-06-03 13:35	2020-06-03 13:35	2020-06-16 18:45	2020-06-24 9:00
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	3	-	-	-	-	188
pH	pH units	0.1	6.0 - 9.5	7.59	7.59	7.71	8.03
Total Suspended Solids ²	mg/L	2	Grab 30 and Average 15	6.6	5.8	97.5	<2.0
Total Dissolved Solids	mg/L	20	-	86	116	75	105
Turbidity	NTU	0.1	-	42.3	42.2	153	2.78
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-	<0.010
Nitrate (as N)	mg/L	0.02	-	-	-	-	0.041
Oil and Grease, Total	mg/L	2	-	-	-	-	<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 7.2.39: Water Quality Results for Water Licence Monitoring Location - MS-SN-02

Analyte	Sample ID			MS-SN-02	MS-SN-0201	MS-SN-02	MS-SN-0201	MS-SN-02	MS-SN-02
	ALS Laboratory Sample ID			L2448972-1	L2448972-2	L2451388-1	L2451388-2	L2463694-2	L2467028-2
	Sample Date & Time			2020-05-19 14:35	2020-05-19 14:35	2020-05-25	2020-05-25	2020-06-16 17:25	2020-06-24 10:45
	QA/QC Sample Type			N/A	Field Duplicate	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹						
Conductivity	umhos/cm	3	-	-	-	74.2	76.0	-	130
pH	pH units	0.1	6.0 - 9.5	7.40	7.40	7.60	7.63	7.58	8.00
Total Suspended Solids	mg/L	2.0/4.0	Grab 30 and Average 15	2.4	<2.0	<2.0	<2.0	21.4	<4.0
Total Dissolved Solids	mg/L	20	-	21	25	39	48	80	82
Turbidity	NTU	0.1	-	15.8	15.3	18.6	18.6	78.9	30.1
Ammonia, Total (as N)	mg/L	0.01	-	-	-	0.033	0.033	-	0.012
Nitrate (as N)	mg/L	0.02	-	-	-	0.168	0.16	-	0.064
Oil and Grease, Total	mg/L	2	-	-	-	<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

Notes:

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

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

Table 7.2.40: Water Quality Results for Water Licence Monitoring Location - MS-SN-03

Analyte	Sample ID			MS-SN-03	MS-SN-0301	MS-SN-03
	ALS Laboratory Sample ID			L2463694-4	L2463694-3	L2467028-3
	Sample Date & Time			2020-06-16 18:10	2020-06-16 18:10	2020-06-25 14:30
	QA/QC Sample Type			N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹			
Conductivity	umhos/cm	3	-	-	-	131
pH	pH units	0.1	6.0 - 9.5	7.64	7.63	7.62
Total Suspended Solids ²	mg/L	2	Grab 30 and Average 15	21.2	25.4	7.0
Total Dissolved Solids	mg/L	20	-	73	76	106
Turbidity	NTU	0.1	-	118	122	92.9
Ammonia, Total (as N)	mg/L	0.01	-	-	-	<0.010
Nitrate (as N)	mg/L	0.02	-	-	-	0.038
Oil and Grease, Total	mg/L	2	-	-	-	<2.0
	-	-	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.

² Average TSS for June exceeded maximum average TSS concentration discharge limits.

Table 7.2.41: Water Quality Results for Water Licence Monitoring Location - TR-SN-01

Analyte	Sample ID			TR-SN-01
	ALS Laboratory Sample ID			L2459155-1
	Sample Date & Time			2020-06-08 15:05
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	162
pH	pH units	0.1	6.0 - 9.5	8.01
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	33.9
Total Dissolved Solids	mg/L	20	-	99
Turbidity	NTU	0.1	-	14.7
Ammonia, Total (as N)	mg/L	0.01	-	0.028
Nitrate (as N)	mg/L	0.02	-	0.132
Oil and Grease, Total	mg/L	2	-	<2.0
	-	-	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 7.2.42: Water Quality Results for Water Licence Monitoring Location - TR-SN-02

Analyte	Sample ID			TR-SN-02	TR-SN-02	TR-SN-02
	ALS Laboratory Sample ID			L2459155-3	L2469724-2	L2468262-3
	Sample Date & Time			2020-06-09 13:35	2020-06-23 11:30	2020-06-27 11:20
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹			
Conductivity	umhos/cm	3	-	62.7	199	195
pH	pH units	0.1	6.0 - 9.5	8.13	8.14	8.29
Total Suspended Solids ²	mg/L	2	Grab 30 and Average 15	174	7.1	2.3
Total Dissolved Solids	mg/L	20	-	69	100	117
Turbidity	NTU	0.1	-	158	4.81	3.07
Ammonia, Total (as N)	mg/L	0.01	-	0.045	0.015	<0.0050
Nitrate (as N)	mg/L	0.02	-	0.073	0.171	0.203
Oil and Grease, Total	mg/L	2	-	<2.0	<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.

² Average TSS for June exceeded maximum average TSS concentration discharge limits.

Table 7.2.43: Water Quality Results for Water Licence Monitoring Location - TR-SN-03

Analyte	Sample ID			TR-SN-03	TR-SN-03	TR-SN-03
	ALS Laboratory Sample ID			L2465600-1	L2469724-1	L2468262-2
	Sample Date & Time			2020-06-18 15:45	2020-06-23 10:30	2020-06-27 10:25
	QA/QC Sample Type			N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹			
Conductivity	umhos/cm	3	-		323	274
pH	pH units	0.1	6.0 - 9.5	8.21	8.19	8.26
Total Suspended Solids ²	mg/L	2	Grab 30 and Average 15	44.1	12.7	207
Total Dissolved Solids	mg/L	20	-	141	159	216
Turbidity	NTU	0.1	-	70.9	18.7	247
Ammonia, Total (as N)	mg/L	0.01	-	0.0131	<0.010	0.0084
Nitrate (as N)	mg/L	0.02	-	0.293	0.059	0.0619
Oil and Grease, Total	mg/L	2.0/5.0	-	<5.0	<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.

Table 7.2.44: Water Quality Results for Water Licence Monitoring Location - TR-SN-04

Analyte	Sample ID			TR-SN-04	TR-SN-04	TR-SN-04	TR-SN-04	TR-SN-04
	ALS Laboratory Sample ID			L2459155-6	L2463693-1	L2468262-1	L2472904-1	L2474232-1
	Sample Date & Time			2020-06-10 10:45	2020-06-16 9:35	2020-06-27 19:55	2020-07-10 11:40	2020-07-12 11:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹					
Conductivity	umhos/cm	2	-	170	-	97.1	-	-
pH	pH units	0.1	6.0 - 9.5	7.73	7.71	7.36	7.70	7.69
Total Suspended Solids ²	mg/L	1.0/2.0	Grab 30 and Average 15	231	367	348	5.2	<2.0
Total Dissolved Solids	mg/L	20	-	129	78	208	177	206
Turbidity	NTU	0.1	-	279	546	653	35.0	19.3
Ammonia, Total (as N)	mg/L	0.005/0.01	-	0.168	-	0.071	-	-
Nitrate (as N)	mg/L	0.005	-	0.094	-	0.154	-	-
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

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 7.2.45: Water Quality Results for Water Licence Monitoring Location - TR-SN-05

Analyte	Sample ID			TR-SN-05
	ALS Laboratory Sample ID			L2459155-4
	Sample Date & Time			2020-06-10 9:50
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
Conductivity	umhos/cm	3	-	22.9
pH	pH units	0.1	6.0 - 9.5	7.05
Total Suspended Solids	mg/L	2	Grab 30 and Average 15	84.5
Total Dissolved Solids	mg/L	20	-	47
Turbidity	NTU	0.1	-	60.5
Ammonia, Total (as N)	mg/L	0.01	-	0.023
Nitrate (as N)	mg/L	0.02	-	0.051
Oil and Grease, Total	mg/L	2	-	<2.0
	-	-	No Visible Sheen	No Visible Sheen

Notes:

Bold and highlighted values indicate results that exceeded the applicable water quality criteria.

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

Table 7.2.46: Water Quality Results for Water Licence Monitoring Location - TR-SN-KM92.5

Analyte	Sample ID			TR-SN-KM92.5	TR-SN-KM92.5	TR-SN-KM92.501	TR-SN-KM92.5
	ALS Laboratory Sample ID			L2459155-5	L2463693-2	L2463693-3	L2468262-4
	Sample Date & Time			2020-06-10 14:15	2020-06-16 14:05	2020-06-16 14:05	2020-06-27 20:30
	QA/QC Sample Type			N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	3	-	102	-	-	120
pH	pH units	0.1	6.0 - 9.5	7.51	7.56	7.58	7.48
Total Suspended Solids ²	mg/L	2	Grab 30 and Average 15	104	183	174	95.9
Total Dissolved Solids	mg/L	20	-	101	98	71	169
Turbidity	NTU	0.1	-	207	303	316	234
Ammonia, Total (as N)	mg/L	0.01	-	<0.010	-	-	0.0125
Nitrate (as N)	mg/L	0.02	-	0.031	-	-	0.0678
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

Notes:

Bold and highlighted values 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 7.2.47: Water Quality Results for Water Licence Monitoring Location - HR-CD-05

Analyte	Sample ID			HR-CD-05	HR-CD-0501	HR-CD-05	HR-CD-05	HR-CD-05	HR-CD-05	HR-CD-0501
	ALS Laboratory Sample ID			L2457252-2	L2457252-1	L2457744-2	L2460910-4	L2464866-1	L2472905-1	L2472905-2
	Sample Date & Time			2020-06-06 10:30	2020-06-06 10:30	2020-06-08 9:30	2020-06-12 9:20	2020-06-23 8:50	2020-07-10 14:55	2020-07-10 14:55
	QA/QC Sample Type			N/A	Field Duplicate	N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹							
Conductivity	umhos/cm	3	-	-	-	115	-	-	-	-
pH	pH units	0.1	6.0 - 9.5	7.94	7.93	7.66	7.63	8.10	8.32	8.36
Total Suspended Solids ²	mg/L	2	Grab 30, Average 15	35.6	33	40	242	32.9	70.9	88.7
Total Dissolved Solids	mg/L	10	-	200	195	103	132	249	413	410
Turbidity	NTU	0.1	-	62.8	66.7	67.2	222	55.4	125	136
Ammonia, Total (as N)	mg/L	0.01	-	-	-	0.045	-	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	0.261	-	-	-	-
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 and July exceeded maximum average TSS concentration discharge limits.

Table 7.2.47: Water Quality Results for Water Licence Monitoring Location - HR-CD-05

Analyte	Sample ID			HR-CD-05	HR-CD-05	HR-CD-05	HR-CD-05	HR-CD-05	HR-CD-05	HR-CD-05
	ALS Laboratory Sample ID			L2479663-1	L2480813-1	L2482850-1	L2487099-1	L2496141-1	L2492742-1	L2493963-1
	Sample Date & Time			2020-07-23 13:30	2020-07-28 16:15	2020-08-03 16:35	2020-08-10 9:15	2020-08-16 8:55	2020-08-21 17:05	08-24-2020 16:25
	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	-	-	662	724	-	-	-	-
pH	pH units	0.1	6.0 - 9.5	8.19	8.19	8.23	8.13	7.87	8.16	8.24
Total Suspended Solids ²	mg/L	2	Grab 30, Average 15	11.8	15.2	12.4	<2.0	113	3.0	2.4
Total Dissolved Solids	mg/L	10	-	390	431	455	500	985	610	531
Turbidity	NTU	0.1	-	12	7.19	5.68	1.19	160	5.49	2.57
Ammonia, Total (as N)	mg/L	0.01	-	-	0.0213	0.011	-	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	1.55	1.84	-	-	-	-
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 and July exceeded maximum average TSS concentration discharge limits.

Table 7.2.48: Water Quality Results for Water Licence Monitoring Location - MS-RW-01

Analyte	Sample ID			MS-RW-01	MS-RW-01	MS-RW-01	MS-RW-01	MS-RW-01	MS-RW-01	MS-RW-01
	ALS Laboratory Sample ID			L2457744-1	L2463014-1	L2467061-1	L2480167-1	L2480814-1	L2482852-1	L2486379-1
	Sample Date & Time			2020-06-08 10:20	2020-06-18 13:30	2020-06-24 14:40	2020-07-27 17:25	2020-07-28 17:50	2020-08-03 17:45	2020-08-10 14:55
	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	-	108	-	-	-	378	422	-
pH	pH units	0.1	6.0 - 9.5	7.48	7.68	8.09	7.94	7.83	8.09	8.18
Total Suspended Solids ²	mg/L	2	Grab 30, Average 15	77.3	15.7	8.2	3.3	<2.0	2.2	3.3
Total Dissolved Solids	mg/L	10	-	86	130	195	211	220	230	265
Turbidity	NTU	0.1	-	149	74.5	14.2	9.31	7.72	7.56	5.59
Ammonia, Total (as N)	mg/L	0.01	-	0.022	-	-	-	0.105	0.045	-
Nitrate (as N)	mg/L	0.02	-	0.501	-	-	-	4	3.99	-
Oil and Grease, Total	mg/L	2.0/5.0	-	<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.

Table 7.2.48: Water Quality Results for Water Licence Monitoring Location - MS-RW-01

Analyte	Sample ID			MS-RW-01	MS-RW-01	MS-RW-01	MS-RW-01
	ALS Laboratory Sample ID			L2496142-2	L2496123-1	L2497355-1	L2499559-1
	Sample Date & Time			2020-08-16 14:35	2020-08-26 13:35	2020-09-01 9:50	2020-09-07 8:15
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	3	-	-	-	515	-
pH	pH units	0.1	6.0 - 9.5	8.18	8.07	8.20	8.09
Total Suspended Solids ²	mg/L	2	Grab 30, Average 15	2.4	<2.0	<2.0	2.8
Total Dissolved Solids	mg/L	10	-	220	309	295	313
Turbidity	NTU	0.1	-	3.74	16.7	7.78	7.13
Ammonia, Total (as N)	mg/L	0.01	-	-	-	0.466	-
Nitrate (as N)	mg/L	0.02	-	-	-	4.73	-
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.

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

² Average TSS for June exceeded maximum average TSS concentration discharge limits.

Table 7.2.49: 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
	ALS Laboratory Sample ID			L2471885-1	L2476176-1	L2478534-1	L2480178-1	L2484599-1	L2486377-1
	Sample Date & Time			2020-07-06 11:45	2020-07-13 13:10	2020-07-20 14:30	2020-07-27 11:55	2020-08-03 11:40	2020-08-10 14:00
	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	3	-	338	-	332	-	333	-
pH	pH units	0.1	6.0 - 9.5	8.14	8.27	8.21	8.44	8.27	8.35
Total Suspended Solids	mg/L	2	Grab 30, Average 15	<2.0	<2.0	3.1	5.6	3.1	3.9
Total Dissolved Solids	mg/L	10	-	181	198	221	208	198	226
Turbidity	NTU	0.1	-	2.3	1.35	3.88	1.88	1.94	1.43
Ammonia, Total (as N)	mg/L	0.01	-	0.279	-	0.069	-	0.031	-
Nitrate (as N)	mg/L	0.02	-	0.54	-	0.445	-	0.333	-
Oil and Grease, Total	mg/L	2	-	<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

Notes:

