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Water Licence Application
Supplementary Questionnaire
for Advanced Exploration
(Underground drilling, bulk sampling, etc.)

SECTION 1 :
GENERAL.....3

SECTION 2 :
GEOLOGY AND MINERALOGY.....9

SECTION 3 :
EXPLORATION OPERATION.....11

SECTION 4 :
THE MILL OR PROCESSING PLANT.....13

SECTION 5 :
THE CONTAINMENT AREAS.....15

SECTION 6 :
WATER TREATMENT.....18

SECTION 7 :
ENVIRONMENTAL MONITORING PROGRAM.....19

SECTION 8:
ENVIRONMENTAL ASSESSMENT AND MONITORING...21

SECTION 1 :

GENERAL

1. Applicant Baffinland Iron Mines Corporation
(Company, corporation, owner)

Suite 1016, 120 Adelaide Street West, Toronto, Ontario M5H 1T1
(Postal address)

(416) 364-8820 (416) 364-0193
(Telephone number) (Fax)

rod.cooper@baffinland.com
(E-Mail)

Corporate Address (if different from above):

(Corporate Office address)

(Telephone number) (Fax)

(E-Mail)

Project Name Mary River Project

Location North Baffin, Nunavut

Closest Community Pond Inlet

Latitude/Longitude 79 ° 23 ' 30 " / 71 ° 18 ' 30 " (see attached map)
Show the location of the project on a general location map (eg: 1:1,000,000)

2. Environmental Manager _____ (416) 364-8820
(Name) (Telephone No.)

or Project Manager Roland Landry, P.Geo.
(Title)

3. Indicate the status of the exploration activity on the date of application.
(Check the appropriate space.)

Design _____

Under construction _____
In operation _____
Suspended ____X____ (shut-down for the season)
Care and Maintenance _____
Abandoned _____

4. If a change in the status of the exploration activity is expected, indicate the nature and anticipated date of such change.

The project's status will change from solely exploration drilling to include bulk sampling in April 2007.

5. Indicate the present (or proposed) schedule for the exploration activity.

Hours per week 168
Days per week 7
Weeks per year 52
Number of employees 90-100 (bulk sample) + 100 (exploration drilling)
Number of Inuit employees At least 75

6. Estimate the term (life) of the exploration activity.

3 years (Months / Year)

7. How will the project affect the traditional uses on Inuit Owned Lands?

- Improved access for traditional pursuits (positive)
- Noise disturbances and traffic on road (negative)
- Baffinland made improvements to an existing cabin at Mary River for use by the Mittimatilik Hunter and Trappers Organization (positive)
- Operation of the camps provides a place for hunters to stop and is a potential refuge for hunters if an emergency was to arise (positive)
- Sea-lift operation in Milne Inlet will coincide with community use during open water (negative)

8. Have the Elders been consulted on effects to the traditional use on Inuit Owned Land? If so, list them. If not, why not?

Baffinland established the Pisiksik Working Group, a traditional knowledge working group in Pond Inlet, in February 2006. Various discussions have been held with Pisiksik since its inception over the course of planning a traditional knowledge study, including understanding the local community's use of the Mary River and Milne Inlet areas. Baffinland's environmental consultants, Knight Piesold, held discussions in April 2006 with both Pisiksik and the HTO regarding proposed terrestrial and marine wildlife studies and community use and knowledge

of these resources. A meeting with Pisiksik was held on Sept 7, 2006 to review and discuss the bulk sampling program in relation to local uses. See Environmental Screening Document by Knight Piésold.

In August 2006, Baffinland hosted a delegation from the Qikiqtani Inuit Association (QIA) to visit Mary River and the surrounding area. In September 2006, Baffinland hosted similar site visits with both the Hamlet and Pisiksik. The site visits involved visits to Mary River and Milne Inlet, and flying along the existing Milne Inlet Tote Road. A public meeting was held in Pond Inlet on Sept. 6, 2006 to present the bulk sampling program.

