

IN THE MATTER OF  
THE ENVIRONMENTAL ASSESSMENT ACT, S.B.C. 2002, c. 43 (ACT)

AND

IN THE MATTER OF  
AN APPLICATION FOR AN ENVIRONMENTAL ASSESSMENT CERTIFICATE  
(APPLICATION)

BY

NOVAGOLD CANADA INC. (PROPONENT) FOR THE  
GALORE CREEK COPPER-GOLD-SILVER PROJECT (PROJECT)  
ENVIRONMENTAL ASSESSMENT CERTIFICATE #M06-03

**Whereas:**

- A. The Proponent proposes to develop an open pit copper-gold-silver mine and mill approximately 260 kilometres north of Stewart and 200 kilometres southwest of Iskut, BC along existing and proposed roads;
- B. The Project constitutes a reviewable project pursuant to Part 3 of the *Reviewable Projects Regulation* (B.C. Reg. 370/02) as the Project is a new mine facility that will have a production capacity of 75,000 tonnes or more per year of mineral ore;
- C. On February 24, 2004, the Executive Director, in accordance with section 4 of the Act, delegated certain statutory and regulatory powers and duties in relation to the Project to the undersigned Project Assessment Director (PAD);
- D. On February 25, 2004, the Environmental Assessment Office (EAO) issued an order under section 10(1)(c) of the Act, stating that the Project requires an environmental assessment certificate, and that the Proponent may not proceed with the Project without an assessment;
- E. On November 30, 2005, EAO issued an Order under section 11 of the Act setting the scope, procedures and methods for the environmental assessment of the Project;
- F. On March 7, 2006, pursuant to section 13 of the Act, EAO amended the November 30, 2005, section 11 Order by repealing and replacing Sections 3.1 and 12.4;
- G. On June 13, 2006, a second section 13 Order was issued to replace and repeal Section 12.4 of the section 11 Order;

- H. On June 14, 2006, the PAD determined that the notification and consultation measures undertaken and proposed by the Proponent for both the public and First Nations were adequate;
- I. The Application was made available for review by the public and by representatives from federal, provincial and local government agencies, and the Tahltan Nation;
- J. The PAD prepared a report on the potential effects of the Project entitled the "Galore Creek Copper-Gold-Silver Project Assessment Report and Comprehensive Study Report" (AR/CSR);
- K. The Executive Director has referred the Application, the AR/CSR, and Recommendations of the Executive Director and Reasons for Recommendations pursuant to section 17 of the Act, to the Minister of Environment and the Minister of Energy, Mines and Petroleum Resources, (Ministers); and,
- L. The Ministers have considered the Application, the AR/CSR, and the Recommendations of the Executive Director and Reasons for Recommendations.

**Now Therefore,**

The Ministers, pursuant to section 17(3) of the Act, hereby issue this Certificate to the Proponent for the Project, subject to the following conditions (Conditions):

**Conditions**

1. The Proponent must cause the Project to be designed, located, constructed, operated and decommissioned in accordance with the Conditions of this Certificate, the documents listed in Schedule A, and the Proponent's commitments in Schedule B, and must comply with all of the Conditions of this Certificate to the reasonable satisfaction of the Minister.
2. Where, in the reasonable opinion of the Minister, there is a conflict or inconsistency between any of the documents listed in Schedule A and the commitments in Schedule B, Condition 1 must be interpreted so that Schedule B will vary, repeal, rescind or supersede, as the case may be, the contents of earlier dated documents listed in Schedule A.
3. Where, in the reasonable opinion of the Minister, there is a conflict or inconsistency between any of the documents listed in Schedule A and the Conditions which follow, these Conditions must take precedence over and supersede the contents of the documents listed in Schedule A.