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

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

Table 7.2.49: 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
	ALS Laboratory Sample ID			L2490510-1	L2494146-1	L2499599-1	L2500077-1
	Sample Date & Time			2020-08-17 11:00	2020-08-24 11:25	2020-09-01 11:55	2020-09-07 16:00
	QA/QC Sample Type			N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹				
Conductivity	umhos/cm	3	-	-	-	-	-
pH	pH units	0.1	6.0 - 9.5	8.22	8.19	8.28	8.28
Total Suspended Solids	mg/L	2	Grab 30, Average 15	<2.0	<2.0	3.0	2
Total Dissolved Solids	mg/L	10	-	234	987	236	246
Turbidity	NTU	0.1	-	1.42	1.43	2.43	3.14
Ammonia, Total (as N)	mg/L	0.01	-	-	-	-	-
Nitrate (as N)	mg/L	0.02	-	-	-	-	-
Oil and Grease, Total	mg/L	2	-	-	-	-	-
	-	-	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 7.2.50: 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	MS-RW-02	MS-RW-02	MS-RW-02	MS-RW-02
	ALS Laboratory Sample ID			L2480167-2	L2480814-2	L2482852-2	L24686379-1	L2496142-1	L2496123-2	L2497355-2	L2499559-2
	Sample Date & Time			2020-07-27 17:10	2020-07-28 17:30	2020-08-03 17:15	2020-08-10 14:55	2020-08-16 13:40	2020-08-26 13:45	2020-09-01 10:45	2020-09-07 9:05
	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	2	-	-	315	353	-	-	-	407	-
pH	pH units	0.1	6.0 - 9.5	8.08	8.11	8.27	8.34	8.12	8.17	8.22	8.22
Total Suspended Solids	mg/L	2	Grab 30, Average 15	<2.0	3.9	3.9	2.7	4.8	<2.0	2.1	2.4
Total Dissolved Solids	mg/L	10	-	170	167	191	198	278	243	220	230
Turbidity	NTU	0.1	-	2.28	2.07	2.93	2.2	5.94	2.64	3.45	3.63
Ammonia, Total (as N)	mg/L	0.005	-	-	0.0957	0.085	-	-	-	0.103	-
Nitrate (as N)	mg/L	0.005	-	-	1.51	1.07	-	-	-	1.21	-
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	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: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Parameter	LDL	Units	Laboratory	MP-01	MP-0101	% Difference
				L2406386-1	L2406386-3	
				15-Jan-20	15-Jan-20	
pH	0.1	pH units	ALS	7.52	7.52	0.0
Total Suspended Solids	2.0	mg/L	ALS	11.2	8.0	N/A
Ammonia, Total (as N)	0.01	mg/L	ALS	0.096	0.094	2.1
Total Kjeldahl Nitrogen	0.15	mg/L	ALS	1.95	1.43	26.7
Phosphorus, Total	0.030	mg/L	ALS	8.61	8.82	2.4
Fecal Coliforms	0	CFU/100mL	ALS	0	1	0.0
BOD	2.0	mg/L	ALS	2.6	<2.0	N/A
Oil and Grease, Total	2.0	mg/L	ALS	<2.0	<2.0	N/A
Parameter	LDL	Units	Laboratory	MS-01	MS-0101	% Difference
				L2406388-1	L2406388-3	
				15-Jan-20	15-Jan-20	
pH	0.10	pH units	ALS	7.75	7.77	0.3
Total Suspended Solids	2.0	mg/L	ALS	6.4	6.2	N/A
Ammonia, Total (as N)	0.010	mg/L	ALS	0.115	0.113	1.7
Total Kjeldahl Nitrogen	0.15	mg/L	ALS	1.38	1.2	13.0
Phosphorus, Total	0.0060	mg/L	ALS	1.10	1.10	0.0
Fecal Coliforms	10	CFU/100mL	ALS	110	80	27.3
BOD	2.0	mg/L	ALS	<2.0	<2.0	N/A
Oil and Grease, Total	2.0	mg/L	ALS	<2.0	<2.0	N/A
Parameter	LDL	Units	Laboratory	MS-01B	MS-01B-01	% Difference
				L2414001-1	L2414001-3	
				4-Feb-20	4-Feb-20	
pH	0.10	pH units	ALS	7.29	7.36	1.0
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Ammonia, Total (as N)	0.010	mg/L	ALS	0.132	0.71	437.9
Total Kjeldahl Nitrogen	0.15	mg/L	ALS	0.45	0.98	N/A
Phosphorus, Total	0.0030	mg/L	ALS	0.0216	0.0195	9.7
Fecal Coliforms	0	CFU/100mL	ALS	0	0	0.0
BOD	2.0	mg/L	ALS	<2.0	<2.0	N/A
Oil and Grease, Total	2.0	mg/L	ALS	No Visible Sheen	No Visible Sheen	N/A
Parameter	LDL	Units	Laboratory	MP-C-B01	MP-C-B0101	% Difference
				L2459408-2	L2459408-6	
				8-Jun-20	8-Jun-20	
Conductivity	3	umhos/cm	ALS	707	705	0.3
pH	0.1	pH units	ALS	8.16	8.17	0.1
Total Suspended Solids	2	mg/L	ALS	2.3	3.3	N/A
Total Dissolved Solids	10	mg/L	ALS	409	402	1.7
Turbidity	0.1	NTU	ALS	4.67	4.6	1.5
Ammonia, Total (as N)	0.01	mg/L	ALS	0.061	0.052	14.8
Nitrate (as N)	0.02	mg/L	ALS	1.18	1.2	1.7
Oil and Grease, Total	2	mg/L	ALS	<2.0	<2.0	N/A
Parameter	LDL	Units	Laboratory	MP-C-J	MP-C-J01	% Difference
				L2454615-1	L2454615-2	
				1-Jun-20	1-Jun-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	7.98	7.97	0.1
Total Suspended Solids	2.0	mg/L	ALS	4.2	4.2	N/A
Total Dissolved Solids	10	mg/L	ALS	200	190	5.0
Turbidity	0.1	NTU	ALS	5.88	5.89	0.2
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MP-Q1-01	MP-Q1-0101	% Difference
				L2467735-5	L2467735-6	
				29-Jun-20	29-Jun-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	7.91	7.95	0.5
Total Suspended Solids	2	mg/L	ALS	3.3	5.1	N/A
Total Dissolved Solids	10	mg/L	ALS	107	107	0.0
Turbidity	0.1	NTU	ALS	2.92	2.78	4.8
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Parameter	LDL	Units	Laboratory	MS-MRY-09	MS-MRY-0901	% Difference
				L2459150-1	L2459150-2	
				10-Jun-20	10-Jun-20	
Hardness	0.50	mg/L	ALS	10.4	10.4	0.0
pH	0.10	pH units	ALS	7.25	7.1	2.1
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	18	<10	N/A
Turbidity	0.10	NTU	ALS	5.4	5.32	1.5
Alkalinity, Total (as CaCO3)	10	mg/L	ALS	<10	<10	N/A
Ammonia, Total (as N)	0.10	mg/L	ALS	<0.010	<0.010	N/A
Chloride (Cl)	0.50	mg/L	ALS	0.67	0.67	0.0
Fluoride (F)	0.020	mg/L	ALS	<0.020	<0.020	N/A
Nitrate (as N)	0.020	mg/L	ALS	0.083	0.055	33.7
Total Kjeldahl Nitrogen	0.15	mg/L	ALS	0.22	<0.15	N/A
Phosphorus, Total	0.00	mg/L	ALS	<0.0030	<0.0030	N/A
Sulfate (SO4)	0.30	mg/L	ALS	0.99	1	N/A
Dissolved Organic Carbon	0.50	mg/L	ALS	2.07	2.44	N/A
Total Organic Carbon	0.50	mg/L	ALS	3.64	3.79	4.1
Aluminum (Al)- Total	0.0050	mg/L	ALS	0.0606	0.0649	7.1
Arsenic (As)- Total	0.00010	mg/L	ALS	<0.00010	<0.00010	N/A
Cadmium (Cd)- Total	0.000005	mg/L	ALS	0.0000071	0.0000067	N/A
Calcium (Ca)- Total	0.50	mg/L	ALS	1.92	1.94	N/A
Copper (Cu)- Total	0.0010	mg/L	ALS	0.0012	0.0011	N/A
Iron (Fe)- Total	0.010	mg/L	ALS	0.096	0.108	12.5
Lead (Pb)- Total	0.000050	mg/L	ALS	0.000081	0.000076	N/A
Magnesium (Mg)- Total	0.050	mg/L	ALS	1.33	1.33	0.0
Manganese (Mn)- Total	0.00050	mg/L	ALS	0.00317	0.00316	0.3
Mercury (Hg)- Total	0.0000050	mg/L	ALS	0.0000071	<0.0000050	N/A
Molybdenum (Mo)- Total	0.000050	mg/L	ALS	0.000116	0.000116	N/A
Nickel (Ni)- Total	0.00050	mg/L	ALS	<0.000050	<0.000050	N/A
Potassium (K)- Total	0.050	mg/L	ALS	0.582	0.572	1.7
Selenium (Se)- Total	0.000050	mg/L	ALS	<0.000050	<0.000050	N/A
Sodium (Na)- Total	0.050	mg/L	ALS	0.293	0.289	1.4
Thallium (Tl)- Total	0.000010	mg/L	ALS	<0.000010	<0.000010	N/A
Uranium (U)- Total	0.000010	mg/L	ALS	0.000155	0.000158	N/A
Zinc (Zn)- Total	0.0030	mg/L	ALS	<0.0030	<0.0030	N/A
Aluminum (Al)- Dissolved	0.0050	mg/L	ALS	0.0172	0.0199	N/A
Arsenic (As)- Dissolved	0.00010	mg/L	ALS	<0.00010	<0.00010	N/A
Cadmium (Cd)- Dissolved	0.000010	mg/L	ALS	<0.000010	<0.000010	N/A
Calcium (Ca)- Dissolved	0.050	mg/L	ALS	2.03	2.01	1.0
Copper (Cu)- Dissolved	0.00020	mg/L	ALS	0.00103	0.00098	4.9
Iron (Fe)- Dissolved	0.010	mg/L	ALS	0.02	0.024	N/A
Lead (Pb)- Dissolved	0.000050	mg/L	ALS	<0.000050	<0.000050	N/A
Magnesium (Mg)- Dissolved	0.050	mg/L	ALS	1.3	1.3	0.0
Manganese (Mn)- Dissolved	0.00050	mg/L	ALS	0.00177	0.00182	N/A
Mercury (Hg)- Dissolved	0.0000050	mg/L	ALS	<0.000050	<0.000050	N/A
Molybdenum (Mo)- Dissolved	0.000050	mg/L	ALS	0.000115	0.000115	N/A
Nickel (Ni)- Dissolved	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Potassium (K)- Dissolved	0.050	mg/L	ALS	0.564	0.556	1.4
Selenium (Se)- Dissolved	0.000050	mg/L	ALS	<0.000050	<0.000050	N/A
Sodium (Na)- Dissolved	0.50	mg/L	ALS	<0.50	<0.50	N/A
Thallium (Tl)- Dissolved	0.000010	mg/L	ALS	<0.000010	<0.000010	N/A
Uranium (U)- Dissolved	0.000010	mg/L	ALS	0.000117	0.000114	2.6
Zinc (Zn)- Dissolved	0.0010	mg/L	ALS	0.0024	<0.0010	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
	No Visible Sheen		ALS	No Visible Sheen	-	N/A
Acute Toxicity	-	-	-	Not Acutely Toxic	-	N/A
Parameter	LDL	Units	Laboratory	MS-MRY-13A	MS-MRY-13A01	% Difference
				L2457153-4	L2457153-5	
				5-Jun-20	5-Jun-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	7.66	7.67	0.1
Total Suspended Solids	2	mg/L	ALS	<2.0	2.1	N/A
Total Dissolved Solids	13	mg/L	ALS	85	75	11.8
Turbidity	0.1	NTU	ALS	22.6	22.8	0.9
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Parameter	LDL	Units	Laboratory	MS-C-A	MS-C-A01	% Difference
				L2466533-13	L2466533-14	
				22-Jun-20	22-Jun-20	
Conductivity	-	umhos/cm	ALS	140	140	0.0
pH	0.1	pH units	ALS	7.82	7.82	0.0
Total Suspended Solids	2	mg/L	ALS	2.9	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	105	59	43.8
Turbidity	0.1	NTU	ALS	25.3	26.4	4.3
Ammonia, Total (as N)	-	mg/L	ALS	0.013	<0.010	N/A
Nitrate (as N)	-	mg/L	ALS	4.23	0.458	N/A
Oil and Grease, Total	2	mg/L	ALS	<2.0	<2.0	N/A
Parameter	LDL	Units	Laboratory	MS-MRY-13B	MS-MRY-13B01	% Difference
				L2468308-1	L2468308-2	
				30-Jun-20	30-Jun-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	7.76	7.8	0.5
Total Suspended Solids	2	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	13	mg/L	ALS	400	545	36.3
Turbidity	0.1	NTU	ALS	1.17	0.53	54.7
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-C-E	MS-C-E01	% Difference
				L2460443-4	L2460443-5	
				13-Jun-20	13-Jun-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	7.90	7.91	0.1
Total Suspended Solids	2	mg/L	ALS	2.1	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	171	169	1.2
Turbidity	0.1	NTU	ALS	5.09	5.03	1.2
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-C-H	MS-C-H01	% Difference
				L2460443-10	L2460443-11	
				13-Jun-20	13-Jun-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	7.59	7.63	0.5
Total Suspended Solids	2	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	65	79	21.5
Turbidity	0.1	NTU	ALS	6.16	6.42	4.2
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-C-H	MS-C-H01	% Difference
				L2466533-5	L2466533-4	
				22-Jun-20	22-Jun-20	
Conductivity	3	umhos/cm	ALS	122	122	0.0
pH	0.1	pH units	ALS	7.77	7.81	0.5
Total Suspended Solids	2	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	13	mg/L	ALS	78	76	2.6
Turbidity	0.1	NTU	ALS	0.98	1.11	13.3
Ammonia, Total (as N)	0.010	mg/L	ALS	<0.010	0.011	N/A
Nitrate (as N)	0.020	mg/L	ALS	0.082	0.089	N/A
Oil and Grease, Total	2	mg/L	ALS	<2.0	<2.0	N/A
Parameter	LDL	Units	Laboratory	MS-C-H	MS-C-H01	% Difference
				L2468308-5	L2468308-6	
				30-Jun-20	30-Jun-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	7.92	7.91	0.1
Total Suspended Solids	2	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	13	mg/L	ALS	72	70	2.8
Turbidity	0.1	NTU	ALS	0.98	1	2.0
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Parameter	LDL	Units	Laboratory	MS-03	MS-0301	% Difference
				L2478360-1	L2478360-2	
				22-Jul-20	22-Jul-20	
pH	0.1	pH units	ALS	8.42	8.40	0.2
Total Suspended Solids	2	mg/L	ALS	2.6	2.5	N/A
Total Dissolved Solids	10	mg/L	ALS	162	157	3.1
Turbidity	0.1	NTU	ALS	12.6	12.8	1.6
Lead (Pb)- Total	0.000050	mg/L	ALS	0.00105	0.000811	22.8
Oil and Grease, Total	5.0	mg/L	ALS	<5.0	<5.0	N/A
Benzene	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Ethylbenzene	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Toluene	0.00050/0.00045	mg/L	ALS	<0.00050	<0.00050	N/A
o-Xylene	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
m+p-Xylenes	0.0010/0.00050	mg/L	ALS	<0.0010	<0.0010	N/A
Xylenes (Total)	0.0011/0.00075	mg/L	ALS	<0.0011	<0.0011	N/A
4-Bromofluorobenzene	-	%	ALS	102	100.6	N/A
1,4-Difluorobenzene	-	%	ALS	100.7	100	N/A
F1 (C6-C10)	0.1	mg/L	ALS	<0.10	<0.10	N/A
F1-BTEX	0.1	mg/L	ALS	<0.10	<0.10	N/A
F2 (C10-C16)	0.10/0.30	mg/L	ALS	<0.10	<0.10	N/A
F3 (C16-C34)	0.25/0.30	mg/L	ALS	<0.25	<0.25	N/A
F4 (C34-C50)	0.25/0.30	mg/L	ALS	<0.25	<0.25	N/A
Total Hydrocarbons (C6-C50)	0.38	mg/L	ALS	<0.38	<0.38	N/A
Parameter	LDL	Units	Laboratory	MS-03	MS-0301	% Difference
				L2482115-1	L2482115-2	
				30-Jul-20	30-Jul-20	
pH	0.1	pH units	ALS	8.28	8.33	0.6
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	206	206	0.0
Turbidity	0.10	NTU	ALS	6.54	6.65	1.7
Lead (Pb)- Total	0.000050	mg/L	ALS	0.000465	0.000313	32.7
Oil and Grease, Total	5.0	mg/L	ALS	<5.0	<5.0	N/A
Benzene	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Ethylbenzene	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Toluene	0.00050/0.00045	mg/L	ALS	<0.00045	<0.00045	N/A
o-Xylene	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
m+p-Xylenes	0.0010/0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Xylenes (Total)	0.0011/0.00075	mg/L	ALS	<0.00075	<0.00075	N/A
4-Bromofluorobenzene	-	%	ALS	90.9	96.4	N/A
1,4-Difluorobenzene	-	%	ALS	101.1	98.5	N/A
F1 (C6-C10)	0.1	mg/L	ALS	<0.10	<0.10	N/A
F1-BTEX	0.1	mg/L	ALS	<0.10	<0.10	N/A
F2 (C10-C16)	0.10/0.30	mg/L	ALS	<0.30	<0.30	N/A
F3 (C16-C34)	0.25/0.30	mg/L	ALS	<0.30	<0.30	N/A
F4 (C34-C50)	0.25/0.30	mg/L	ALS	<0.30	<0.30	N/A
Total Hydrocarbons (C6-C50)	0.38	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-03	MS-0301	% Difference
				L2484837-1	L2484837-2	
				31-Jul-20	31-Jul-20	
pH	0.1	pH units	ALS	-	-	N/A
Total Suspended Solids	2	mg/L	ALS	-	-	N/A
Total Dissolved Solids	10	mg/L	ALS	-	-	N/A
Turbidity	0.1	NTU	ALS	-	-	N/A
Lead (Pb)- Total	0.000050	mg/L	ALS	0.000316	0.000320	1.3
Oil and Grease, Total	5.0	mg/L	ALS	-	-	N/A
Benzene	0.00050	mg/L	ALS	-	-	N/A
Ethylbenzene	0.00050	mg/L	ALS	-	-	N/A
Toluene	0.00050/0.00045	mg/L	ALS	-	-	N/A
o-Xylene	0.00050	mg/L	ALS	-	-	N/A
m+p-Xylenes	0.0010/0.00050	mg/L	ALS	-	-	N/A
Xylenes (Total)	0.0011/0.00075	mg/L	ALS	-	-	N/A
4-Bromofluorobenzene	-	%	ALS	-	-	N/A
1,4-Difluorobenzene	-	%	ALS	-	-	N/A
F1 (C6-C10)	0.1	mg/L	ALS	-	-	N/A
F1-BTEX	0.1	mg/L	ALS	-	-	N/A
F2 (C10-C16)	0.10/0.30	mg/L	ALS	-	-	N/A
F3 (C16-C34)	0.25/0.30	mg/L	ALS	-	-	N/A
F4 (C34-C50)	0.25/0.30	mg/L	ALS	-	-	N/A
Total Hydrocarbons (C6-C50)	0.38	mg/L	ALS	-	-	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Parameter	LDL	Units	Laboratory	MS-08	MS-0801	% Difference
				L2469875-1	L2469875-2	
				5-Jul-20	5-Jul-20	
Conductivity	2.0	umhos/cm	ALS	739	744	0.7
pH	0.1	pH units	ALS	7.24	7.26	0.3
Total Suspended Solids	2	mg/L	ALS	7	6.8	N/A
Total Dissolved Solids	10	mg/L	ALS	585	599	2.4
Turbidity	0.1	NTU	ALS	8.36	9.13	9.2
Acidity (as CaCO3)	2.0	mg/L	ALS	<2.0	2.7	N/A
Alkalinity, Total (as CaCO3)	1.0	mg/L	ALS	15.4	15.8	2.6
Ammonia, Total (as N)	0.025	mg/L	ALS	0.917	0.942	2.7
Chloride (Cl)	2.50	mg/L	ALS	5.9	6.1	N/A
Fluoride (F)	0.100	mg/L	ALS	<0.10	<0.10	N/A
Nitrate (as N)	0.025	mg/L	ALS	7.03	7.07	0.6
Total Kjeldahl Nitrogen	0.05	mg/L	ALS	1.37	1.45	5.8
Phosphorus, Total	0.0020	mg/L	ALS	0.0062	0.0402	548.4
Sulfate (SO4)	1.50	mg/L	ALS	329	331	0.6
Dissolved Organic Carbon	0.50	mg/L	ALS	1.48	1.85	N/A
Total Organic Carbon	0.50	mg/L	ALS	1.38	1.58	N/A
Aluminum (Al)- Total	0.0030	mg/L	ALS	0.223	0.160	28.3
Antimony (Sb)- Total	0.00010	mg/L	ALS	<0.00010	<0.00010	N/A
Arsenic (As)- Total	0.00010	mg/L	ALS	<0.00010	<0.00010	N/A
Barium (Ba)- Total	0.00010	mg/L	ALS	0.0144	0.0136	5.6
Beryllium (Be)- Total	0.00010	mg/L	ALS	<0.00010	<0.00010	N/A
Bismuth (Bi)- Total	0.000050	mg/L	ALS	<0.000050	<0.000050	N/A
Boron (B)- Total	0.010	mg/L	ALS	0.017	0.017	N/A
Cadmium (Cd)- Total	0.0000050	mg/L	ALS	0.00000432	0.00000489	N/A
Calcium (Ca)- Total	0.050	mg/L	ALS	28.3	29.1	2.8
Cesium (Cs)- Total	0.000010	mg/L	ALS	0.000027	0.000023	N/A
Chromium (Cr)- Total	0.00010	mg/L	ALS	0.00054	0.00032	N/A
Copper (Cu)- Total	0.00050	mg/L	ALS	0.00184	0.00182	N/A
Iron (Fe)- Total	0.010	mg/L	ALS	0.628	0.501	20.2
Lead (Pb)- Total	0.000050	mg/L	ALS	0.000255	0.000255	0.0
Magnesium (Mg)- Total	0.0050	mg/L	ALS	70.9	70.4	0.7
Manganese (Mn)- Total	0.00010	mg/L	ALS	1.46	1.45	0.7
Mercury (Hg)- Total	0.0000050	mg/L	ALS	<0.0000050	<0.0000050	N/A
Molybdenum (Mo)- Total	0.000050	mg/L	ALS	0.00173	0.00162	6.4
Nickel (Ni)- Total	0.00050	mg/L	ALS	0.0245	0.0256	4.5
Potassium (K)- Total	0.050	mg/L	ALS	4.18	4.1	1.9
Selenium (Se)- Total	0.000050	mg/L	ALS	0.00141	0.00134	5.0
Sodium (Na)- Total	0.050	mg/L	ALS	2.21	2.21	0.0
Thallium (Tl)- Total	0.000010	mg/L	ALS	0.000022	0.000022	0.0
Uranium (U)- Total	0.000010	mg/L	ALS	0.00132	0.00131	0.8
Zinc (Zn)- Total	0.0030	mg/L	ALS	0.0034	<0.0030	N/A
Aluminum (Al)- Dissolved	0.0010	mg/L	ALS	0.0018	0.0016	N/A
Arsenic (As)- Dissolved	0.00010	mg/L	ALS	<0.00010	<0.00010	N/A
Cadmium (Cd)- Dissolved	0.0000050	mg/L	ALS	0.0000366	<0.000010	N/A
Calcium (Ca)- Dissolved	0.050	mg/L	ALS	29.3	28	4.4
Copper (Cu)- Dissolved	0.00020	mg/L	ALS	0.00113	0.00109	3.5
Iron (Fe)- Dissolved	0.010	mg/L	ALS	<0.010	<0.010	N/A
Lead (Pb)- Dissolved	0.000050	mg/L	ALS	<0.000050	<0.000050	N/A
Magnesium (Mg)- Dissolved	0.0050	mg/L	ALS	72.8	70.8	2.7
Manganese (Mn)- Dissolved	0.00010	mg/L	ALS	1.34	1.35	0.7
Mercury (Hg)- Dissolved	0.0000050	mg/L	ALS	<0.0000050	<0.0000050	N/A
Molybdenum (Mo)- Dissolved	0.000050	mg/L	ALS	0.00149	0.00148	0.7
Nickel (Ni)- Dissolved	0.00050	mg/L	ALS	0.0223	0.0222	0.4
Potassium (K)- Dissolved	0.050	mg/L	ALS	3.85	3.85	0.0
Selenium (Se)- Dissolved	0.000050	mg/L	ALS	0.00121	0.00137	13.2
Sodium (Na)- Dissolved	0.050	mg/L	ALS	2.25	2.17	3.6
Thallium (Tl)- Dissolved	0.000010	mg/L	ALS	0.000012	0.000013	N/A
Uranium (U)- Dissolved	0.000010	mg/L	ALS	0.000845	0.000855	1.2
Zinc (Zn)- Dissolved	0.0010	mg/L	ALS	0.0017	0.0016	5.9
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
	No Visible Sheen		ALS	No Visible Sheen	-	N/A
Acute Toxicity	-	-	-	Not Acutely Toxic	-	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Parameter	LDL	Units	Laboratory	MS-MRY-09	MS-MRY-0901	% Difference
				L2475703-1	L2475703-2	
				15-Jul-20	15-Jul-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	7.97	7.89	1.0
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	73	84	15.1
Turbidity	0.1	NTU	ALS	0.89	0.89	0.0
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-MRY-09	MS-MRY-0901	% Difference
				L2480169-4	L2480169-8	
				27-Jul-20	27-Jul-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	7.97	8.00	0.4
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	60	81	35.0
Turbidity	0.10	NTU	ALS	0.30	0.32	N/A
Ammonia, Total (as N)	0.1	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.1	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-MRY-13A	MS-MRY-13A	% Difference
				L2479073-7	L2479073-8	
				23-Jul-20	23-Jul-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	7.91	7.91	0.0
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	1060	1090	2.8
Turbidity	0.10	NTU	ALS	0.19	0.19	0.0
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-C-A	MS-C-A01	% Difference
				L2473444-10	L2473444-11	
				13-Jul-20	13-Jul-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	8.01	8.03	0.2
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	99	100	1.0
Turbidity	0.10	NTU	ALS	0.34	0.94	176.5
Ammonia, Total (as N)	0.10	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.10	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-C-G	MS-C-G01	% Difference
				L2471945-1	L2471945-2	
				6-Jul-20	6-Jul-20	
Conductivity	3	umhos/cm	ALS	210	211	0.5
pH	0.1	pH units	ALS	7.26	7.71	6.2
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	91	89	2.2
Turbidity	0.10	NTU	ALS	0.35	0.17	N/A
Ammonia, Total (as N)	0.01	mg/L	ALS	<0.010	<0.010	N/A
Nitrate (as N)	0.02	mg/L	ALS	0.779	0.792	1.7
Oil and Grease, Total	2	mg/L	ALS	<2.0	<2.0	N/A
Parameter	LDL	Units	Laboratory	MP-Q1-01	MP-Q1-0101	% Difference
				L2484595-4	L2484595-5	
				3-Aug-20	3-Aug-20	
Conductivity	3.0	umhos/cm	ALS	248	249	0.4
pH	0.10	pH units	ALS	7.98	7.96	0.3
Total Suspended Solids	2.0	mg/L	ALS	<3.0	<3.0	N/A
Total Dissolved Solids	10	mg/L	ALS	152	151	0.7
Turbidity	0.10	NTU	ALS	2.49	2.44	2.0
Ammonia, Total (as N)	0.01	mg/L	ALS	0.017	0.018	N/A
Nitrate (as N)	0.02	mg/L	ALS	0.723	0.721	0.3
Oil and Grease, Total	2.0	mg/L	ALS	<2.0	<2.0	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Parameter	LDL	Units	Laboratory	MS-C-A	MS-C-A01	% Difference
				L2489338-3	L2489338-4	
				16-Aug-20	16-Aug-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	7.91	7.90	0.1
Total Suspended Solids	2	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	132	128	3.0
Turbidity	0.1	NTU	ALS	0.21	0.22	N/A
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-C-E	MS-C-E01	% Difference
				L2486375-4	L2486375-5	
				10-Aug-20	10-Aug-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	7.89	7.90	0.1
Total Suspended Solids	2.0	mg/L	ALS	3.4	2.6	N/A
Total Dissolved Solids	10	mg/L	ALS	936	922	1.5
Turbidity	0.10	NTU	ALS	0.67	0.72	7.5
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-C-F	MS-C-F01	% Difference
				L2486375-9	L2486375-14	
				10-Aug-20	10-Aug-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	8.20	8.18	0.2
Total Suspended Solids	2	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	155	147	5.2
Turbidity	0.1	NTU	ALS	1.01	1.05	4.0
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-03B	MS-03B01	% Difference
				L2491466-1	L2491466-2	
				18-Aug-20	18-Aug-20	
pH	0.10	pH units	ALS	8.18	8.18	N/A
Total Suspended Solids	2.0	mg/L	ALS	5.2	5.2	N/A
Total Dissolved Solids	20	mg/L	ALS	266	285	7.1
Turbidity	0.10	NTU	ALS	5.12	5.04	1.6
Lead (Pb)- Total	0.000050	mg/L	ALS	0.00095	0.00091	4.2
Oil and Grease, Total	5.0	mg/L	ALS	<5.0	<5.0	N/A
Benzene	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Ethylbenzene	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Toluene	0.00050/0.00045	mg/L	ALS	<0.00050	<0.00050	N/A
o-Xylene	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
m+p-Xylenes	0.0010/0.00050	mg/L	ALS	<1.0	<1.0	N/A
Xylenes (Total)	0.0011/0.00075	mg/L	ALS	<1.1	<1.1	N/A
4-Bromofluorobenzene	-	%	ALS	96.4	96	N/A
1,4-Difluorobenzene	-	%	ALS	100.4	100.6	N/A
F1 (C6-C10)	0.1	mg/L	ALS	<0.10	<0.10	N/A
F1-BTEX	0.1	mg/L	ALS	<0.10	<0.10	N/A
F2 (C10-C16)	0.10/0.30	mg/L	ALS	<0.10	<0.10	N/A
F3 (C16-C34)	0.25/0.30	mg/L	ALS	<0.25	<0.25	N/A
F4 (C34-C50)	0.25/0.30	mg/L	ALS	<0.25	<0.25	N/A
Total Hydrocarbons (C6-C50)	0.38	mg/L	ALS	<0.38	<0.38	N/A
Parameter	LDL	Units	Laboratory	MS-C-G	MS-C-G01	% Difference
				L2493952-6	L2493952-7	
				23-Aug-20	23-Aug-20	
Conductivity	3.0	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	8.05	7.96	1.1
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	140	148	5.7
Turbidity	0.10	NTU	ALS	0.14	0.15	N/A
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2.0	mg/L	ALS	-	-	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Parameter	LDL	Units	Laboratory	MS-08	MS-0801	% Difference
				L2491370-1	L2491370-2	
				18-Aug-20	18-Aug-20	
Conductivity	3.0	umhos/cm	ALS	2890	2880	0.3
pH	0.10	pH units	ALS	7.80	7.84	0.5
Total Suspended Solids	2.0	mg/L	ALS	7.2	8.4	N/A
Total Dissolved Solids	10	mg/L	ALS	2730	2760	1.1
Turbidity	0.10	NTU	ALS	3.02	2.68	11.3
Acidity (as CaCO ₃)	1.3	mg/L	ALS	3.1	3.2	N/A
Alkalinity, Total (as CaCO ₃)	1.0	mg/L	ALS	30	30	0.0
Ammonia, Total (as N)	0.025	mg/L	ALS	2.87	2.88	0.3
Chloride (Cl)	2.50	mg/L	ALS	15.7	16.3	3.8
Fluoride (F)	0.10	mg/L	ALS	0.13	0.19	N/A
Nitrate (as N)	0.025	mg/L	ALS	21.7	22.4	3.2
Total Kjeldahl Nitrogen	0.15	mg/L	ALS	3.82	2.55	33.2
Phosphorus, Total	0.0030	mg/L	ALS	<0.0030	<0.0030	N/A
Sulfate (SO ₄)	1.50	mg/L	ALS	1850	1900	2.7
Dissolved Organic Carbon	0.50	mg/L	ALS	4.14	3.16	23.7
Total Organic Carbon	0.50	mg/L	ALS	2.85	2.9	1.8
Aluminum (Al)- Total	0.050	mg/L	ALS	<0.050	<0.050	N/A
Antimony (Sb)- Total	0.001	mg/L	ALS	<0.0010	<0.0010	N/A
Arsenic (As)- Total	0.001	mg/L	ALS	<0.0010	<0.0010	N/A
Barium (Ba)- Total	0.001	mg/L	ALS	0.0120	0.0125	4.2
Beryllium (Be)- Total	0.001	mg/L	ALS	<0.0010	<0.0010	N/A
Bismuth (Bi)- Total	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Boron (B)- Total	0.100	mg/L	ALS	<0.10	<0.10	N/A
Cadmium (Cd)- Total	0.0001	mg/L	ALS	<0.000050	<0.000050	N/A
Calcium (Ca)- Total	0.050	mg/L	ALS	175	182	4.0
Cesium (Cs)- Total	0.0001	mg/L	ALS	<0.00010	<0.00010	N/A
Chromium (Cr)- Total	0.005	mg/L	ALS	<0.0050	<0.0050	N/A
Copper (Cu)- Total	0.005	mg/L	ALS	<0.0050	<0.0050	N/A
Iron (Fe)- Total	0.010	mg/L	ALS	0.57	0.58	1.8
Lead (Pb)- Total	0.005	mg/L	ALS	<0.00050	<0.00050	N/A
Magnesium (Mg)- Total	0.0050	mg/L	ALS	0.012	0.013	N/A
Manganese (Mn)- Total	0.00010	mg/L	ALS	355	374	5.4
Mercury (Hg)- Total	0.0000050	mg/L	ALS	1.74	1.85	6.3
Molybdenum (Mo)- Total	0.000050	mg/L	ALS	<0.0000050	<0.0000050	N/A
Nickel (Ni)- Total	0.00050	mg/L	ALS	0.00081	0.00088	N/A
Potassium (K)- Total	0.050	mg/L	ALS	0.0138	0.0145	N/A
Selenium (Se)- Total	0.000050	mg/L	ALS	0.00281	0.00275	2.1
Sodium (Na)- Total	0.050	mg/L	ALS	5.01	5.09	1.6
Thallium (Tl)- Total	0.00010	mg/L	ALS	<0.00010	<0.00010	N/A
Uranium (U)- Total	0.000010	mg/L	ALS	0.00109	0.00108	0.9
Zinc (Zn)- Total	0.030	mg/L	ALS	<0.030	<0.030	N/A
Aluminum (Al)- Dissolved	0.050	mg/L	ALS	<0.050	<0.050	N/A
Arsenic (As)- Dissolved	0.0010	mg/L	ALS	<0.0010	<0.0010	N/A
Cadmium (Cd)- Dissolved	0.0000050	mg/L	ALS	<0.0000050	<0.0000050	N/A
Calcium (Ca)- Dissolved	0.000050	mg/L	ALS	167	171	2.4
Copper (Cu)- Dissolved	0.050	mg/L	ALS	<0.0020	<0.0020	N/A
Iron (Fe)- Dissolved	0.10	mg/L	ALS	<0.10	<0.10	N/A
Lead (Pb)- Dissolved	0.00050	mg/L	ALS	<0.00050	<0.00050	N/A
Magnesium (Mg)- Dissolved	0.0050	mg/L	ALS	314	317	1.0
Manganese (Mn)- Dissolved	0.00010	mg/L	ALS	1.60	1.62	1.3
Mercury (Hg)- Dissolved	0.0000050	mg/L	ALS	<0.0000050	<0.0000050	N/A
Molybdenum (Mo)- Dissolved	0.000050	mg/L	ALS	0.00083	0.00081	2.4
Nickel (Ni)- Dissolved	0.00050	mg/L	ALS	0.0137	0.0133	2.9
Potassium (K)- Dissolved	0.050	mg/L	ALS	5.95	5.93	0.3
Selenium (Se)- Dissolved	0.000050	mg/L	ALS	0.00254	0.00254	0.0
Sodium (Na)- Dissolved	0.050	mg/L	ALS	4.31	4.26	1.2
Thallium (Tl)- Dissolved	0.00010	mg/L	ALS	<0.00010	<0.00010	N/A
Uranium (U)- Dissolved	0.0010	mg/L	ALS	0.001	0.00093	N/A
Zinc (Zn)- Dissolved	0.010	mg/L	ALS	<0.010	<0.010	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
	No Visible Sheen		ALS	No Visible Sheen	No Visible Sheen	N/A
Acute Toxicity	-	-	-	Not Acutely Toxic	-	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Parameter	LDL	Units	Laboratory	MS-C-H	MS-C-H01	% Difference
				L2485627-8	L2485627-9	
				5-Aug-20	5-Aug-20	
Conductivity	3.0	umhos/cm	ALS	278	276	0.7
pH	0.1	pH units	ALS	8.31	8.39	1.0
Total Suspended Solids	2.0	mg/L	ALS	<3.0	<3.0	N/A
Total Dissolved Solids	10	mg/L	ALS	143	143	0.0
Turbidity	0.1	NTU	ALS	0.39	0.47	N/A
Ammonia, Total (as N)	0.01	mg/L	ALS	<0.010	<0.010	N/A
Nitrate (as N)	0.02	mg/L	ALS	0.028	0.031	N/A
Oil and Grease, Total	2	mg/L	ALS	<2.0	<2.0	N/A
Parameter	LDL	Units	Laboratory	MQ-C-A	MQ-C-A01	% Difference
				L2493952-14	L2493952-13	
				23-Aug-20	23-Aug-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	8.20	8.19	0.1
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	222	219	1.4
Turbidity	0.1	NTU	ALS	<0.10	<0.10	N/A
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MQ-C-B	MQ-C-B01	% Difference
				L2489338-12	L2489338-13	
				16-Aug-20	16-Aug-20	
Conductivity	3.0	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	8.13	8.13	0.0
Total Suspended Solids	2.0	mg/L	ALS	2.0	2.5	N/A
Total Dissolved Solids	10	mg/L	ALS	362	362	0.0
Turbidity	0.1	NTU	ALS	2.39	2.38	0.4
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MP-05	MP-0501	% Difference
				L2504433-1	L2504433-2	
				14-Sep-20	14-Sep-20	
Hardness (as CaCO3)	0.50	mg/L	ALS	533	525	1.5
pH	0.10	pH units	ALS	8.38	8.39	0.1
Total Suspended Solids	3.0	mg/L	ALS	4	5.6	N/A
Total Dissolved Solids	20	mg/L	ALS	887	884	0.3
Turbidity	0.10	NTU	ALS	4.92	5.39	9.6
Alkalinity, Total (as CaCO3)	10	mg/L	ALS	212	212	0.0
Ammonia, Total (as N)	0.010	mg/L	ALS	0.068	0.069	1.5
Chloride (Cl)	2.5	mg/L	ALS	199	204	2.5
Fluoride (F)	0.10	mg/L	ALS	0.21	0.18	N/A
Nitrate (as N)	0.10	mg/L	ALS	3.95	3.99	1.0
Total Kjeldahl Nitrogen	0.15	mg/L	ALS	0.53	0.57	N/A
Phosphorus, Total	0.0030	mg/L	ALS	0.0039	0.0068	N/A
Sulfate (SO4)	1.5	mg/L	ALS	232	238	2.6
Dissolved Organic Carbon	0.50	mg/L	ALS	5.99	6.17	3.0
Total Organic Carbon	0.50	mg/L	ALS	8.21	8.53	3.9
Aluminum (Al)-Total	0.0050	mg/L	ALS	0.0485	0.0891	83.7
Arsenic (As)-Total	0.00010	mg/L	ALS	0.00027	0.00029	N/A
Cadmium (Cd)-Total	0.0000050	mg/L	ALS	<0.0000050	<0.0000050	N/A
Calcium (Ca)-Total	0.050	mg/L	ALS	93.2	92.2	1.1
Copper (Cu)-Total	0.00050	mg/L	ALS	0.00181	0.00199	N/A
Iron (Fe)-Total	0.010	mg/L	ALS	0.132	0.226	71.2
Lead (Pb)-Total	0.00005	mg/L	ALS	0.000096	0.000131	N/A
Magnesium (Mg)-Total	0.0050	mg/L	ALS	67	67.9	1.3
Manganese (Mn)-Total	0.00050	mg/L	ALS	0.134	0.138	3.0
Mercury (Hg)-Total	0.0000050	mg/L	ALS	<0.0000050	<0.0000050	N/A
Molybdenum (Mo)-Total	0.000050	mg/L	ALS	0.00329	0.00319	3.0
Nickel (Ni)-Total	0.00050	mg/L	ALS	0.00234	0.0025	N/A
Potassium (K)-Total	0.050	mg/L	ALS	9.35	9.52	1.8
Selenium (Se)-Total	0.000050	mg/L	ALS	0.000323	0.000343	6.2
Sodium (Na)-Total	0.050	mg/L	ALS	84.1	84.9	1.0
Thallium (Tl)-Total	0.000010	mg/L	ALS	0.000012	0.000013	N/A
Uranium (U)-Total	0.000010	mg/L	ALS	0.0627	0.0615	1.9
Zinc (Zn)-Total	0.0030	mg/L	ALS	0.0077	0.0084	N/A
Aluminum (Al)-Dissolved	0.0050	mg/L	ALS	0.0073	0.0083	N/A
Arsenic (As)-Dissolved	0.00010	mg/L	ALS	0.0003	0.00028	N/A
Cadmium (Cd)-Dissolved	0.0000050	mg/L	ALS	<0.0000050	<0.0000050	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Calcium (Ca)-Dissolved	0.050	mg/L	ALS	97.1	97.7	0.6
Copper (Cu)-Dissolved	0.00020	mg/L	ALS	0.00185	0.00189	2.2
Iron (Fe)-Dissolved	0.010	mg/L	ALS	0.027	0.029	N/A
Lead (Pb)-Dissolved	0.000050	mg/L	ALS	<0.000050	<0.000050	N/A
Magnesium (Mg)-Dissolved	0.0050	mg/L	ALS	70.5	68.1	3.4
Manganese (Mn)-Dissolved	0.00050	mg/L	ALS	0.134	0.133	0.7
Mercury (Hg)-Dissolved	0.0000050	mg/L	ALS	<0.0000050	<0.0000050	N/A
Molybdenum (Mo)-Dissolved	0.000050	mg/L	ALS	0.00327	0.00334	2.1
Nickel (Ni)-Dissolved	0.00050	mg/L	ALS	0.0023	0.00231	N/A
Potassium (K)-Dissolved	0.050	mg/L	ALS	9.79	9.63	1.6
Selenium (Se)-Dissolved	0.000050	mg/L	ALS	0.000458	0.000343	25.1
Sodium (Na)-Dissolved	0.050	mg/L	ALS	88.2	86.7	1.7
Thallium (Tl)-Dissolved	0.000010	mg/L	ALS	0.000014	0.000012	N/A
Uranium (U)-Dissolved	0.000010	mg/L	ALS	0.0613	0.0607	1.0
Zinc (Zn)-Dissolved	0.0010	mg/L	ALS	0.0068	0.0072	5.9
Oil and Grease	-	-	ALS	No Visible Sheen	No Visible Sheen	N/A
Toxicity	-	-	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MP-C-H	MP-C-H01	% Difference
				L2500073-1	L2500073-2	
				7-Sep-20	7-Sep-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	8.27	8.30	0.4
Total Suspended Solids	2	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	214	214	0.0
Turbidity	0.1	NTU	ALS	0.19	0.19	N/A
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-C-A	MS-C-A01	% Difference
				L2497354-11	L2497354-12	
				1-Sep-20	1-Sep-20	
Conductivity	3.0	umhos/cm	ALS	240	240	0.0
pH	0.10	pH units	ALS	8.16	8.17	0.1
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	136	133	2.2
Turbidity	0.10	NTU	ALS	0.2	0.21	N/A
Ammonia, Total (as N)	0.01	mg/L	ALS	<0.010	<0.010	N/A
Nitrate (as N)	0.02	mg/L	ALS	0.203	0.207	2.0
Oil and Grease, Total	2	mg/L	ALS	<2.0	<2.0	N/A
Parameter	LDL	Units	Laboratory	MS-C-A	MS-C-A01	% Difference
				L2499560-10	L2499560-11	
				7-Sep-20	7-Sep-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.1	pH units	ALS	7.98	7.98	0.0
Total Suspended Solids	2	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	121	129	6.6
Turbidity	0.1	NTU	ALS	3.11	0.19	93.9
Ammonia, Total (as N)	0.01	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.02	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-C-E	MS-C-E01	% Difference
				L2497354-3	L2497354-4	
				1-Sep-20	1-Sep-20	
Conductivity	3.0	umhos/cm	ALS	1210	1210	0.0
pH	0.10	pH units	ALS	8.09	8.07	0.2
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	924	923	0.1
Turbidity	0.10	NTU	ALS	0.63	0.6	4.8
Ammonia, Total (as N)	0.010	mg/L	ALS	0.033	<0.010	N/A
Nitrate (as N)	0.020	mg/L	ALS	9.34	9.14	2.1
Oil and Grease, Total	2	mg/L	ALS	<2.0	<2.0	N/A
Parameter	LDL	Units	Laboratory	MS-C-F	MS-C-F01	% Difference
				L2503076-7	L2503076-8	
				14-Sep-20	14-Sep-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	8.13	8.13	0.0
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	139	138	0.7
Turbidity	0.10	NTU	ALS	0.71	0.63	11.3
Ammonia, Total (as N)	0.010	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.020	mg/L	ALS	-	-	N/A

