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

2020 ᖁᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖏᑎᒋᑦ ᐊᒻᒪ ᓄᓇᕗᒻᒥ ᐃᒥᓕᓴᐅᔪᑦ ᑲᑎᒪᔨᖓᑦ ᐊᖏᕐᕋᔪᒃᑖᑦ ᑲᑎᒪᔨᖓᑦ

Water Licence 2AM-MRY-1325 and Commercial Lease Q13C301

ᖃᓄᐃᑦᑐᓂᖅ A ᐃᒥᖏᒻᒪᑦ ᓯᐃᓴᓂᓗ 2AM-MRY1325 ᐊᒻᒪ ᑭᓴᐅᔾᔨᐅᕐᓯᐊᓂᖏᒻᒪᑦ ᐊᑐᖅᑐᐊᕈᑦ Q13C301

March 31, 2021 | ᐊᒃᓚᖏᓗ 31, 2021

Baffinland Iron Mines Corporation

Mary River Project

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

REV 0

2021-03-31	0	A McKenzie	
		A. McKenzie	C. Murray
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
Name and contact information of the Baffinland representative responsible for the preparation and approval of the Annual Report.	**Christopher Murray** Christopher.murray@baffinland.com T: +1 416 364 8820 x5072 C: +1 647 472 9842
The name and contact information of the Baffinland representative that QIA can contact should it have any questions or comments regarding the Annual Report	**Christopher Murray** Christopher.murray@baffinland.com T: +1 416 364 8820 x5072 C: +1 647 472 9842

2020 QIKIQTANI INUIT ASSOCATION (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 Eqe 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 ensuing 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.

2020ᒥᒧᑦ ᖃᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑎᒪᔨᖅᑎᑦᑎᓕᒪᓂᑦ ᓄᓇᕗᒥ ᐃᒥᑕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖅᑎᓕᓐᓂᒃ ᐊᖏᔪᒍᒪᔪᓕᕆᓂᖅᑐᑎᑎᓂ ᐅᓂᒃᑲᖅ ᓄᓇᕗᕆᓂᖅ

<u>ᓯᕗᓕᖅᑎᓄᑦ ᓇᐃᔭᖅᓯᒪᔪᖅ</u>

ᑭᓐᓇ ᐅᓂᒃᑲᖅ ᖃᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑎᒪᔨᖅᑎᑦᑎᓕᒪᓂᑦ ᓄᓇᕗᒥᓗ ᐃᒥᑕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖅᑎᓕᒪᓂᑦ ᐸᖓᓇᐅᑉᓯᓯᒪᔪᖅ ᓇᐃᔭᖏᓗᓂᑦ ᐅᖓᑲᓯᓕᕆᓂᖅᓯᒪᓕᑕ 2020ᒥ ᓄᑖᒃᓴᓂ ᐱᑕᕆᓂᖅᒥ ᐃᓗᐊᓂ ᐸᒪᓐᓂᖅᑐᑦ ᐊᓕᑦᑎᓐᓂᒃ ᐅᖓᑕᕆᓂᖅᓯᒪᓕᑕ ᐊᓕᑦᑎᓐᓂᒃ ‘A’ ᐃᒥᖓᓂᑦ ᓕᐃᓴᖅᓱᒪᓄᑦ 2AM-MRY1325 – ᐊᖅᑭᑎᐊᑭᑎ 1 ᓄᓇᐃᓕᓐᓗ ᐊᑐᖅᑕᐅᓂᖅᓯᒪᓂᑦ ᐊᑐᓵᓇᐅᑎᒥ Q13C301 ᖃᑭᖅᑕᓂᒪᓂᑦ ᐸᒪᓐᓂᖅᑐᓂᓗ. ᐊᓯᐊᓂᒃ ᐊᖃᕐᒍᒥᓀᓕᕆᓂᖅᓯᒪᓂᑦ ᐅᓂᒃᑲᖅᑭᒪᔪᖅᑐᑦ ᐃᒥᑕᕆᔨᒃᑯᑦᓄᑦᓗ ᓇᐃᔭᖅᑕᐅᓂᖅᑐᑦ ᐸᒪᓐᓂᖅᑐᑦᓗ. 2020ᒥ ᐱᑕᕆᐊᕐᓂᓄᑦ ᐊᓕᑦᑎᓐᓂᒃ ‘B’ ᐃᒥᖓᓂᑦ ᓕᐃᓴᖅᓱᒪᓄᑦ 2BE-EQE1926 ᓄᓇᐃᓕᓐᓗ ᐊᑐᖅᑕᐅᓂᖅᓯᒪᓂᑦ ᓕᐃᓴᒥ QL2-1910.