4. Despite Condition 1 above, if prior to full scale commercial production in early 2011, the Proponent proposes a material change to the design, location, construction, operation and decommissioning of the Project as described in the documents listed in Schedule A or B, and the change may in the opinion of the Executive Director have the potential for significant adverse effects, the Proponent must then provide to the Executive Director:
  - a) an application in writing to amend the Certificate pursuant to section 19(1) of the Act; and,
  - b) plans, analysis, records and other information necessary for an effective assessment by the Executive Director of the proposed change.
5. The Proponent must enter into an Indemnity within 60 days of the signing of this Certificate, acceptable to the Director of the Risk Management Branch, Ministry of Finance, to save harmless the Crown from any and all claims, liabilities, losses, damages arising out of the Province or its agencies granting to the Project an environmental assessment certificate, lease, a *Mines Act* permit for facilities over the Grace Claims or right-of-way over Crown lands in which Pioneer Metals Corporation holds a similar interest or tenure.
6. The Proponent must submit a report to the Executive Director on the status of compliance with the Conditions of this Certificate, and the commitments in Schedule B, four weeks prior to significant surface disturbance during construction, four weeks prior to full scale commercial production, and one year following the start of full scale commercial production of the Project.
7. This Certificate is of no force or effect until signed by the Ministers.
8. This Certificate does not constitute a permit, licence, approval or any other authority required under any other enactment.
9. The Proponent must obtain the written consent of the Minister, such consent not to be unreasonably withheld, prior to disposing, whether legally, beneficially or otherwise, of:
  - a. this Certificate, or any right, title or interest conferred by this Certificate; or,
  - b. the Project.

#### **Duration of Certificate**

10. The Proponent must have, in the reasonable opinion of the Minister, substantially started the construction of the Project within five years of the date of issue of this Certificate, otherwise this Certificate expires.

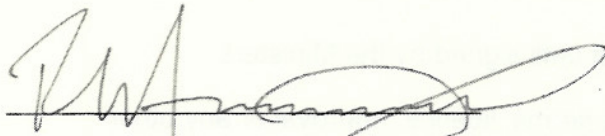
#### **Suspension, Cancellation and Amendment of Certificate**

11. This Certificate may be subject to cancellation, suspension in whole or in part, amendments, or the attachment of new Conditions, for any of the following reasons:
  - a) the Minister has reasonable and probable grounds to believe that the Proponent is in default of:
    - i. an order of the Courts under section 35(2), 45 or 47 of the Act;

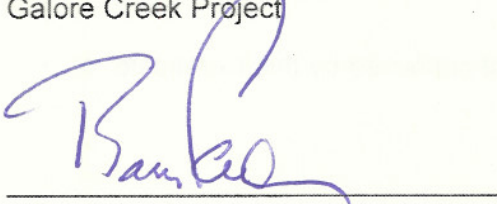
- ii. an order of the Minister made under section 34 or 36 of the Act; or,
  - iii. one or more requirements or Conditions of this Certificate.
- b) the Proponent or its officers or employees when acting on behalf the Proponent, have been convicted of an offence under the Act, with respect to the Project; or,
- c) an order is made or a resolution is passed, for the winding up, or dissolution of the Proponent, or the Proponent is in receivership or bankruptcy proceedings, without such order or resolution being rescinded or stayed and, in the case of any of the foregoing, the Minister has reasonable and probable grounds to believe that a breach of, or default under, this Certificate has occurred or is likely to occur.

The Conditions of this Certificate are agreed to by the Proponent this

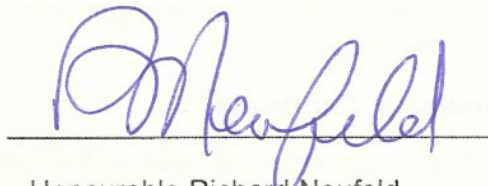
2<sup>nd</sup> day of February, 2007.



Rick Van Nieuwenhuyse  
President & CEO  
NovaGold Resources Inc.  
Galore Creek Project



Honourable Barry Penner  
Minister of Environment



Honourable Richard Neufeld  
Minister of Energy, Mines and  
Petroleum Resources

Issued this 16<sup>th</sup> day of February, 2007, in Victoria, British Columbia.