Table 7.3: Field QA/QC Water Quality Data Analysis - Field Duplicates - 2020

% Difference Comparison						
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MQ-C-B	MQ-C-B01	% Difference
				L2499560-3	L2499560-4	
				7-Sep-20	7-Sep-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	8.10	8.05	0.6
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	308	306	0.6
Turbidity	0.10	NTU	ALS	1.48	2.00	35.1
Ammonia, Total (as N)	0.010	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.020	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MQ-C-B	MQ-C-B01	% Difference
				L2503076-3	L2503076-4	
				14-Sep-20	14-Sep-20	
Conductivity	3	umhos/cm	ALS	-	-	N/A
pH	0.10	pH units	ALS	7.71	7.70	0.1
Total Suspended Solids	2.0	mg/L	ALS	<2.0	<2.0	N/A
Total Dissolved Solids	10	mg/L	ALS	281	272	3.2
Turbidity	0.10	NTU	ALS	1.27	1.26	0.8
Ammonia, Total (as N)	0.010	mg/L	ALS	-	-	N/A
Nitrate (as N)	0.020	mg/L	ALS	-	-	N/A
Oil and Grease, Total	2	mg/L	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MP-01	MP-0101	% Difference
				L2526083-2	L2526083-3	
				4-Nov-20	4-Nov-20	
pH	0.10	pH units	ALS	7.69	7.75	0.8
Total Suspended Solids	3.0	mg/L	ALS	<3.0	<3.0	N/A
Ammonia, Total (as N)	0.010	mg/L	ALS	0.020	0.020	N/A
Total Kjeldahl Nitrogen	0.050	mg/L	ALS	1.34	1.19	11.2
Phosphorus, Total	0.030	mg/L	ALS	9.30	9.18	1.3
Fecal Coliforms	-	CFU/100 mL	ALS	0	0	N/A
BOD	2	mg/L	ALS	<2.0	<2.0	N/A
Oil and Grease, Total	2	mg/L	ALS	<2.0	<2.0	N/A
Toxicity	-	-	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MS-01	MS-0101	% Difference
				L2526115-1	L2526115-3	
				4-Nov-20	4-Nov-20	
pH	0.10	pH units	ALS	7.60	7.63	0.4
Total Suspended Solids	3.0	mg/L	ALS	<3.0	<3.0	N/A
Ammonia, Total (as N)	0.010	mg/L	ALS	0.100	0.103	3.0
Total Kjeldahl Nitrogen	0.050	mg/L	ALS	4.80	0.610	87.3
Phosphorus, Total	0.0030	mg/L	ALS	0.675	0.660	2.2
Fecal Coliforms	-	CFU/100 mL	ALS	0	0	N/A
BOD	2	mg/L	ALS	<2.0	<2.0	N/A
Oil and Grease, Total	5	mg/L	ALS	<5.0	<5.0	N/A
Toxicity	-	-	ALS	-	-	N/A
Parameter	LDL	Units	Laboratory	MP-01B	MP-01B	% Difference
				L2541325-2	L2541325-3	
				15-Dec-20	15-Dec-20	
pH	0.10	pH units	ALS	7.97	8.06	1.1
Total Suspended Solids	3.0	mg/L	ALS	<3.0	<3.0	N/A
Ammonia, Total (as N)	0.010	mg/L	ALS	<0.010	0.076	N/A
Total Kjeldahl Nitrogen	0.050	mg/L	ALS	1.06	2.87	170.8
Phosphorus, Total	0.030	mg/L	ALS	9.48	9.86	4.0
Fecal Coliforms	-	CFU/100 mL	ALS	0	0	0.0
BOD	3.0/2.0	mg/L	ALS	<3.0	<2.0	N/A
Oil and Grease, Total	2.0	mg/L	ALS	<2.0	<2.0	N/A
Toxicity	-	-	ALS	-	-	N/A

Note:

RPD calculated when average of two samples > 5x LDL.

Table 7.4: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - 2020

FIELD AND TRAVEL BLANKS						
Sample Number	Sample ID	Date Sampled	Parameter	Result	Unit	Lab
L2453047-1	MP-C-B	25-May-20	pH	7.93	pH units	ALS
L2453047-1	MP-C-B	25-May-20	Total Suspended Solids	13.4	mg/L	ALS
L2453047-1	MP-C-B	25-May-20	Total Dissolved Solids	168	mg/L	ALS
L2453047-1	MP-C-B	25-May-20	Turbidity	45.7	NTU	ALS
L2453047-2	MP-C-B03	25-May-20	pH	5.76	pH units	ALS
L2453047-2	MP-C-B03	25-May-20	Total Suspended Solids	<2.0	mg/L	ALS
L2453047-2	MP-C-B03	25-May-20	Total Dissolved Solids	<10	mg/L	ALS
L2453047-2	MP-C-B03	25-May-20	Turbidity	0.25	NTU	ALS
L2451387-1	MS-C-E	25-May-20	Conductivity	85.1	umhos/cm	ALS
L2451387-1	MS-C-E	25-May-20	pH	7.68	pH units	ALS
L2451387-1	MS-C-E	25-May-20	Total Suspended Solids	4.4	mg/L	ALS
L2451387-1	MS-C-E	25-May-20	Total Dissolved Solids	43	mg/L	ALS
L2451387-1	MS-C-E	25-May-20	Turbidity	40.6	NTU	ALS
L2451387-1	MS-C-E	25-May-20	Ammonia, Total (as N)	0.027	mg/L	ALS
L2451387-1	MS-C-E	25-May-20	Nitrate (as N)	0.123	mg/L	ALS
L2451387-1	MS-C-E	25-May-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2451387-2	MS-C-E02	25-May-20	Conductivity	<3.0	umhos/cm	ALS
L2451387-2	MS-C-E02	25-May-20	pH	5.80	pH units	ALS
L2451387-2	MS-C-E02	25-May-20	Total Suspended Solids	<2.0	mg/L	ALS
L2451387-2	MS-C-E02	25-May-20	Total Dissolved Solids	<10	mg/L	ALS
L2451387-2	MS-C-E02	25-May-20	Turbidity	<0.10	NTU	ALS
L2451387-2	MS-C-E02	25-May-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2451387-2	MS-C-E02	25-May-20	Nitrate (as N)	<0.020	mg/L	ALS
L2451387-2	MS-C-E02	25-May-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2457153-1	MQ-C-A	5-Jun-20	pH	7.57	pH units	ALS
L2457153-1	MQ-C-A	5-Jun-20	Total Suspended Solids	<2.0	mg/L	ALS
L2457153-1	MQ-C-A	5-Jun-20	Total Dissolved Solids	72	mg/L	ALS
L2457153-1	MQ-C-A	5-Jun-20	Turbidity	7.15	NTU	ALS
L2457153-2	MQ-C-A03	5-Jun-20	pH	5.86	pH units	ALS
L2457153-2	MQ-C-A03	5-Jun-20	Total Suspended Solids	<2.0	mg/L	ALS
L2457153-2	MQ-C-A03	5-Jun-20	Total Dissolved Solids	15	mg/L	ALS
L2457153-2	MQ-C-A03	5-Jun-20	Turbidity	<0.10	NTU	ALS
L2471945-11	MS-C-B	6-Jul-20	Conductivity	167	umhos/cm	ALS
L2471945-11	MS-C-B	6-Jul-20	pH	7.18	pH units	ALS
L2471945-11	MS-C-B	6-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2471945-11	MS-C-B	6-Jul-20	Total Dissolved Solids	93	mg/L	ALS
L2471945-11	MS-C-B	6-Jul-20	Turbidity	2.69	NTU	ALS
L2471945-11	MS-C-B	6-Jul-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2471945-11	MS-C-B	6-Jul-20	Nitrate (as N)	0.220	mg/L	ALS
L2471945-11	MS-C-B	6-Jul-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2471945-12	MS-C-B03	6-Jul-20	Conductivity	<3.0	umhos/cm	ALS
L2471945-12	MS-C-B03	6-Jul-20	pH	6.47	pH units	ALS
L2471945-12	MS-C-B03	6-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2471945-12	MS-C-B03	6-Jul-20	Total Dissolved Solids	<10	mg/L	ALS
L2471945-12	MS-C-B03	6-Jul-20	Turbidity	0.23	NTU	ALS
L2471945-12	MS-C-B03	6-Jul-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2471945-12	MS-C-B03	6-Jul-20	Nitrate (as N)	0.035	mg/L	ALS
L2471945-12	MS-C-B03	6-Jul-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2476158-2	MP-C-B01	13-Jul-20	pH	8.12	pH units	ALS
L2476158-2	MP-C-B01	13-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2476158-2	MP-C-B01	13-Jul-20	Total Dissolved Solids	558	mg/L	ALS
L2476158-2	MP-C-B01	13-Jul-20	Turbidity	0.73	NTU	ALS
L2476158-1	MP-C-B0103	13-Jul-20	pH	5.79	pH units	ALS
L2476158-1	MP-C-B0103	13-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2476158-1	MP-C-B0103	13-Jul-20	Total Dissolved Solids	<10	mg/L	ALS
L2476158-1	MP-C-B0103	13-Jul-20	Turbidity	6.41	NTU	ALS
L2478539-5	MP-Q1-01	20-Jul-20	Conductivity	205	umhos/cm	ALS
L2478539-5	MP-Q1-01	20-Jul-20	pH	7.91	pH units	ALS
L2478539-5	MP-Q1-01	20-Jul-20	Total Suspended Solids	5.8	mg/L	ALS
L2478539-5	MP-Q1-01	20-Jul-20	Total Dissolved Solids	205	mg/L	ALS
L2478539-5	MP-Q1-01	20-Jul-20	Turbidity	12.6	NTU	ALS
L2478539-5	MP-Q1-01	20-Jul-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2478539-5	MP-Q1-01	20-Jul-20	Nitrate (as N)	0.274	mg/L	ALS
L2478539-5	MP-Q1-01	20-Jul-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2478539-6	MP-Q1-0103	20-Jul-20	Conductivity	<3.0	umhos/cm	ALS
L2478539-6	MP-Q1-0103	20-Jul-20	pH	5.81	pH units	ALS
L2478539-6	MP-Q1-0103	20-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2478539-6	MP-Q1-0103	20-Jul-20	Total Dissolved Solids	16	mg/L	ALS
L2478539-6	MP-Q1-0103	20-Jul-20	Turbidity	<0.10	NTU	ALS
L2478539-6	MP-Q1-0103	20-Jul-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2478539-6	MP-Q1-0103	20-Jul-20	Nitrate (as N)	<0.020	mg/L	ALS
L2478539-6	MP-Q1-0103	20-Jul-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2479073-5	MS-C-H	23-Jul-20	pH	8.03	pH units	ALS
L2479073-5	MS-C-H	23-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2479073-5	MS-C-H	23-Jul-20	Total Dissolved Solids	130	mg/L	ALS
L2479073-5	MS-C-H	23-Jul-20	Turbidity	0.24	NTU	ALS

Table 7.4: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - 2020

FIELD AND TRAVEL BLANKS						
Sample Number	Sample ID	Date Sampled	Parameter	Result	Unit	Lab
L2479073-4	MS-C-H02	23-Jul-20	pH	6.45	pH units	ALS
L2479073-4	MS-C-H02	23-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2479073-4	MS-C-H02	23-Jul-20	Total Dissolved Solids	13	mg/L	ALS
L2479073-4	MS-C-H02	23-Jul-20	Turbidity	<0.10	NTU	ALS
L2480169-5	MS-C-H	27-Jul-20	pH	8.10	pH units	ALS
L2480169-5	MS-C-H	27-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2480169-5	MS-C-H	27-Jul-20	Total Dissolved Solids	122	mg/L	ALS
L2480169-5	MS-C-H	27-Jul-20	Turbidity	0.44	NTU	ALS
L2480169-17	MS-C-H02	27-Jul-20	pH	6.37	pH units	ALS
L2480169-17	MS-C-H02	27-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2480169-17	MS-C-H02	27-Jul-20	Total Dissolved Solids	<10	mg/L	ALS
L2480169-17	MS-C-H02	27-Jul-20	Turbidity	<0.10	NTU	ALS
L2480169-13	MQ-C-B	27-Jul-20	pH	8.01	pH units	ALS
L2480169-13	MQ-C-B	27-Jul-20	Total Suspended Solids	2.9	mg/L	ALS
L2480169-13	MQ-C-B	27-Jul-20	Total Dissolved Solids	321	mg/L	ALS
L2480169-13	MQ-C-B	27-Jul-20	Turbidity	3.46	NTU	ALS
L2480169-16	MQ-C-B03	27-Jul-20	pH	6.62	pH units	ALS
L2480169-16	MQ-C-B03	27-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2480169-16	MQ-C-B03	27-Jul-20	Total Dissolved Solids	<10	mg/L	ALS
L2480169-16	MQ-C-B03	27-Jul-20	Turbidity	<0.10	NTU	ALS
L2480180-4	MP-C-J	27-Jul-20	pH	7.88	pH units	ALS
L2480180-4	MP-C-J	27-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2480180-4	MP-C-J	27-Jul-20	Total Dissolved Solids	297	mg/L	ALS
L2480180-4	MP-C-J	27-Jul-20	Turbidity	0.45	NTU	ALS
L2480180-5	MP-C-J02	27-Jul-20	pH	6.24	pH units	ALS
L2480180-5	MP-C-J02	27-Jul-20	Total Suspended Solids	<2.0	mg/L	ALS
L2480180-5	MP-C-J02	27-Jul-20	Total Dissolved Solids	<10	mg/L	ALS
L2480180-5	MP-C-J02	27-Jul-20	Turbidity	<0.10	NTU	ALS
L2485407-1	MS-06	4-Aug-20	Conductivity	1590	umhos/cm	ALS
L2485407-1	MS-06	4-Aug-20	Hardness (as CaCO3)	917	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	pH	7.26	pH units	ALS
L2485407-1	MS-06	4-Aug-20	Total Suspended Solids	6.0	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Total Dissolved Solids	1520	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Turbidity	7.08	NTU	ALS
L2485407-1	MS-06	4-Aug-20	Acidity (as CaCO3)	2.3	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Alkalinity, Total (as CaCO3)	13	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Ammonia, Total (as N)	0.272	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Chloride (Cl)	22.8	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Fluoride (F)	<0.10	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Nitrate (as N)	14.9	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Total Kjeldahl Nitrogen	0.82	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Phosphorus, Total	0.0302	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Sulfate (SO4)	952	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Dissolved Organic Carbon	1.17	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Total Organic Carbon	2.06	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Aluminum (Al)-Total	0.068	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Arsenic (As)-Total	<0.0010	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Cadmium (Cd)-Total	0.000206	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Calcium (Ca)-Total	77.9	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Copper (Cu)-Total	<0.0050	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Iron (Fe)-Total	0.16	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Lead (Pb)-Total	<0.00050	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Magnesium (Mg)-Total	197	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Manganese (Mn)-Total	7.87	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Mercury (Hg)-Total	<0.0000050	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Molybdenum (Mo)-Total	0.00113	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Nickel (Ni)-Total	0.0361	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Potassium (K)-Total	11.3	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Selenium (Se)-Total	0.00210	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Sodium (Na)-Total	8.98	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Thallium (Tl)-Total	0.00010	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Uranium (U)-Total	0.00269	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Zinc (Zn)-Total	<0.030	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Aluminum (Al)-Dissolved	<0.050	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Arsenic (As)-Dissolved	<0.0010	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Cadmium (Cd)-Dissolved	0.000205	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Calcium (Ca)-Dissolved	67.9	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Copper (Cu)-Dissolved	<0.0020	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Iron (Fe)-Dissolved	<0.10	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Lead (Pb)-Dissolved	<0.00050	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Magnesium (Mg)-Dissolved	182	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Manganese (Mn)-Dissolved	7.36	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Mercury (Hg)-Dissolved	<0.0000050	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Molybdenum (Mo)-Dissolved	0.00121	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Nickel (Ni)-Dissolved	0.0324	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Potassium (K)-Dissolved	10.2	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Selenium (Se)-Dissolved	0.00209	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Sodium (Na)-Dissolved	7.91	mg/L	ALS