9. Has the proponent consulted Inuit Organizations in the area? If so, list them.

Over the past year, Baffinland has met with the Hamlet of Pond Inlet several times, and has held two public meetings in Pond Inlet (April 22 and September 6, 2006). Baffinland has met with the local Community Lands and Resources Committee (CLARC) and has initiated discussions with the QIA regarding negotiation of an Inuit Impact and Benefits Agreement. A recent meeting with the QIA the week of Nov. 4, 2006 discussed training opportunities related to the bulk sampling program.

10. Has the proponent consulted surrounding communities on traditional water use areas? If so, list them. If not, why not?

Discussions with Pisiksik identified the creeks draining into Milne Inlet as important sources of drinking water while camping at Milne Inlet or en route inland and camping is generally adjacent these creeks. Inland waters are used incidentally during overland travel by snowmobile or ATV.

11. Attach a detailed map drawn to scale showing the relative locations (or proposed locations) of the exploration activity, Sewage and solid waste facilities, and containment areas. The plan should include the water intake and pump house, fuel and chemical storage facilities. Ore and waste rock storage piles, piping distribution systems, and transportation access routes around the site. The map also should include elevation contours, water bodies and an indication of drainage patterns for the area.

See the Environmental Screening Report by Knight Piésold.

12. If applicable, provide a brief history of property development which took place before the present company gained control of the site. Include shafts, audits, mills (give rated capacity, etc.) waste dumps, chemical storage areas, tailings disposal areas and effluent discharge locations. Make references to the detailed map.

The property was initially explored in the 1960s by Baffinland Iron Mines Ltd. (a predecessor to the current Baffinland Iron Mines Corporation). A camp was established next to Sheardown Lake, and exploration consisted of drilling and limited trenching. A landfill was constructed

and some equipment and materials remain at site. No shafts, adits, mills, waste dumps or tailings areas were established during this early exploration activity.

Baffinland Iron Mines Corporation initiated its exploration program in 2004, after the property lying dormant for several decades.

13. Give a short description of the proposed or current freshwater intake facility, the type and operating capacity of the pumps used, and the intake screen size.

The freshwater intake facility will consist of a small heated shelter and 5 cm diameter insulated and heat-traced rigid pipeline. Freshwater will be pumped from Camp Lake by a submersible approximately 20-25 m offshore and 3 m depth, to allow winter use and account for ice formation. The pump will be equipped with a screen to prevent the entrapment of fish. The system will be operated on demand with a flow meter installed to measure water takes.

14. At the rate of intended water usage for the exploration activity, explain water balance inputs and outputs in terms of estimated maximum draw down and recharge capability of the water source from fresh water will be drawn.

Freshwater for the camp water supply is drawn from an adjacent lake. The maximum potential withdrawal (60 m^3/day) represents an immeasurable amount compared with the volume of the lake.

15. Will any work be done that penetrates regions of permafrost?

Yes.

16. If "YES"above, is the permafrost continuous or discontinuous?

Continuous.

17. Were (or will) any old workings or water bodies (be) dewatered in order to conduct the exploration activity?

No.

18. If "YES" above, indicate the name of the water body, the total volume of water to be discharged and the chemical characteristics of the water.

Water body (if unnamed give Latitude/Longitude)_____
Total volume _____ cubic metres
Receiving Watercourse _____
Dewatering flow rate into above _____ cubic metres / sec

Chemical characteristics of discharge:

T/Pb	_____mg/L	Total Ammonia	_____ mg/L
T/Cu	_____mg/L	Suspended solids	_____ mg/L
T/Al	_____mg/L	Specific conductivity	_____ uhmo/cm
T/HCN	_____mg/L	pH	_____
T/Hg	_____mg/L		
T/Zn	_____mg/L		
T/Cd	_____mg/L		
T/As	_____mg/L		
T/Ni	_____ mg/L		
T/Mn	_____ mg/L		

19. Was (or will) the above discharge (be) treated chemically?

Not applicable.

20. If "YES" above, describe the applied treatment.

Not applicable.