ᐱᓕᕆᐅᓕᓐᓄᑦ ᑯᐃᓕ-19 ᓄᑯᓇᖏᓐᓇᖅ, ᓯᓚᖅᓄᓐᓂ ᓴᓗᒥᓕᕿᓂ ᐊᑐᓕᖅᑎᑕᕆᑕᐅᓕᖅᑐᑦ 2020ᒥ ᐊᑯᑎᓄᑦ ᖃᐅᔨᓴᖏᓐᓄᑦ. ᐸᑯᓵᓄᓕᑯᑦ ᖃᐅᔨᓴᓕᒫᓂᓗ ᐊᑐᓕᖅᑎᓂᑎᓕᕆᓂᖅᓴᓂ ᒪᓕᖅᑕᐅᓂᑎᐊᓚᐊᖏᖅᑐᓄᖅ ᐊᓕᑦᑎᓇᒫᓂᑐᒍᓐᓄᖏᓐᓄᑦ ᐸᖓᓇᐅᑉᓯᓯᓄᓐᓗ ᒥᑭᓕᓕᖅᓯᒪᓕᑕᓂᑦ ᑯᐃᓕ-19ᒧᑦ ᐊᐃᑐᑐᓇᐃᓐᓄᑦ ᐃᖏᖅᐅᐃᓴᖏᓐᓂᑦ, ᓄᓇᕗᓐᓄᑦ, ᓇᓕᑐᐃᓇᓐᓗ ᐅᑎᑐᑐᓄᑦ. ᓴᓂᑎᑯᓕᓂᑦ ᓄᓇᓕᓕᒃ ᓄᓇᕗᒥ ᑯᐃᓕ-19ᒥᑦ, ᐸᑯᓵᓄᓕᑯᑦ ᑐᕆᓴᖏᓐᓇᒪᓕᑕ ᓄᓇᕗᒥᐅᓕᒫᑦ ᐊᖏᓕᖏᓐᓇᖅᑎᓕᕆᓂᖅᓯᒪᓂᑦ ᐊᒋᓕᖏᓐᓇᖅᑎᓂᒃ. ᐅᓄᖅᑐᓄᑦ ᓴᓂᖅᐅᔨᔪᖏᓐᓇᖅᑐᓂᒃ ᐱᓕᕆᔨᔪᖏᓂᒃᓴᓗ, ᐸᑯᓵᓄᓕᑯᑦ ᑯᐃᓕ-19ᒥᒃ ᐊᐃᑐᑐᓇᐃᐅᑐᐃᓐᓇᕆᓕᓵᓂ ᓄᓇᕗᒥ ᓄᓇᕗᒧᑦ ᒥᑭᓕᓕᖅᓯᒪᓕᑕᓂᑦ ᐊᖏᓕᖏᓐᓇᖅᑎᓕᕆᓂᖅᓯᒪᓂᑦ, ᐊᖏᓕᖏᓐᓇᖅᑎᓂᑎᓕᕆᓂᖅᓯᒪᓂᑦ ᐱᓕᕆᖅᓯᒪᓕᑕᓂᑦ ᐅᓪᓗᒥᒃᑲᓐᓂᕆᓕᕆᓂᖅᓯᒪᓂᑦ. ᐊᑐᐃᓐᓇᖅᑐᓂᒃ ᐊᖏᓕᖏᓐᓇᖅᑎᓂᑎᓕᕆᓂᖅᓯᒪᓂᑦ ᓴᖅᑭᑎᓕᕆᓂᖅᓯᒪᓂᑦ ᐅᓪᓗᒥᒃᑲᓐᓂᕆᓕᕆᓂᖅᓯᒪᓂᑦ ᐊᑐᓕᖅᑎᓂᑎ