Table 7.4: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - 2020

FIELD AND TRAVEL BLANKS						
Sample Number	Sample ID	Date Sampled	Parameter	Result	Unit	Lab
L2485407-1	MS-06	4-Aug-20	Thallium (Tl)-Dissolved	<0.00010	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Uranium (U)-Dissolved	0.00243	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Zinc (Zn)-Dissolved	<0.010	mg/L	ALS
L2485407-1	MS-06	4-Aug-20	Ra-226	<0.0095	Bq/L	ALS
L2485407-2	MS-0602	4-Aug-20	Conductivity	<3.0	umhos/cm	ALS
L2485407-2	MS-0602	4-Aug-20	Hardness (as CaCO3)	<0.50	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	pH	5.85	pH units	ALS
L2485407-2	MS-0602	4-Aug-20	Total Suspended Solids	<3.0	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Total Dissolved Solids	<10	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Turbidity	0.58	NTU	ALS
L2485407-2	MS-0602	4-Aug-20	Acidity (as CaCO3)	<2.0	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Alkalinity, Total (as CaCO3)	<10	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Chloride (Cl)	<0.50	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Fluoride (F)	<0.020	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Nitrate (as N)	<0.020	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Total Kjeldahl Nitrogen	<0.15	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Phosphorus, Total	<0.0030	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Sulfate (SO4)	<0.30	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Dissolved Organic Carbon	0.71	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Total Organic Carbon	1.07	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Aluminum (Al)-Total	<0.0050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Arsenic (As)-Total	<0.00010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Cadmium (Cd)-Total	<0.0000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Calcium (Ca)-Total	<0.050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Copper (Cu)-Total	<0.00050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Iron (Fe)-Total	<0.010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Lead (Pb)-Total	<0.000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Magnesium (Mg)-Total	0.0093	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Manganese (Mn)-Total	<0.00050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Mercury (Hg)-Total	<0.0000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Molybdenum (Mo)-Total	<0.000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Nickel (Ni)-Total	<0.00050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Potassium (K)-Total	<0.050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Selenium (Se)-Total	<0.000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Sodium (Na)-Total	<0.050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Thallium (Tl)-Total	<0.000010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Uranium (U)-Total	<0.000010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Zinc (Zn)-Total	<0.0030	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Aluminum (Al)-Dissolved	<0.0050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Arsenic (As)-Dissolved	<0.00010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Cadmium (Cd)-Dissolved	<0.0000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Calcium (Ca)-Dissolved	<0.050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Copper (Cu)-Dissolved	<0.00020	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Iron (Fe)-Dissolved	<0.010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Lead (Pb)-Dissolved	<0.000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Magnesium (Mg)-Dissolved	<0.0050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Manganese (Mn)-Dissolved	<0.00050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Mercury (Hg)-Dissolved	<0.0000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Molybdenum (Mo)-Dissolved	<0.000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Nickel (Ni)-Dissolved	<0.00050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Potassium (K)-Dissolved	<0.050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Selenium (Se)-Dissolved	<0.000050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Sodium (Na)-Dissolved	<0.050	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Thallium (Tl)-Dissolved	<0.000010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Uranium (U)-Dissolved	<0.000010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Zinc (Zn)-Dissolved	<0.0010	mg/L	ALS
L2485407-2	MS-0602	4-Aug-20	Ra-226	<0.0067	Bq/L	ALS
L2485369-1	MP-01	5-Aug-20	pH	7.8	pH units	ALS
L2485369-1	MP-01	5-Aug-20	Total Suspended Solids	<3.0	mg/L	ALS
L2485369-1	MP-01	5-Aug-20	Ammonia, Total (as N)	0.047	mg/L	ALS
L2485369-1	MP-01	5-Aug-20	Total Kjeldahl Nitrogen	0.39	mg/L	ALS
L2485369-1	MP-01	5-Aug-20	Phosphorus, Total	12.1	mg/L	ALS
L2485369-1	MP-01	5-Aug-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2485369-1	MP-01	5-Aug-20	BOD	<2.0	mg/L	ALS
L2485369-1	MP-01	5-Aug-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2485369-3	MP-0102	5-Aug-20	pH	5.75	pH units	ALS
L2485369-3	MP-0102	5-Aug-20	Total Suspended Solids	<3.0	mg/L	ALS
L2485369-3	MP-0102	5-Aug-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2485369-3	MP-0102	5-Aug-20	Total Kjeldahl Nitrogen	<0.15	mg/L	ALS
L2485369-3	MP-0102	5-Aug-20	Phosphorus, Total	<0.0030	mg/L	ALS
L2485369-3	MP-0102	5-Aug-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2485369-3	MP-0102	5-Aug-20	BOD	<2.0	mg/L	ALS
L2485369-3	MP-0102	5-Aug-20	Oil and Grease, Total	2.9	mg/L	ALS

Table 7.4: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - 2020

FIELD AND TRAVEL BLANKS						
Sample Number	Sample ID	Date Sampled	Parameter	Result	Unit	Lab
L2485422-1	MP-01B	5-Aug-20	pH	8.31	pH units	ALS
L2485422-1	MP-01B	5-Aug-20	Total Suspended Solids	<3.0	mg/L	ALS
L2485422-1	MP-01B	5-Aug-20	Ammonia, Total (as N)	0.028	mg/L	ALS
L2485422-1	MP-01B	5-Aug-20	Total Kjeldahl Nitrogen	1.21	mg/L	ALS
L2485422-1	MP-01B	5-Aug-20	Phosphorus, Total	7.33	mg/L	ALS
L2485422-1	MP-01B	5-Aug-20	Fecal Coliforms	1	CFU/100 mL	ALS
L2485422-1	MP-01B	5-Aug-20	BOD	<2.0	mg/L	ALS
L2485422-1	MP-01B	5-Aug-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2485422-3	MP-01B02	5-Aug-20	pH	5.73	pH units	ALS
L2485422-3	MP-01B02	5-Aug-20	Total Suspended Solids	<3.0	mg/L	ALS
L2485422-3	MP-01B02	5-Aug-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2485422-3	MP-01B02	5-Aug-20	Total Kjeldahl Nitrogen	<0.15	mg/L	ALS
L2485422-3	MP-01B02	5-Aug-20	Phosphorus, Total	<0.0030	mg/L	ALS
L2485422-3	MP-01B02	5-Aug-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2485422-3	MP-01B02	5-Aug-20	BOD	<2.0	mg/L	ALS
L2485422-3	MP-01B02	5-Aug-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2485339-1	MS-01	5-Aug-20	pH	7.42	pH units	ALS
L2485339-1	MS-01	5-Aug-20	Total Suspended Solids	3.4	mg/L	ALS
L2485339-1	MS-01	5-Aug-20	Ammonia, Total (as N)	0.024	mg/L	ALS
L2485339-1	MS-01	5-Aug-20	Total Kjeldahl Nitrogen	1.28	mg/L	ALS
L2485339-1	MS-01	5-Aug-20	Phosphorus, Total	1.03	mg/L	ALS
L2485339-1	MS-01	5-Aug-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2485339-1	MS-01	5-Aug-20	BOD	<2.0	mg/L	ALS
L2485339-1	MS-01	5-Aug-20	Oil and Grease, Total	<5.0	mg/L	ALS
L2485339-3	MS-0102	5-Aug-20	pH	5.89	pH units	ALS
L2485339-3	MS-0102	5-Aug-20	Total Suspended Solids	<3.0	mg/L	ALS
L2485339-3	MS-0102	5-Aug-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2485339-3	MS-0102	5-Aug-20	Total Kjeldahl Nitrogen	<0.15	mg/L	ALS
L2485339-3	MS-0102	5-Aug-20	Phosphorus, Total	<0.0030	mg/L	ALS
L2485339-3	MS-0102	5-Aug-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2485339-3	MS-0102	5-Aug-20	BOD	<2.0	mg/L	ALS
L2485339-3	MS-0102	5-Aug-20	Oil and Grease, Total	<5.0	mg/L	ALS
L2485627-6	MS-C-G	5-Aug-20	Conductivity	268	umhos/cm	ALS
L2485627-6	MS-C-G	5-Aug-20	pH	8.21	pH units	ALS
L2485627-6	MS-C-G	5-Aug-20	Total Suspended Solids	<3.0	mg/L	ALS
L2485627-6	MS-C-G	5-Aug-20	Total Dissolved Solids	152	mg/L	ALS
L2485627-6	MS-C-G	5-Aug-20	Turbidity	0.17	NTU	ALS
L2485627-6	MS-C-G	5-Aug-20	Ammonia, Total (as N)	0.117	mg/L	ALS
L2485627-6	MS-C-G	5-Aug-20	Nitrate (as N)	5.18	mg/L	ALS
L2485627-6	MS-C-G	5-Aug-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2485627-7	MS-C-G02	5-Aug-20	Conductivity	<3.0	umhos/cm	ALS
L2485627-7	MS-C-G02	5-Aug-20	pH	5.68	pH units	ALS
L2485627-7	MS-C-G02	5-Aug-20	Total Suspended Solids	<3.0	mg/L	ALS
L2485627-7	MS-C-G02	5-Aug-20	Total Dissolved Solids	<10	mg/L	ALS
L2485627-7	MS-C-G02	5-Aug-20	Turbidity	0.44	NTU	ALS
L2485627-7	MS-C-G02	5-Aug-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2485627-7	MS-C-G02	5-Aug-20	Nitrate (as N)	<0.020	mg/L	ALS
L2485627-7	MS-C-G02	5-Aug-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2486375-4	MS-C-E	10-Aug-20	pH	7.89	pH units	ALS
L2486375-4	MS-C-E	10-Aug-20	Total Suspended Solids	3.4	mg/L	ALS
L2486375-4	MS-C-E	10-Aug-20	Total Dissolved Solids	936	mg/L	ALS
L2486375-4	MS-C-E	10-Aug-20	Turbidity	0.67	NTU	ALS
L2486375-5	MS-C-E02	10-Aug-20	pH	7.90	pH units	ALS
L2486375-5	MS-C-E02	10-Aug-20	Total Suspended Solids	2.6	mg/L	ALS
L2486375-5	MS-C-E02	10-Aug-20	Total Dissolved Solids	922	mg/L	ALS
L2486375-5	MS-C-E02	10-Aug-20	Turbidity	0.72	NTU	ALS
L2493980-2	MP-C-B01	24-Aug-20	pH	8.01	pH units	ALS
L2493980-2	MP-C-B01	24-Aug-20	Total Suspended Solids	2	mg/L	ALS
L2493980-2	MP-C-B01	24-Aug-20	Total Dissolved Solids	711	mg/L	ALS
L2493980-2	MP-C-B01	24-Aug-20	Turbidity	0.23	NTU	ALS
L2493980-3	MP-C-B0103	24-Aug-20	pH	5.98	pH units	ALS
L2493980-3	MP-C-B0103	24-Aug-20	Total Suspended Solids	<2.0	mg/L	ALS
L2493980-3	MP-C-B0103	24-Aug-20	Total Dissolved Solids	712	mg/L	ALS
L2493980-3	MP-C-B0103	24-Aug-20	Turbidity	<0.10	NTU	ALS
L2499492-5	MP-C-H	1-Sep-20	Conductivity	402	umhos/cm	ALS
L2499492-5	MP-C-H	1-Sep-20	pH	8.36	pH units	ALS
L2499492-5	MP-C-H	1-Sep-20	Total Suspended Solids	<3.0	mg/L	ALS
L2499492-5	MP-C-H	1-Sep-20	Total Dissolved Solids	179	mg/L	ALS
L2499492-5	MP-C-H	1-Sep-20	Turbidity	0.76	NTU	ALS
L2499492-5	MP-C-H	1-Sep-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2499492-5	MP-C-H	1-Sep-20	Nitrate (as N)	0.234	mg/L	ALS
L2499492-5	MP-C-H	1-Sep-20	Oil and Grease, Total	<2.0	mg/L	ALS

Table 7.4: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - 2020

FIELD AND TRAVEL BLANKS						
Sample Number	Sample ID	Date Sampled	Parameter	Result	Unit	Lab
L2499492-6	MP-C-H03	1-Sep-20	Conductivity	<3.0	umhos/cm	ALS
L2499492-6	MP-C-H03	1-Sep-20	pH	6.18	pH units	ALS
L2499492-6	MP-C-H03	1-Sep-20	Total Suspended Solids	<3.0	mg/L	ALS
L2499492-6	MP-C-H03	1-Sep-20	Total Dissolved Solids	<10	mg/L	ALS
L2499492-6	MP-C-H03	1-Sep-20	Turbidity	1.2	NTU	ALS
L2499492-6	MP-C-H03	1-Sep-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2499492-6	MP-C-H03	1-Sep-20	Nitrate (as N)	<0.020	mg/L	ALS
L2499492-6	MP-C-H03	1-Sep-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2504436-4	MP-C-B	14-Sep-20	Conductivity	960	umhos/cm	ALS
L2504436-4	MP-C-B	14-Sep-20	pH	8.35	pH units	ALS
L2504436-4	MP-C-B	14-Sep-20	Total Suspended Solids	<3.0	mg/L	ALS
L2504436-4	MP-C-B	14-Sep-20	Total Dissolved Solids	533	mg/L	ALS
L2504436-4	MP-C-B	14-Sep-20	Turbidity	0.74	NTU	ALS
L2504436-4	MP-C-B	14-Sep-20	Ammonia, Total (as N)	0.101	mg/L	ALS
L2504436-4	MP-C-B	14-Sep-20	Nitrate (as N)	4.26	mg/L	ALS
L2504436-4	MP-C-B	14-Sep-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2504436-5	MP-C-B03	14-Sep-20	Conductivity	<3.0	umhos/cm	ALS
L2504436-5	MP-C-B03	14-Sep-20	pH	5.83	pH units	ALS
L2504436-5	MP-C-B03	14-Sep-20	Total Suspended Solids	<3.0	mg/L	ALS
L2504436-5	MP-C-B03	14-Sep-20	Total Dissolved Solids	<10	mg/L	ALS
L2504436-5	MP-C-B03	14-Sep-20	Turbidity	0.32	NTU	ALS
L2504436-5	MP-C-B03	14-Sep-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2504436-5	MP-C-B03	14-Sep-20	Nitrate (as N)	<0.020	mg/L	ALS
L2504436-5	MP-C-B03	14-Sep-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2505075-2	MP-01	16-Sep-20	pH	7.71	pH units	ALS
L2505075-2	MP-01	16-Sep-20	Total Suspended Solids	<3.0	mg/L	ALS
L2505075-2	MP-01	16-Sep-20	Ammonia, Total (as N)	0.104	mg/L	ALS
L2505075-2	MP-01	16-Sep-20	Total Kjeldahl Nitrogen	0.73	mg/L	ALS
L2505075-2	MP-01	16-Sep-20	Phosphorus, Total	8.93	mg/L	ALS
L2505075-2	MP-01	16-Sep-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2505075-2	MP-01	16-Sep-20	BOD	<2.0	mg/L	ALS
L2505075-2	MP-01	16-Sep-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2505075-3	MP-0103	16-Sep-20	pH	5.79	pH units	ALS
L2505075-3	MP-0103	16-Sep-20	Total Suspended Solids	<3.0	mg/L	ALS
L2505075-3	MP-0103	16-Sep-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2505075-3	MP-0103	16-Sep-20	Total Kjeldahl Nitrogen	<0.15	mg/L	ALS
L2505075-3	MP-0103	16-Sep-20	Phosphorus, Total	<0.0030	mg/L	ALS
L2505075-3	MP-0103	16-Sep-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2505075-3	MP-0103	16-Sep-20	BOD	<2.0	mg/L	ALS
L2505075-3	MP-0103	16-Sep-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2505065-2	MP-01B	16-Sep-20	pH	7.80	pH units	ALS
L2505065-2	MP-01B	16-Sep-20	Total Suspended Solids	<3.0	mg/L	ALS
L2505065-2	MP-01B	16-Sep-20	Ammonia, Total (as N)	7.43	mg/L	ALS
L2505065-2	MP-01B	16-Sep-20	Total Kjeldahl Nitrogen	15.7	mg/L	ALS
L2505065-2	MP-01B	16-Sep-20	Phosphorus, Total	16.3	mg/L	ALS
L2505065-2	MP-01B	16-Sep-20	Fecal Coliforms	18900	CFU/100 mL	ALS
L2505065-2	MP-01B	16-Sep-20	BOD	4.2	mg/L	ALS
L2505065-2	MP-01B	16-Sep-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2505065-3	MP-01B03	16-Sep-20	pH	5.75	pH units	ALS
L2505065-3	MP-01B03	16-Sep-20	Total Suspended Solids	<3.0	mg/L	ALS
L2505065-3	MP-01B03	16-Sep-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2505065-3	MP-01B03	16-Sep-20	Total Kjeldahl Nitrogen	<0.15	mg/L	ALS
L2505065-3	MP-01B03	16-Sep-20	Phosphorus, Total	<0.0030	mg/L	ALS
L2505065-3	MP-01B03	16-Sep-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2505065-3	MP-01B03	16-Sep-20	BOD	<2.0	mg/L	ALS
L2505065-3	MP-01B03	16-Sep-20	Oil and Grease, Total	<2.0	mg/L	ALS
L2504195-1	MS-01	16-Sep-20	pH	7.59	pH units	ALS
L2504195-1	MS-01	16-Sep-20	Total Suspended Solids	<2.0	mg/L	ALS
L2504195-1	MS-01	16-Sep-20	Ammonia, Total (as N)	0.026	mg/L	ALS
L2504195-1	MS-01	16-Sep-20	Total Kjeldahl Nitrogen	0.39	mg/L	ALS
L2504195-1	MS-01	16-Sep-20	Phosphorus, Total	1.70	mg/L	ALS
L2504195-1	MS-01	16-Sep-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2504195-1	MS-01	16-Sep-20	BOD	<2.0	mg/L	ALS
L2504195-1	MS-01	16-Sep-20	Oil and Grease, Total	<5.0	mg/L	ALS
L2504195-3	MS-0103	16-Sep-20	pH	5.82	pH units	ALS
L2504195-3	MS-0103	16-Sep-20	Total Suspended Solids	<2.0	mg/L	ALS
L2504195-3	MS-0103	16-Sep-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2504195-3	MS-0103	16-Sep-20	Total Kjeldahl Nitrogen	<0.15	mg/L	ALS
L2504195-3	MS-0103	16-Sep-20	Phosphorus, Total	<0.0030	mg/L	ALS
L2504195-3	MS-0103	16-Sep-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2504195-3	MS-0103	16-Sep-20	BOD	<2.0	mg/L	ALS
L2504195-3	MS-0103	16-Sep-20	Oil and Grease, Total	<5.0	mg/L	ALS

Table 7.4: Field QA/QC Water Quality Data Analysis - Field Blanks, and Travel Blanks - 2020

FIELD AND TRAVEL BLANKS						
Sample Number	Sample ID	Date Sampled	Parameter	Result	Unit	Lab
L2504318-1	MS-01B	16-Sep-20	pH	7.87	pH units	ALS
L2504318-1	MS-01B	16-Sep-20	Total Suspended Solids	4.0	mg/L	ALS
L2504318-1	MS-01B	16-Sep-20	Ammonia, Total (as N)	0.118	mg/L	ALS
L2504318-1	MS-01B	16-Sep-20	Total Kjeldahl Nitrogen	0.81	mg/L	ALS
L2504318-1	MS-01B	16-Sep-20	Phosphorus, Total	0.675	mg/L	ALS
L2504318-1	MS-01B	16-Sep-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2504318-1	MS-01B	16-Sep-20	BOD	<2.0	mg/L	ALS
L2504318-1	MS-01B	16-Sep-20	Oil and Grease, Total	<5.0	mg/L	ALS
L2504318-3	MS-01B03	16-Sep-20	pH	5.99	pH units	ALS
L2504318-3	MS-01B03	16-Sep-20	Total Suspended Solids	<2.0	mg/L	ALS
L2504318-3	MS-01B03	16-Sep-20	Ammonia, Total (as N)	<0.010	mg/L	ALS
L2504318-3	MS-01B03	16-Sep-20	Total Kjeldahl Nitrogen	<0.15	mg/L	ALS
L2504318-3	MS-01B03	16-Sep-20	Phosphorus, Total	<0.0030	mg/L	ALS
L2504318-3	MS-01B03	16-Sep-20	Fecal Coliforms	0	CFU/100 mL	ALS
L2504318-3	MS-01B03	16-Sep-20	BOD	<2.0	mg/L	ALS
L2504318-3	MS-01B03	16-Sep-20	Oil and Grease, Total	<5.0	mg/L	ALS
L2506231-1	MP-C-H	21-Sep-20	pH	8.08	pH units	ALS
L2506231-1	MP-C-H	21-Sep-20	Total Suspended Solids	<2.0	mg/L	ALS
L2506231-1	MP-C-H	21-Sep-20	Total Dissolved Solids	229	mg/L	ALS
L2506231-1	MP-C-H	21-Sep-20	Turbidity	<0.10	NTU	ALS
L2506231-2	MP-C-H03	21-Sep-20	pH	5.74	pH units	ALS
L2506231-2	MP-C-H03	21-Sep-20	Total Suspended Solids	<2.0	mg/L	ALS
L2506231-2	MP-C-H03	21-Sep-20	Total Dissolved Solids	<10	mg/L	ALS
L2506231-2	MP-C-H03	21-Sep-20	Turbidity	<0.10	NTU	ALS
L2507045-2	MQ-C-D	22-Sep-20	pH	7.85	pH units	ALS
L2507045-2	MQ-C-D	22-Sep-20	Total Suspended Solids	<2.0	mg/L	ALS
L2507045-2	MQ-C-D	22-Sep-20	Total Dissolved Solids	300	mg/L	ALS
L2507045-2	MQ-C-D	22-Sep-20	Turbidity	2.09	NTU	ALS
L2507045-3	MQ-C-D03	22-Sep-20	pH	6.32	pH units	ALS
L2507045-3	MQ-C-D03	22-Sep-20	Total Suspended Solids	<2.0	mg/L	ALS
L2507045-3	MQ-C-D03	22-Sep-20	Total Dissolved Solids	<10	mg/L	ALS
L2507045-3	MQ-C-D03	22-Sep-20	Turbidity	<0.10	NTU	ALS

Notes:

Bold values indicate values greater than their respective parameter MDLs.

The field and travel result values greater than their respective parameter MDLs were within 3 times the value of each parameter MDLs, with the exception of MP-0102 on Jul 1, MS-0103 on Sept 4, MQ-C-A03 on Aug 11 and MQ-C-D03 on Sept 2.

Possible explanations for the elevated values of the QA-QC samples include contamination during sampling or analytical error.

Table 7.5: Summary - QA/QC Analysis of Duplicates with an RPD > 30% - 2020

Sample ID	Date Sampled	Parameter	RPD (%) ^a
MS-01B01	4-Feb-20	Ammonia, Total (as N)	438
MS-MRY-0901	10-Jun-20	Nitrate (as N)	34
MS-C-A01	22-Jun-20	Total Dissolved Solids	44
MS-MRY-13B01	30-Jun-20	Total Dissolved Solids; Turbidity	36; 55
MS-0301	30-Jul-20	Lead (Pb)- Total	33
MS-0801	5-Jul-20	Phosphorus, Total	548
MS-MRY-0901	27-Jul-20	Total Dissolved Solids	35
MS-C-A01	13-Jul-20	Turbidity	177
MS-0801	18-Aug-20	Total Kjeldahl Nitrogen	33
MP-0501	14-Sep-20	Aluminum (al)- Total; Iron (Fe)- Total	84; 71
MS-C-A01	7-Sep-20	Turbidity	94
MQ-C-B01	7-Sep-20	Turbidity	35
MS-0101	4-Nov-20	Total Kjeldahl Nitrogen	87
MP-01B	15-Dec-20	Total Kjeldahl Nitrogen	171

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 analytical result of the sample, and multiplying by 100.

^b Observed variation attributed to the normal water quality variability of an effluent stream.

^c Observed variation attributed to the normal water quality variability in surface water runoff.

Table 7.6: Water Quality Monitoring Results - Natural Sedimentation Events - 2020

ALS Sample Number	Sample ID	Sample Date	Parameter	Result ^{1,2}	Lab
L2468309-1	MP-NS-20-04-DS	30-Jun-20	Total Suspended Solids (TSS)	222	ALS
L2468309-1	MP-NS-20-04-DS	30-Jun-20	Turbidity	133	ALS
L2468309-2	MP-NS-20-04-US	30-Jun-20	Total Suspended Solids (TSS)	11.8	ALS
L2468309-2	MP-NS-20-04-US	30-Jun-20	Turbidity	0.49	ALS
L2463614-3	MP-NS-20-01-DS	17-Jun-20	Total Suspended Solids (TSS)	209	ALS
L2463614-3	MP-NS-20-01-DS	17-Jun-20	Turbidity	37.4	ALS
L2463614-1	MP-NS-20-01-US	17-Jun-20	Total Suspended Solids (TSS)	7.9	ALS
L2463614-1	MP-NS-20-01-US	17-Jun-20	Turbidity	0.96	ALS
L2463614-6	MP-NS-20-02-DS	17-Jun-20	Total Suspended Solids (TSS)	346	ALS
L2463614-6	MP-NS-20-02-DS	17-Jun-20	Turbidity	49.3	ALS
L2463614-4	MP-NS-20-02-US	17-Jun-20	Total Suspended Solids (TSS)	<2.0	ALS
L2463614-4	MP-NS-20-02-US	17-Jun-20	Turbidity	0.71	ALS
L2463614-9	MP-NS-20-03-DS	17-Jun-20	Total Suspended Solids (TSS)	168	ALS
L2463614-9	MP-NS-20-03-DS	17-Jun-20	Turbidity	39.7	ALS
L2463614-7	MP-NS-20-03-US	17-Jun-20	Total Suspended Solids (TSS)	7.1	ALS
L2463614-7	MP-NS-20-03-US	17-Jun-20	Turbidity	1.51	ALS
L2475704-1	MR-NATSED-1-DS	15-Jul-20	Total Suspended Solids (TSS)	18.6	ALS
L2475704-1	MR-NATSED-1-DS	15-Jul-20	Turbidity	27.9	ALS
L2475704-2	MR-NATSED-1-US	15-Jul-20	Total Suspended Solids (TSS)	10.8	ALS
L2475704-2	MR-NATSED-1-US	15-Jul-20	Turbidity	23.7	ALS
L2475704-3	MR-NATSED-2-DS	15-Jul-20	Total Suspended Solids (TSS)	18.1	ALS
L2475704-3	MR-NATSED-2-DS	15-Jul-20	Turbidity	48.9	ALS
L2475704-4	MR-NATSED-2-US	15-Jul-20	Total Suspended Solids (TSS)	15.5	ALS
L2475704-4	MR-NATSED-2-US	15-Jul-20	Turbidity	22.9	ALS
L2475704-1	MR-NATSED-3-DS	15-Jul-20	Total Suspended Solids (TSS)	18.6	ALS
L2475704-1	MR-NATSED-3-DS	15-Jul-20	Turbidity	27.9	ALS
L2475704-2	MR-NATSED-3-US	15-Jul-20	Total Suspended Solids (TSS)	10.8	ALS
L2475704-2	MR-NATSED-3-US	15-Jul-20	Turbidity	23.7	ALS
L2476396-1	MR-NATSED-2-DS	19-Jul-20	Total Suspended Solids (TSS)	16.8	ALS
L2476396-1	MR-NATSED-2-DS	19-Jul-20	Turbidity	65	ALS
L2476396-2	MR-NATSED-2-US	19-Jul-20	Total Suspended Solids (TSS)	6.4	ALS
L2476396-2	MR-NATSED-2-US	19-Jul-20	Turbidity	19	ALS
L2476396-3	MR-NATSED-3-DS	19-Jul-20	Total Suspended Solids (TSS)	11.8	ALS
L2476396-3	MR-NATSED-3-DS	19-Jul-20	Turbidity	27.7	ALS
L2476396-4	MR-NATSED-3-US	19-Jul-20	Total Suspended Solids (TSS)	3.9	ALS
L2476396-4	MR-NATSED-3-US	19-Jul-20	Turbidity	15	ALS
L2482849-1	MR-NATSED-4-US	3-Aug-20	Total Suspended Solids (TSS)	4.4	ALS
L2482849-1	MR-NATSED-4-US	3-Aug-20	Turbidity	19.9	ALS
L2482849-2	MR-NATSED-4-DS	3-Aug-20	Total Suspended Solids (TSS)	348	ALS
L2482849-2	MR-NATSED-4-DS	3-Aug-20	Turbidity	306	ALS

Notes:

¹ Total Suspended Solids (TSS) results are in milligrams per liter (mg/L).