21. Briefly describe what will be done with the camp sewage.

Sewage generated at the Mary River camps will be treated using a Rotary Disk or Roto-disk, packaged sewage treatment plant. The plant's design capacity (70 m^3/day) will be sufficient to treat the sewage of up to the 200 people at site (at 250 L/p/d) and still have residual capacity. An approximately 2-km long heat-traced insulated pipeline will be constructed to discharge the treated effluent below the ice in Sheardown Lake, which is in a separate watershed from Camp Lake.

Sewage generated at the Milne Inlet camp will be treated using a Tanks a Lot package sewage treatment plant. The system consists of a bioreactor for treatment, filtration then chlorination followed by dechlorination. Effluent will be discharged by a heat-traced pipeline into the sea.

Sewage generated at the Midway camp will be collected in latrine toilets and disposed of in a camp incinerator.

SECTION 2 :

GEOLOGY AND MINERALOGY

22. Briefly describe the physical nature of the mineralization, including known dimensions and approximate shape.

High grade iron ore deposits were discovered in 1962 at Mary River. A total of five exposed deposits were initially delineated (No. 1, 2, 3, 3a and 4). Surface channel sampling of all the deposits and drilling at the Deposit No. 1 was performed in 1963 to 1965. In 1966, an indicated resource was calculated for Deposit No. 1 that totaled 116.7 million tonnes grading 68.3% Fe, 0.8% SiO2, 0.03% P and 0.03% S, plus a higher sulphur resource of 26.9 million tonnes grading 62.8% Fe. 3.8% SiO2 0.03% P and 0.43% S. Drilling resumed at Mary River in 2004 and focused on expanding and improving resource definition at Deposit No. 1. A total of 2,813 m of core was drilled in 15 holes. Advanced exploration work in 2005 will be focused on continued resource definition at Deposit No. 1 and drilling of satellite Deposits No. 2, 3 and 3a. Baffinland is working to complete a feasibility study over the next two years.

Mary River Iron Ore deposits represent high grade atypical examples of Algoma type iron formation. The five deposits are spatially associated with large scale synforms and a major northwest-trending discontinuity. Deposit No.1 is composed of steeply dipping high grade magnetite-hematite over a core strike length of 2.8 km and drill indicated widths of 100 - 300 m.

23. Briefly describe the host rock in the general vicinity of the mineralization (from the surface to the mineralized zone.)

Mineralization at Mary River is hosted in the granite-greenstone terrain of the Committee Belt. The high grade deposits are characterized by zones of massive, layered to brecciated iron oxide, variably intermixed with banded oxide to silicate facies iron formation. The deposits were formed during the accumulation of the late Archean (ca. 2.76 – 2.72 Ga) Mary River Group – a diverse assemblage of volcanic flows and intercalated sediments interpreted as having formed in a volcanic arc setting. Mary River Group rocks were subsequently deformed by amphibolite-faces metamorphism and intruded by granitic rocks during the late Archean Committee (2.9 – 2.7 Ga) and Mesoproterozoic Baffin (1.9 – 1.8 Ga) Orogens.

24. Provide a geological description of the mineralized zone. (If possible, include the percentage of metals.)

In 1966, an indicated resource was calculated for Deposit No. 1 that totaled 116.7 million tonnes grading 68.3% Fe, 0.8% SiO2, 0.03% P and 0.03% S, plus a higher sulphur resource of 26.9 million tonnes grading 62.8% Fe. 3.8% SiO2 0.03% P and 0.43% S.

25. Describe the geochemical tests which have been (or will be) performed on the ore, host rock, and waste rock to determine their relative acid generation and contaminant leaching potential.

Outline methods used (or to be used) and provide test results in an attached report (ie. static tests, kinetic tests.)