- ᐃᑭᑦᑏᖅᓯᒪᑦ ᐅᓗᓚᐊᓯᕐᓂᑐᒃ ᓱᕈᒃ ᐅᕆᖏᖅᑎᐊᕐᕕᒃ ᐅᓗᓚᐊᓯᕐᓂᑐᓄᑦ ᐊᒃᑕᖏᕐᒧᑦ;
- ᐃᑭᑦᑏᖅᓯᒪᑦ ᐃᑭᑕᐅᔪᓂᒃ ᐅᕆᖏᖅᓂᒃ ᐱᓕᓚᖅᓗᑦ ᐊᐅᓕᖅᓂᖅᑎᑦ ᐃᑭᑕᐅᔪᓄᑦ ᐅᕆᖏᓕᓚᕐᓇᖅᑲᑦ;
- ᐸᖅᑭᕆᐅᔪᑦ ᓄᓇᐃᑦ ᖃᐅᓱᓂᑕᓄᑦ ᐃᒥᖓᓄᑦ ᐊᕐᕕᖅᓂᒃ ᓴᖅᑭᑎᑦᑕᓄᑦ ᓯᓚᑦᓴᓂᑦ ᐃᓱᒪᓕᑕᐅᔪᓄᑦ ᐱᐅᓱᐊᖅᑎᑕᐅᓕᖅᑐᑦ ᓄᓇᐃᑦ ᖃᐅᑎᖅᓂᑦ ᐊᕐᕕᑦ;
- ᐊᑐᓕᖅᓴᓂᖅ ᓱᖅᑲᓕᔪᐃᑦ ᐃᓂᐊᑕ ᓄᖕᓴᐸᓕᓕᐊᖅᓇᖅᓂᖏᓄᑦ ᖃᓄᖅᑐᑭᑎᒥᖅ ᐃᒪᒋᖅᑲᑦᑐᖏᒪᒪᑦ ᖃᐅᖅᑎᑦ ᐊᖏᑕᓄᓐᓂᑦᓗ ᓱᖅᑲᓕᐅᕙᖅᐸ ᐃᓂᐊ ᐃᓕᓴᐅᑎᓐᓗ ᒥᓗᐊᑭᓄᑦ ᓄᓇᐃᑦ ᐃᒪᐃᔪᖅᑕᐅᔪᓄᑦ ᑲᓴᓐᓗᑦ MS-06;
- ᓴᓇᔪᐅᓂᖅᖏᓐᖓ ᑭᓪᓕᒥᑦ 106 ᐅᓴᖅᓂᐊᖅᓇᖅᑎᑦ ᑲᑎᑦᐅᔪᓄᑦ ᒪᖅᓴᓄᓐᓗ ᑕᓱᖅ, ᐊᒻᒪᓗ;
- ᐊᖏᕐᕕᒋᐊᖅᑕᐅᓐᓗᓂ ᐃᑭᑦᑏᖅᓯᒪᑦ ᐅᓴᖅᓄᑦ ᑕᓱᖅ ᐊᐅᓚᐃᖅᓇᖅᓯᓗᓗ ᑐᖓᔪᓚᐅᑦ ᐃᒥᖅᓄᑦ ᓱᕈᐃᔪᐃᑲᐅᑎᒃ ᒪᓕᓂᑎᐊᖅᑯᓂᑦ ᑭᓇᓗᓄᑦ ᐃᒋᑦ ᐋᐅᓂᖅᑭᖃᓄᑦ ᒪᓕᑕᐊᓕᖅᑐᒃ.

ᐅᓱᑲᖅᑕᖅᓴᐅᓕᐸᒃ ᐊᖅᑯᑎᐊᓂ

ᐅᓱᑲᖅᑕᖅᓴᐅᓕᐸᒃ ᐊᖅᑯᑎᐊᔪᑦ, ᐱᓕᓚᔭᐅᓕᓗᐊᑕᖅᑐᑦ ᐱᖅᑲᐅᐅᔨᓕᐅᕙᖅᓵᑦ:

- ᐅᓱᓕᑦᑐᑦ ᓴᙱᕆᔭᒃᓴᑦ ᐅᓱᑲᖅᑕᐅᑎᓄᑦ ᓄᓇᒃᑯᑭᑎᓄᑦ ᐅᓴᖅᓂᐊᖅᓇᖅᑎᑦ ᖃᐅᖓᔪᐊᓄᑦ ᑐᖅᑯᖅᑕᐅᓂᐊᖅᓇᖅᑐᔪᑦ ᐃᑲᔪᑕᐅᓂᐊᖅᓇᖅᑐᔪᑦ ᐱᓕᕆᔨᒃᑯᑦ ᐊᐅᓚᓂᖅᓯᒪᓕᐅᕙᖅᓵᑦ ᐊᐅᓕᓂᖅᓯᒪᓕᖅᑐᑦ ᐱᖅᑲᐅᐅᔨᓕᐅᕙᖅᓵᑦ ᐱᖅᑲᓇᐃᔨᒃᑯᑦ ᐊᐅᓚ