² Turbidity results are in Nephelometric Turbidity Units (NTU).

Table 7.7.1: Surface Water Quality Results CV-167

Analyte	Sample ID				CV-167-DS	CV-167-US	CV-167-DS	CV-167-US	CV-167-DS	CV-167-US	CV-167-DS	CV-167-US
	ALS Laboratory Sample ID				L2461098-29	L2461098-30	L2460912-19	L2460912-20	L2466968-1	L2466968-2	L2468269-1	L2468269-2
	Sample Date & Time				2020-06-08 11:25	2020-06-08 11:35	2020-06-14 15:40	2020-06-14 15:50	2020-06-23 13:40	2020-06-23 13:50	2020-06-27 15:30	2020-06-27 15:45
	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	Between 6.0 and 9.5	-	8.02	7.97	7.95	7.95	8.23	8.22	7.96	7.99
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	31.3	13.0	10.2	3.3	2.1	2.9	<1.0	<1.0
Total Dissolved Solids	mg/L	10	-	-	102	98	95	80	118	118	103	102
Turbidity	NTU	0.1	-	-	39.8	21.0	8.97	2.57	4.89	3.85	3.17	2.35

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 7.7.1: Surface Water Quality Results CV-167

Analyte	Sample ID				CV-167-DS	CV-167-US	CV-167-DS	CV-167-US	CV-167-DS	CV-167-US	CV-167-DS	CV-167-US
	ALS Laboratory Sample ID				L2474218-39	L2474218-40	L2477586-1	L2477586-2	L2489314-11	L2489314-12	L2502750-1	L2502750-2
	Sample Date & Time				2020-07-13 16:55	2020-07-13 17:10	2020-07-19 13:40	2020-07-19 13:50	2020-08-14 17:40	2020-08-14 17:45	2020-09-11 12:20	2020-09-11 12:40
	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	Between 6.0 and 9.5	-	8.22	8.31	8.24	8.26	8.11	8.26	8.20	8.26
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	3.6	5.0	7.1	3.1	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	149	141	127	150	228	218	230	219
Turbidity	NTU	0.1	-	-	2.29	1.51	16.6	8.09	0.6	0.52	0.50	0.57

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 7.7.2: Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-DS	CV-154-A-DS01	CV-154-A-US	CV-154-A-DS	CV-154-A-US	CV-154-A-DS	CV-154-A-US
	ALS Laboratory Sample ID				L2457156-10	L2457156-12	L2457156-11	L2461098-18	L2461098-17	L2460912-21	L2460912-22
	Sample Date & Time				2020-06-04 13:30	2020-06-04 13:30	2020-06-04 13:50	2020-06-08 11:50	2020-06-08 12:00	2020-06-14 15:00	2020-06-14 15:10
	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	Between 6.0 and 9.5	-	8.24	8.24	8.00	7.89	7.86	7.99	7.96
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	314	348	24.5	37.3	15.2	12.0	8.3
Total Dissolved Solids	mg/L	10	-	-	109	108	95	73	71	94	80
Turbidity	NTU	0.1	-	-	242	237	37.6	30.8	17.2	5.37	4.66

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 7.7.2: Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-DS	CV-154-A-US	CV-154-A-DS	CV-154-A-US	CV-154-A-DS	CV-154-A-US
	ALS Laboratory Sample ID				L2466968-3	L2466968-4	L2468269-3	L2468269-4	L2474218-37	L2474218-38
	Sample Date & Time				2020-06-23 14:10	2020-06-23 14:20	2020-06-27 16:10	2020-06-27 16:25	2020-07-13 16:20	2020-07-13 16:35
	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	Between 6.0 and 9.5	-	8.18	8.22	8.14	8.11	8.13	8.05
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	7.8	4.5	6.0	8.8	<2.0	3.6
Total Dissolved Solids	mg/L	10	-	-	115	122	139	117	182	177
Turbidity	NTU	0.1	-	-	4.70	4.76	8.22	11.7	0.93	0.80

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 7.7.2: Surface Water Quality Results CV-154

Analyte	Sample ID				CV-154-A-DS	CV-154-A-US	CV-154-A-DS	CV-154-A-US	CV-154-A-DS	CV-154-A-US
	ALS Laboratory Sample ID				L2477586-3	L2477586-4	L2489314-15	L2489314-16	L2502750-3	L2502750-4
	Sample Date & Time				2020-07-19 14:05	2020-07-19 14:15	2020-08-14 17:15	2020-08-14 17:20	2020-09-11 13:10	2020-09-11 13:25
	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	Between 6.0 and 9.5	-	8.33	8.37	8.22	8.44	8.25	8.25
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	3.2	5.2	6.3	8.5	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	172	164	211	195	246	190
Turbidity	NTU	0.1	-	-	8.45	11.3	3.21	9.55	1.12	3.57

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 7.7.3: Surface Water Quality Results CV-128

Analyte	Sample ID				CV-128-DS	CV-128-US	CV-128-DS	CV-128-US
	ALS Laboratory Sample ID				L2461098-1	L2461098-2	L2466546-11	L2466546-12
	Sample Date & Time				2020-06-08 12:40	2020-06-08 12:55	2020-06-22 17:05	2020-06-22 17:40
	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	Between 6.0 and 9.5	-	7.71	7.58	7.89	7.78
Total Suspended Solids	mg/L	2	30	See note ¹	23.1	12.8	2.7	<2.0
Total Dissolved Solids	mg/L	10	-	-	53	53	68	56
Turbidity	NTU	0.1	-	-	20.7	5.79	1.20	0.85

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 7.7.3: Surface Water Quality Results CV-128

Analyte	Sample ID				CV-128-DS	CV-128-DS	CV-128-US	CV-128-DS	CV-128-US
	ALS Laboratory Sample ID				L2468269-18	L2474218-33	L2474218-34	L2502750-7	L2502750-8
	Sample Date & Time				2020-06-27 17:30	2020-07-13 14:55	2020-07-13 15:15	2020-09-11 14:30	2020-09-11 14:40
	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	Between 6.0 and 9.5	-	7.88	8.58	7.65	8.22	8.12
Total Suspended Solids	mg/L	2	30	See note ¹	6.1	2.0	2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	82	95	127	160	132
Turbidity	NTU	0.1	-	-	2.49	1.34	0.46	0.99	0.57

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 7.7.4: Surface Water Quality Results CV-129

Analyte	Sample ID				CV-129-DS	CV-129-US	CV-129-DS	CV-129-US	CV-129-DS	CV-129-US	CV-129-DS
	ALS Laboratory Sample ID				L2461098-23	L2461098-24	L2460912-31	L2460912-32	L2466968-5	L2466968-6	L2468269-5
	Sample Date & Time				2020-06-08 12:20	2020-06-08 12:30	2020-06-14 14:15	2020-06-14 14:45	2020-06-23 14:50	2020-06-23 15:00	2020-06-27 16:50
	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	Between 6.0 and 9.5	-	8.19	8.18	7.92	7.85	7.90	7.92	7.86
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	45.0	4.2	2.7	<2.0	4.7	<2.0	1.2
Total Dissolved Solids	mg/L	10	-	-	143	149	77	89	63	45	71
Turbidity	NTU	0.1	-	-	9.43	1.94	0.98	0.53	0.19	0.13	0.65

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 7.7.4: Surface Water Quality Results CV-129

Analyte	Sample ID				CV-129-US	CV-129-DS	CV-129-US	CV-129-DS	CV-129-US	CV-129-DS	CV-129-US
	ALS Laboratory Sample ID				L2468269-6	L2474218-35	L2474218-36	L2477586-5	L2477586-6	L2489314-8	L2489314-10
	Sample Date & Time				2020-06-27 17:05	2020-07-13 15:40	2020-07-13 15:55	2020-07-19 15:10	2020-07-19 15:15	2020-08-14 16:50	2020-08-14 17:00
	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	Between 6.0 and 9.5	-	7.86	8.28	8.37	8.41	8.49	8.52	8.56
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	70	127	74	168	122	140	127
Turbidity	NTU	0.1	-	-	0.37	0.30	0.21	0.29	0.14	0.16	<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 7.7.4: Surface Water Quality Results CV-129

Analyte	Sample ID				CV-129-DS	CV-129-US
	ALS Laboratory Sample ID				L2502750-5	L2502750-6
	Sample Date & Time				2020-09-11 14:00	2020-09-11 14:05
	QA/QC Sample Type				N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria		
pH	pH units	0.1	Between 6.0 and 9.5	-	8.28	8.36
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	152	152
Turbidity	NTU	0.1	-	-	<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 7.7.5: Surface Water Quality Results CV-112

Analyte	Sample ID				CV-112-DS	CV-112-US	CV-112-DS	CV-112-US	CV-112-DS	CV-112-US	CV-112-DS
	ALS Laboratory Sample ID				L2457156-6	L2457156-5	L2461098-3	L2461098-4	L2460912-33	L2460912-34	L2466968-7
	Sample Date & Time				2020-06-04 15:35	2020-06-04 15:45	2020-06-08 13:50	2020-06-08 13:55	2020-06-14 12:25	2020-06-14 12:35	2020-06-23 15:40
	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	Between 6.0 and 9.5	-	8.30	8.08	8.04	7.70	8.09	7.78	8.22
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	254	110	94.7	25.1	235	26.9	<2.0
Total Dissolved Solids	mg/L	10	-	-	107	59	79	68	84	75	83
Turbidity	NTU	0.1	-	-	226	60.6	134	12.3	15	1.56	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 7.7.5: Surface Water Quality Results CV-112

Analyte	Sample ID				CV-112-US	CV-112-DS	CV-112-US	CV-112-DS	CV-112-US	CV-112-DS	CV-112-US
	ALS Laboratory Sample ID				L2466968-8	L2468269-7	L2468269-8	L2474218-31	L2474218-32	L2477586-9	L2477586-10
	Sample Date & Time				2020-06-23 15:50	2020-06-27 14:30	2020-06-27 14:45	2020-07-13 13:20	2020-07-13 13:35	2020-07-20 11:00	2020-07-20 11:10
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	Between 6.0 and 9.5	-	8.17	7.98	7.99	8.42	8.46	8.49	8.53
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	<2.0	<1.0	<1.0	<2.0	<2.0	2.6	<2.0
Total Dissolved Solids	mg/L	10	-	-	72	96	93	176	149	171	171
Turbidity	NTU	0.1	-	-	0.54	0.82	0.97	0.36	0.20	0.39	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 7.7.5: Surface Water Quality Results CV-112

Analyte	Sample ID				CV-112-DS	CV-112-US	CV-112-DS	CV-112-US
	ALS Laboratory Sample ID				L2489314-13	L2489314-14	L2502750-9	L2502750-10
	Sample Date & Time				2020-08-14 15:15	2020-08-14 15:20	2020-09-11 16:20	2020-09-11 16:30
	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	Between 6.0 and 9.5	-	8.50	8.56	8.39	8.39
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	-	-	208	203	220	224
Turbidity	NTU	0.1	-	-	0.23	<0.10	0.32	<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 7.7.6: Surface Water Quality Results CV-115

Analyte	Sample ID				CV-115-DS	CV-115-US	CV-115-DS	CV-115-US	CV-115-DS	CV-115-US
	ALS Laboratory Sample ID				L2457156-2	L2457156-1	L2461098-21	L2461098-22	L2460912-37	L2460912-39
	Sample Date & Time				2020-06-04 15:10	2020-06-04 15:10	2020-06-08 13:20	2020-06-08 13:25	2020-06-14 13:35	2020-06-14 13:40
	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	Between 6.0 and 9.5	-	8.09	8.06	7.82	7.93	8.06	7.97
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	79.5	3.7	15.4	<2.0	9.1	<2.0
Total Dissolved Solids	mg/L	10	-	-	130	153	76	70	90	101
Turbidity	NTU	0.1	-	-	82.1	4.51	6.13	0.95	2.51	0.42

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 7.7.6: Surface Water Quality Results CV-115

Analyte	Sample ID				CV-115-DS	CV-115-US	CV-115-DS	CV-115-US
	ALS Laboratory Sample ID				L2468269-16	L2468269-19	L2477586-7	L2477586-8
	Sample Date & Time				2020-06-27 18:10	2020-06-27 18:20	2020-07-20 10:30	2020-07-20 10:45
	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	Between 6.0 and 9.5	-	8.32	8.32	8.44	8.18
Total Suspended Solids	mg/L	1.0/2.0	30	See note ¹	<1.0	<1.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	193	182	202	178
Turbidity	NTU	0.1	-	-	0.84	0.68	1.51	0.35

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 7.7.7: Surface Water Quality Results CV-106

Analyte	Sample ID				CV-106-DS	CV-106-DS	CV-106-US	CV-106-DS	CV-106-US	CV-106-DS	CV-106-US
	ALS Laboratory Sample ID				L2457156-7	L2461098-14	L2461098-13	L2460912-17	L2460912-18	L2466968-9	L2466968-11
	Sample Date & Time				2020-06-04 16:15	2020-06-08 14:20	2020-06-08 14:30	2020-06-14 12:00	2020-06-14 12:10	2020-06-23 16:05	2020-06-23 16:10
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	Between 6.0 and 9.5	-	8.32	7.95	7.47	7.96	7.69	8.13	7.90
Total Suspended Solids	mg/L	2	30	See note ¹	281	60.3	2.2	11.7	3.3	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	92	89	55	82	61	60	49
Turbidity	NTU	0.1	-	-	203	61.8	1.45	3.39	1.39	1.31	1.28

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 7.7.7: Surface Water Quality Results CV-106

Analyte	Sample ID				CV-106-DS	CV-106-US	CV-106-DS	CV-106-US	CV-106-DS	CV-106-US	CV-106-US01
	ALS Laboratory Sample ID				L2468269-9	L2468269-11	L2474218-28	L2474218-29	L2477586-11	L2477586-12	L2477586-13
	Sample Date & Time				2020-06-27 13:50	2020-06-27 14:05	2020-07-13 12:45	2020-07-13 13:00	2020-07-20 11:30	2020-07-20 11:40	2020-07-20 11:40
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	Between 6.0 and 9.5	-	7.85	7.65	8.00	7.98	8.14	8.22	8.21
Total Suspended Solids	mg/L	2	30	See note ¹	1.9	1.7	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	65	57	155	96	224	113	86
Turbidity	NTU	0.1	-	-	1.75	1.37	0.48	0.28	0.44	0.28	0.34

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 7.7.8: Surface Water Quality Results CV-099

Analyte	Sample ID				CV-099-DS	CV-099-US	CV-099-DS	CV-099-US	CV-099-DS	CV-099-US	CV-099-DS	CV-099-US
	ALS Laboratory Sample ID				L2461098-7	L2461098-5	L2460912-25	L2460912-26	L2466546-9	L2466546-10	L2468269-10	L2468269-14
	Sample Date & Time				2020-06-08 15:20	2020-06-08 15:35	2020-06-14 18:00	2020-06-14 18:10	2020-06-22 15:45	2020-06-22 16:05	2020-06-27 12:50	2020-06-27 13:05
	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	Between 6.0 and 9.5	-	7.81	7.59	7.91	7.84	7.65	7.68	7.88	7.89
Total Suspended Solids	mg/L	2.0/4.0	30	See note ¹	90.3	25.6	18.3	11.2	2.0	<2.0	3.0	2.2
Total Dissolved Solids	mg/L	10	-	-	90	74	66	71	44	32	72	71
Turbidity	NTU	0.1	-	-	81.4	3.87	2.07	1.78	0.69	0.65	1.50	1.81

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 7.7.8: Surface Water Quality Results CV-099

Analyte	Sample ID				CV-099-DS	CV-099-US	CV-099-DS	CV-099-US	CV-099-DS	CV-099-US	CV-099-DS	CV-099-US
	ALS Laboratory Sample ID				L2474218-26	L2474218-27	L2477931-4	L2477931-5	L2489313-8	L2489313-10	L2502750-11	L2502750-13
	Sample Date & Time				2020-07-13 11:50	2020-07-13 12:15	2020-07-20 12:05	2020-07-20 12:25	2020-08-14 14:05	2020-08-14 14:25	2020-09-11 10:15	2020-09-11 10:30
	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	Between 6.0 and 9.5	-	8.37	8.36	8.42	8.41	8.56	8.55	8.41	8.43
Total Suspended Solids	mg/L	2.0/4.0	30	See note ¹	<2.0	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	127	117	158	153	221	216	223	214
Turbidity	NTU	0.1	-	-	0.2	0.14	<0.10	0.13	<0.10	<0.10	0.13	<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 7.7.9: Surface Water Quality Results CV-093

Analyte	Sample ID				CV-093-DS	CV-093-DS	CV-093-US
	ALS Laboratory Sample ID				L2457156-9	L2467515-6	L2467515-7
	Sample Date & Time				2020-06-04 10:35	2020-06-28 13:10	2020-06-28 13:20
	QA/QC Sample Type				N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria			
pH	pH units	0.1	Between 6.0 and 9.5	-	8.14	8.28	8.16
Total Suspended Solids	mg/L	2	30	See note ¹	97.8	2.6	<2.0
Total Dissolved Solids	mg/L	10	-	-	152	121	138
Turbidity	NTU	0.1	-	-	60.8	0.93	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 7.7.10: Surface Water Quality Results CV-078

Analyte	Sample ID				CV-078-DS	CV-078-DS01	CV-078-DS	CV-078-US	CV-078-DS	CV-078-DS01	CV-078-US
	ALS Laboratory Sample ID				L2457156-4	L2457156-3	L2461098-31	L2461098-32	L2460912-23	L2460912-40	L2460912-24
	Sample Date & Time				2020-06-04 17:00	2020-06-04 17:00	2020-06-09 11:45	2020-06-09 11:55	2020-06-14 10:45	2020-06-14 10:45	2020-06-14 10:50
	QA/QC Sample Type				N/A	Field Duplicate	N/A	N/A	N/A	Field Duplicate	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	Between 6.0 and 9.5	-	8.2	8.2	7.88	7.83	7.81	7.83	7.73
Total Suspended Solids	mg/L	2	30	See note ¹	75.5	76.4	25.6	16.4	<2.0	2.5	5.9
Total Dissolved Solids	mg/L	10	-	-	99	97	66	59	63	58	60
Turbidity	NTU	0.1	-	-	87.7	78.1	23.2	5.49	1.28	1.34	1.10

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 7.7.10: Surface Water Quality Results CV-078

Analyte	Sample ID				CV-078-DS	CV-078-US	CV-078-DS	CV-078-US	CV-078-US01	CV-078-DS	CV-078-US
	ALS Laboratory Sample ID				L2466546-7	L2466546-8	L2467515-8	L2467515-9	L2467515-10	L2474218-24	L2474218-25
	Sample Date & Time				2020-06-22 14:00	2020-06-22 14:30	2020-06-28 13:50	2020-06-28 14:00	2020-06-28 14:00	2020-07-13 10:30	2020-07-13 10:40
	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	Between 6.0 and 9.5	-	7.81	7.84	8.22	8.22	8.22	8.32	8.34
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	-	-	53	55	127	132	134	140	118
Turbidity	NTU	0.1	-	-	0.45	0.36	0.16	0.18	0.26	0.17	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 7.7.10: Surface Water Quality Results CV-078

Analyte	Sample ID				CV-078-DS	CV-078-DS01	CV-078-US	CV-078-DS	CV-078-US	CV-078-DS	CV-078-US
	ALS Laboratory Sample ID				L2477931-6	L2477931-7	L2477931-8	L2489313-4	L2489313-5	L2502750-14	L2502750-15
	Sample Date & Time				2020-07-20 13:55	2020-07-20 13:55	2020-07-20 14:20	2020-08-14 13:00	2020-08-14 13:20	2020-09-12 11:30	2020-09-12 11:40
	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	Between 6.0 and 9.5	-	8.36	8.37	8.38	8.46	8.49	8.36	8.39
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	-	-	154	152	138	183	194	188	192
Turbidity	NTU	0.1	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	0.14	<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 7.7.11: Surface Water Quality Results CV-072

Analyte	Sample ID				CV-072-C-DS	CV-072-US	CV-072-C-DS	CV-072-C-US	CV-072-C-DS	CV-072-C-US	CV-072-C-US01
	ALS Laboratory Sample ID				L2461098-26	L2461098-25	L2460912-15	L2460912-16	L2466968-24	L2466968-25	L2466968-26
	Sample Date & Time				2020-06-09 12:15	2020-06-09 12:25	2020-06-14 10:15	2020-06-14 10:25	2020-06-24 13:35	2020-06-24 13:45	2020-06-24 13:45
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	Between 6.0 and 9.5	-	7.93	8.02	7.99	7.98	7.96	7.96	7.98
Total Suspended Solids	mg/L	2	30	See note ¹	2.0	2.6	2.1	3.7	2.5	<2.0	2.8
Total Dissolved Solids	mg/L	10	-	-	60	57	72	64	56	69	31
Turbidity	NTU	0.1	-	-	2.16	3.35	1.63	1.43	0.52	0.53	0.57

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 7.7.11: Surface Water Quality Results CV-072

Analyte	Sample ID				CV-072-C-DS	CV-072-C-US	CV-072-C-DS	CV-072-C-US	CV-072-C-DS	CV-072-C-US	CV-072-C-US01
	ALS Laboratory Sample ID				L2467515-11	L2467515-12	L2474218-21	L2474218-23	L2477586-14	L2477586-15	L2477586-16
	Sample Date & Time				2020-06-28 14:25	2020-06-28 14:35	2020-07-13 9:50	2020-07-13 10:10	2020-07-20 14:50	2020-07-20 15:00	2020-07-20 15:00
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	Between 6.0 and 9.5	-	8.12	8.10	8.17	8.20	8.35	8.37	8.37
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	2.0	3.9	2.6	<2.0
Total Dissolved Solids	mg/L	10	-	-	102	106	93	92	97	100	102
Turbidity	NTU	0.1	-	-	0.30	0.32	0.18	0.16	0.26	0.17	0.24

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 7.7.11: Surface Water Quality Results CV-072

Analyte	Sample ID				CV-072-C-DS	CV-072-C-US	CV-072-C-DS	CV-072-C-US
	ALS Laboratory Sample ID				L2489314-3	L2489314-4	L2502750-16	L2502750-17
	Sample Date & Time				2020-08-14 12:40	2020-08-14 12:50	2020-09-12 12:00	2020-09-12 12:10
	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	Between 6.0 and 9.5	-	8.40	8.31	8.34	8.31
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	176	149	174	171
Turbidity	NTU	0.1	-	-	<0.10	<0.10	0.22	<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 7.7.12: Surface Water Quality Results CV-060

Analyte	Sample ID				CV-060-DS	CV-060-DS	CV-060-US	CV-060-DS	CV-060-US	CV-060-DS	CV-060-US
	ALS Laboratory Sample ID				L2457156-8	L2461098-28	L2461098-27	L2460912-35	L2460912-36	L2466968-21	L2466968-22
	Sample Date & Time				2020-06-04 9:15	2020-06-09 12:45	2020-06-09 12:50	2020-06-14 9:25	2020-06-14 9:40	2020-06-24 13:00	2020-06-24 13:10
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria							
pH	pH units	0.1	Between 6.0 and 9.5	-	8.07	7.82	7.82	7.84	7.84	8.11	8.10
Total Suspended Solids	mg/L	2	30	See note ¹	60.6	58.4	9.3	5.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	104	52	42	93	87	110	84
Turbidity	NTU	0.1	-	-	43.3	40.7	9.17	1.48	0.76	0.12	<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 7.7.12: Surface Water Quality Results CV-060

Analyte	Sample ID				CV-060-DS	CV-060-US	CV-060-DS	CV-060-US	CV-060-DS	CV-060-US
	ALS Laboratory Sample ID				L2467515-25	L2467515-26	L2474218-19	L2474218-20	L2477586-17	L2477586-18
	Sample Date & Time				2020-06-29 13:05	2020-06-29 13:10	2020-07-12 17:15	2020-07-12 17:25	2020-07-20 15:20	2020-07-20 15:30
	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	Between 6.0 and 9.5	-	8.14	8.15	8.18	8.22	8.34	8.34
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	107	103	128	134	130	115
Turbidity	NTU	0.1	-	-	0.20	0.13	0.43	0.31	0.28	0.22

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 7.7.12: Surface Water Quality Results CV-060

Analyte	Sample ID				CV-060-DS	CV-060-US	CV-060-US01	CV-060-DS	CV-060-US
	ALS Laboratory Sample ID				L2489314-21	L2489314-22	L2489314-23	L2502750-19	L2502750-21
	Sample Date & Time				2020-08-14 12:20	2020-08-14 12:25	2020-08-14 12:25	2020-09-12 12:30	2020-09-12 12:35
	QA/QC Sample Type				N/A	N/A	Field Duplicate	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria					
pH	pH units	0.1	Between 6.0 and 9.5	-	8.12	8.13	8.13	8.15	8.07
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	-	-	182	185	187	208	207
Turbidity	NTU	0.1	-	-	0.84	0.70	0.71	1.00	0.57

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 7.7.13: Surface Water Quality Results BG-50

Analyte	Sample ID				BG-50-DS	BG-50-DS01	BG-50-US	BG-50-DS	BG-50-US	BG-50-DS
	ALS Laboratory Sample ID				L2460912-5	L2460912-6	L2460912-7	L2466546-5	L2466546-6	L2467515-13
	Sample Date & Time				2020-06-15 13:45	2020-06-15 13:45	2020-06-15 13:55	2020-06-22 12:40	2020-06-22 13:00	2020-06-28 15:10
	QA/QC Sample Type				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	Between 6.0 and 9.5	-	7.70	7.65	7.60	7.80	7.81	7.97
Total Suspended Solids	mg/L	2	30	See note ¹	127	27.3	7.6	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	46	47	39	93	92	97
Turbidity	NTU	0.1	-	-	6.22	5.09	1.59	0.59	0.52	0.56