Acid Rock Drainage (ARD) and Metal Leaching (ML) testing is being conducted on the ore (fresh and weathered hematite and magnetite) and waste rock using drill core and surface samples from the exploration program. The samples have been submitted to SGS Lakefield Research Ltd. for the following tests:

- Static Acid Base Accounting (ABA) – modified sobek method
- ICP metal scan
- XRD (mineral content assessment - % mineralogy)
- SPLP 1312 – metal leaching
- TCLP 1311 – aggressive metal leaching
- Whole rock analysis

Complete results from the above tests are not yet available. However, preliminary results that are available suggest that ARD may not be produced and ML will be minor.

There was no evidence of ARD in the field. Surface water quality downstream of the orebody exhibits generally neutral pH conditions (between 6.2 and 7.9). Sulphate concentrations in the surface water downstream are very low from <0.5 mg/L to <5 mg/L. Visually there was no evidence of iron staining caused by ARD or ML from the fresh ore. Weathered, oxidized ore did exhibit sulphide alteration but no evidence of ARD drainage or ML was observed.

The ore and waste rock do contain sulphides (mostly pyrite in the magnetite with trace phyrohtite) at low concentrations (trace). However, these sulphides are likely to be relatively slow to react if exposed to the atmosphere (oxygen) due to the cold and dry climatic conditions typical oft the site. This reactivity of the sulphides and the ARD and ML potential of the ore and waste rock will be confirmed with on-site tests planned to commence in 2007.

26. Estimate the percentage of sulphide in the mineralization:

Not yet determined.

pyrite _____
pyrrhotite _____
pyrite / pyrrhotite mixture _____
arsenopyrite _____

SECTION 3 :

EXPLORATION OPERATION

27. Check off the type (or proposed type) of exploration operation that will be used on the property and briefly describe the method in more detail.

a)	Reverse circulation to obtain bulk sample	_____
b)	Trenching	_____
c)	Conventional open pit	X
d)	Decline	_____
e)	Conventional underground	_____
f)	Strip mining activity	_____
g)	Other Exploration activity (please explain)	_____

28. Indicate the size and number of samples that will be obtained.

250,000 tonnes
2 number of samples (125,000 t each)

Please note if smaller samples are to be taken from different areas (note location) to form one large bulk sample.

Drilling of small diameter core will also be extracted as part of ongoing exploration drilling

29. Indicate the present or proposed average rate of exploratory production from all mineralized sources on the property:

Current (before seasonal shutdown): 90 m drill core per day
Bulk sampling program: 10,0000 tonnes ore / day

30. Outline the water usage (or proposed water usage) in the exploration activity, indicate the source and volume of water for each use.

	Source	Use	Volume (m^3 / day)
1.	"Camp Lake"	Mary River camp	50 m^3/day
2.	Phillips Creek	Milne camp	10 m^3/day
3.	Km 99 Lake	Camp water supply	10 m^3/day

Other water take locations identified in earlier renewal package submitted for continued exploration drilling and feasibility study-related geotechnical drilling.

31. If applicable, indicate or estimate the volume of natural ground water presently gaining access to the mine workings.
0 m^3 / day

32. If applicable, outline methods used underground or on surface to decrease mine water flow. (For example: recycling)

Not applicable

33. List the brand names and constituents of the drill additives to be used.

Darina rod grease
EZ-Mud
Calcium chloride salt

SECTION 4 :

THE MILL OR PROCESSING PLANT

34. Is there (or will there be) a portable mill processing plant be operating on the property in conjunction with the exploration activity ?

_____ Yes _____X_____ No

35. If "yes" indicate the proposed point of discharge for the mill or process plant water and the volume of the discharge.

Point of discharge _____

Volume of discharge _____ m^3 / day

36. Attach a copy of the portable mill or processing plant flow sheet. Indicate the points of addition of all the various reagents (chemicals) that are (or will be) used.

37. Indicate the proposed rate of milling.

_____ not applicable (check) or _____ tonnes / day

38. List the types and quantities of all reagents used in the mill or processing plant (in kg/tonne ore milled.)

Reagent:_____Amount in kg/tonne ore milled:_____

39. If applicable, is the (proposed) milling circuit based on autogenous grinding?

Yes _____ No _____Partially _____

40. Based on present production or bench test results, describe the chemical and physical characteristics of liquid mill or processing plant wastes directed to the tailing deposition area.

