Cmt. #	Cmt. #	Reviewer's Detailed Comment	Recommendations	Reference Section	Baffinland's Response
	HC #3	Missing data on metals in fish tissue and information on the derivation of screening criteria, limited Health Canada's review of the 2024 Freshwater Fish Health Report (FFHR) and its conclusions. HC's review of the report was limited by the following: 1. the omission of data on metals concentrations in fish tissue referenced in section 3.2.4 (i.e., Appendix D, Tables D7 & D8); and, 2. insufficient information on the derivation of screening criteria (consumption benchmarks) in Table 2.1. HC would require Appendix D: Tables D7 & D8 to complete its review, as the data in these tables was used to estimate dietary exposure to metals in fish tissue from Qurluktuk and Ikaluit Lakes. With regard to screening criteria, HC notes that several references to "HC's [consumption] benchmarks" (i.e., p. iii, 51 and 55) incorrectly attribute the derived screening values in Table 2.1 to HC. While HC's published toxicological reference values for environmental contaminants, guidance for contaminants considered essential trace elements, and resources on nutrition are referenced, information on their specific use in deriving the listed screening values was limited and could not be verified. Additionally, the 2024 FFHR indicted that mercury concentrations in fish tissue were compared to a guideline of 0.5 mg/kg wet weight. This guideline value is applicable to commercial foods only. For species consumed by local communities, it is more appropriate to use a toxicological reference value (a provisional Tolerably Daily Intake, pTDI) of 0.47 µg of MeHg per kg body weight per day (kg-bw/day) for adults and 0.2 µg MeHg per kg-bw/day for women of childbearing age and young children up to 12 years of age (Health Canada, 2007) to assess potential risks to local consumers based on consumption patterns informed by community consultation. Baffinland's 2024 Country Foods Human Health Risk Assessment (Intrinsik, 2024) also considered toxicological reference values and consumption rates in their assessment of health risks that may be relevant to the analysis in the 2024 Freshwater Fish Health Report. Aligning the values used in both reports would allow for a comparison of relevant results and lend support to the conclusions made.	HC requests that the Proponent: 1. Provide a complete version of the 2024 Freshwater Fish Health Report, including Appendix D - Fish Data: Tables D7 and D8. 2. Correct the references to "Health Canada consumption benchmarks" and "Health Canada benchmarks" throughout the report to accurately reflect their origin. Specifically, Health Canada references should be removed, as the derived consumption benchmarks are not HC values. In addition, HC recommends: 1. Applying the HC pTDI values and local consumption patterns to assess potential human health risks from mercury in country foods, and specifically fish tissues, in future project reporting as an approach that is protective of human health. 2. Using reference values and consumption estimates from the 2024 Country Foods Human Health Risk Assessment (Intrinsik, 2024) for comparison between the two reports. Alternatively, including additional information on the derivation of screening criteria (similar to the Intrinsik 2024 report) so the analysis can be evaluated.	2024 Annual Report – Mary River (NIRB Registry ID No.: 355641) ○ Section 4.6.7: Freshwater Environment Project T&C No. 48(a) (Pages 185-187 ; PDF p., 203-205) ○ Appendix G 4.3 Freshwater Fish Health Report (NIRB Registry ID No.: 355695; 355696; 355697; 395698; &, 395699) Executive Summary (Pages i-iv; PDF p., 3-6) ○ Section 2.4.6 Data Analysis (Pages 21-26; PDF p., 36-41) ○ Table 2.1: Consumption Benchmarks for Metals in Fish Tissue (mg/kg wet weight) (Page 25; PDF p., 40) ○ Section 3.2.4 Fish Tissue (Pages 43-51; PDF p., 58-66) Appendix D: Fish Data Intrinsik (2024) Country Foods Human Health Risk Assessment – Baffinland Sustaining Operations Proposal (NIRB Registry ID: 350996) HC's response to the Comment Request for Baffinland Iron Mines' Mary River Project 2022 Annual Monitoring Report (NIRB Registry ID No. 346056) HC's response to the Comment Request for Baffinland Iron Mines' Mary River Project 2023 Annual Monitoring Report (NIRB Registry ID No. 350643)	Requests 1. Please find Appendix Tables D.7 and D.8 in the attached file. There was an error in finalizing the 2024 Milne Inlet Freshwater Fish Health Report (FFHR) and Appendix Tables D.7 and D.8 were omitted. 2. Metal concentrations in muscle tissue were evaluated in comparison to relevant benchmarks for tolerable daily intake (TDI; mg/kg wet-weight [ww] per day) from the United States Environmental Protection Agency Integrated Risk Information System (USEPA 2020) or Health Canada (2021), whichever was more conservative (see Table 2.1 in the FFHR), and to screening level risk assessment benchmarks from Health Canada (2021) based on a consumption rate of 111 g/day, which exceeds the average consumption rate for subsistence fishing populations (70 g/day; USEPA 1997). The equation to determine benchmarks is as follows (Health Canada 2021a, BCENV 2023): $$SVn=\frac{TDI\times BW\times AF}{IRFoodi\times RAFOrali}$$ Where SV_n = the screening value TDI = tolerable daily intake (Table 2.1 in FFHR) BW = body weight = 70 kg AF = allocation factor = 20% IR_{Foodi} = ingestion rate (Table 2.1 in FFHR) RAF_{Orali} = relative absorption factor from the gastrointestinal tract set at 100%, which is the most conservative value possible. Dietary exposure to metals in fish tissue from Qurluktuk and Ikaluit lakes was not evaluated in the Milne Inlet FFHR. The report did state that Health Canada recommends a daily upper limit of iron intake of 45 mg/day (2006) and calculated that to reach the limit, one would need to consume between 5 to 7 kg of fish muscle per day. Recommendations: 1. The main objective of the Milne Inlet FFHR is to satisfy Term and Condition 8(a) of the Project Certificate by developing a plan to conduct additional surveys for the presence of arctic charr in freshwater bodies and ongoing monitoring of arctic charr health where applicable. At the request of community members, fish tissue metal concentrations were compared to applicable benchmarks. No assessment of human health risks was completed, as it falls outside the scope and objectives of this work. 2. Future reporting for the Milne Inlet FFHR will consider this recommendation. **References:**

Cmt. #	Cmt. #	Reviewer's Detailed Comment	Recommendations	Reference Section	Baffinland's Response
					British Columbia Ministry of Water, Land & Resource Stewardship. 2023. Derivation of Screening Values for Contaminants in Fish Tissue. Prov. B.C., Victoria B.C. Health Canada. 2006. Dietary reference intake tables. Government of Canada. https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/dietary-reference-intakes/tables. Accessed April 2023. Health Canada. 2021. Federal Contaminated Sites Risk Assessment in Canada: Toxicological Reference Values (TRVs). ISBN: 978-0-660-36723. Health Canada 2021a. Federal Contaminated Sites Risk Assessment in Canada: Guidance on Human Health Preliminary Quantitative Risk Assessment (PQRA). ISBN:978-0-660-37620-2. USEPA (United States Environmental Protection Agency). 1997. Exposure Factors Handbook, Volume II, Food Ingestion Factors. EPA/600/P-95/002. United States EPA Office of Research and Development, Washington, D.C. USEPA 2020. IRIS (Integrated Risk Information System). United States Environmental Protection Agency. http://www.epa.gov/iris. Accessed February 2020.