



## PART A DEFINITIONS

"Act" means *Waters Act* and any amendments thereto.

"Application" means application for water use licence PM06-535 and placer mining land use approval AP06535 and any subsequent information presented to the Yukon Water Board up to the date of the Board's decision.

"Board" means the Yukon Water Board.

"Inspector" means any person designated as an Inspector under the Act.

"Natural Boundary" means the visible high water mark of any lake, river, stream or other body of water where the presence and action of the water is so common and usual, and so long continued, as to mark upon the soil of the bed of the lake, stream or other body of water, a character distinct from that of the banks thereof, both in respect to vegetation and in respect to the nature of the soil itself. In addition, the best estimates of the edge of dormant or old side channels and marsh areas are considered to be natural boundaries.

"Regulation" means the *Waters Regulation*.

"Spring Freshet" means the sudden increase in flow carried by a stream as snowmelt occurs at higher elevations in the watershed.

"Watercourse" means any stream, lake, pond, river, creek, spring, ravine or swamp, whether ordinarily containing water or not.

"Work Areas" means any area disturbed and/or altered by mining activities, excluding any stable diversion channel.

## PART B WATER USE AND WASTE DEPOSIT

1. The Licensee is hereby authorized:
  - a) to obtain water from the Indian River at a maximum quantity of 10,080 cubic metres per day; and
  - b) to use this water for a placer mining undertaking on the following grant numbers as shown in Appendix A, attached; and
  - c) to return a flow of water to the Indian River, and to deposit waste into the Indian River.
2. All of the activities authorized in Part B (1) shall be as described in the Application and subject to the conditions of this licence. Where there is a discrepancy between the Application and the conditions of this licence, then the conditions of this licence shall prevail.
3. The Board has relied on the representations, warranties and undertakings provided by the Licensee in the material filed in the Application. Such representations, warranties and undertakings are considered by the Board to be a part of the licence, but shall be subject to, and may be modified by, the conditions of the licence.
4. All work authorized by this licence shall occur on property that the Licensee has the right to enter upon and use for that purpose.
5. Effluent Quality Standard: Any grab sample at the point of discharge from the final settling facility shall not exceed settleable solids of 5.0 millilitres per litre above levels in the Watercourse immediately above the uppermost mine operation.
6. Except as otherwise provided in this licence, the Licensee shall not deposit, or permit the deposit of waste containing:
  - a) anything toxic to fish;
  - b) floating solids;
  - c) visible oil or grease; or
  - d) a total concentration of mercury in excess of 0.005 milligrams per litre;

into a receiving Watercourse, or in any place, under conditions where such waste, or any other waste that results from the deposit of such waste, if resulting waste contains any of the items prohibited by this paragraph, may enter the receiving Watercourse.

7. If, subsequent to the issuing of this licence, the Licensee uses water and/or deposits waste in one or more ways not authorized in this licence, and the combined effect of those uses and/or deposits of wastes, as determined by an Inspector:
- a) has no potential for significant adverse environmental effects; and
  - b) does not interfere with existing rights of other water users or waste depositors; and
  - c) satisfies the criteria set out in column 2 of Schedule 6 of the Regulation;
- no amendment to this licence will be required for that use of water and/or deposit of waste.
8. Fuels, lubricants, cleansers, solvents and similar chemicals or substances shall be used, transported, stored and disposed of in such a way that said substances are not deposited in, or allowed to be deposited in, waters.

#### PART C LEAVE STRIPS

9. A 20 metre leave strip shall be retained from the Natural Boundary to the Indian River by the Licensee on all grant numbers included in this licence, except as otherwise provided by this licence.
10. The leave strip shall be measured at right angles from the Natural Boundary of the Indian River.
11. Forest cover, topsoil, tailings and debris shall be disposed of in such a manner so as to prevent entry into any Watercourse.
12. Any settling facilities or ancillary dikes shall not be located within 20 horizontal metres of the Natural Boundary of the Indian River.
13. Forest cover, gravel, vegetation or any other material shall not be removed or disturbed within at least 20 horizontal metres of the Natural Boundary of the Indian River.
14. Machinery or vehicles shall not work or operate within the leave strip, except as otherwise provided by this licence.
15. A hand cut corridor 20 metre long by 3 metres wide may be cut through the leave strip for placement of a pump and pipeline.

