

YUKON TERRITORY WATER BOARD

Pursuant to the Yukon Waters Act and Regulations, the Yukon Territory Water Board hereby grants a Type B water use Licence for placer mining undertaking to:

Duncan Creek Golddusters Ltd.
P.O. Box 174
Mayo, Yukon
Y0B 1M0

LICENCE NUMBER: PM94-093

LICENCE TYPE: B

UNDERTAKING: PLACER

WATER USE AREA: 02 STREAM CLASSIFICATION: IVA

WATER SOURCE: Duncan Creek, a tributary of the Mayo River

MAXIMUM QUANTITY: 33,120 cubic metres per day

EFFECTIVE DATE: The effective date of this licence shall be the date on which the signature of the Chairperson of the Yukon Territory Water Board is affixed.

EXPIRY DATE: March 31, 2015

This Licence shall be subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the Yukon Waters Act and the Regulations made thereunder.

This Licence shall be deemed to be a renewal of licence number PM91-107.

Dated this 29th day of
May 1995

D. Mueller
Witness

YUKON TERRITORY WATER BOARD

Paul H. Hunter
Chairperson

TERMS AND CONDITIONS OF WATER USE LICENCE PM94-093

PART A WATER USE AND WASTE DEPOSIT

1. The Licensee is hereby authorized to obtain water from Duncan Creek at a maximum quantity of 33,120 cubic metres per day and to use this water for a placer mining undertaking on claim numbers P2166 to P2176 inclusive, P2921 to P2924 inclusive, 3676 to 3680 inclusive, P2663 to P2673 inclusive, P2722 to P2734 inclusive, P016758 to P016785 inclusive, P5118 and P5433 to P5439 inclusive, and to return a flow of water to Duncan Creek, and to deposit waste into Duncan Creek as proposed in water use application PM94-093.

2. Where there is a discrepancy between the water use application and the terms of this licence, the terms of this licence shall prevail.

3. Effluent Quality Standard: The Licensee shall ensure that 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 stream immediately above the uppermost mine operation.

4. Notwithstanding paragraph 3 hereof, 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 stream, 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 stream.

5. The Licensee shall ensure that deleterious substances, including, but not limited to, 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 frequented by fish.

PART B MINING ACTIVITIES

1. The Licensee may construct an instream pump pond in Duncan Creek and stream channel diversions of Duncan Creek, Williams Creek and Beliveau Creek. The Licensee shall ensure that the instream pump pond and stream channel diversions are constructed and maintained to withstand and convey at least a 1:2 year flood flow.
2. The Licensee shall ensure that all instream earthworks, diversions, ditches, spillways and any other water related structures built or otherwise effected for the storage or conveyance of water must be able to withstand seasonal floods.
3. The Licensee shall ensure that all storage and settling facilities and associated spillways, drains and water supply ditches located outside the stream channel are of adequate capacity and construction.
4. The Licensee shall maintain in good repair all works associated with the undertaking, including, but not limited to, all dams, weirs, spillways, stream crossings, ditches, gates, water intakes, culverts and settling facilities.
5. The Licensee shall construct and maintain a protective berm between the stream channel diversion and the settling facilities.
6. The Licensee shall provide settling facilities for all mining waste waters.
7. Available overburden and/or other materials, such as washed tailings, 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.
8. In those areas where mining will not again occur, tailings and overburden, or other relocated materials, shall be levelled and contoured into low relief piles. The slopes of these low relief piles shall be stable.

PART C CHANNEL RESTORATION

The Licensee shall adhere to the following conditions regarding stream restoration:

Area A: claims on Duncan Creek downstream of the bridge on claim P2731 to the confluence of the Mayo River.

Area B: claims on Duncan Creek upstream of the bridge on claim P2732 upstream to claim P2924.

Area C: claims on Beliveau Creek, claim P5433 upstream to P5439.

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Area D: Williams Creek on claim P2923 upstream to claim P2924.