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 7.7.13: Surface Water Quality Results BG-50

Analyte	Sample ID				BG-50-US	BG-50-DS	BG-50-US	BG-50-DS	BG-50-US	BG-50-DS
	ALS Laboratory Sample ID				L2467515-14	L2474218-17	L2474218-18	L2477931-9	L2477931-10	L2489313-11
	Sample Date & Time				2020-06-28 15:15	2020-07-12 16:15	2020-07-12 16:30	2020-07-20 16:15	2020-07-20 16:30	2020-08-14 11:40
	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	Between 6.0 and 9.5	-	7.97	8.17	8.09	8.23	8.24	8.40
Total Suspended Solids	mg/L	2	30	See note ¹	2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	101	77	75	95	94	128
Turbidity	NTU	0.1	-	-	0.52	0.33	0.2	0.17	0.15	0.21

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 7.7.13: Surface Water Quality Results BG-50

Analyte	Sample ID				BG-50-US	BG-50-DS	BG-50-US
	ALS Laboratory Sample ID				L2489313-12	L2502750-22	L2502750-23
	Sample Date & Time				2020-08-14 11:55	2020-09-12 13:30	2020-09-12 13:45
	QA/QC Sample Type				N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria			
pH	pH units	0.1	Between 6.0 and 9.5	-	8.39	8.24	8.21
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	131	120	116
Turbidity	NTU	0.1	-	-	0.22	0.13	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 7.7.14: Surface Water Quality Results CV-040

Analyte	Sample ID				CV-040-DS	CV-040-DS01	CV-040-DS	CV-040-DS01	CV-040-US	CV-040-DS	CV-040-US	CV-040-DS
	ALS Laboratory Sample ID				L2451389-3	L2451389-4	L2457156-17	L2457156-15	L2457156-16	L2460912-27	L2460912-28	L2466546-14
	Sample Date & Time				2020-05-25 15:50	2020-05-25 15:50	2020-06-03 14:15	2020-06-03 14:15	2020-06-03 14:40	2020-06-15 14:35	2020-06-15 14:50	2020-06-22 19:55
	QA/QC Sample Type				N/A	Field Duplicate	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	Between 6.0 and 9.5	-	8.3	8.33	8.13	8.12	8.11	7.88	7.78	7.65
Total Suspended Solids	mg/L	2	30	See note ¹	2960	2920	127	130	15.8	63.4	45.5	<2.0
Total Dissolved Solids	mg/L	10/13	-	-	120	154	139	130	100	34	50	49
Turbidity	NTU	0.1	-	-	3390	3300	88.7	82.2	21.5	10.1	7.23	0.64

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 7.7.14: Surface Water Quality Results CV-040

Analyte	Sample ID				CV-040-US	CV-040-DS	CV-040-US	CV-040-DS	CV-040-US	CV-040-DS	CV-040-US	CV-040-DS
	ALS Laboratory Sample ID				L2466546-16	L2467515-15	L2467515-16	L2474218-15	L2474218-16	L2477931-11	L2477931-12	L2489313-6
	Sample Date & Time				2020-06-22 20:15	2020-06-28 15:50	2020-06-28 16:00	2020-07-12 15:00	2020-07-12 15:20	2020-07-21 9:20	2020-07-21 9:35	2020-08-14 10:50
	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	Between 6.0 and 9.5	-	7.62	8.21	8.21	8.41	8.42	8.38	8.43	8.50
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13	-	-	49	132	120	187	212	200	207	258
Turbidity	NTU	0.1	-	-	0.50	0.50	0.47	0.76	0.12	0.26	0.12	0.31

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 7.7.14: Surface Water Quality Results CV-040

Analyte	Sample ID				CV-040-US	CV-040-DS	CV-040-US
	ALS Laboratory Sample ID				L2489313-7	L2502750-24	L2502750-25
	Sample Date & Time				2020-08-14 11:05	2020-09-12 14:40	2020-09-12 14:45
	QA/QC Sample Type				N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria			
pH	pH units	0.1	Between 6.0 and 9.5	-	8.53	8.37	8.39
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10/13	-	-	257	273	274
Turbidity	NTU	0.1	-	-	0.55	0.42	<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 7.7.15: Surface Water Quality Results BG-32

Analyte	Sample ID				BG-32-DS	BG-32-DS	BG-32-US	BG-32-DS	BG-32-US	BG-32-DS	BG-32-US
	ALS Laboratory Sample ID				L2451389-2	L2461098-20	L2461098-19	L2460912-1	L2460912-2	L2466968-19	L2466968-20
	Sample Date & Time				2020-05-25 14:50	2020-06-07 12:30	2020-06-07 12:05	2020-06-15 11:50	2020-06-15 12:00	2020-06-24 11:30	2020-06-24 11:40
	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	Between 6.0 and 9.5	-	7.67	7.64	7.61	7.81	7.79	7.99	8.02
Total Suspended Solids	mg/L	2	30	See note ¹	65.7	83.0	4.2	12.2	3.3	2.9	2.5
Total Dissolved Solids	mg/L	10	-	-	94	77	91	90	83	144	122
Turbidity	NTU	0.1	-	-	133	66.5	2.78	2.04	1.36	0.52	0.48

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 7.7.15: Surface Water Quality Results BG-32

Analyte	Sample ID				BG-32-DS	BG-32-US	BG-32-DS	BG-32-US	BG-32-US01	BG-32-DS	BG-32-US
	ALS Laboratory Sample ID				L2467515-17	L2467515-18	L2474218-12	L2474218-13	L2474218-14	L2477586-19	L2477586-20
	Sample Date & Time				2020-06-28 16:25	2020-06-28 16:35	2020-07-12 13:50	2020-07-12 14:10	2020-07-12 14:10	2020-07-21 10:05	2020-07-21 10:10
	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	Between 6.0 and 9.5	-	8.12	8.15	8.08	8.14	8.11	8.27	8.13
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	-	-	200	192	290	242	246	179	218
Turbidity	NTU	0.1	-	-	0.62	0.61	0.77	0.66	0.70	0.77	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 7.7.15: Surface Water Quality Results BG-32

Analyte	Sample ID				BG-32-DS	BG-32-DS01	BG-32-US	BG-32-DS	BG-32-US
	ALS Laboratory Sample ID				L2489314-5	L2489314-6	L2489314-7	L2502750-26	L2502750-27
	Sample Date & Time				2020-08-14 10:20	2020-08-14 10:20	2020-08-14 10:30	2020-09-12 15:35	2020-09-12 15:50
	QA/QC Sample Type				N/A	Field Duplicate	N/A	N/A	N/A
	Units	LOR	Water Licence Criteria ¹	Screening Criteria					
pH	pH units	0.1	Between 6.0 and 9.5	-	8.07	8.06	8.10	8.12	8.16
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	-	-	326	329	317	369	378
Turbidity	NTU	0.1	-	-	0.72	0.74	0.69	0.66	0.54

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 7.7.16: Surface Water Quality Results CV-217

Analyte	Sample ID				CV-217-US	CV-217-DS	CV-217-US	CV-217-DS	CV-217-US	CV-217-DS	CV-217-US
	ALS Laboratory Sample ID				L2451389-1	L2460912-13	L2460912-14	L2466546-3	L2466546-4	L2467515-19	L2467515-20
	Sample Date & Time				2020-05-25 14:20	2020-06-15 11:30	2020-06-15 11:35	2020-06-22 11:00	2020-06-22 11:30	2020-06-28 16:50	2020-06-28 17:00
	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	Between 6.0 and 9.5	-	8.03	7.64	7.63	7.49	7.52	7.53	7.53
Total Suspended Solids	mg/L	2	30	See note ¹	44.1	3.4	<2.0	<2.0	<2.0	2.7	<2.0
Total Dissolved Solids	mg/L	10	-	-	103	57	73	55	54	50	91
Turbidity	NTU	0.1	-	-	129	3.10	0.47	0.86	1.33	1.63	1.58

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 7.7.16: Surface Water Quality Results CV-217

Analyte	Sample ID				CV-217-DS	CV-217-US	CV-217-DS	CV-217-US
	ALS Laboratory Sample ID				L2474218-10	L2474218-11	L2477931-13	L2477931-14
	Sample Date & Time				2020-07-12 13:10	2020-07-12 13:25	2020-07-21 10:35	2020-07-21 10:50
	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	Between 6.0 and 9.5	-	7.71	7.72	7.81	7.75
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	77	47	58	64
Turbidity	NTU	0.1	-	-	0.98	0.93	1.13	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 7.7.17: Surface Water Quality Results BG-30

Analyte	Sample ID				BG-30-DS	BG-30-US	BG-30-DS	BG-30-US	BG-30-DS	BG-30-US
	ALS Laboratory Sample ID				L2457156-13	L2457156-14	L2461098-11	L2461098-10	L2460912-3	L2460912-4
	Sample Date & Time				2020-06-03 11:50	2020-06-03 11:30	2020-06-07 10:45	2020-06-07 11:00	2020-06-15 10:55	2020-06-15 11:05
	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	Between 6.0 and 9.5	-	7.91	7.87	7.69	7.71	7.62	7.56
Total Suspended Solids	mg/L	2	30	See note ¹	217	324	135	164	36.4	28.5
Total Dissolved Solids	mg/L	10	-	-	122	117	98	103	77	64
Turbidity	NTU	0.1	-	-	197	137	116	125	13.7	16.4

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 7.7.17: Surface Water Quality Results BG-30

Analyte	Sample ID				BG-30-DS	BG-30-US	BG-30-DS	BG-30-US	BG-30-DS	BG-30-DS01	BG-30-US
	ALS Laboratory Sample ID				L2466968-16	L2466968-18	L2467515-21	L2467515-22	L2474218-7	L2474218-8	L2474218-9
	Sample Date & Time				2020-06-24 10:50	2020-06-24 11:00	2020-06-28 17:30	2020-06-28 17:40	2020-07-12 11:45	2020-07-12 11:45	2020-07-12 12:05
	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	Between 6.0 and 9.5	-	7.83	7.81	8.05	7.94	8.10	8.14	8.15
Total Suspended Solids	mg/L	2	30	See note ¹	2.0	<2.0	<2.0	<2.0	3.2	2.5	<2.0
Total Dissolved Solids	mg/L	10	-	-	55	77	91	93	182	180	179
Turbidity	NTU	0.1	-	-	0.46	0.39	0.56	0.42	4.33	4.46	2.19

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 7.7.17: Surface Water Quality Results BG-30

Analyte	Sample ID				BG-30-DS	BG-30-US	BG-30-DS	BG-30-US	BG-30-DS	BG-30-US
	ALS Laboratory Sample ID				L2477586-22	L2477586-23	L2489314-17	L2489314-18	L2502750-28	L2502750-29
	Sample Date & Time				2020-07-21 11:35	2020-07-21 11:50	2020-08-14 19:25	2020-08-14 19:35	2020-09-12 17:00	2020-09-12 17:10
	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	Between 6.0 and 9.5	-	8.17	8.11	8.29	8.21	8.18	7.70
Total Suspended Solids	mg/L	2	30	See note ¹	2.2	<2.0	5.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	240	245	328	332	333	324
Turbidity	NTU	0.1	-	-	1.44	1.27	6.81	2.63	1.69	2.92

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 7.7.18: Surface Water Quality Results BG-24

Analyte	Sample ID				BG-24-DS	BG-24-US	BG-24-DS	BG-24-US	BG-24-DS	BG-24-US	BG-24-DS	BG-24-US
	ALS Laboratory Sample ID				L2461098-15	L2461098-16	L2460912-8	L2460912-9	L2466546-1	L2466546-2	L2467515-23	L2467515-24
	Sample Date & Time				2020-06-07 10:00	2020-06-07 10:10	2020-06-15 10:20	2020-06-15 10:30	2020-06-22 10:10	2020-06-22 22:25	2020-06-29 9:30	2020-06-29 9:40
	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	Between 6.0 and 9.5	-	7.76	7.51	7.75	7.72	7.74	7.62	8.00	8.01
Total Suspended Solids	mg/L	2	30	See note ¹	142	22.7	6.6	2.6	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	77	27	59	84	64	66	85	79
Turbidity	NTU	0.1	-	-	117	4.10	2.87	1.50	0.50	0.43	0.67	0.53

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 7.7.18: Surface Water Quality Results BG-24

Analyte	Sample ID				BG-24-DS	BG-24-US	BG-24-DS	BG-24-US	BG-24-DS	BG-24-US	BG-24-DS	BG-24-US	BG-24-DS	BG-24-US
	ALS Laboratory Sample ID				L2474218-5	L2474218-6	L2477931-15	L2477931-16	L2489313-1	L2489313-3	L2502750-30	L2502750-31	L2502750-32	
	Sample Date & Time				2020-07-12 10:25	2020-07-12 10:35	2020-07-21 12:20	2020-07-21 12:35	2020-08-14 8:40	2020-08-14 9:00	2020-09-13 10:40	2020-09-13 10:50	2020-09-13 10:50	
	QA/QC Sample Type				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Field Duplicate
	Units	LOR	Water Licence Criteria ¹	Screening Criteria										
pH	pH units	0.1	Between 6.0 and 9.5	-	8.15	8.19	8.26	8.31	8.26	8.30	8.16	8.20	8.20	
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Total Dissolved Solids	mg/L	10	-	-	153	143	186	175	392	378	562	661	665	
Turbidity	NTU	0.1	-	-	0.85	0.39	0.50	0.23	2.79	0.10	0.85	<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 7.7.19: Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-DS	CV-001-US	CV-001-DS	CV-001-US	CV-001-DS	CV-001-US	CV-001-DS	CV-001-US
	ALS Laboratory Sample ID				L2461098-8	L2461098-9	L2460912-11	L2460912-12	L2466968-14	L2466968-15	L2467515-3	L2467515-4
	Sample Date & Time				2020-06-08 9:10	2020-06-08 9:30	2020-06-15 9:40	2020-06-15 9:45	2020-06-24 9:50	2020-06-24 10:00	2020-06-28 10:30	2020-06-28 10:40
	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	Between 6.0 and 9.5	-	7.52	7.63	7.41	7.41	7.71	7.78	7.68	7.75
Total Suspended Solids	mg/L	2	30	See note ¹	37.0	32.7	<2.0	<2.0	<2.0	2.9	5.3	6.7
Total Dissolved Solids	mg/L	10	-	-	46	46	41	45	40	46	83	78
Turbidity	NTU	0.1	-	-	35.5	39.0	2.73	2.53	0.66	0.68	3.41	4.34

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 7.7.19: Surface Water Quality Results CV-001

Analyte	Sample ID				CV-001-US01	CV-001-DS	CV-001-US	CV-001-DS	CV-001-US	CV-001-DS	CV-001-US	CV001-DS	CV-001-US
	ALS Laboratory Sample ID				L2467515-5	L2474218-3	L2474218-4	L2477586-24	L2477586-25	L2489314-1	L2489314-2	L2502750-33	L2502750-34
	Sample Date & Time				2020-06-28 10:40	2020-07-12 9:50	2020-07-12 10:00	2020-07-21 13:05	2020-07-21 13:15	2020-08-14 8:10	2020-08-14 8:20	2020-09-13 12:25	2020-09-13 12:35
	QA/QC Sample Type				Field Duplicate	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	Between 6.0 and 9.5	-	7.76	7.69	7.93	7.72	7.86	7.75	7.85	7.77	7.90
Total Suspended Solids	mg/L	2	30	See note ¹	6.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	81	107	94	119	103	142	144	141	144
Turbidity	NTU	0.1	-	-	3.91	2.24	1.50	3.19	2.76	4.73	3.95	4.33	3.45

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 7.7.20: Surface Water Quality Results CV-223

Analyte	Sample ID				CV-223-DS	CV-223-US	CV-223-DS	CV-223-US	CV-223-DS	CV-223-US
	ALS Laboratory Sample ID				L2466968-12	L2466968-13	L2467515-1	L2467515-2	L2474218-1	L2474218-2
	Sample Date & Time				2020-06-24 9:15	2020-06-24 9:30	2020-06-28 9:40	2020-06-28 10:00	2020-07-12 8:50	2020-07-12 9:15
	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	Between 6.0 and 9.5	-	7.22	7.13	7.36	7.37	7.95	7.93
Total Suspended Solids	mg/L	2	30	See note ¹	2.9	3.0	2.8	4.7	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	18	<10	34	42	77	78
Turbidity	NTU	0.1	-	-	1.70	0.76	1.72	1.49	0.63	0.53

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 7.7.20: Surface Water Quality Results CV-223

Analyte	Sample ID				CV-223-DS	CV-223-US	CV-223-DS	CV-223-US	CV-223-DS	CV223-US
	ALS Laboratory Sample ID				L2477586-26	L2477586-27	L2489314-19	L2489314-20	L2502750-35	L2502750-36
	Sample Date & Time				2020-07-21 13:30	2020-07-21 13:35	2020-08-14 7:50	2020-08-14 7:55	2020-09-13 13:00	2020-09-13 13:10
	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	Between 6.0 and 9.5	-	8.09	8.22	8.16	8.31	8.05	8.22
Total Suspended Solids	mg/L	2	30	See note ¹	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids	mg/L	10	-	-	92	98	138	136	166	155
Turbidity	NTU	0.1	-	-	0.19	0.21	0.24	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 8.1: Reclamation Works Related to Project Operations on Inuit-Owned and Crown Lands - 2020

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). Significant dewatering of the KM 97 borrow was completed in 2020.	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 2020 included bulk fill and grading of borrow sources at KM72.3 and in the area of KM20. Refer to Appendix C.4 for complete progress update.	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 2021.
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. No remediated soils were removed from the Landfarm Facility during 2018. Continued remediation and treatment of soils held within the Landfarm Facility anticipated during 2019.

Table 8.2: Mary River Project Total Closure and Reclamation Security Summary - 2020 ^b

Authorization	Liability	Securities Held on 1 Jan 2020 (Actual) (\$)	Adjustment for 2020 (Actual) ^c (\$)	Securities Held on 31 Dec 2020 (Actual) (\$)
				F-D
Type 'A' Water Licence 2AM-MRY1325	IOL ^b	104,687,658	8,683,342	113,371,000
	Crown	1,448,801	142,199	1,591,000
Subtotal Type 'A' Water Licence		106,136,459	8,825,541	114,962,000
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		107,386,000	8,825,541	116,212,000

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 2020 include the 2020 Annual Security Review, and the arbitration completed with QIA regarding the 2019 Work Plan.

Table 9.1: Management and Monitoring Plan Updates - 2020

Management Plan	Current Revision	Updated since 2019 QIA/NWB Annual Report for Operations?
Air Quality and Noise Abatement Management Plan	March 2020	No update
Emergency Response Plan	December 2020	Yes
Spill Contingency Plan	March 2021	Yes
Environmental Protection Plan	August 2016	No update
Fresh Water, Sewage and Wastewater Management Plan	March 2021	Yes
Surface Water and Aquatic Ecosystem Management Plan	March 2021	Yes
Hazardous Materials and Hazardous Waste Management Plan	March 2017	No update
Waste Management Plan	March 2020	No update
Interim Closure and Reclamation Plan	October 2018	No update
Surface Water Sampling Program - Quality Assurance and Quality Control Plan	March 2017	No update
Aquatic Effects Monitoring Plan	October 2015	No update
Snow Management Plan	March 2021	Yes
Life of Mine Waste Rock Management Plan	April 2014	No update
Phase 1 Waste Rock Management Plan	June 2020	Yes
Explosives Management Plan	August 2013	No update
Milne Port Oil Pollution Emergency Plan (OPEP)	September 2018	No update
Exploration Spill Contingency Plan	January 2021	Yes
Exploration Closure and Reclamation Plan	January 2021	Yes
Terrestrial Environmental Management and Monitoring Plan	March 2016	No update
Roads Management Plan	February 2020	No update
Borrow Pits and Quarry Management Plan	March 2014	No update
Milne Inlet Tote Road Quarry and Borrow Source Management Plan	March 2019	No update
Site Specific Quarry Management Plans	Various below	
Borrow Source Management Plan – Kilometre 2	October 2014	No update
Borrow Source Management Plan – Kilometre 97	October 2014	No update
Borrow Source Management Plan – Kilometre 104	March 2014	No update
D1Q1 Quarry Management Plan	October 2013	No update
D1Q2 Quarry Management Plan	October 2013	No update
Q1 Quarry Management Plan	July 2017	No update
Q11 Quarry Management Plan	October 2013	No update
Q19 Quarry Management Plan	October 2013	No update
Q7 Quarry Management Plan	October 2013	No update
QMR2 Quarry Management Plan	July 2017	No update

Table 9.2: Sample Results from 2020 Waste Rock Facility QA/QC Sample Program - 2020

Sample ID	Sulfur (%) by X-Ray Diffraction ¹	Carbon (%) by LECO ²	Sulfur (%) by LECO ¹	Paste pH	Sampling Location (UTM NAD83 Zone 17W)		Waste Deposition Area
					Easting	Northing	
WRD-2314	0.05	0.04	0.06	8.30	562935	7916203	NAG
WRD-2422	0.01	0.06	<0.01	8.10	562945	7916260	NAG
WRD-2278	0.02	0.02	0.01	9.10	563274	7916001	NAG
WRD-2268	0.04	<0.01	0.02	9.00	563321	7916102	NAG
WRD-2386	0.06	0.01	0.04	8.90	563337	7916121	NAG
WRD-2350	0.06	<0.01	0.04	9.10	563304	7916332	NAG
WRD-2440	0.02	<0.01	0.01	9.20	563296	7916409	NAG
WRD-2404	0.01	0.02	<0.01	8.20	563215	7916497	NAG
WRD-2296	0.07	<0.01	0.05	8.40	563105	7916180	PAG
WRD-2332	0.01	0.03	<0.01	8.20	563095	7916324	PAG

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.

Table 11.1: Pending and Completed Amendments to Provisions of the Commercial Lease - 2020

OEN / TRAN Title	Property Section	Location (UTM NAD83 Zone 17W)		Description of Activity	Supporting Documentation
		Easting	Northing		
KM 76 Snow Stockpile Land Classification Amendment ¹	Tote Road (IOL Parcels PI-16)	538779	7920623	The kilometer 76.5 Snow Stockpile is located immediately adjacent to the Tote Road which connects the Mary River Mine Site to Milne Port. The area was previously disturbed as the Tote Road was historically located here, but was re-aligned in 2018. An extension of the commercial lease boundary at kilometer 76.5 of 7,317 m ² was proposed.	N/A

Notes:

¹Approved on February 5, 2021.

