

**YUKON WATER BOARD  
AMENDMENT OF LICENCE**

LICENSEE: TAGISH LAKE GOLD CORP.  
AMENDMENT NUMBER: ONE (1)

Licence: QZ02-057  
Application Number: QZ06-076

Pursuant to the *Waters Act*, Water Use Licence, is hereby amended as follows:

**1. Definition of "Application" is hereby withdrawn and replaced by:**

"Application" and "Water Use Application" means Water Use Application QZ02-057 and QZ06-076, including any additional submissions and/or revisions, submitted to the Board by the Licensee, up to the date of the Board's decision.

**2. Clause 19 is hereby withdrawn and replaced by:**

Description of Water Use

19. The Licensee is hereby authorized to:

- a) obtain a maximum of 20 cubic metres of groundwater for camp use, and
  - b) obtain a maximum of 480 cubic metres per day for the purpose of dewatering portals at the Skukum Creek 1300 and 1350 metre elevations, above sea level ("asl"), and
  - c) obtain a maximum of 480 cubic metres per day for the purpose of dewatering a portal at the Skukum Creek 1100 metre elevation asl, and
  - d) construct a free span bridge across Skukum Creek, and
  - e) install rip-rap armouring along the banks of Skukum Creek,
- all as described in the Application, and subject to the conditions of this licence.

**3. Clause 29 is hereby withdrawn and replaced by:**

29. No sample of waste discharge from the sump at the 1300 metre (asl) portal or the final surface sump from the 1100 metre (asl) portal shall exceed the concentrations listed in Column B. The monthly arithmetic mean of samples of waste discharge shall not exceed the concentration listed in Column A.

PARAMETER	COLUMN A Monthly Arithmetic Mean Concentration measured in mg/L	COLUMN B Maximum Concentration in a Grab Sample Measured in mg/L
Arsenic	0.5 mg/L	1.0 mg/L
Copper	0.3 mg/L	0.6 mg/L
Lead	0.2 mg/L	0.4 mg/L
Nickel	0.5 mg/L	1.0 mg/L
Zinc	0.5 mg/L	1.0 mg/L
Total Suspended Solids ("TSS")	25.0 mg/L	50.0 mg/L

**4. Clause 30 is hereby withdrawn and replaced by:**

30. The point of compliance for effluent discharge standards that are required by this licence shall be the point of discharge from the sump located at the 1300 metre (asl) portal and from the final surface sump located in the service area for the 1100 metre (asl) portal.

**5. Clause 31 is hereby withdrawn and replaced by:**

31. The Licensee shall conduct monitoring and sampling activities at the following locations:

SAMPLING STATION	DESCRIPTION
1	Sump Discharge at the 1300 metre (asl) portal
2	Skukum Creek- upstream of workings
3	Skukum Creek- downstream of workings
4	Sump Discharge at the 1100 metre (asl) portal

**6. Clause 32 is hereby withdrawn and replaced by:**

32. The Licensee shall comply with the sampling program as follows:

STATION ANALYSIS	SAMPLING STATION 1	SAMPLING STATION 2	SAMPLING STATION 3	SAMPLING STATION 4
Total ICP Metals	2W	M	M	2W
TSS	2W	M	M	2W
Flow	2W	-	M	2W
pH	2W	M	M	2W
Conductivity	2W	M	M	2W
Temperature	2W	M	M	2W
Hardness	-	M	M	-
Alkalinity	-	M	M	-
Ammonia	2W	-	-	2W

**LEGEND**

2W = Every two weeks if discharging

M = Monthly during discharge, quarterly if not discharging

7. **Clause 34 of this licence is hereby withdrawn and replaced by:**

34. Prior to the development of the 1100 metre elevation (asl) portal, the Licensee shall submit to the Board, a water treatment contingency plan and acid base accounting/metal leaching contingency plan. The plan shall include at a minimum, but necessarily be limited to, the details of how the Licensee will prevent the discharge of non-compliant water from the final surface sump, and shall provide details for the disposal of any sludge or other by-products of treatment during operations and during temporary closure.

8. **Part G, is appended as follows:**

**PART G - OPERATIONS AT 1100 METRE PORTAL**

Berms

38. Berms shall be constructed and maintained along the toe of the waste rock dump and around the exterior perimeter of the 1100 metre elevation (asl) portal area.