- ᐅᓄᖅᑐᑦ ᐅᒥᐊᖏᓚᖅᓯᑦ ᐅᓱᐅᖅᑕᖅᑐᑦ, ᐱᖅᓱᐅᕐᓗᑎᑦ ᐅᑎᖅᑎᑕᐅᔪᓂᑦ ᑭᓱᓕᕆᔨᒋᑦ ᓱᐅᐃᓪᓗ ᖃᐅᔨᓗᐃᓄᑦ ᐅᖅᓱᐊᓗᐃᓪᓗ ᑎᑭᑎᑕᐅᔪᓂᑦ, ᓄᖓᓴᑦᑐᑦ ᐱᖏᓂᑦᓗ ᐃᑲᔪᑕᐅᓪᓗᑎᒃ ᑲᔪᓱᓇᖅᑐᓄᑦ ᐱᓕᕆᓂᖅᓗᑎᑦ ᐊᐅᑕᓂᖅᓄᑦ ᐱᑭᖅᕿᓪᓕᐊᓂᖅᓗᒍ.

ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᓕᕆᖏᖓᓂᒃ ᐊᐅᑕᓪᑎᓐᓂᒃ

2020ᒥ, ᐸᖅᑭᒃᓴᓄᑦ ᓇᓗᓇᐃᖅᕿᓪᓕᐊᑕᐅᖅᕿᐅᒃ ᐅᓴᕋᖏᓂᐊᖏᖅᑕ 1 ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᓄᑦ ᐱᓕᕆᓂᐅᕐᓂ ᐊᐅᑕᓂᖓᓕᒃᓂᓗ ᐁᖅᑭᓕᐊᖏᓗᑎᓗ ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᐃᑦ ᓇᒪᓴᖅᑕᐅᓂᖓᓕᒃᓗ ᖃᓄᖅᑐᑐᑎᓄᑦ ᐃᓴᖅᑭᑎᓗᑎᑦ ᐊᑎᓕᐊᖅᑐᑦ ᐅᖅᑕᐅᓯᒪᔪᓄᑦ ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᖅᑯᐊᖓᓄᑦ ᑐᖓᔪᖅᑐᑎᓄᑦ ᐊᐅᑕᑎᓂᖓᓕᒃᓗ ᓄᓇᕗᑦᑕᐅᔪᓄᑦ ᐊᑐᖅᑕᐅᓂᖓᓕᒃᓗ ᐊᐅᑕᑎᓂᖓᓕᒃᓗ ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᐃᑦ ᓇᓗᓇᐃᖅᕿᓪᓕᐊᑕᐅᖅᕿᐅᒃ ᐊᐅᑕᑎᓂᖓᓕᒃᓗ ᖃᐅᔨᓴᖅᑭᑦᑐᖅᑐᑦ ᖃᐅᔨᓴᖅᑭᑦᑐᖅᑐᑦ, ᖃᐅᔨᓴᖅᑭᑦᑐᓗ ᐃᓕᑕᐅᔪᓂ ᐅᓴᕋᐃᑦ ᓇᓗᓇᐃᖅᕿᓪᓕᐊᑕᐅᖅᕿᐅᒃ ᐊᐅᑕᑕᐅᓂᖓᓕᒃᓗ ᖃᐅᔨᓴᖅᑭᑦᑐᖅᑐᑦ ᑕᐃᒪᐃᑎᑕᐅᓴᖅᑐᓄᑦᑐᓗ ᐅᓴᕋᐃᑦ ᐃᓕᑕᐅᔪᓂ ᐃᓗᓕᕆᔨᒋᑦ.