Table 12.1: Meetings with the Public, Government, and Inuit Organizations - 2020

Date	Group	Location	Description
January 10, 2020	QIA, NWB, CIRNAC	Teleconference	Annual Security Review Teleconference
January 14, 2020	Member of Parliament for Nunavut	Iqaluit	Introductory meeting with new Member of Parliament for Nunavut
January 15, 2020	IIBA Employment Committee - QIA	Teleconference	Regular Employment Committee Meeting
January 16, 2020	Chief of Staff to the Minister of Northern Affairs	Ottawa	Update on Phase 2 Environmental Assessment Process
January 21, 2020	Community Radio Show	Clyde River	Update on Phase 2 and Ongoing Operations
January 21, 2020	Meeting with RCMP	Clyde River	Meeting with RCMP Officers
January 22, 2020	Meeting with CAO and Mayor	Clyde River	Update on Phase 2 and Ongoing Operations
January 22, 2020	Meeting with Hamlet Council and MHTO	Pond Inlet	Update on Phase 2 review process, direct project benefits
January 22, 2020	Community Radio Show	Pond Inlet	2019 Shipping Season Update
January 22, 2020	Qikiqtani Inuit Association	Ottawa	Joint Priorities under the Commercial Lease
January 23, 2020	Hamlet Council and MHTO	Pond Inlet	End of 2019 Shipping Season Meeting
January 23, 2020	Community Radio Show	Pond Inlet	Update on Phase 2 and Ongoing Operations
January 27, 2020	EA Workshop #1	Mary River Mine Site	Jan 27-31, All North Baffin Community Hamlet's and HTO's
January 29, 2020	Mineral Industry Working Group	Teleconference	Nunavut Chamber of Mines & Committee
January 31, 2020	QIA	Teleconference	Baffinland CEO and QIA President Update Call
February 4, 2020	NEDA	Ottawa	Nunavut Economic Developers Association Event
February 4, 2020	Sermersooq Municipality (Kommuneqarfik Sermersooq)	Nuuk, Greenland	Steensby Project
February 4, 2020	Greenland Ministry of Housing and Infrastructure	Nuuk, Greenland	Steensby Project
February 4, 2020	Greenland Ministry of Finance	Nuuk, Greenland	Steensby Project
February 5, 2020	Embassy of United States	Ottawa	Discuss Northern Mining Projects
February 5, 2020	Government of Nunavut, Minister Akeegok, DM Bernie MacIsaac and Premier Savikataaq along with Brian Penney	Ottawa	Update on Phase 2 Assessment
February 5, 2020	Minister Dominic LeBlanc	Ottawa	Update on Phase 2 Assessment
February 5, 2020	QIA President PJ Akeegok	Ottawa	Update on Phase 2 Assessment
February 5, 2020	Ministry of Nature and Environment	Nuuk, Greenland	Steensby Project
February 5, 2020	Ministry of industry, Energy, Research and Labour	Nuuk, Greenland	Steensby Project
February 6, 2020	Premier Savikataaq	Ottawa	Update on Phase 2 Assessment
February 8, 2020	Community Radio Show	Igloolik	Update on Phase 2 and Ongoing Operations
February 8, 2020	Co-Op Store Public Session	Igloolik	Public Engagement
February 11, 2020	NIRB Winter 2020 Site Visit	Mary River Mine Site/Milne Port	Annual NIRB Winter Site Inspection (Feb 11-14)
February 11, 2020	Northern Store Public Session	Arctic Bay	Public Engagement
February 11, 2020	Community Radio Show	Arctic Bay	Update on Phase 2 and Ongoing Operations
February 11, 2020	Joint Executive Committee	Teleconference	JEC Meeting
February 12, 2020	Meeting with Deputy Mayor and CAO	Arctic Bay	Update on pending technical meeting, community roundtable and pre hearing conference
February 13, 2020	CANNOR	Iqaluit	Update on Phase 2 Assessment
February 14, 2020	NIRB	Igloolik	NIRB-led community information session
February 22, 2020	Ilisaqsivik Society	Clyde River	Socio Economic Issues and Further Society Planning
February 24, 2020	PAC - QSTEP Meeting	Teleconference	QIA/ESDC/Baffinland/Kakivak Committee Meeting

Table 12.1: Meetings with the Public, Government, and Inuit Organizations - 2020

Date	Group	Location	Description
February 25, 2020	MEWG	Ottawa	Marine Environment Working Group Meeting
February 26, 2020	TEWG	Ottawa	Terrestrial Environment Working Group Meeting
February 26, 2020	IIBA Employment Committee-QIA	Teleconference	Regular Employment Committee Meeting
February 26, 2020	Mineral Industry Working Group	Teleconference	Nunavut Chamber of Mines & Committee
February 28, 2020	MRSEWG	Teleconference	Proposed updates to the 2019 Socio-Economic Monitoring Report
February 28, 2020	QIA Minimum Inuit Employment Goals Working Group	Teleconference	Meeting to finalize Inuit employment targets for 2020-2021
March 3, 2020	QIA	Iqaluit	Phase 2 Updates and Technical Comment Review
March 5, 2020	QIA	Ottawa	Baffinland CEO and QIA President Update Meeting
March 9, 2020	QIA	Teleconference	Phase 2 Updates and Technical Comment Review
March 10, 2020	DFO	Teleconference	Phase 2 Updates and Technical Comment Review
March 11, 2020	IIBA Employment Committee-QIA	Ottawa	Finalizing Annual Work Plan and MIHR presentation
March 11, 2020	QIA, CIRNAC, ECCC, NrCan	Teleconference	Phase 2 Updates and Technical Comment Review
March 12, 2020	IIBA Contracting Committee	Teleconference (Changed from in-person meeting due to Covid 19)	Finalizing Annual Work Plan and updating the QIA
March 12, 2020	QIA – Terrestrial	Teleconference	Phase 2 Updates and Technical Comment Review
March 13, 2020	Mayor of Pond Inlet and Technical Support	Teleconference	Phase 2 March 2020 Technical Meeting Update
March 16, 2020	QIA - Marine	Teleconference	Phase 2 Updates and Technical Comment Review
March 17, 2020	Ms. Yvonne Jones, Parliamentary Secretary to the Minister of Northern Affairs	Teleconference	Update on COVID-19 response by Northern Miners
March 26, 2020	Joint Executive Committee	Conference Call	JEC Meeting
March 27, 2020	Joint Executive Committee	Conference Call	JEC Meeting
March 30, 2020	MHTO	Teleconference	Discuss Phase 2 Final Written Submission Responses
March 31, 2020	Call with GN-EDNT	Teleconference	COVID19 Industry Update
March 31, 2020	WWF	Teleconference	Phase 2 Updates and Technical Comment Review
April 1, 2020	ECCC	Teleconference	Phase 2 Updates and Technical Comment Review
April 1, 2020	QIA	Teleconference	Daily ICA Calls - April 1-30
April 6, 2020	QIA Employment Committee	Teleconference	Finalizing ETF Guidelines for laid off employees
April 7, 2020	Harvesters Enabling Program- Hamlet of Pond Inlet	Teleconference	Update on rollout of Harvesters Enabling Program
April 7, 2020	DFO, PC	Teleconference	Phase 2 Updates and Technical Comment Review
April 8, 2020	DFO	Teleconference	Phase 2 Updates and Technical Comment Review
April 8, 2020	QIA - Marine	Teleconference	Phase 2 Updates and Technical Comment Review
April 9, 2020	Government of Nunavut	Teleconference	Phase 2 Updates and Technical Comment Review
April 9, 2020	QIA	Teleconference	Phase 2 Updates and Technical Comment Review
April 9, 2020	DFO, PC, TC	Teleconference	Phase 2 Updates and Technical Comment Review
April 9, 2020	QIA Contracting Committee	Teleconference	Regular Contracting Committee Meeting
April 15, 2020	CANNOR	Teleconference	Support for Inuit in Communities who may be laid off due to Covid-19
April 17, 2020	QIA- Vegetation	Teleconference	Teleconference to discuss resolution of QIA-09
April 27, 2020	Hamlet of Arctic Bay	Teleconference	Covid-19, Food Relief
April 28, 2020	DFO, PC	Teleconference	Phase 2 Updates and Technical Comment Review
April 28, 2020	Hamlet of Igloolik	Teleconference	Covid-19, Food Relief

Table 12.1: Meetings with the Public, Government, and Inuit Organizations - 2020

Date	Group	Location	Description
April 30, 2020	QIA Contracting Committee	Teleconference	Contracting Committee Meeting
May 1, 2020	QIA	Teleconference	Daily ICA Calls - May 1-31
May 8, 2020	MEWG, TEWG	Teleconference	Terms of Reference for Working Groups
May 12, 2020	QIA Employment Committee	Teleconference	Regular Employment Committee Meeting
May 13, 2020	MHTO	Teleconference	Discuss Phase 2 Final Written Submission Responses, specifically those related to the marine environment
May 20, 2020	QIA APRF Planning	Teleconference	Planning Committee
May 22, 2020	DFO, PC	Teleconference	Phase 2 Updates and Technical Comment Review
June 1, 2020	QIA	Teleconference	Daily ICA Calls - June 1-30
June 4, 2020	QIA QSTEP	Teleconference	QSTEP Apprenticeship
June 9, 2020	JEC	Teleconference	JEC
June 11, 2020	GN EDT & CPHO	Teleconference	Covid-19
June 11, 2020	QIA Contracting Committee	Teleconference	Regular Contracting Committee Meeting
June 17, 2020	IIBA Employment Committee - QIA	Teleconference	Regular EC Meeting
June 19, 2020	DFO, PC	Teleconference	Phase 2 Updates and Technical Comment Review
June 19, 2020	GN, Dept. of Family Services	Teleconference	Support for Inuit in Communities who were laid off before Christmas
June 19, 2020	GN, Economic Development and Transportation	In-person	Covid-19
June 19, 2020	QIA APRF Planning	Teleconference	Planning Committee
June 24, 2020	MRSEMWG	Teleconference	Annual Meeting of the MRSEMWG
June 24, 2020	TEWG	Teleconference	2019 Monitoring Results, 2020 Monitoring Plans
June 25, 2020	MEWG	Teleconference	2020 Monitoring Plans, Shipping Mitigations and Early Warning Indicators (EWIs)- Part 1
June 26, 2020	QIA APRF Planning	Teleconference	Planning Committee
June 30, 2020	QIA/BIM Contracting Committee	Teleconference	Regular Contracting Committee Meeting
2020/06/31	QIA	Teleconference	Employment Committee
July 1, 2020	QIA	Teleconference	Daily ICA Calls - June 1-17
July 4, 2020	QIA	Teleconference	Weekly ICA Management Meeting X14 (July 4 - September 25)
July 8, 2020	Hamlet of Pond Inlet and MHTO	Teleconference	2020 Pre-Shipping Season Meeting 1
July 9, 2020	CIRNAC	Teleconference	Phase 2 and Project Certificate
July 10, 2020	MEWG	Teleconference	2020 Monitoring Plans, Shipping Mitigations and EWIs - Part 2
July 10, 2020	CANNOR	Teleconference	Support for Inuit in Communities who were laid off before Christmas
July 10, 2020	Service Canada, Iqaluit	Teleconference	Support for Inuit in the communities
July 14, 2020	Government of Nunavut	Teleconference	Phase 2 Proposal
July 15, 2020	Hamlet of Pond Inlet and MHTO	Teleconference	2020 Pre-Shipping Season Meeting 2
July 15, 2020	QIA	Teleconference	Weekly CRLU Working Group Meeting X9 (July 15-September 9)
July 17, 2020	QIA/BIM Contracting Committee	Teleconference	Discussing ICR's Inuit Content Requirements
July 18, 2020	BIM/Ilisaqsivik	Teleconference	Discussing the community counsellor program with Ilisaqsivik Executive Director
July 22, 2020	Senator Patterson	Teleconference	Phase 2 Discussion
July 22, 2020	DM EDT, GN	Teleconference	Phase 2 Discussion

Table 12.1: Meetings with the Public, Government, and Inuit Organizations - 2020

Date	Group	Location	Description
July 23, 2020	DFO	Teleconference	Fisheries Act Authorizations
July 23, 2020	QIA	Teleconference	ICA Day care Schedule
July 23, 2020	Nunavut Tunngavik Inc.	Teleconference	ICA Childcare Initiatives
July 27, 2020	QIA/BIM JEC Committee	Teleconference	Regular JEC meeting
July 28, 2020	MHTO Technical Consultant	Teleconference	Engagement Forecast
July 31, 2020	QIA Employment Committee	Teleconference	Regular Employment Committee Meeting
August 10, 2020	QIA/BIM Contracting Committee	Teleconference	Regular CC meeting
August 10, 2020	QIA	Teleconference	Outstanding Marine Technical Comments - Phase 2
August 11, 2020	DFO/PC	Teleconference	Marine Mammal Technical Comments - Phase 2
August 13, 2020	DFO	Teleconference	Ore Dock # 2 FAA
August 14, 2020	QIA QSTEP	Teleconference	QSTEP Apprenticeship
August 18, 2020	QIA	Teleconference	ICA Community Engagement
August 19, 2020	CIRNAC	Teleconference	Phase 2 Proposal
August 20, 2020	ECCC	Teleconference	Phase 2
August 24, 2020	NIRB	Pond Inlet	NIRB-led community information session. Baffinland representatives attended as observers
August 25, 2020	NIRB	Teleconference and in-person (Pond Inlet)	NIRB Marine Monitoring and Marine Mitigation Workshop: annual NIRB-led workshop related to shipping activities under 6 MTPA
August 28, 2020	QIA	Teleconference	AMP Meeting- Marine Environment OTIRs
September 2, 2020	QIA QSTEP	Teleconference	QSTEP Community Based Training
September 9, 2020	Nunavut Tunngavik Inc.	Teleconference	Phase 2 Discussion
September 11, 2020	CIRNAC	Teleconference	Phase 2
September 11, 2020	ECCC	Teleconference	Phase 2
September 11, 2020	CANNOR	Teleconference	Phase 2 Discussion
September 13, 2020	ECCC	Teleconference	Discussion on proposed addition of FDP site at Camp Lake Jetty
September 14, 2020	NIRB Phase 2 Technical Meeting #3	Teleconference	NIRB Phase 2 Technical Meeting #3 (Sept 14-18)
September 24, 2020	QIA/BIM Employment Committee	Teleconference	Regular meeting updates
September 24, 2020	NRCAN	Teleconference	Mary River Mine Dust Study
September 24, 2020	DFO/PC/QIA	Teleconference	Ballast Water Technical Comments - Phase 2
September 24, 2020	QIA Employment Committee	Teleconference	Regular Employment Committee Meeting
September 25, 2020	Minister David Akeagok	In-person	Phase 2 Discussion
September 28, 2020	NIRB Phase 2 Community Round Table and Pre Hearing Conference	Teleconference	NIRB Phase 2 Community Round Table and Pre Hearing Conference (September 28-October 1)
October 14, 2020	MHTO	Teleconference	Phase 2 Issues Resolution
October 20, 2020	Mayor of Pond Inlet	In-Person	Phase 2 Discussion
October 21, 2020	MHTO	Teleconference	Phase 2 Issues Resolution
October 26, 2020	Hamlet of Pond Inlet Phase 2 Technical Advisor	Teleconference	Mary River Project Community Counsellor Program
October 27, 2020	Economic Development - Bernie Mclsaac	In-Person	Covid-19
October 28, 2020	Hamlet of Pond Inlet and MHTO	Teleconference	Phase 2 Engagement Planning
October 30, 2020	Natalie O'Grady	In-Person	Briefing on Phase 2
November 2, 2020	CEO NTI	In-Person	Briefing on Phase 2
November 3, 2020	QIA	Teleconference	Phase 2 Marine and Freshwater Environment
November 4, 2020	Community Radio show	Pond Inlet	Phase 2 Update
November 4, 2020	QIA	Teleconference	Phase 2 Marine and Freshwater Environment

Table 12.1: Meetings with the Public, Government, and Inuit Organizations - 2020

Date	Group	Location	Description
November 4, 2020	Mayor Pond Inlet	In-Person	Phase 2 Discussion
November 5, 2020	Community Radio Show	Pond Inlet	2020 Shipping Season Summary
November 5, 2020	Public Q and A	Pond Inlet	Information table at the Sauniq Co-Op
November 5, 2020	MHTO & Hamlet of Pond Inlet	In-Person	Phase 2 Discussion
November 9, 2020	Mayor of Igloolik	Teleconference	2019 Socio-Economic Monitoring Report engagement
November 10, 2020	NWB	Teleconference	Phase 2 Discussion
November 10, 2020	NPMO	Teleconference	Phase 2
November 10, 2020	QIA	In-Person	Phase 2 Discussion
November 12, 2020	DFO	Teleconference	Phase 2 Issues Resolution
November 13, 2020	Mayor of Pond Inlet and Technical Support	Teleconference	2019 Socio-Economic Monitoring Report engagement
November 16, 2020	CIRNAC	Teleconference	Mining Association of Canada Meetings
November 16, 2020	DFO	Teleconference	Mining Association of Canada Meetings
November 17, 2020	Larry Bagnell, MP for the Yukon and Parliamentary Secretary to the Minister of Economic Development	Teleconference	Mining Association of Canada Meetings
November 18, 2020	QIA	Teleconference	Weekly ICA Management Meeting X7 (October 2-November 18)
November 18, 2020	QIA	Teleconference	Weekly ICA CRLU Meetings X7 (October 2-November 18)
November 18, 2020	QIA	Teleconference	Weekly ICA AMP Meetings x7 (October 2-November 18)
November 19, 2020	Minister Dan Vandal, Minister of Northern Affairs	Teleconference	Mining Association of Canada Meetings
November 19, 2020	QIA	Teleconference	Weekly Phase Terrestrial Environment Meetings x5 (October 22-November 19)
November 19, 2020	Mayor Pond Inlet	In-Person	Phase 2 Discussion
November 20, 2020	JEC QIA/Baffinland	Teleconference	Phase 2 Discussion
November 25, 2020	Marine Environment Working Group (MEWG)/Terrestrial Environment Workig Group (TEWG)	Teleconference	MEWG/TEWG - Review latest updates to Terms of Reference
November 25, 2020	MEWG/TEWG	Teleconference	Updated TOR Discussion
November 26, 2020	DFO	Teleconference	Commitment Language - Outstanding Issues
December 8, 2020	Hamlet of Arctic Bay & HTO	In-Person	Phase 2 Discussion
December 9, 2020	Hamlet of Pond Inlet and MHTO	Pond Inlet	Tote Road Acces
December 9, 2020	Marine Environment Working Group (MEWG)	Teleconference	MEWG Update Meeting - Baffinland shipping operations, 2020 monitoring programs, Early Warning Indicators discussions
December 9, 2020	Hamlet of Pond Inlet and MHTO	Pond Inlet	Tote Road Acces
December 9, 2020	MEWG	Teleconference	Marine Environment Working Group Meeting
December 10, 2020	DFO	Teleconference	Ore Dock #2 FAA - Engineering
December 10, 2020	Terrestrial Environment Working Group (TEWG)	Teleconference	TEWG Update Meeting - Baffinland operations, 2020 monitoring programs, caribou monitoring triggers discussions
December 10, 2020	DFO	Teleconference	Ore Dock #2 FAA
December 11, 2020	Hamlet of Sanirajak & HTO	In-Person	Phase 2 Discussion
December 14, 2020	NWB/CIRNAC/DFO/ECCC/QIA	Teleconference	Phase 2 Water Licence Amendment
December 17, 2020	DFO	Teleconference	North Railway FAA
December 17, 2020	DFO	Teleconference	Freshwater FAA - Offsetting

Table 12.2: Site Visits to the Mary River Project - 2020

Date	Agency
February 11-14, 2020	NIRB - Inspectors Solomon Amuno and Cory Barker
February 17-28, 2020	CIRNAC - Inspector Jonathan Mesher
February 19-20, 2020	WSCC - Inspector Viktor Mubuli (Virtual Visit)
March 10-13, 2020	QIA - Inspectors Chris Spencer and Stephen Anderson
August 17-21, 2020	WSCC - Inspector Viktor Mubuli (Virtual Visit)
September 3-11, 2020	QIA Environmental Audit - Nick Jewitt and Adam Boczek
October 13-15, 2020	CIRNAC - Inspector Omer Pasalic
December 7-11, 2020	WSCC - Inspector Viktor Mubuli (Desktop Geotechnical Review)

Notes:

QIA - Qikiqtani Inuit Association

NIRB - Nunavut Impact Review Board

CIRNAC - Crown Indigenous Relations Northern Affairs Canada

FIGURES

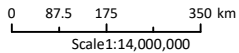


- LEGEND**
- Project Facility Location
 - North Baffin Planning Region
 - - - Nunavut Settlement Area
 - Qikiqtani Region

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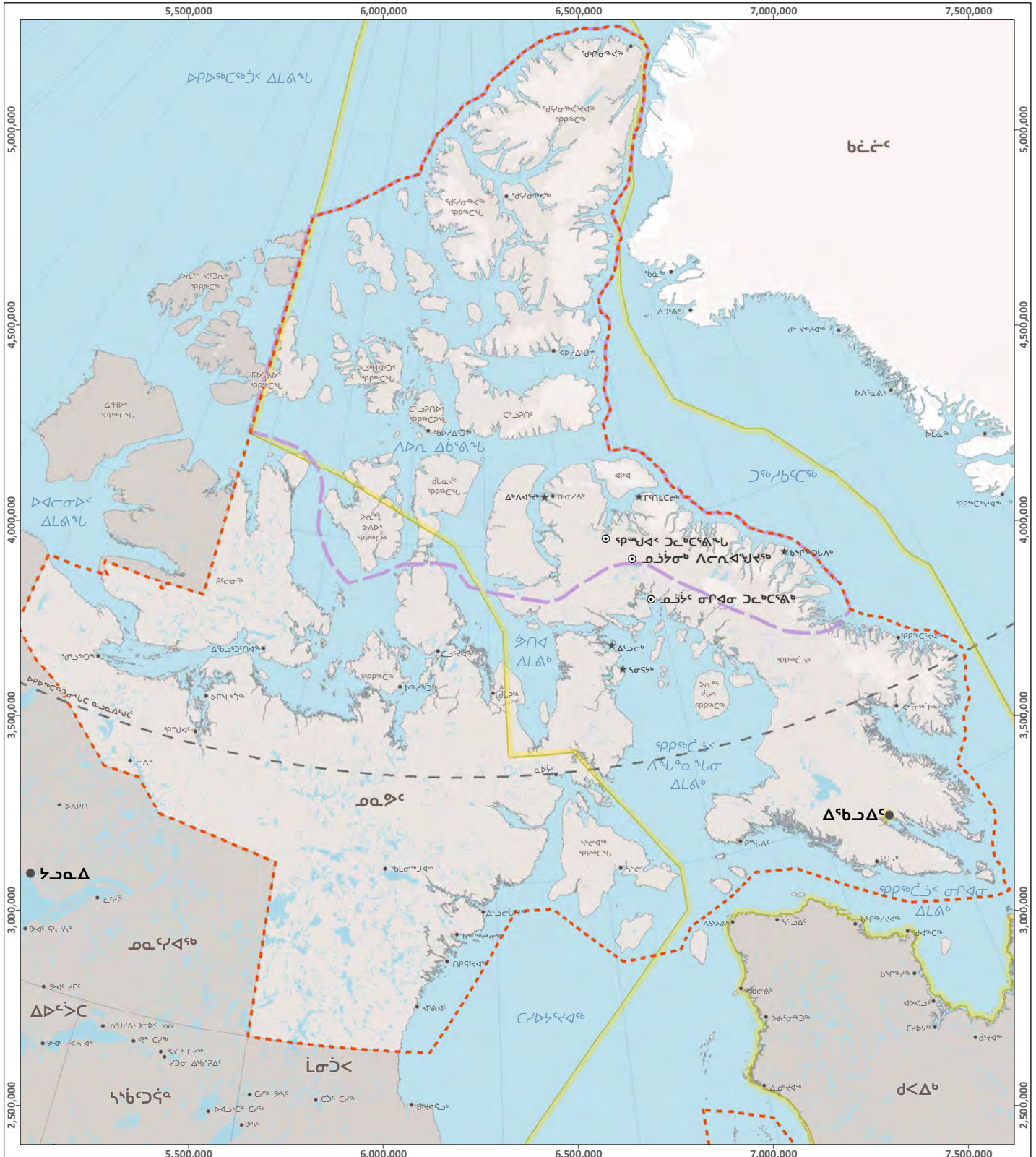
Baffinland Iron Mines Project Location

Projection: NAD 1983 STATISTICS CANADA LAMBERT.
Base Map: © Queen's Printer for Ontario, 2020



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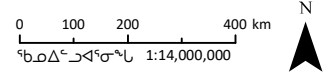
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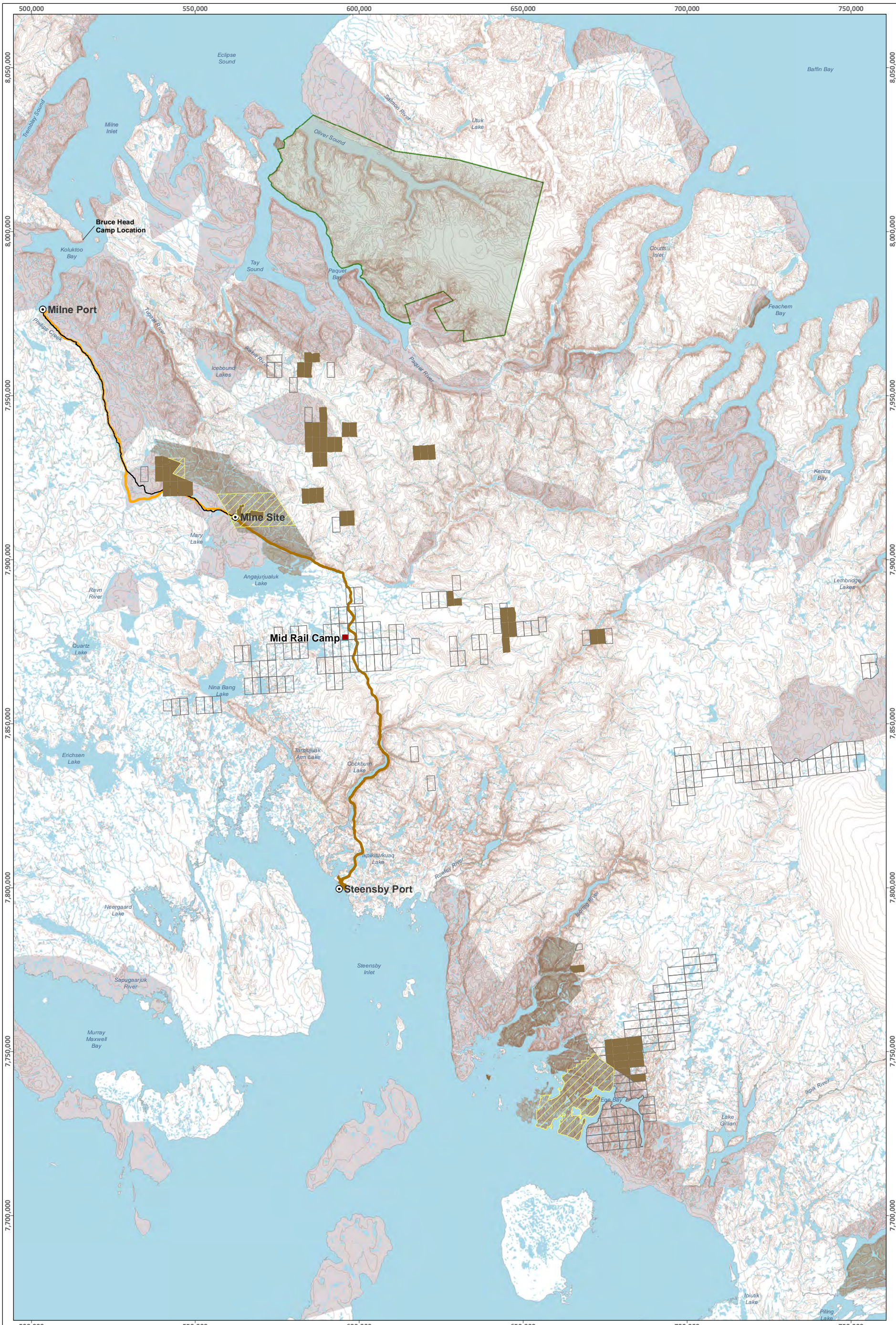
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FIGURE 1



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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, 2020
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FIGURE 2