PART D MINING ACTIVITIES WITHIN THE LEAVE STRIP ON GRANTS P40907 TO P40914 INCLUSIVE

16. Mining activities may be conducted within the leave strip and adjacent channel bed and banks of the Indian River on grants P40907 to P40914 inclusive. Such activities shall be confined to the areas delineated in the Application and limited to only one side of the Indian River.
17. A 1.5 metre wide strip of river bank, measured from the Natural Boundary of the Indian River on grants P40907 to P40914 inclusive, shall remain untouched and include riparian vegetation to ensure river bank stability.
18. A stable earth berm shall be constructed and maintained along the river bank on grants P40907 to P40914 inclusive, for the purpose of maintaining a physical barrier between the river and the mining cut.
19. Restoration of the leave strip and channel bed and bank shall be ongoing, to withstand seasonal floods.

PART E FISH SCREENS

20. The Licensee shall provide barriers consisting of fish guards, screens, coverings or nets on all water intakes as follows:
  - a) Screens or nets shall have a minimum of 3.5 openings per centimetre and openings no greater than 3.2 millimetres along any given side.
  - b) If a punch plate or similar material is used, openings shall be no greater than 3.2 millimetres in length or width.
  - c) There shall be no less than 929 square centimetres of open screen area for every 205 litres per minute being withdrawn.
  - d) The barriers shall be monitored and maintained to ensure that they function effectively at all times when water is being withdrawn.
  - e) The barriers shall be designed and installed in such a manner that the screen is submerged and a uniform flow is maintained through the total screen area.
  - f) Water shall not be withdrawn when the barrier is removed for renewal, repair or inspection.
  - g) The Licensee shall cease pumping or decanting and take remedial action if there is alteration to the leave strip and/or bed or bank of the water channel.

## PART F MINING ACTIVITIES

21. Settling facilities shall be provided for all mining wastewater.
22. Available overburden shall be stockpiled for use in future site restoration, and such stockpiles shall be located where they will not adversely affect water quality in any Watercourse.
23. All works associated with the undertaking, including, but not limited to, all storage and settling facilities located outside of the Watercourse shall be of adequate capacity and maintained in good repair

## PART G WATERCOURSE CROSSINGS ON THE INDIAN RIVER

24. The Licensee shall only use existing fords. The number of fords shall be limited to those shown in the Application.
25. The Licensee shall adhere to the following conditions regarding fording of the river channels:
  - a) all crossings shall be at a right angle to the river; and
  - b) removal of vegetation adjacent to the crossings shall be minimized; and
  - c) non-erodible materials shall be placed up the bank on both sides of the crossing to stabilize the banks; and
  - d) the river crossing approaches shall be low and stable enough to support the vehicles and equipment; and
  - e) the river shall be crossed on either a firm rock bottom or a coarse gravel bottom; and
  - f) equipment shall only cross the river during time of low flow, and
  - g) equipment crossing the river shall be mechanically sound and free of leaks; and
  - h) the blade or bucket on equipment shall be left in a raised position when crossing the river.

**PART H COMPENSATION MEASURES FOR THE BANK OF THE INDIAN RIVER**

The Licensee shall adhere to the following conditions regarding bank compensation measures and restoration:

26. The restored sections of the Indian River bed and banks must be left in a stable condition to a level of utility that is comparable to its previous level of utility.
27. The untouched 1.5 metre wide strip of river bank, shall form the base of the reconstructed river bank.
28. The bed and banks of any tributary (gulch or pup) of the Indian River shall be left in a stable condition.
29. Class II and/or III armouring shall be used, as directed in Schedule I.
30. Structures such as boulder groupings or rock islands shall be provided and spaced no further than 20 metres apart.
31. The riverside shall be left in such a manner, so that erosion is controlled and re-vegetation is possible.
32. To promote revegetation of the disturbed bank of the Indian River, the Licensee shall:
  - a) Spread fine organic material on the reconstructed river bank to a minimum width of 20 metres.
  - b) Mix stockpiled overburden with willow and spread the mixture over the fines.
  - c) Replant the reconstructed areas at 20 metre intervals with shrubs, live willows, alder and root wads.

**PART I SEASONAL CLOSURE**

33. The Licensee shall comply with the following conditions pertaining to seasonal closure:
  - a) The mine site shall be left in a stable condition at the end of each mining season.
  - b) An Inspector shall be contacted not less than 2 weeks prior to seasonal closure.
  - c) Spring Freshet shall not be routed through Work Areas.
  - d) All mined or otherwise disturbed ground surfaces, including cut banks, fill slopes and tailings piles shall be stabilized annually to prevent erosion and surface runoff from carrying sediment into adjacent Watercourses.
  - f) All mining and restoration activities pertaining to disturbed areas of the leave strip and the channel bed and banks shall be completed.