2020ᒥ, ᐸᖅᑭᒃᓴᓄᑦ ᐁᖅᑭᐹᐊᖅᓯᒪᔪᖅᑐᑦ ᐱᓕᕆᓂᐅᕐᓂ ᓯᕗᑦᑕᐊᓂᒃ ᐅᓴᕋᐃᑦ ᐃᓕᑕᐅᔪᓄᑦ ᐊᐅᑕᑎᓂᖓᓕᒃᓗ ᐸᖅᓇᐅᑎᒃ (ᐁᖅᑭᐹᐊᐹᑎ 3, BAF-P1 -830-P16-0029) ᐊᖏᕐᕋᐅᑦᑕᐃᓗᓂᓗ ᐸᖅᓇᐅᑎᖓᓗ ᐃᒥᑕᕆᓴᐅᓯᒪᓂᖓᓂᑦ. ᐊᑐᑎᖃᓗᐊᖅᑐᑦ ᓄᑖᕆᓇᐊᑲᑎᑦ ᐸᖅᓇᐅᑎᒧᑦ ᐱᖃᓯᓯᔨᓕᐅᕐᖅᑐᑦ ᓄᑖᐃᑦ ᓇᒧᓕᖅᑐᓂᖏᓐᓂᒃ ᓄᑖᕆᓇᐊᖅᓯᒪᔪᖅᑐᑦ ᓄᓇᕗᑦᑕᐅᔪᓂᑦ ᐁᖅᑭᖓᒪᓂᖅᓗᒍ ᖃᐅᔨᓴᖅᑭᑦᑐᖅᑐᒃ ᑐᖓᓯᓂᓗᑎᒃ ᐅᓇᓂᖓᓂᑦ ᓄᑖᐃᓂᓗ ᑭᓪᓕᓯᒪᔪᖅᑐᓂᖓᓂᑦ, ᐊᑐᓕᖅᑎᓕᑎᓂᓗᑎᒃᓗ ᐁᖅᑭᑭᓚᐅᖏᓐᓄᑦᑐᖅᑐᑦ ᐊᐅᑕᑎᓂᖓᓕᒃᓗ ᖃᐅᔨᓴᖅᑭᑦᑐᖅᑐᑦ ᐸᖅᓇᐅᑎᒧᑦ ᐃᓗᓕᕆᔨᒋᑦ ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᖅᑯᐊᖓᓂᑦ ᐊᓯᒪᓕᕐᓂᖅᓗᒍ.

ᐅᓇᓂᓂᓄᑦ ᖃᐅᔨᓴᖅᑎᑦ 2020ᒥ ᑲᔪᓯᒪᔪᖅᑐᑦ ᓴᖅᑭᑦᑎᓂᒃᑯᑐᓄᑦ ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᖅᑯᐊᖅ ᖃᐊᖓᔪᓚᐅᖏᓐ ᑭᓱᓂᐅᓂ ᐃᖅᑲᑐᒧᑦ ᓯᓚᐃᓗ ᐊᓯᖏᓐᓂᖅᓯᒪᓂᖓᓂᑦ ᒪᓕᒃᑐᒧᑦ. ᖃᐅᔨᓴᖅᑎᑦ ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᖅᑯᐊᖓᓂᖅᓯᒪᓂᖓᓂᑦ ᐊᐅᑦᓴᒪᓕᐊᓂᒃ, ᐱᖓᓱᐅᖅᓴᓕᐊᖃᖅᑐᓕᖅᑐᒃᓗ ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᖅᑯᐊᖓᓂᑦ ᓯᑭᐃᓴᐅᔪᓐᓇᓂᖓᓂᑦ ᐸᖅᓇᐅᑎᒧᑦ ᐅᓪᓚᒥᓂᖅᑐᑦ ᐊᐃᑐᑦ ᑕᐃᓴᖅᓯᒪᓂᖓᓂᑦ ᖃᐊᖓᔪᓂᖓᓂᑦᑐᓗ ᐊᐃᑐᑦ ᐊᐅᑕᓚᐅᖏᓐᓂᑦ. ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᖅᑯᐊᖓᓂᒃ ᓴᓇᓴᖅᑐᑦ ᐊᐅᑕᑎᓂᖓᓕᒃᓗ ᐱᓕᕆᓂᐅᕐᓂ ᐃᓕᑕᐅᔪᓄᑦ ᐅᓴᕋᖅᑯᐊᖓᓂᖅᓯᒪᓂᖓᓂᑦ ᐊᐅᑕᑎᓂᖓᓕᒃᓗ

