

**August 14, 2024**

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Dear Elisabeth,

**RE: Type A Water License (2AM-MRY1325) Renewal Application - Water Quality Scatter Plots**

Baffinland Iron Mines Corporation (Baffinland) is applying to the Nunavut Water Board (NWB) to renew their Type A Water Licence (2AM-MRY1325) of the Mary River Project (the Project) for an additional 15-year term.

The Type A Water Licence permits Baffinland to use water and dispose of waste as part of operating the Mary River Project. The NWB first issued this Water Licence to Baffinland on June 12, 2013, and Amendment No. 1 to the Licence supporting the Early Revenue Phase was issued on July 21, 2015. The Licence will expire on June 10, 2025.

Figure 1 and Figure 2 present the water quality monitoring locations at Milne Port (Figure 1) and the Mine Site (Figure 2). The attached summary figures for each monitoring location (Figures 3 through 18) have been prepared in response to the Qikiqtani Inuit Association's (QIA) comment 'QIA-4' in support of the Water License Renewal application. The specific comment from QIA requests a summary of aquatic monitoring data to demonstrate compliance with water licence terms and conditions.

## **1.0 REVIEW OF WATER QUALITY MONITORING DATA (2015-2024)**

Baffinland maintains a database, EQuIS, in which water quality data from the monitoring stations is recorded. Baffinland is in the process of uploading historical water quality data into EQuIS. To date, data between 2020 and 2023 has been uploaded into the database. Furthermore, QA/QC checks have only been completed on data from 2023. Baffinland is actively completing QA/QC checks on the remainder of the data already uploaded into the EQuIS database. The water quality results presented in Figures 3 through 18 contains the 2023 data, which has undergone the necessary QA/QC checks. Data from all monitoring years and any noted exceedances are described in detail in annual reports submitted to the QIA and NWB.

Key parameters for which exceedances against Water Licence criteria have been noted, primarily Total Suspended Solids are compared against the applicable discharge limits presented in Amendment No. 1 to Type "A", Water Licence No. 2AM-MRY1325 (Nunavut Water Board, 2015). Other parameters are also shown on the figures including Lead, which had two minor exceedances and pH, which had no exceedances in 2023.

Additional water quality monitoring data will be added to the water quality plots once the QA/QC data checks have been completed.

## 2.0 EXCEEDANCES TO WATER LICENSE CRITERIA

Figures 3 through 18 illustrate the water quality results for key parameters at each of the Project's monitoring stations that were sampled in 2023. Identified exceedances from 2023 are presented in Table 1 below. Detailed explanations pertaining to each exceedance are described in the 2023 Annual Report for Operations (Baffinland, 2024). Overall, exceedances of applicable discharge criteria in 2023 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. Additional details explaining the cause of exceedances and the mitigation measures and corrective actions implemented are provided in the 2023 NWB QIA Annual Report for Operations.

**Table 1 2023 Water Quality Criteria Exceedances**

Monitoring Station	Parameter	Total Number of Exceedances	Month of Exceedances
MP-03	Lead	1	June
MP-04A	TSS	1	September
	Lead	1	September
MP-C-B	TSS	2	June
MP-C-H	TSS	1	June
MP-Q1-02	TSS	2	June; July
MQ-C-B	TSS	5	June; July
MQ-C-D	TSS	2	June
MS-08	TSS	1	September
MS-C-A	TSS	3	June
MS-C-B	TSS	3	June
MS-C-C	TSS	4	May; June
MS-C-D	TSS	3	May; June
MS-C-E	TSS	2	June
MS-C-F	TSS	6	June; July

**Note(s):**

1. Water quality data compared against the applicable discharge limits in Amendment No. 1 to Type "A", Water Licence No. 2AM-MRY1325 (Nunavut Water Board, 2015).

### 3.0 REFERENCES

Baffinland Iron Mines Corporation, 2024. *2023 Qikiqtani Inuit Association and Nunavut Water Board Annual Report for Operations*. March 31. Rev 0.


Nunavut Water Board, 2015. *Amendment No. 1 to Type "A", Water Licence No. 2AM-MRY1325, Issued to Baffinland Iron Mines Corporation for the Mary River Project*. July 30.

Yours truly,

**Knight Piésold Ltd.**

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Approval that this document adheres to the Knight Piésold Quality System:



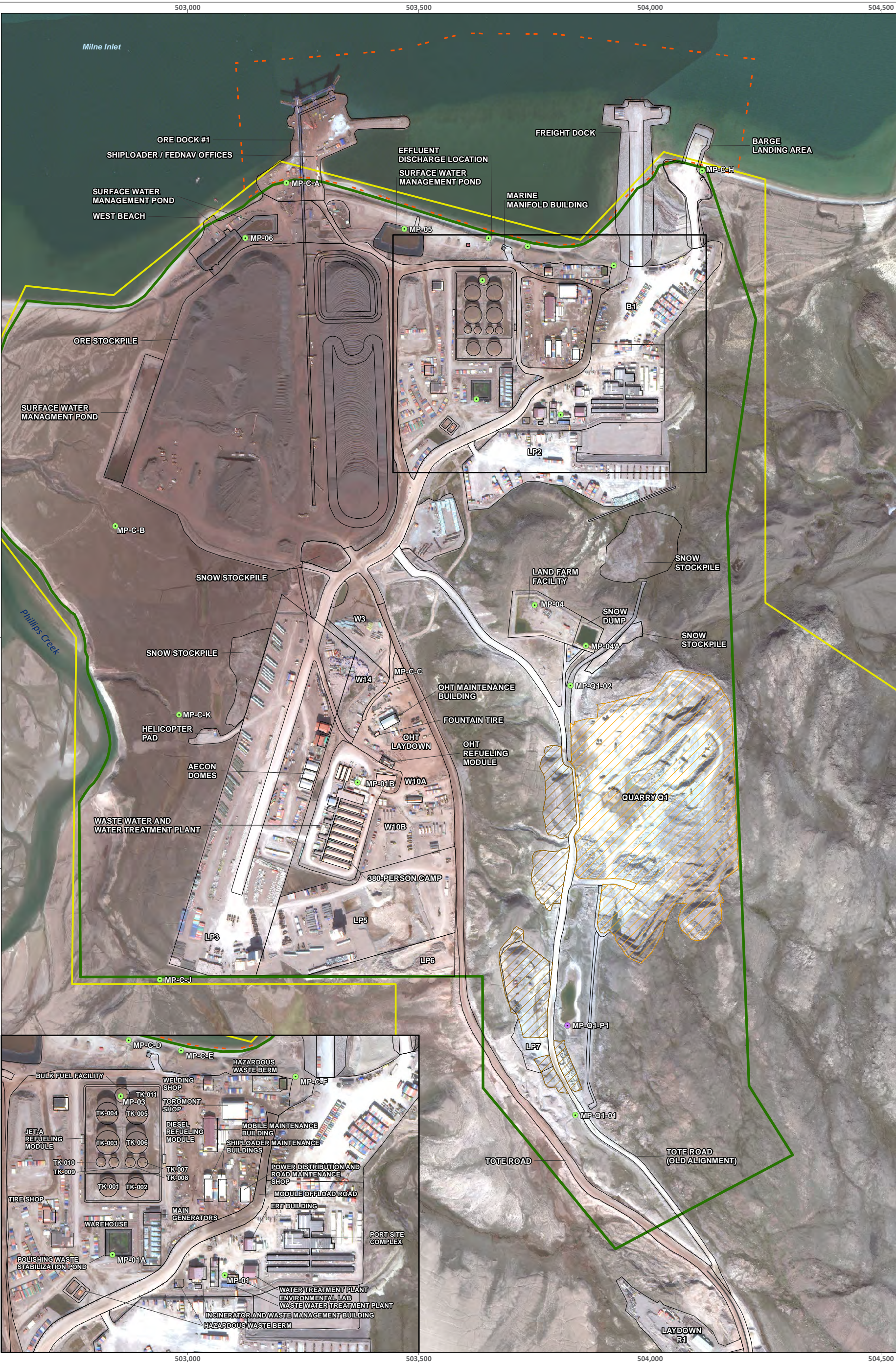
#### Attachments:

Figure 1 Rev 0	Milne Port Site Layout
Figure 2 Rev 0	Mine Site Layout
Figure 3 Rev 0	MP-01
Figure 4 Rev 0	MP-03
Figure 5 Rev 0	MP-04
Figure 6 Rev 0	MP-05
Figure 7 Rev 0	MP-06
Figure 8 Rev 0	Milne Port SNP (MP-C)
Figure 9 Rev 0	Milne Port Quarry (MP-Q)
Figure 10 Rev 0	Mine Site Quarry (MQ-C)
Figure 11 Rev 0	MS-01B
Figure 12 Rev 0	MS-03B
Figure 13 Rev 0	MS-06
Figure 14 Rev 0	MS-07
Figure 15 Rev 0	MS-08
Figure 16 Rev 0	Mine Site SNP (MS-C) - Total Suspended Solids
Figure 17 Rev 0	Mine Site SNP (MS-C) - pH
Figure 18 Rev 0	MS-MRY13

Copy To: Lou Kamermans, Baffinland Iron Mines Corporation  
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Foreshore Lease Boundary

Project Development Area

Commercial Lease Boundary

Borrow Area

Quarry Area

Infrastructure

Domestic and Industrial Water Sources

SNP Monitoring Location

Active

Inactive

Monitoring Location

Recycled Water Monitoring

Snow Stockpile Monitoring

Tote Road Monitoring

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MARY RIVER PROJECT

Milne Port Site Layout

Projection: NAD 1983 UTM ZONE 17N.  
Base Map: © 2024 Digital Globe, Inc.  
Imagery and Infrastructure are representative  
as of July 2023.

0 25 50 100 150 200 Meters

Scale 1:8,000

N

Baffinland

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FIGURE

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