1. The diversion channel width shall be no less than 8.0 meters for Area A and B, 1.5 meters for Area C, and 5.0 meters for Area D.
2. The diversion channel depth shall be no less than 1.6 meters for Area A and B, 1.3 meters for Area C, and 1.5 meters for Area D.
3. The diversion channel grade shall be between 0.0% and 3.5% for Area A and B, 0.0% and 7.0% for Area C, and 0.0% and 2.0% for Area D.
4. The bed and banks of the diversion channel shall be stable.
5. The bed and banks of any tributary (gulch or pup) of Duncan Creek, Williams Creek or Beliveau Creek must be left in a stable condition.
6. Class I armouring shall be used, as directed in schedule I.
7. Structures such as boulder groupings or rock islands shall be provided and spaced no further than 96 metres apart in Areas A and B.
8. Topsoil/organic overburden or fines from washed tailings shall be spread on top of tailings deposits adjacent to Duncan, Williams or Beliveau Creeks in Area A.
9. The streamside shall be left in such a manner that erosion is controlled and revegetation is possible in Area A.
10. Stream channel energy dissipating methods shall be used in Areas A and B.

PART D SEASONAL CLOSURE

The Licensee shall comply with the following conditions pertaining to seasonal closure:

1. The mine site shall be left in a stable condition at the end of each mining season.
2. An inspector shall be contacted not less than two weeks prior to seasonal closure.

3. To prevent flood damage during freshet, the settling facilities shall be dewatered, the intake to the settling ponds shall be blocked, instream dams and dikes shall be breached, and the diversion ditches shall be constructed and maintained to withstand and convey flood flows.

4. 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.

5. Spring freshets shall not be routed through work areas. Where diversion channels around working areas are built or excavated, they shall be open in preparation for spring freshet.

PART E DECOMMISSIONING

Upon final decommissioning and/or expiry of this licence the Licensee shall:

1. Ensure that the final creek channel approximates its pre-licence condition in length, gradient and stability except as otherwise required in this licence; and

2. Level and recontour tailings and overburden, or other relocated materials, into low relief piles. The slopes of these low relief piles shall be stable; and

3. Ensure that all dams and dikes across stream channels are removed; and

4. Ensure that all waste materials, excluding silt and other natural materials, but including, and not limited to, scrap metal, discarded machinery and parts, barrels and containers are removed from the operation site; and

5. Contact an inspector not less than two weeks prior to final decommissioning.

PART F REPORTS, SAMPLING, & ANALYSIS

1. 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 one hour test.

2. Where no discharge from the settling facility to a receiving stream occurs, whether by surface discharge or seepage, no sampling is required.

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3. 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. The report shall describe the quantity of water used under the licence, and the quantity, concentration and type of any waste deposited under the licence, and shall include all data collected as a result of any sampling which is required by this licence.

PART G GENERAL CONDITIONS

1. The expiry date of this licence shall be March 31, 2015.

2. The Licensee shall ensure that sewage, including all human excreta and wastewater associated with daily camp operations, is disposed of in accordance with the Public Health Act of the Yukon Territory.

3. The Licensee shall ensure that all garbage and refuse is removed from the site or, where appropriate, incinerated and buried under not less than one (1) metre of compacted soil in pits located not less than thirty (30) metres from the natural boundary of the watercourse.

4. The Licensee shall ensure that stationary fuel storage and pumping sites comply with the provisions of the Gasoline Handling Act and Regulations of the Yukon Territory.

5. The Licensee shall immediately contact the 24-hour Yukon Spill Report number (403) 667-7244 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 fifteen (15) days after its occurrence.

6. No term of this licence limits the application of any other Federal or Territorial law.

7. The Licensee shall convert placer leases which are included in this licence to placer claims before beginning active mining. Where the Licensee has, under section 95 of the Yukon Placer Mining Act, staked out, in the manner prescribed by the Yukon Placer Mining Act, the placer lease or portions of the placer lease into placer mining claims and has a grant of placer mining claims, the Licensee shall promptly notify the Board with a copy of the grant of placer mining claims that shall clearly indicate the number and name of the grant of placer mining claims and shall also show the placer lease number or a portion of the placer lease number from which the grant of placer mining claims was created.

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Where the Licensee provides such information to the Board, the grant of placer mining claims shall be deemed to be included in this licence.

8. In the event that the Licensee fails to comply with any provision or condition of this licence, the Board may, with the approval of the Minister and subject to the Act, cancel the licence. A violation of a provision or condition of this licence may also result in a mandatory injunction to restrain the Licensee from breaching the provision or condition of this licence.