## PART J DECOMMISSIONING

34. Prior to final decommissioning and/or expiry of this licence, the Licensee shall:
- a) ensure that the final river channel approximates its pre-licence condition in length, gradient and stability, except as may otherwise be required in this licence; and
  - b) contact an Inspector not less than 2 weeks prior to final decommissioning.

## PART K REPORTS, SAMPLING AND ANALYSIS

35. Where there is a surface discharge from the settling facilities, the Licensee shall take weekly samples at a point upstream of the water supply intake and at the point of discharge from the final settling facility, and shall analyze these samples for settleable solids using the Imhoff cone 1 hour test.
36. Where no discharge from the settling facility to a Watercourse occurs, whether by surface discharge or seepage, no sampling is required.
37. On or before the anniversary of the date of issuance of this licence, and for each year during which this licence is in effect, the Licensee shall submit an annual report to the Board.
38. Annual reports during the year reported shall include the information required by this licence and by the Regulation including, but not necessarily limited to:
- a) the quantity of water used under this licence; and
  - b) the quantity, concentration and type of any waste deposited under this licence; and
  - c) all data collected which is required by this licence; and
  - d) a description of the reclamation that has taken place; and
  - e) a list of grant numbers of claims where any reclamation has taken place.

## PART L GENERAL CONDITIONS

39. The expiry date of this licence shall be July 13, 2017.
40. Sewage, including all human excreta and wastewater associated with daily camp operations, shall be disposed of in accordance with the *Public Health and Safety Act* of the Yukon.
41. The location of subsurface grey water pits and/or pit privies shall be not less than 30 metres from the high water mark of any Watercourse, and at least 1.2 metres above bedrock or the water table.

- 42. If very permeable soils are encountered, the pit privy or grey water pit shall be lined with 0.6 metres of sand or silt.
- 43. All garbage and refuse shall be kept in a covered container until removed from the site or, where appropriate, incinerated and buried under not less than 1 metre of compacted soil in pits located not less than 30 metres from the Natural Boundary of any Watercourse.
- 44. The Licensee shall immediately contact the 24-hour Yukon Spill Report number (867) 667-7244, and implement the Spill Contingency Plan should a spill or unauthorized discharge occur. A detailed written report on any such event including, but not limited to, dates, quantities, parameters, causes and other relevant details and explanations shall be submitted to the Board no later than 10 days after its occurrence.
- 45. No condition of the water use licence limits the application of any federal, territorial, first nation or municipal legislation.
- 46. In the event that the Licensee fails to comply with any provision or condition of this licence, the Board may, subject to the Act, cancel the licence.
- 47. Where any direction, notice, order or report under this licence is required to be in writing, it shall be given:

- a) to the Licensee, if delivered, faxed or mailed by registered mail, to the following address:

Simon Hambrook  
 P.O. Box 34013  
 Whitehorse, YT Y1A 7A1  
 Fax #: ( 867) 633-3883

and shall be deemed to have been given to the Licensee on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be; or

- b) to the Board, if delivered, faxed or mailed by registered mail, to the following address:

Yukon Water Board  
 Suite 106, 419 Range Road  
 Whitehorse, YT Y1A 3V1  
 Fax #: (867) 456-3890