T/Cu	_____mg/L	Total Ammonia	_____mg/L
T/Pb	_____mg/L	Suspended solids	_____mg/L
T/Zn	_____mg/L	Specific conductivity	_____uhmo/cm
T/Ag	_____mg/L	pH	_____
T/Mn	_____mg/L	Alkalinity	_____$CaCo_3$/L
T/Ni	_____mg/L	Hardness	_____mg/L
T/Fe	_____mg/L	Total cyanide	_____mg/L
T/Hg	_____mg/L	Oil and Grease	_____mg/L
T/As	_____g/L		
T/Cd	_____mg/L		

T/Cr _____mg/L
T/Al _____mg/L

41. Provide a geochemical description of the solid fraction of the tailings.

Cu _____mg/g
Pb _____mg/g
Zn _____mg/g
Ag _____mg/g
Mn _____mg/g
Cr _____mg/g
Cd _____mg/g

Al _____mg/g
Fe _____mg/g
Hg _____mg/g
Ni _____mg/g
As _____mg/g
CN_____mg/g

SECTION 5 :

THE CONTAINMENT AREAS

42. What is the (Proposed) method of disposal of the mine water, mill or process planttailings (ie. sump, subaqueous, surface tailings pond, settling pond)?

No mine water is generated. No impoundments are proposed.

43. Attach detailed scale plan drawings of the proposed (or present) containment area. The drawings must include the following:

a) details of pond size and elevation;
b) details of all retaining structures (length, width, height, materials of construction, etc.);
c) details of the drainage basin;
d) details of all decant, siphon mechanisms etc., including water treatment plant facilities;
e) details with regard to the direction and route followed by the flow of wastes and / or waste water from the area; and
f) indicate of the distance to nearby major watercourses.

Not applicable.

44. Justify your choice of location for the containment area design by rationalising rejection of other options. Consider the following criteria in your comparisons: subsurface strata permeability, abandonment, recycling/reclaiming waters, and assessment of runoff into basins. Attach a brief summation.

Not applicable.

45. The average depth of the existing or proposed containment area is dependent on the volume of water encountered metres.

Not applicable.

46. Indicate the total capacity for the existing or proposed containment area by using water balance and stage volume calculations and curves. (Attach a description of inputs and outputs along with volume calculations.)

Not applicable.

47. Has any evaporation and/or precipitation data been collected at the site ? _____ if so, please include the data.

A weather station was installed at Mary River in June 2005, however, damage to wiring resulted in no readings between October 2005 and April 2006. Average evaporation rates were calculated in July and August 2005 at 3.2 mm and 4.5 mm, respectively. The weather station has been operational since April 2006 and two additional weather stations were installed in the summer 2006, one at Milne Inlet and another at Steensby Inlet.

48. Will the present or proposed containment area contain the entire production from the mill or processing plant complex for the life of the project?

Not applicable.

49. Will the proposed tailings deposition area engulf or otherwise disturb any existing watercourse?

Not applicable.

50. If "Yes", attach all pertinent details (Name of watercourse, present average flow, direction of flow, proposed diversions, etc.)

Not applicable.

51. Describe the proposed or present operation, maintenance and monitoring of the containment area.

Not applicable.

SECTION 6 :

WATER TREATMENT

52. If applicable, will the minewater, mill or process plant water be chemically treated before being discharged to the containment area? If so, explain the treatment process (Attach flow sheet if available)

    Not applicable.

53. Will (treated) effluent be discharged directly to a natural water body or will polishing or settling ponds be employed? Describe location, control structures, and process of water retention and transfer. Attach any relevant design drawings.