Fording

39. The Licensee shall adhere to the following conditions regarding fording of the creek channels:
- a) all crossings shall be at a right angle to the Watercourse; 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 Watercourse crossing approaches shall be low and stable enough to support the vehicles and equipment; and
  - e) the Watercourse shall be crossed on either a firm rock bottom or a coarse gravel bottom; and
  - f) equipment crossing the Watercourse shall be mechanically sound and free of leaks; and
  - g) the blade or bucket on equipment shall be left in a raised position when crossing the Watercourses.


Sediment Removal and Disposal

40. Any accumulation of sediment within the drainage ditch shall be removed and disposed a minimum of 60 metres from any Watercourse.
41. Any sediment removed from the sumps or the settling pond shall be disposed a minimum of 60 metres from any Watercourse.

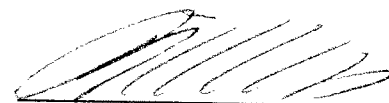
Dated this 9<sup>th</sup> day of

May, 2007.

YUKON WATER BOARD



Witness



Chairperson

## REASONS FOR DECISION

WATER USE APPLICATION QZ06-076  
(AMEND. TO QZ02-057)  
TAGISH LAKE GOLD CORP.  
SKUKUM PROJECT, 1100 METRE (ASL) ELEVATION  
PORTAL/ADIT DEVELOPMENT

The Yukon Water Board (“the board”) has concluded deliberations pertaining to Water Use Application QZ06-076. This is an application to amend Water Use Licence QZ02-057, which is a type B licence for quartz mining undertaking at the Skukum Property.

In the application, Tagish Lake Gold Corp. proposed to amend the licence to include:

1. Development of an adit at the 1100m elevation (asl) (“the new adit”)
2. Construction of water treatment facilities (sumps) to settle sediment in water from the new adit
3. Construction of a free span bridge across Skukum Creek,
4. Dewatering of the new adit at a rate of 480 cubic metres of water per day.

Notice of this application was provided in accordance with the requirements of the *Waters Act*. In response, the board received interventions from the following parties:

Government of Yukon-Environment (“GY-Env”), and  
Carcross/Tagish First Nation, and  
Government of Yukon-Energy, Mines & Resources-Mineral Resources Branch (“GY-EMR”).

The board did not receive a request for a public hearing.

In making licensing decisions pertaining to this application, the board also took into account the *Waters Act and Regulation*, the application, recommendations from the interveners, the Licensee’s response to interventions, the YESAA Decision Document, the board’s standard licence requirements, Territorial Resources Base Maps 105D3 and 105D/7, Mining Claims Maps 105D/4 and 105D/6, Chapter 14 of the Umbrella Final Agreement, and board policies.

### **Environmental Assessment**

This application required an environmental assessment under the *Yukon Environmental and Socio-economic Assessment Act* (YESAA) and the water use register included a copy of the YESAA Decision Document. The board noted some difficulties with this Decision Document, as follows:

The Decision Document includes mitigation measures that are so precise as to significantly restrict the board’s ability to make licensing decisions.

By stipulating that the mitigation measures identified in the Decision Document “will be incorporated in a water use licence issued by the Yukon Water Board”, the Government of Yukon appears to be prescribing water licence terms and conditions. The *Waters Act* provides that the board may include in a water use licence any conditions that the board considers to be appropriate. Nothing in either YESAA or the *Waters Act* gives Government of Yukon the authority to dictate those conditions.

In addition, the language of the Decision Document is problematic in that it would appear to require a Fisheries and Oceans Canada operational statement as a term and condition of a water use licence. An operational statement is not an appropriate licence condition.

Section 86 of YESAA requires that the board cannot include in a licence any terms that conflict with a Decision Document. The board is satisfied that this amendment to licence QZ02-057 does not conflict with the Decision Document.

#### **Water Quality and Monitoring Locations**

GY-Env proposed that the point of compliance for effluent from the portal of the new adit should be the discharge from the final lined surface sump, as this was the last point of control. The board accepted this recommendation and that is reflected in clause 30 of the amended licence.