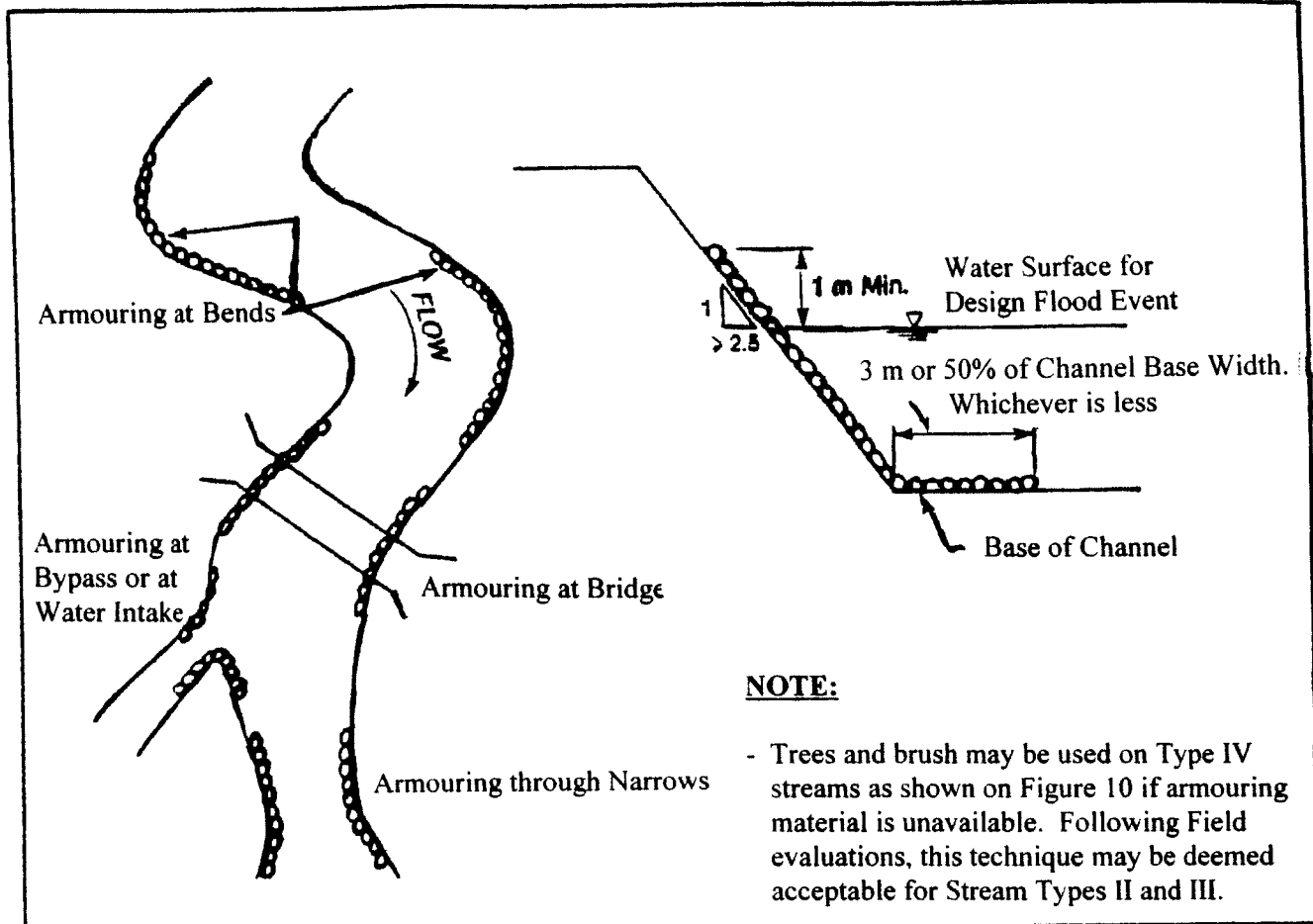
and shall be deemed to have been given to the Board on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- c) The Board or the Licensee may, by notice in writing, change its address for delivery.

APPENDIX A

Grant Number	Grant Number	Grant Number	Grant Number
P40885	P40907	P40921	P40943
P40886	P40908	P40922	P40944
P40887	P40909	P40923	P40945
P40888	P40910	P40924	P40946
P40889	P40911	P40925	P40947
P40890	P40912	P40926	P40948
P40891	P40913	P40927	P40949
P40892	P40914	P40928	P40950
P40893	P40915	P40929	P40951
P40894	P40916	P40930	P40952
P40895	P40917	P40931	P40953
P40896	P40918	P40932	P40954
P40897	P40919	P40933	P40955
P40898	P40920	P40934	P40956
P40899	P43267	P40935	P40957
P40900	P43266	P40936	P40958
P40901	P43265	P40937	P40959
P40902	P43264	P40938	P40960
P40903	P40499	P40939	P40961
P40904	P40500	P40940	P40962
P40905	P40501	P40941	P40963
P40906	P40502	P40942	

# SCHEDULE 1



## **PURPOSE:**

- To control bank erosion at bends or curves, at bridge approaches and through channel narrows.

## **DESIGN:**

- Channel armouring should extend from the base of the channel to at least 1 m above the water surface (depth of flow) for the design flood event.
- Armouring should extend beyond the toe of the channel bank along the base of the channel 3 m or 50% the base width of the channel, whichever is less.
- The bank or channel side slopes should be no steeper than 2.5H:1V where the bank is to be armoured.
- Use the following table to determine what size of armouring material should be used.

### **SUGGESTED STONE SIZES FOR ARMOURING MATERIAL**

	Riprap Class					
	1		2		3	
	mm	inches	mm	inches	mm	inches
Maximum Stone Size	450	18	800	32	1200	47
Average Stone Size	300	12	500	20	800	32
Velocity	< 3 m/s		3 to 4 m/s		4 to 4.7 m/s	

## **CONSTRUCTION:**

- Place Material on bank using available equipment.
- Ensure that there is a fairly uniform mix of armour material sizes on bank.

## ARMOURING TECHNIQUES