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MARY RIVER PROJECT

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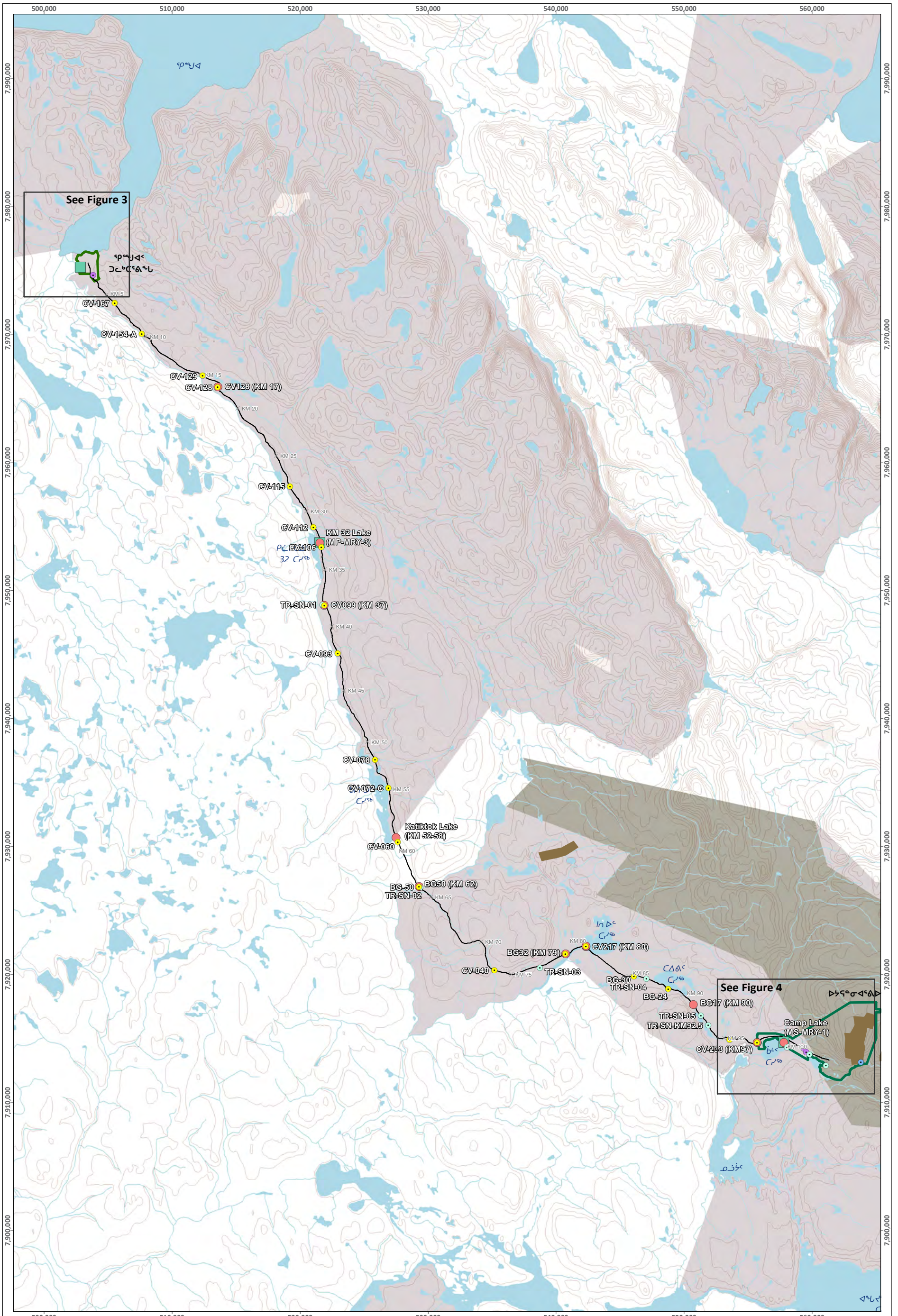
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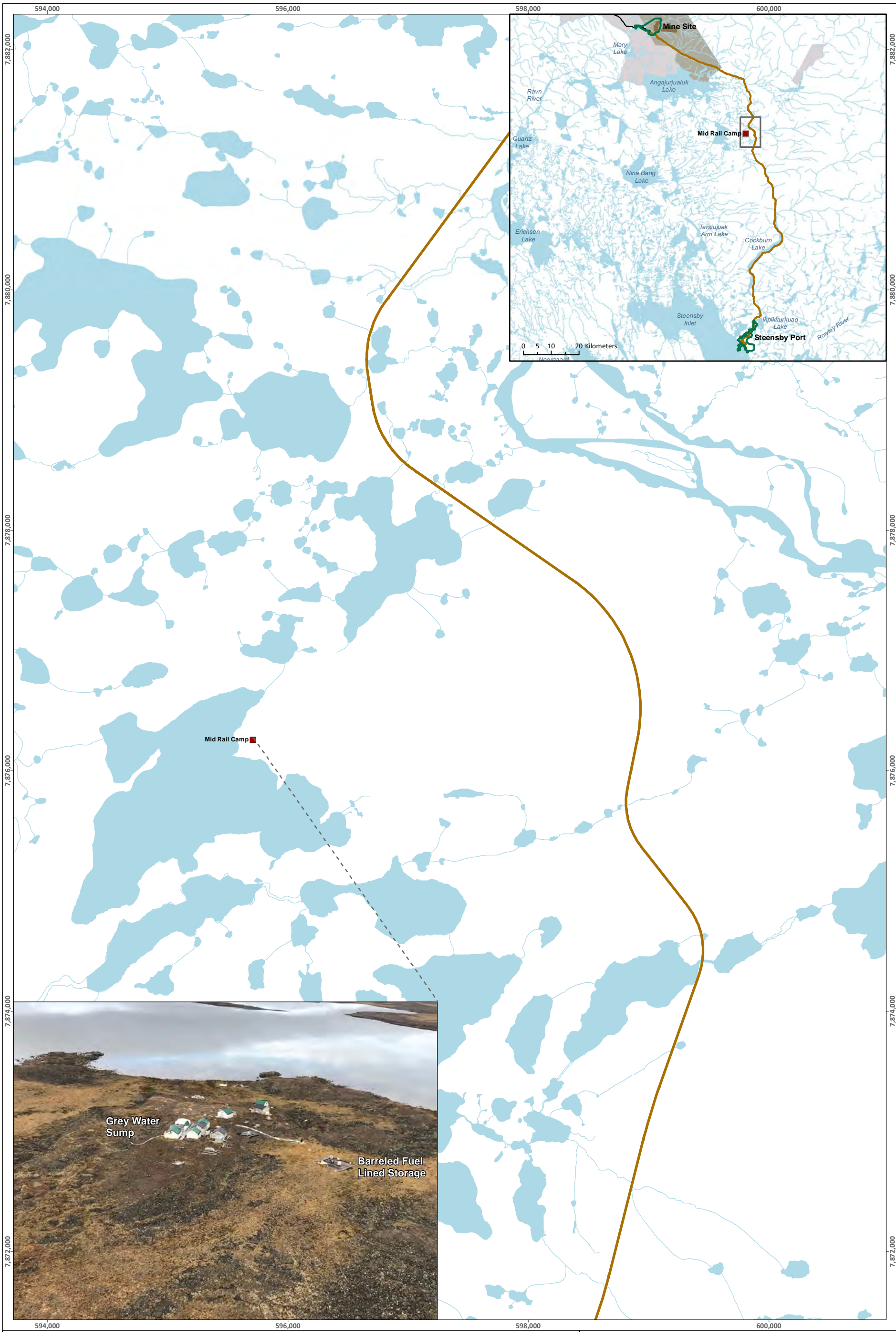
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FIGURE 3



<p>ᓄᓇᓴᓴᓴᓴ ᐅᓂᓂᓂᓂᓂᓂ</p> <ul style="list-style-type: none"> × ᓂᓂᓂᓂ ᐱᓂ ᐅᓄᓄᓄᓄᓄᓄ ᐱᓄᓄᓄᓄᓄᓄ — ᓂᓂᓂᓂ ᐱᓂ ᐅᓄᓄᓄᓄᓄᓄ ᐱᓄᓄᓄᓄᓄᓄ — ᓄᓄᓄᓄ ᓂᓂᓄᓄᓄᓄᓄᓄᓄᓄ (20ᓄᓄ ᐅᓄᓄᓄᓄᓄᓄ) □ ᐱᓂᓄᓄᓄᓄᓄᓄᓄᓄᓄᓄ ᐱᓄᓄᓄᓄ ■ ᐅᓄᓄᓄᓄᓄᓄᓄᓄ ᐱᓄᓄᓄᓄᓄᓄᓄᓄᓄᓄ ᓄᓄᓄᓄ 		<p>ᓂᓂᓂᓂᓂᓂ</p> <ul style="list-style-type: none"> △ ᓄᓄᓄᓄ ᓄᓄᓄᓄᓄᓄᓄᓄ ᓄᓄᓄᓄ ■ ᓄᓄᓄᓄ ᓄᓄᓄᓄᓄᓄᓄᓄ ᓄᓄᓄᓄ ᐱᓄᓄᓄ □ ᓄᓄᓄᓄᓄᓄᓄ ᓄᓄᓄᓄ ● >ᓄᓄᓄᓄᓄᓄᓄᓄ ᐱᓄᓄᓄᓄᓄᓄ ■ ᐱᓄᓄᓄᓄᓄᓄ ᐱᓄᓄᓄ ᓄᓄᓄᓄᓄᓄ ᐱᓄᓄᓄᓄᓄᓄ 		<p>ᓂᓂᓂᓂᓂᓂ</p> <ul style="list-style-type: none"> ● ᐱᓄᓄᓄ ᐱᓄᓄᓄᓄᓄᓄᓄᓄᓄ ᓂᓂᓂᓂᓂᓂᓂ ○ ᐱᓄᓄᓄᓄ ᓄᓄᓄᓄᓄᓄ ᓂᓂᓂᓂᓂᓂᓂ ● ᐅᓄᓄᓄᓄᓄᓄ ᐱᓄᓄᓄᓄᓄᓄ ᓂᓂᓂᓂᓂᓂ ● ᐱᓄᓄᓄᓄᓄ 		<p>ᓄᓄᓄᓄ ᐅᓄᓄᓄᓄᓄᓄ MARY RIVER PROJECT</p> <p>ᐅᐱᓄᓄᓄᓄ ᓄᓄᓄᓄᓄᓄ</p> <p>ᓄᓄᓄᓄ: NAD 1983 UTM ZONE 17N. ᓄᓄᓄᓄᓄᓄ ᓂᓂᓄᓄᓄᓄᓄᓄᓄᓄᓄ 2019. © Queen's Printer for Ontario, 2020.</p> <p>0 2 4 8 km N</p> <p>ᓂᓂᓄᓄᓄᓄᓄᓄ 1:280,000</p>	
<p>ᓄᓄᓄᓄᓄᓄᓄᓄᓄᓄ</p> <p>Baffinland</p>		<p>ᓄᓄᓄᓄᓄᓄᓄᓄᓄᓄ</p> <p>FIGURE 4</p>		<p>4</p>			

SAVED: C:\Users\katie\OneDrive\Documents\1 - Impact Reporting\1 - Area\1 Type A\2020\BIML_Fig 4 - Tree Road 2020 Monitoring - INK.mxd, 31-Mar-21

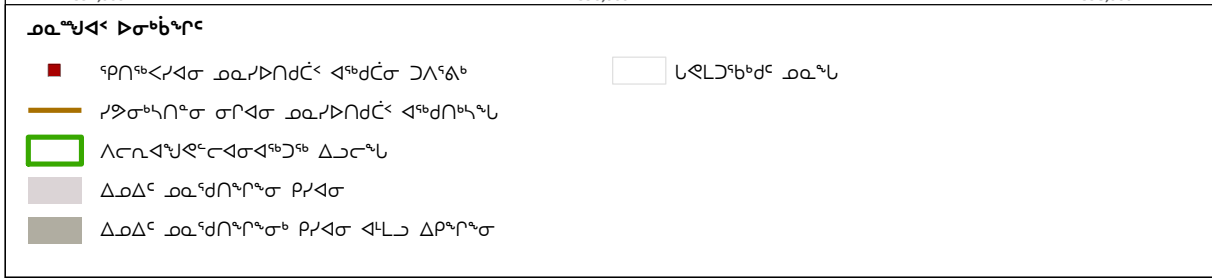
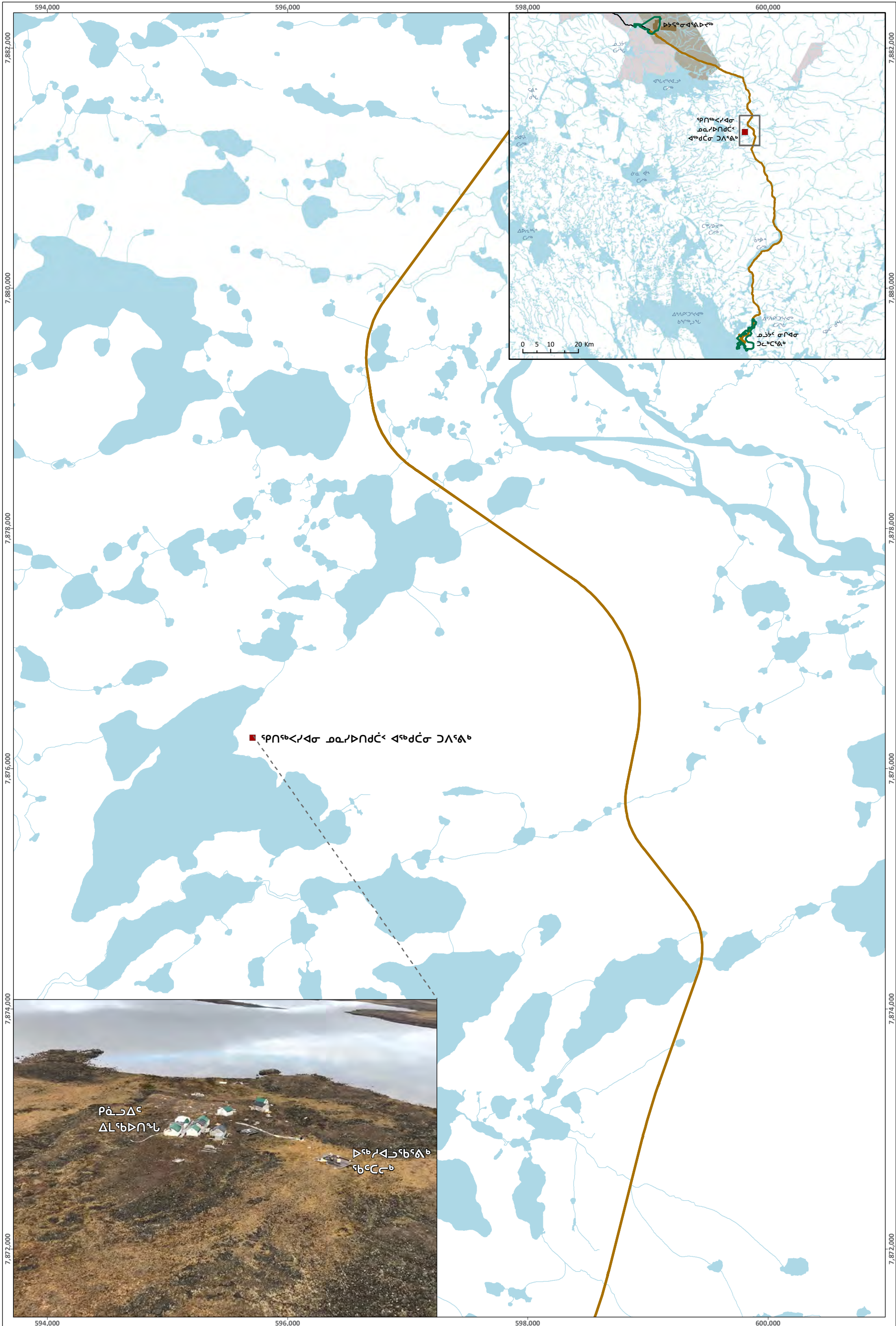


SAVED: C:\Users\kellm\OneDrive\Documents\4 - Maps\Reporting1_Areua\Type A\2020\BIML_Fig 6 Mid Rail Camp.mxd: 09-Mar-20

LEGEND

- Mid Rail Camp Location
- Future South Railway Alignment
- Project Development Area
- IOL Surface Only
- IOL Surface and Subsurface
- Crown Land

ماري ريفر پراجيڪٽ MARY RIVER PROJECT	
Mid Rail Camp Location	
Projection: NAD 1983 UTM ZONE 17N. Base Map: © Queen's Printer for Ontario, 2020.	
0 170 340 680 Meters Scale 1:30,000	
	ᐅᐅᐅᐅᐅᐅᐅᐅ FIGURE 6



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 © Queen's Printer for Ontario, 2020.

0 175 350 700 ᄃᄃᄃᄃ
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Baffinland ᄃᄃᄃᄃᄃᄃᄃᄃᄃ **FIGURE 6**

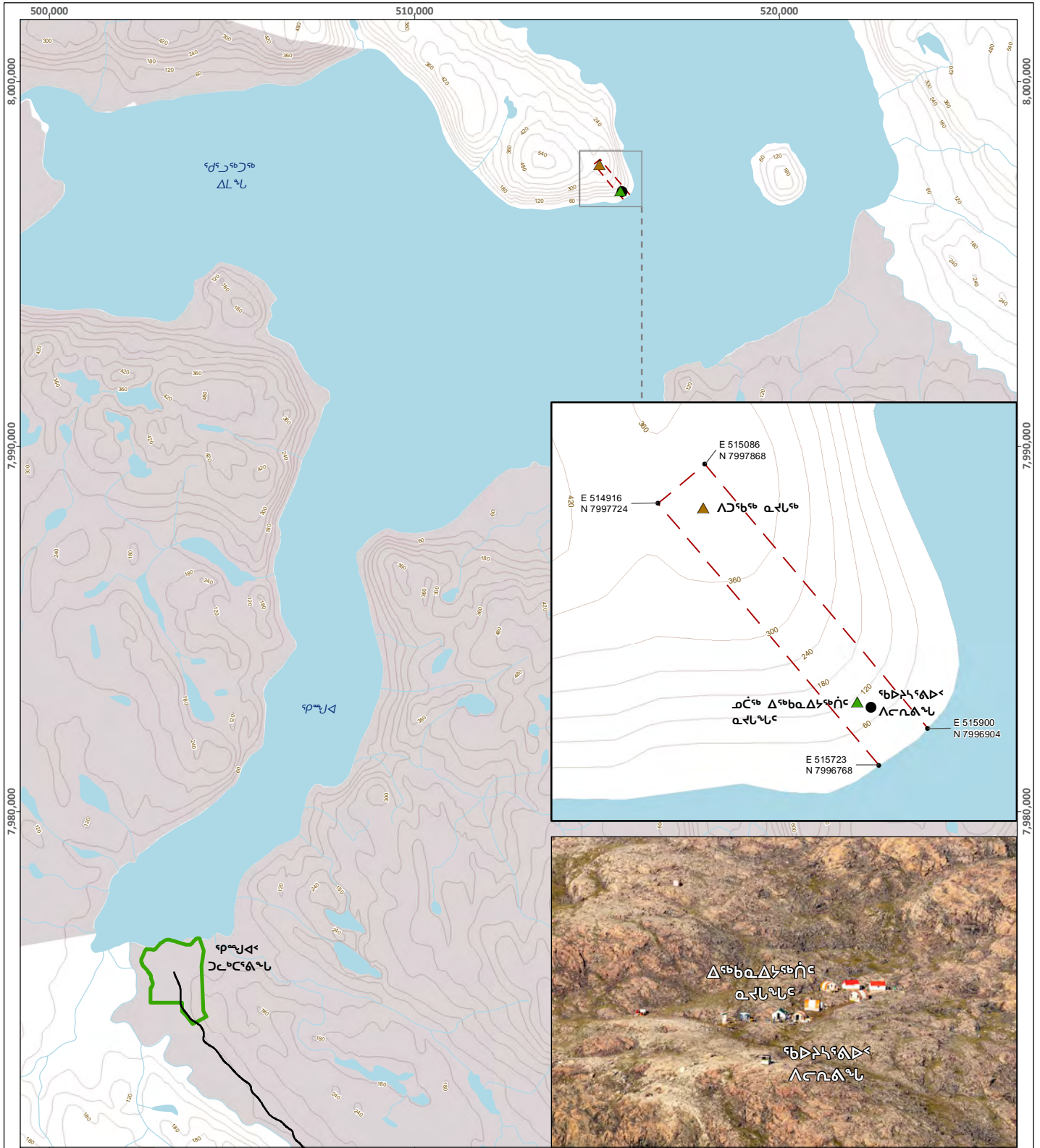
SAVED: C:\Users\kellam\Documents\Mapa\Reporting1_Areua\Types A\2019\BIML_Fig 6 Mid Rail Camp_INK.mxd, 19-Mar-20



SAVIED: C:\Users\kellie.mcgill\Documents\1 - Maps\Reporting\1 - Areas\Types A12020\BIML_Fig 7 Steensby Port.mxd; 09-Mar-20

- LEGEND**
- Contour (2.5 km Interval)
 - Current Infrastructure
 - Project Development Area

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Steensby Port Layout	
Projection: NAD 1983 UTM ZONE 17N. Base Map: © Queen's Printer for Ontario, 2020.	0 200 400 800 Meters Scale 1:35,000
	ᓄᓄᓄᓄᓄᓄᓄᓄᓄᓄᓄᓄ FIGURE 7



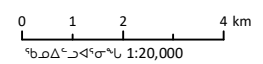
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- ለጋራጌᓐ ልገᓐ ስርዓት
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- ጋራጌᓐ ልገᓐ ስርዓት (20ፑሮ ስርዓት)
- ለጋራጌᓐ ልገᓐ ስርዓት
- ለጋራጌᓐ ልገᓐ ስርዓት
- ለጋራጌᓐ ልገᓐ ስርዓት
- ▲ ጋራጌᓐ ልገᓐ ስርዓት ለጋራጌᓐ ልገᓐ
- ▲ ጋራጌᓐ ልገᓐ ስርዓት
- ጋራጌᓐ ልገᓐ ስርዓት ለጋራጌᓐ ልገᓐ

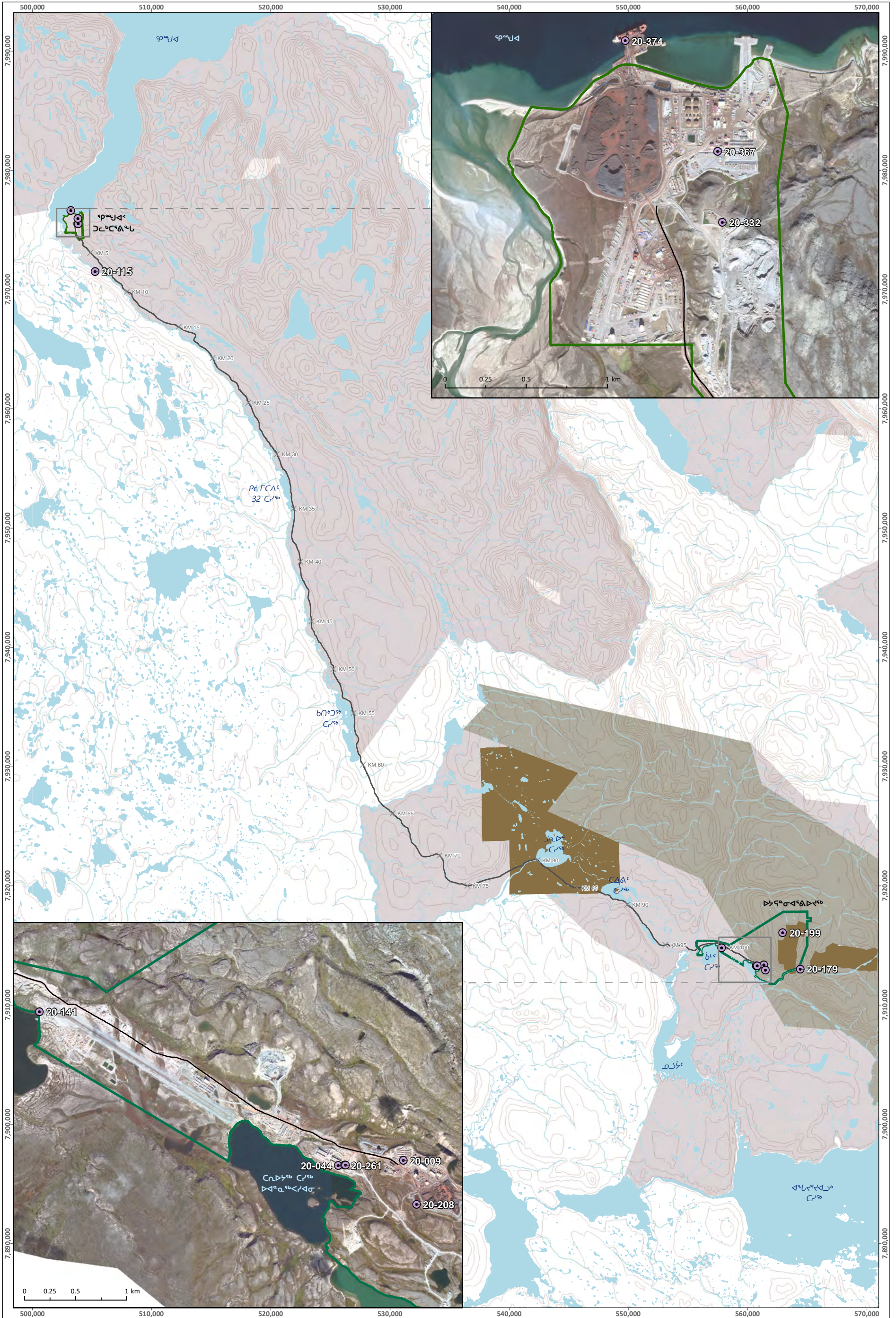
ጋራጌᓐ ልገᓐ ስርዓት MARY RIVER PROJECT

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ጋራጌᓐ ልገᓐ ስርዓት: NAD 1983 UTM ZONE 17N.
 ጋራጌᓐ ልገᓐ ስርዓት ስርዓት:
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FIGURE 8



SAVED: C:\Users\kellie.mingui\Documents\1_Area\1_Type A\2020\BIML_Fig 9 Unauthorised Discharges_INK.mxd; 28-Jan-21

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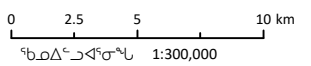
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- ᓯᓯᓂᓄ ᐱᓕ ᐅᓐᓂᓂᓄᓐ ᐱᓐᓂᓄᓐ
- ᓄᓇᓂᓄ ᓯᓂᓄᓄᓐᓂᓄᓐ (20ᓯᓐᓂ ᐅᓐᓂᓂᓄᓐ)
- ▭ ᐱᓕ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ
- ▭ ᐅᓂᓂᓄᓐ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ

- ▭ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ
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- ▭ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ
- 2020 ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ (NT-NU ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ)

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ᓄᓄᓄᓄ: NAD 1983 UTM ZONE 17N.
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 © 2020 Digital Globe, Inc.
 ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ ᐱᓐᓂᓄᓐ 2020.
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SAVED: C:\Users\katie.mcguire\Documents\4 - Maps\Reporting\1_AnnualType A\2022\08\BM_Fig 10 QAQC Sampling.mxd; Mar 30, 2021 3:25 PM

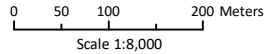
LEGEND

- X QA/QC Sampling Location
- X WRF Monitoring Station
- Current Infrastructure

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Deposit 1 Waste Rock Facility

Projection: NAD 1983 UTM ZONE 17N.
 Base Map: © 2020 Digital Globe, Inc.
 Imagery and Infrastructure are representative as of August 2020.



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FIGURE

10

