Appendix D-
Reclamation Research Plans

The following table is a guide to proposed Reclamation Research Plans that will be initiated for the Project. As the study of these items is anticipated in the future, for now a schedule of preliminary tasks and timelines when they will be proposed to be addressed is provided. Further detail will be provided when reclamation research is anticipated to occur prior to the next revision of the ICRP.

TABLE D-1: PROPOSED RECLAMATION RESEARCH PLANS

Topic	Open Pit Runoff Water Quality	Waste Rock Stockpile Runoff Water Quality	Natural Re-Vegetation
Uncertainty	What closure and post closure activities are required to ensure open pit runoff water quality meets closure objectives and criteria?	What closure and post closure activities are required to ensure waste rock stockpile runoff water quality meets closure objectives and criteria?	What best practices can be implemented to promote natural re-vegetation of disturbed areas?
Research/ Study Objective	The objective of this program is to inform prediction of expected runoff quality over time associated with the Open Pit related to ARD/ML potential.	The objective of this program is to inform prediction of expected runoff quality over time associated with the Waste Rock Stockpile related to ARD/ML potential.	The objective of this program is to identify methods to successfully promote natural re-vegetation in an effort to achieve a sustainable vegetation cover, and the ability of a vegetation cover to enhance physical stability and/or achieve the desired aesthetic conditions for the project site at closure.
Overview of Tasks	• Collection of baseline data. • Implementation of AEMP and characterization program used to detect Project-related changes in water quality contaminant concentrations within mine site lakes and streams. • Based on water quality changes observed, determination of closure and post closure activities are required to ensure open pit runoff water quality meets closure objectives and criteria. • Determination of suitable contingencies that will be put into place if there are ARD/ML drainage issues and treatment is necessary.	• Collection of baseline data. • Implementation of AEMP and characterization program used to detect Project-related changes in water quality contaminant concentrations within mine site lakes and streams. • Based on water quality changes observed, determination of closure and post closure activities are required to ensure waste rock stockpile runoff water quality meets closure objectives and criteria. • Determination of suitable contingencies that will be put into place if there are ARD/ML issues and treatment is necessary.	• Collection of baseline data. • Ongoing vegetation health monitoring, vegetation abundance monitoring, and exotic invasive plant species monitoring of reclaimed areas. • Based on observations, determination of successful methods and/or conditions to successfully achieve a sustainable vegetation cover, and the ability of a vegetation cover to enhance physical stability and/or achieve the desired aesthetic conditions for the project site at closure.
Linkages to Other Research/ Studies	Findings of waste rock stockpile runoff water quality reclamation research will be considered. Updates on open pit prediction of runoff water quality will be provided in future updates of the ICRP.	Findings of open pit runoff water quality reclamation research will be considered. Findings of natural re-vegetation reclamation research will be considered related to colonization of cover material. Regular updates on waste rock characterization and prediction of runoff water quality will be provided	Findings of natural re-vegetation reclamation research will be considered related to colonization of cover material for waste rock stockpile. Updates on natural re-vegetation reclamation research will be provided in future updates of the ICRP.

Topic	Open Pit Runoff Water Quality	Waste Rock Stockpile Runoff Water Quality	Natural Re-Vegetation
		in future updates of the Life-of-Mine Waste Rock Management Plan (BAF-PH1-830-P16-0031) and ICRP.	
Project Research Schedule	Expected to commence at approximately Year 10 of Operations (when an Open Pit is expected to exist associated with the Project)	Expected to commence at approximately Year 3 to 5 Operations (when an Waste Rock Stockpile is expected to exist associated with the Project)	Ongoing through life of project.
Costs	TBD	TBD	Approx $25,000/year
References	• Baffinland Iron Mines Corporation. 2012. Mary River Project – Final Environmental Impact Statement. February 2012. • Baffinland Iron Mines Corporation. 2013. Mary River Project – Addendum to the Final Environmental Impact Statement. June 2013. • Baffinland Iron Mines Corporation. 2014. • Mary River Project – Aquatic Effects Monitoring Plan, Rev. 0. June 27, 2014. • Baffinland Iron Mines Corporation. 2015. 2014 Qikiqtani Inuit Association (QIA) and Nunavut Water Board (NWB) Annual Report. March 31, 2015 • Knight Piésold Ltd. 2007. Mine Site Infrastructure, Pit Overburden & Waste Dumps - 2006 Site Investigation Summary Report. Ref. No. NB102-00181/3-2, Rev. 0. North Bay: Knight Piésold Ltd. February 28, 2007. • Knight Piésold Ltd. 2008. Mine Site Infrastructure, Pit Overburden & Waste Dumps - 2007 Site Investigations and Foundation Recommendations Summary Report. Ref. No. NB102-00181/8-2, Rev. 1. North Bay: Knight Piésold Ltd. February 20, 2008. • Knight Piésold Ltd., 2010. Mine Site Infrastructure, Pit Overburden and Waste Dumps - 2008 Site Investigations Summary Report. Knight Piésold Ref. No. NB102-00181/24-1, Rev. 0, May 4, 2010. • Knight Piésold Ltd. 2015. 2014 Water and Sediment CREMP Monitoring Report. Ref. No. NB102 00181/34-6, Rev. A, dated February 24, 2015.		• Baffinland Iron Mines Corporation. 2012. Mary River Project – Final Environmental Impact Statement. February 2012. • Baffinland Iron Mines Corporation. 2013. Mary River Project – Addendum to the Final Environmental Impact Statement. June 2013. • Environmental Dynamics Inc. 2013. Baffinland Field Guide to Exotic Plant Species Identification. Project No. 13-Y-0012. Prepared for Baffinland Iron Mines Corporation. Dated September 20, 2013 • Environmental Dynamics Inc. 2014. Baffinland Mary River Project: DRAFT 2014 Annual Terrestrial Monitoring Report. Project No. 14-Y-0244. Prepared for Baffinland Iron Mines Corporation. Dated November 16, 2014.