## SCHEDULE A - APPLICATION AND SUPPORTING DOCUMENTS

June 2006	Application for an Environmental Assessment Application for the Galore Creek Copper-Gold-Silver Project (Volumes 1 – 16) submitted by NovaGold Canada Inc.
July 31, 2006	Report from Iain G. Bruce (BGC Engineering Inc.) to Dean Lindsay (NovaGold Canada Inc.) entitled "Galore Creek Project Open Pit Slope Design - Feasibility Geotechnical Report".
August 17, 2006	Email from Dianna Stoopnikoff (NovaGold Canada Inc.) to Nicole Vinette (Environmental Assessment Office) identifying change to the location of the filter plant.
September 7, 2006	Report entitled "Water Quality Model Predictions Total and Dissolved Metals" submitted by NovaGold Canada Inc.
September 7, 2006	Report entitled "Porcupine River Floodplain Delineation near the Proposed Aerodrome Facility" submitted by NovaGold Canada Inc.
September 7, 2006	Report entitled "Galore Creek Human Health Effects Assessment" submitted by NovaGold Canada Inc.
September 22, 2006	Report from Iain G. Bruce (BGC Engineering Inc.) to Dean Lindsay entitled "Galore Creek Project Plant Site Design - Feasibility Geotechnical Report".
September 26, 2006	Report entitled "Overland Pipelines Detailed Feasibility Study" by PSI submitted by NovaGold Canada Inc.
November 2006	Report entitled "Galore Creek Project: Post Closure Long-Term Water Quality Predictions (without mitigation)" submitted by NovaGold Canada Inc.
November 2, 2006	Letter from Dianna Stoopnikoff (NovaGold Canada Inc.) to Anne Currie (Environmental Assessment Office) identifying changes to construction camps.
November 14, 2006	Memo report entitled "Galore Creek Tailings Dam Geologic Condition" submitted by NovaGold Canada Inc.
November 20, 2006	Report entitled "Revised Tunnel Alignment and Related Geotechnical Investigations" submitted by NovaGold Canada Inc.
December 6, 2006	Report entitled "Galore Creek Project Interior Grizzly Bear Cumulative Effects Assessment" submitted by NovaGold Canada Inc.
December 13, 2006	Report "Installation of the Diffuser in the Iskut River for Discharge of Treated Concentrate Water" submitted by NovaGold Canada Inc.
December 2006	Report entitled "Galore Creek Conceptual Fish Habitat Compensation Plan" submitted by NovaGold Canada Inc.

**SCHEDULE B - SUMMARY OF NOVAGOLD CANADA INC.'S COMMITMENTS  
FOR THE GALORE CREEK COPPER-GOLD-SILVER  
PROJECT**

<b>Component</b>	<b>Commitment</b>
Overall Commitments	1. Will establish an Environmental Management System for the Project after commencing commercial operations and use best efforts to obtain ISO 14001 certification or any other equivalent independent certification. <sup>1</sup>
	2. Is committed to the concept of sustainable development, which requires balancing good environmental stewardship with economic growth and social well being.
	3. Will use NovaGold's Environmental Policy to guide all phases of the Project.
	4. Will finalize the various management plans identified in Volume III, Section 10 of NovaGold Canada Inc.'s Application for an environmental assessment certificate.
	5. Will develop, in collaboration with the Tahltan Central Council, local communities and Canadian and U.S. federal and B.C. and Alaska State government agencies, and implement monitoring that meet provincial and federal requirements.
Community Relations, Community Consultation, Community Involvement	6. Will build long-term relationships with the Tahltan Nation and local communities.
	7. Will provide transcripts of the January 2005 Special Assembly if requested by the Tahltan Central Council.
	8. Will report back to the Tahltan communities on how their input shaped project decisions.
	9. Will maintain ongoing communications and consultation programs with the Tahltan communities during the life of the mine.
	10. Will consult with the Tahltan Central Council on all draft permits and management plans, consistent with the conditions of the Participation Agreement.
	11. Will hold information sessions in Telegraph Creek, Dease Lake, Iskut, Stewart, Terrace and Smithers to provide information on project planning, business, training and employment opportunities.
	12. Will organize further discussions and/or meetings with potentially affected guide outfitters and trap line holders to discuss potential effects, mitigative measures and compensation.
Recruitment, Employment and Training	13. Will give hiring priority to Tahltan Nation people, residents of northwestern British Columbia residing in a primary community, and then to other Canadians.
	14. Will develop a long-term recruitment, employment and training strategy, whose success depends upon cooperation and commitment of the Tahltan Central Council, local communities and provincial and federal governments.