9. Where any direction, notice, order or report under this Licence is required to be in writing, it shall be given:

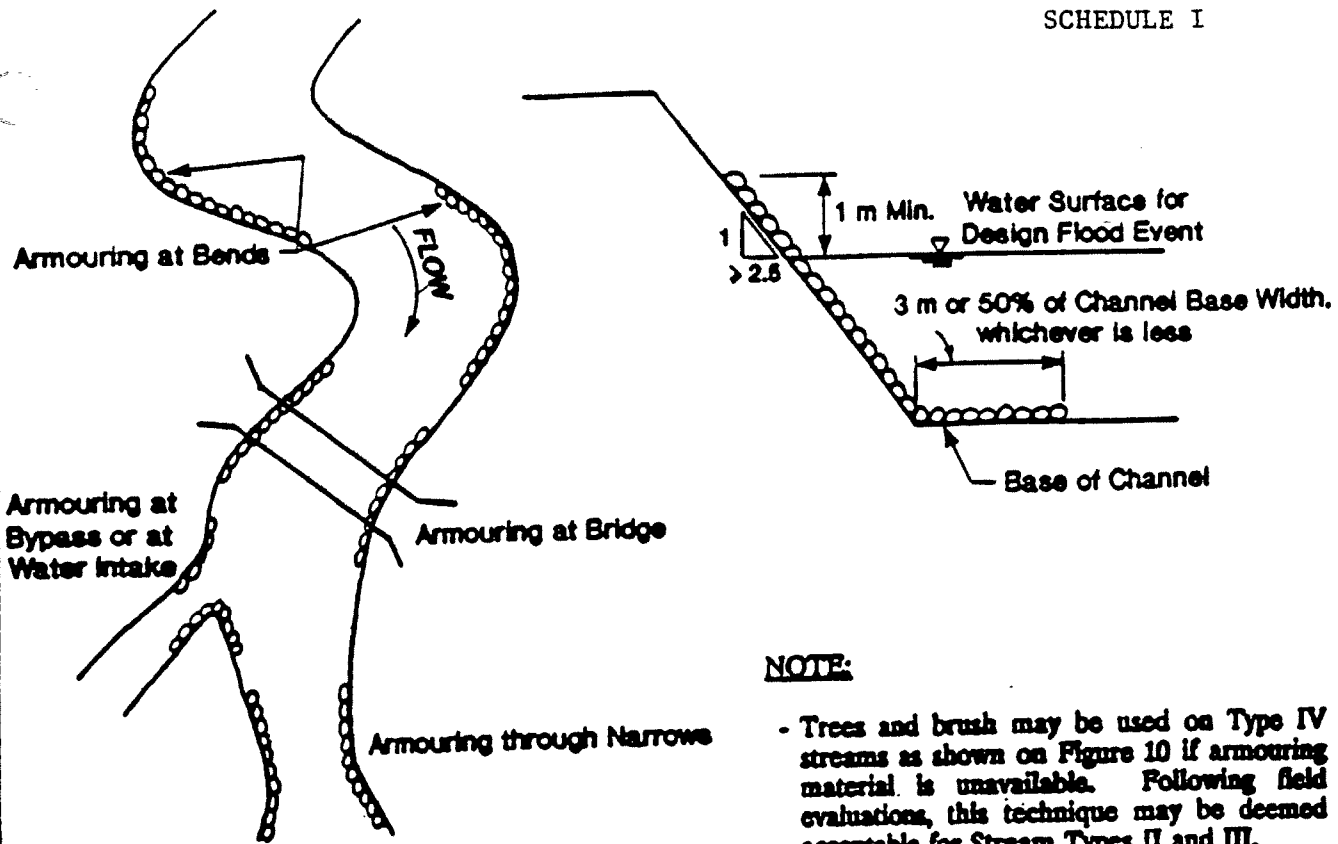
To the Licensee, if left at or mailed by registered mail to the address which appears on the signature page of this licence and shall be deemed to have been given to the Licensee on the day it was left or seven (7) days after the day it was mailed, as the case may be; or

To the Board, if left at or sent by registered mail to the following address:

The Yukon Territory Water Board
Suite 200, 4114-4th Avenue
Whitehorse, Yukon
Y1A 4N7

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

If normal mail service is interrupted by strike, slowdown, force majeure or other cause a notice sent by Registered Mail will not be deemed to be received until actually received and the party sending the notice shall, if possible, deliver such notice in order to ensure prompt receipt thereof.