GY-Env proposed that the effluent standards included in licence QZ02-057 should also apply to any effluent discharged from the new adit. The board accepted this recommendation, in clause 29 of the amended licence.

GY-Env proposed that the licence require flow measurements and reporting of volumes of effluent discharged from the new adit. Clause 31, and the sampling program, of the amended licence include sampling at station 4.

GY-Env proposed an additional monitoring location on Skukum Creek, downstream of inputs from facilities associated with the new adit. The licence already included a requirement for Sampling Station 3 which is described as “Skukum Creek – downstream of workings”. With this amendment, Sampling Station 3 must be located at a point on Skukum Creek, downstream of the portal of the new adit.

Carcross/Tagish First Nation recommended that water monitoring and sampling should be conducted prior to start up and during operations, with the involvement of the Carcross/Tagish First Nation. The Licensee responded that water quality data was provided as part of the application and that the licence already includes monitoring requirements.

The *Waters Act* requires that monitoring reports must be included in the water use register, and

the water use register must be available to the public. For this reason, licences do not typically include a requirement for licensees to provide monitoring information to any other party. The board notes, and is encouraged, that the Licensee has offered to provide copies to the Carcross/Tagish First Nation.

### **Sumps and Settling Pond**

Initially, GY-Env was concerned that the sediment accumulating in the sumps and the settling pond may be metal-laden, and provided recommendations regarding the accumulated sediment. GY-Env later clarified that, after further discussions with the Licensee, they were satisfied that it is unlikely that metal-laden water will be discharged from the portal of the new adit.

The board accepted GY-Env's recommendation for removal of sediment and added clauses 40 and 41 to the licence. The clauses require any sediment that is removed from the settling pond and the sumps is to be disposed of a minimum of 60 metres from any watercourse. The Licensee is also required to remove any accumulated sediment within the drainage ditch, and dispose of the sediment a minimum of 60 metres from any watercourse. The removal of the sediment will ensure that the flow of water within these facilities is not restricted, and will prevent unauthorized discharges of wastewater and runoff water to the environment.

GY-Env recommended that a water treatment contingency plan should be required prior to the development of the new adit portal, and the board accepted this recommendation. The plan must include details on how the Licensee will prevent the discharge of non compliant water from the final surface sump, as well as details for the disposal of any sludge or other by-products of treatment during operation and temporary closure. The board advises the applicant that, if additional contingencies will be put in place to prevent failure of the pipeline across Skukum Creek, then the plan should be updated.

Carcross/Tagish First Nation recommended that soil samples should be taken from the settlement pond and the fenced areas, to determine potential effects on groundwater. The Licensee confirmed that the settlement pond soils will be fully characterized prior to development and that groundwater monitoring is underway. The board is satisfied with the information provided by the Licensee and the amendment to clause 34 will satisfy the recommendation provided by Carcross/Tagish First Nation.

Carcross/Tagish First Nation also recommended that the settling ponds be fenced to deter wildlife from drinking discharge water from the lower portal. The Licensee responded that plastic fencing has been installed at the existing settling pond at the 1300 metre (asl) site and that similar fencing will be installed this spring at the Goddell Gully site. The Licensee confirmed that other measures to deter wildlife from drinking the water from the sumps and settlement pond will be considered. The board is satisfied, from the evidence presented by the Licensee and

GY-Env regarding the quality of water, that fencing of the sumps or settling pond related to the new portal will not be necessary.

### **Adit Location**

GY-Env recommended construction of a berm around the perimeter of the portal area to prevent any drainage from entering either Berney Creek or Skukum Creek. The Licensee agreed, and this has been included in the amended licence.

### **Characterization of Rock Types**

GY-Env recommended that Acid Base Accounting/Metal Leaching characterization of rock types should be conducted, as well as metals analysis of water encountered during advance drilling. The Licensee included the commitment to conduct these activities as part of the application and this has been included in clause 19.

### **Watercourse Crossing**

GY-Env noted a concern that there may be a potential spillage of waste rock or other materials into Skukum Creek as trucks haul the rock or materials across the bridge, and recommended that the approaches and structure be designed to reduce or eliminate any potential for spillage. The board is satisfied that construction of the bridge according to the design drawings, which were sealed by a Professional Engineer licensed to practice in Yukon, will address this concern.