ᓇ⊃ᓇᐃᑦᑎᐊᖅᓯᒪᔨᖏᑦᑐᖅ ᐅᓂᖅᑲᒥᖅ ᑐᓂᓯᒋᐊᖅᑐᑦ ᐃ⊃ᐊᓂ 30 ᐅᑦ⊃ᑦ ᐊᑐᓂ ძᕕᔨᓇᑦ. ᐸᕐᓄᑦᓯᐅᑦ ᖃᐅᔨᓴᐃᓇᓕᐅᖅᑐᑦ ძᕕᖏᑦᑕᐅᔨᓕᒻᒥᓇᑦ ᐅᖏᕈᓂᓂᐊᕐᕕᖓ 20120Γ ᐊᑐᑎᖃᑎᐊᖅᑐᑦ ᐊძᓂᒧᑦ ᐸᖅᑭᑎᐊᕈᑎᑦ ᐊᑐᓂᖅᑎᑕᐅᓂᐊᖅᓯᒪᓕᑦ ძᕕᖃᑦᑕᖏᓐᓂᖅᓴᐅᓂᑯᓕᑦᑐᑦ ᐱᓕᕆᕕᐅᔨᓂ.

ᐃᒋᑦ ᐊᑐᖅᑕᐅᓂᖏᑦ ᑕᕆᐅᖓᖏᑦᑕᑐᓴᓗ ᐃᒥᕐᓂᖅ ᖃᐅᔨᓴᕐᓂᓐᓂ

ᐃ⊃ᐊᓂ ᐱᔨᓇᐅᑎᐅᔨᐸ ‘A’ ᐃᒥᕐᓄᑦ ᓪᓚᕿᔨᐸ, ᑕᕆᐅᖓᖏᑦᑕᑐᓂ ᐃᒥᖅᑕᓪᓕᐅᖅᑐᑦ 2020Γ ᐊᐅᓪᓚᕇᓇᕐᓂᑦ ᐱᖓᓱᓪ ᐊᑐᑎᖃᓴᐊᖅᑐᑦ ᐱᓪᑕᕆᓂᑦ ᐱᓪᑕᕆᓂᒥᑦ: ᐃᒥᑲᕿᑦ ᐃᒋᑦ, ᓯᓚᐃᓴᕐᕕᑎᑦ, ᐊᓯᓄᑦᓗ ᐱᓪᑕᕆᓂᖅᓄᑦ. 2020Γ, ᑲᑎᕐᓗᑎᑦ ᐃᒥᕐᓂᖅ ᐊᑐᕐᓂᑦ ᐳᔪᐃᖅᓯᓂᖅᓄᑦ ᐅᖓᑕᒧᐊᓪᓚᐅᖅᑐᑦ 31 ᖃᑎᖅᓯᖅᓴᑎᑲᑎᖅ ᐊᖏᑎᖅᑕᐅᓯᒪᔨᓄᑦ ᐱᓪᑕᕆᐅᐸᑦ ᐃᒥᖅᑕᕐᕕᖓᖅᓯᓂ. ᐃᒥᓂᖅ ᐊᑐᓗᐊᕐᓂᑦ ᑕᐃᒪᐃᑕᐅᖅᑐᑦ ᓴᓱᒃᑐᓂᖅ ᐃᒥᕐᓂᖅ ᐊᑐᖅᑕᒥᓂᖅ ᖃᐅᔨᓴᕐᓂᐊᖅᖃᐅᔨᖅᓱᒪᑕ ᐊᑐᓂ ᐃᒥᖅᑕᕐᕕᖓᓂ ᑐᖃᖅᑐᓗᓄᑦ ᑕᐃᑭᖅᑕᖅᑕᓂᓄᑦ. ᑕᐃᒪᐃᖅᑲᓂᔪᓂᑦᑎᓐᓂᑦ, ᐸᕐᓄᑦᓯᐅᑦ ᑎᑎᖅᑲᓂᓂ ᐱᐅᔪᑎᐊᖅᓯᒪᔨᖏᑦ ᐊᖅძᑎᓂᑦ ᐳᐃᔪᕐᓂᖅᓯᓂᖅᓄᑦ ᓇ⊃ᓇᖅᑎᑎᓂᕐᕋᑎᓂᑦ ᖃᐅᔨᓴᕐᓂᐊᖅᖃᐅᔨᖅᓱᒪᑕ ᐃᒥᖅᑕᕐᕕᖓᖅᓯᓂ ᐃᒥᖅᑕᕐᕕᖓᓂ ᐃᓕᑦᑕᖅᑐᑦ ᐃᒥᖅᑕᕐᕕᖓᖅᓯᓂ ᐃᒥᖅᑕᕐᕕᖓᓂ ᐃᒥᖅᑕᕐᕕᖓᖅᓯ