PURPOSE:

- To control bank erosion at bends or curves, at bridge approaches and abutments 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

CONSTRUCTION:

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

YUKON TERRITORY WATER BOARD
REASONS FOR DECISION

The Yukon Territory Water Board ("the Board") has made licensing decisions with respect to the following application for water use for placer mining purposes:

PM94-093 Duncan Creek Golddusters Ltd.

Notice of application was provided in accordance with the requirements of the Yukon Waters Act. In response, the Board received interventions from Fisheries and Oceans Canada ("DFO") and Indian and Northern Affairs Canada ("DIAND").

No party stated that they wished to appear and make representations at a public hearing.

Prior to making licensing decisions, the Board undertook an environmental screening of this project pursuant to the Canadian Environmental Assessment Act. The Board is satisfied that any potentially adverse effects that may be caused by this project are insignificant or mitigable with known technology.

In making licensing decisions pertaining to this application, the Board took into account the application itself, the Environmental Assessment, the recommendations of intervenors, the Board's standard licence requirements for type IV licences and Board policies.

Except where otherwise noted, the Board has abided by the effluent discharge standards and operating standards which are stipulated in the Yukon Placer Authorization ("YPA"). Fish Habitat Restoration Plans, required and approved by DFO, have been incorporated into the Licence. Further guidelines have been provided by DFO for the proposed diversions. The Board expects the Licensee to refer to the DFO intervention letter for instructions on fulfilling Licence requirements pertaining to channel restoration.

No term of any Licence limits the application of any Federal or Territorial Law. Without limiting the generality of this statement, but in order to provide further clarification, the Board notes that:

1. The requirement that the Licensee contact the 24 hour spill line in case of unauthorized discharge does not relieve the licensee of the obligation to comply with section 9(3) of the Yukon Waters Act, and
2. This licence does not constitute approval or authorization pursuant to the Fisheries Act.

Except where the Board has decided that further elaboration is necessary, these reasons will address only those areas where a Licence differs from the application and/or the intervenors' recommendations.

DFO provided a recommendation regarding class I/III armouring which the Board, in deliberations on previous applications, had decided to exclude from the licence. In keeping with its earlier decisions, the licence requires class I armouring only.

The applicant requested a change in the wording of the clause that prohibited the deposit of waste containing floating solids (clause 2(b)(ii) in licence PM91-107, Part A.4(b) in PM94-093). The operator argued that a "limited amount of sticks, limbs, moss or other vegetation may enter the stream." DIAND replied that the intent of the clause is to restrict harmful or excessive amounts of floating solids. The Board agreed with the DIAND interpretation and has decided to leave the wording of the clause as is.

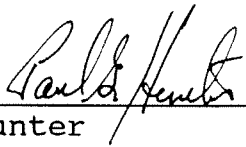
Changes were also requested in the licence provisions under decommissioning concerning stream channel restoration (clause 4(c)(i) in PM91-107, Part E.1 in PM94-093). Specifically, the applicant wanted the flexibility to leave the final stream channel shorter and steeper than the original. The Board reviewed the clause in question and agreed that the desired degree of flexibility already existed. Standard type IV licences no longer contain a length provision: they simply include a requirement to construct the restored channel within certain minimum and maximum gradients. Thus, the licence allows some flexibility in restored channel length. Since the clause in question states, ". . . except as otherwise required in this licence," and because the other licence conditions already provide some flexibility, the Board agreed that it would not change the wording of the clause.

The applicant also requested a change in the decommissioning provisions concerning the removal of instream dams and dikes (clause 4(c)(iii) in PM91-107, Part E.3 in PM94-093) such that only temporary dams and dikes would have to be removed. The Board's current practice requires proponents to specifically apply for permanent instream structures. Because the application did not contain any information which showed the use of permanent instream dams, the Board has rejected this request.

Finally, the applicant suggested waste materials, such as scrap metal and barrels, could be buried. A rationale was not provided. The Board agreed to review this clause at a later date.

The Board was emphatic that the Licensee is obligated to do what is necessary to meet the effluent standard, whether it is to construct new settling ponds, more settling ponds or to clean out the settling ponds on a regular or as required basis.

The decision of the Board is that this project may proceed as it is not likely to cause significant adverse environmental effects.



Paul Hunter
Chairperson

April 11, 1995

Board Meeting Date