    Not applicable

54. Name the first major watercourse the discharge flow enters after it leaves the area of company operations.

    Not applicable

SECTION 7 :

ENVIRONMENTAL MONITORING PROGRAM

55. Has Traditional Knowledge in the area been considered? If so, how? If not, why not?

Traditional knowledge was first considered on the project in the original siting and positioning of the exploration tent camp. Local Co-op personnel provided valuable information on lake water quality, prevailing winds, and selected the camp location. Approximately 30 people from Pond Inlet work at the site each season, and contribute their knowledge on an on-going basis by being part of the site activities.

Since February 2006, Baffinland and Knight Piesold have been working with the Pisiksik Working Group in Pond Inlet, and discussions on the project with the group have been ongoing since February 2006. In addition, discussions have been held with the Hamlet of Pond Inlet and the Mittimatilik Hunters and Trappers Organization.

These discussions have helped Baffinland develop an understanding of land use in the region, and have provided information to Knight Piesold biologists regarding wildlife movements.

56. Has any baseline data been collected for the main water bodies in the area prior to development?

Water quality sampling

57. If "Yes", include all data gathered on the physical, biotic and chemical characteristics at each sampling location. Identify sampling locations on a map.

See attached Environmental Screening Report by Knight Piésold Ltd.

58. Provide an inventory of hazardous materials on the property and storage locations.

Calcium chloride (approximately 1,500 tonnes), bulk fuel storage and fuel drums – see Environmental Screening Report by Knight Piésold

59. Provide a conceptual abandonment and restoration plan for the site, detailing the costs to carry out the plan, and a proposal for a financial assurance which covers the costs to carry out the plan.

An abandonment and restoration plan has been developed for the bulk sampling program. Costs and proposed financial assurance are described in this report.

SECTION 8 :

ENVIRONMENTAL ASSESSMENT AND SCREENING

60. Has this project ever undergone an initial environmental review? If yes, by whom and when.

This project will undergo an environmental screening by the Nunavut Impact Review Board (NIRB).

61. Has any baseline data collection and evaluation been undertaken with respect to the various biophysical components of the environment potentially affected by the project (eg. Wildlife, soils, air quality), ie. In addition to water treated information requested in this questionnaire?

Yes____X____ No_____ Unknown_____

62. If "Yes" please attach copies of reports or cite titles, authors and dates.

Draft baseline environmental reports have been prepared by Knight Piesold Ltd. on behalf of Baffinland. Findings are summarized in the Environmental Screening Report by Knight Piésold

63. If no, are such studies being planned Not applicable

Briefly describe the proposals.

Environmental baseline studies are being conducted, covering the following components:

Water Quality
Terrestrial Wildlife and Vegetation
Fisheries
Archaeology
Marine wildlife

64. Has authorization been obtained or sought from the Department of Fisheries and Oceans for dewatering or using any waterbodies for containment of waste?

Authorization is being sought from DFO for various aspects of the bulk sampling program.

65. Has a socio-economic impact assessment or evaluation of this project been undertaken? (this would include a review of any public concerns, land, water and cultural uses of the area, implications of land claims, compensation, local employment opportunities, etc.)

Yes____X____ No_____ Unknown_____

66. If "Yes" please describe the proposal briefly.

Land and resource use, archaeology, and public feedback on the proposal is described in the Environmental Screening Report by Knight Piésold

67. If "No" is such a study being planned? Yes ____X____ No _____

Additional socio-economic studies are underway for the Mary River Project.

68. Describe any cumulative impacts the project may create?

The Mary River Project is the only advanced exploration project currently in the region, although some grassroots exploration, research and military operations in the area has a cumulative effect on the level of air traffic in the region.

In terms of effects to wildlife and the land, the effects of the project are localized and short-term, and there is an absence of other contributors to a cumulatively increased effect.

See the Environmental Screening Report by Knight Piésold

69. Does the project alter the quantity or quality or flow of waters through Inuit Owned Lands?

No

70. If yes, has the applicant entered into an agreement with the Designated Inuit Organization to pay compensation for any loss or damage that may be caused by the alteration?

A commercial lease is being obtained from the DIO and water usage fees are paid.

71. If no compensation arrangement has been made, how will compensation be determined?