ᐊᒃᓱᖏᑕᐅᓪᓴᒍᑎᒃ. ᑕᒃᑯᐊ ᑲᓱᓐᓇᖅᑐᑦ ᖃᑎᖅᑭᒃᑦ ᐋᖅᑭᑎᐊᕐᓇᖅᑐᒃᑯᓪᓗ ᐱᓕᕆᔨᓴᖅᑎᒃ ᑲᑎᒪᓂᖅᓄᑦ ᓂᕆᐅᑎᔾᐅᖅᑐᑦ ᑭᓱᓛᓐ ᑯᓘᑦ-19 ᓄᖅᓇᖅᓯᐊᖅ ᐊᒃᑐᐊᔨᓪᓗ ᐃᓄᓕᒻᒥᓄᑦ ᖃᒃᓂᒪᖅᓇᖅᑭᒃᓂᓄᑦ ᑎᓕᐅᖏᑕᐅᔨᑦ ᐱᖓᖅᖢᑎᓕᕐᒪᒃᑯ ᑭᓇᒪᑦ ᑲᑎᒃᓴᑎᓕᕐᒪᒃᑯ ᐅᑎᖅᑕᓗᒃᑯ ᑲᑎᒪᔨᓕᕐᓂᖅᓄᑦ.

<u>ᓇᐃᓇᖅᓱᒪᔨᑦ ᐸᖅᓇᑕᐅᓱᒪᔨᓄᑦ 2021ᒧᑦ</u>

2021 ᐱᓕᕆᓂᖅᓄᑦ ᐸᖅᓇᐅᑎ ᓴᓇᔨᐅᓕᐅᖅᑲᖅ ᑐᓂᔨᐅᓪᓗᓂᓗ ᐸᓚᓵᓕᓐᓂᑦ ᐱᔨᕆᐊᓕᓐᓄᑦ ᓄᓇᕗᑦ 6, 2020Γ ᒪᓕᒃᖢᑐᒍ ᒪᓕᑎᐊᓕᒃ ᐊᕐᕕᖏᒪᔨᖅ 61Γ ᑭᓇᐅᔨᓕᐅᕆᔨᖅᑐᓂᖅᓄᑦ ᓄᓇᕗᑦ ᐊᑐᖅᑕᐅᓂᖅᑎᑐᓄᑦ ᐃᓗᐊᓂᓗ ᐃᓕᖅᖠ J, ᓇᐃᔨᐅᑎ 3 ‘A’ ᐃᒥᖅᓄᑦ ᓕᐃᔨᒥ, ᐊᑐᑎᖅᑲᓂᐊᖏᓕᑦ ᐊᖅᑳᒍᑦᓯᖅᓯᐅᑎᒧᑦ ᑭᓇᐅᔨᓄᑦ ᑲᓂᖅᓴᑕᐅᓯᒪᔨᑦ ᖃᓄᖅᑭᑐᐅᓯᒪᔨᓂᖅᓄᑦ ᐱᓕᕆᔨᐅᓂᖅᑎᑦᓴᓂᖅᓄᑦ ᐊᖅᑳᒍᑦᓯᖅᓯᐅᑎᓄᑦ.