Since fording may be required on Skukum Creek, to facilitate the construction of the bridge crossing, the board has included fording criteria in the licence.

### **Waste Rock Dump**

GY-Env proposed construction of a toe berm at the waste rock dump to prevent encroachment of the waste rock slope into the 30 metre reserve and Skukum Creek, and the application included a drainage ditch along the toe of the waste rock dump and a protective berm to capture material before it encroaches on the setback. This is addressed in clause 38.

### **Security**

GY-Env recommended security in the amount of \$64,000 and supported this amount by referencing another type B water use licence for quartz mining undertaking. The *Waters Act Regulation* restricts the amount of security to the cost of abandonment and restoration, including any ongoing measures required after decommissioning. The *Regulation* also identifies the facts that the board can consider when determining the amount of security, including the Licensee's ability to meet the costs of abandonment, and the Licensee's past performance.

GY-Env did not provide a projection, or an analysis, of the likely costs of abandonment for either the project itself, which is already licensed, or the works proposed in the amendment. GY-Env did not provide any information to suggest that they questioned the Licensee's ability to comply with current licence conditions, or to meet the costs of decommissioning. Further, the board was not presented with any information to suggest that past performance should be a consideration. The only information provided to substantiate the quantum of proposed security was that this was the amount calculated to cover one year of water treatment for another quartz licence, unrelated to this project or this proponent.

The intervention from GY-EMR described the Licensee as "good corporate citizens", but supported the GY-Env recommendation for security.

The board determined that, in this case, the interventions did not provide adequate facts or reasons to support the recommendation for security.

#### **Traditional Knowledge and Harvest Monitoring**

Carcross/Tagish First Nation recommended that the Licensee conduct a traditional knowledge study and negotiate an agreement with the First Nation regarding harvest monitoring. The applicant responded that they support a traditional knowledge study, that they have signed a Memorandum of Understanding with the First Nation, and they are working on a Co-operation Agreement, which the Licensee expects will address some of the points raised in the intervention.

The board is encouraged by the commitments made by the Licensee. However, these recommendations pertain to issues which go beyond the jurisdiction of the Water Board.

#### **Old Mine Site Clean-up**

Carcross/Tagish First Nation recommended that an old mine site be cleaned up this season, arguing that it is affecting animal use and traditional uses by the First Nation. The board was not provided with any other facts to support this recommendation. The area of the old mine site is not part of this application. Therefore, this recommendation has not been addressed in the amendment, but the board advises the Licensee to pursue this matter further with the First Nation and with the appropriate Government of Yukon departments.

#### **UFA-Chapter 14**

Territorial Resources Base Map 105D/3 is included in the Carcross/Tagish First Nation Final Agreement. Carcross/Tagish First Nation provided a list of map numbers where water is flowing on, through or adjacent to settlement land that will be impacted. The board reviewed Territorial Resources Base Maps 105D/3 and 105D/7 and Mining Claims Maps 105D/4 and 105D/6 for

settlement land within the project area.

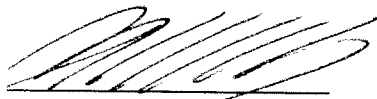
The project activities under review by the board include construction of sumps to treat any water draining from the new adit portal and to construct a bridge across Skukum Creek. The Licensee has not proposed to directly use water from a surface watercourse. The bridge is designed to have a hydraulic capacity to withstand the 20 year flood estimate, and the channel will be lined with rip-rap to ensure that flood flows are contained within the active channel. Therefore, the quantity and rate of water will not be substantially altered.

The mitigation proposed by the Licensee and the conditions of the water use licence will minimize sediment inputs to any watercourse. Water draining from the new adit will be treated in constructed sumps, and sediment will be settled prior to discharge to the environment. Therefore, there will not be a substantial alteration to the quality of water.

Considering the locations of settlement land in comparison to the purpose of the project, the methodology of the project, and the mitigation included in the amended licence, the board has concluded that this project will not substantially alter the quantity, quality or rate of flow of water flowing on, through or adjacent to settlement land, including seasonal rate of flow.

**Conclusion**

The board has approved the issuance of Water Use Licence QZ06-076, which is an amendment to Water Use Licence QZ02-057.



Chairperson  
Yukon Water Board

May 11, 2007  
Dated