2021 ᐱᓕᕆᓂᖅᓄᑦ ᐸᖅᓇᐅᑎ ᐅᖅᑲᐅᓯᖅᑕᐅᓕᖅᑲᖅ ᐸᖅᓇᑕᐅᓯᒪᔨᖅᓂᒃ ᑲᓇᓂᖅᓂᒃ ᐊᐅᓕᓂᖅᓂᓗ ᐅᓴᖅᓂᐊᖏᓐᓇᒥ, ᑲᓚᖅᑲᓂᒃ ᓯᖅᑕᓂᖅᓂᒃ ᓇᓇᕐᔪᓗ ᓄᑕᖅᓂᒃ, ᑲᑎᒪᓂᖅᓄᑦ ᓯᖅᑲᐅᓂᖅᓂᒃ ᑕᓚᐅᖅᔪᓗ ᐅᓯᑲᖅᑕᐃᓂᖅᓂᒃ ᑲᓚᖅᑲᓂᒃ, ᑲᓱᓕᓇᖅᑐᓗ, ᑲᓇᐅᔨᓂᖅᓂᓂᓗ ᐱᖅᔪᑎᐊᕐᓇᐅᑦ ᐊᑐᓚᐊᓪᓚᑦ ᖃᓄᖅᑐᐊᓕ, ᐅᓯᑲᖅᑕᖅᓚᐅᑦ ᐊᖅᑳᒍᑦᓯᖅ, ᐅᖅᑲᐅᓯᐊᖅᓚᖅᑐᓗ. ᐸᓇᓂᓚᔪᑦ ᑲᓇᐅᑦ ᐊᔪᓕᑦ ᐃᒥᓂᒃ ᐊᐅᓚᑎᓂᓄᑦ ᐸᖅᓇᐅᑎᒥᒃ ᐅᖅᑲᐅᓯᐊᖅᓚᖅᑐᑦ ᑲᓇᐅᓚᐊᖅᑎᓂᖅᑲᖅᑎᒃ ᐊᑐᓕᓗᑐᒃᓗ ᓄᑕᓂᒃ ᐃᒥᓂᒃ ᐊᐅᓚᑎᓂᓄᑦ ᐱᓂᔪᐊᓂᒃ. ᐃᓚᖅᑭᑦ ᑕᒃᑯᐊ ᐱᓂᔪᐊᓂᑦ ᐱᓂᐊᖏᓐᓄᑦ ᓄᓇᕗᓕᒫᓂᖅᑲᖅᑎᒃᓴᑦ ᓄᓇᕗᒃ ᑲᓇᓱᒪᓂᖅᓂᓗ ᐊᖅᑭᒃᑭᓱᒪᓂᖅᓂᒃ ᑐᑭᓯᓇᖅᑐᒃᓴᑦ ᓄᓇᕗᑦ ᐃᒥᑕᓚᓵᖅᑯᓂᒃ. ᐃᓚᖅᑭᑦ ᑕᒃᑯᐊ ᐱᓂᔪᐊᓂᑦ ᐱᓂᐊᖏᓐᓄᑦ ᐃᓐᓇᐃᖅᑭᒃᑦᓴᓂᖅᓄᑦ ᐃᓕᓴᕐᓂᖅᓄᑦ ᐃᒥᑕᓚᓵᖅᑯᓂᒃ ᐱᓂᔪᐊᓂᑦ ᐱᓂᐊᖏᓐᓄᑦ.

ᐱᓕᕆᓂᐅᕐ ᒪᑭᑐᓄᑦ ᐊᖅᑭᑦᑕᓕᐅᑎᓂᕐᒧᑦ ᐱᓱᒪᓄᓕᓚᐅᑎᓂᖅᓄᑦ ᑲᓇᐅᔨᓄᖅᑐᑦ ᐊᖅᑭᑦᑕᐅᓂᖅᑎᑐᓄᑦ ᐊᐅᓚᑦᑐᕆᐊᓂᖅᓄᑦ ᐃᒥᑕᓚᓵᖅᑯᓂᖅᓄᑦ. ᐱᓕᕆᓂᖅᑎᑦ ᐊᐅᓚᑦᑐᕆᐊᓂᖅᓄᑦ ᐃᓐᓇᐃᖅᑭᒃᑦᓴᓂᖅᓄᑦ ᐃᒥᑕᓚᓵᖅᑯᓂᖅᓄᑦ ᐱᓂᐊᖏᓐᓄᑦ ᐃᒥᑕᓚᓵᖅᑯᓂᖅᓄᑦ ᐊᐅᓚᑦᑐᕆᐊᓂᖅᓄᑦ ᐱᓂᐊᖏᓐᓄᑦ ᐃᒥᑕᓚᓵᖅᑯ

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 Eqe, 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

LIST OF TABLES

LIST OF FIGURES

APPENDICES

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 Eqe Bay Exploration Program are captured in the 2020 QIA & NWB Annual Report for the Eqe 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 m^3/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 m^3/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 Sailiivik 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 m^3 of treated wastewater was discharged from the Milne Port PWSP to the approved discharge point near Milne Inlet. Additionally, approximately 1,521 m^3 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 m^3 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 m^3 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 m^3 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 m^3 (3,990 m^3 at MP-05 and 2,722 m^3 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 m^3 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 m^3 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 Sailiivik 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 Sailiivik 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 Sailiivik 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 Sailiivik 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 m^3 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-SEEGAGE-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 and 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 m^3 of material fill was sourced from decommisioned 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 m^3 of compliant incinerator ash was disposed in the Landfill Facility, including 35.11 m^3 generated from the Mine Site incinerator and 36.56 m^3 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 m^2 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 ensuing 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 Eqe 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.