<sup>1</sup> ISO is the International Standard Organization and 14001 is the certification program for environmental management.

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	15.	Will implement a hiring strategy that will include a workforce education and skill assessment, capacity survey of primary communities, mine employment orientation program, open pit mine heavy equipment training program, specific on-the-job training programs and apprenticeship programs.
	16.	Will ensure that all employees receive site-specific safety and environmental awareness training.
Business Opportunities	17.	Will develop a long-term business opportunities strategy involving structuring contacts so they can be accessed by a variety of different sized local businesses.
	18.	Will implement a business opportunities strategy that will require contractors to disclose their policies and practices for providing opportunities to the members of the Tahltan Nation and residents of northwestern British Columbia.
Health and Safety, Air Quality and Noise	19.	Will develop a safety plan which will outline and describe appropriate procedures and protocols to effectively deal with hazards including hazard evaluation, appropriate control procedures and protocols, personal protective equipment to be used, air and water monitoring protocols and specifications, confined space entry procedures and detailed fire-fighting procedures.
	20.	Will implement a program of risk reduction to provide protection from accidental losses for all personnel and physical assets.
	21.	Will use the Loss Control and Risk Reduction Policy to guide all phases of the Project.
	22.	Will use monitoring programs to ensure healthy work environments and protection of other biological receptors.
	23.	Will locate the explosives facilities and related access roads in safe sites relative to other mine facilities and geohazards.
	24.	Will consider installing a gravity-fed fire suppression water system in addition to the pump-supported system proposed in the Application for an environmental assessment certificate.
	25.	Will develop and implement an Air Emissions and Fugitive Dust Management Plan.
	26.	Will use appropriate emissions control equipment such as scrubbers.
	27.	Will use high-efficiency technologies for diesel mining equipment.
	28.	Will develop and implement a site-wide air monitoring program during permitting to assess the effectiveness of mitigation strategies employed.
	29.	Will use appropriate control methods such as road watering and vehicle speed regulations to minimize the generation of fugitive dust.
	30.	Will use preventative maintenance to ensure optimum performance of light-duty vehicles, diesel mining equipment, aircraft and the incinerator.

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31. Will make reasonable efforts to use post-2005 diesel equipments to minimize air emissions.
  32. Will use the lowest sulphur-content fuel reasonably available on the market.
  33. Will implement a recycling program to reduce the amount of incinerated wastes and hence CO<sub>2</sub> emissions.
  34. Will segregate waste prior to incineration to minimize toxic air emissions.
  35. Will develop a dust deposition monitoring program to measure dust/chemical deposition from mining activities.
  36. Will use a dust suppression system for the primary crusher to reduce fugitive dust and keep ore drop height to a minimum.
  37. Will cover the conveyors and ore stockpile to reduce fugitive dust.
  38. Will inform employees, contractors and subcontractors about policies for managing air quality (e.g., trucking contractors will be informed of the requirements for speed limits and no idling).
  39. Will implement dust control at the intersection of the access road and Highway 37.
  40. Will use appropriate covers for concentrate trucks to minimize the loss of concentrate due to dusting along Highway 37.
  41. Will, if tarpaulins are used to cover concentrate trucks, develop an operating procedures manual for correct tarpaulin use and provide training for transportation contractors.
  42. Will participate with other industrial users of Highway 37 and government agencies to monitor for potential metals contamination resulting from concentrate dusting along the highway.
  43. Will participate with other Port of Stewart users and the Ministry of Environment in a joint air quality monitoring program.
  44. Will monitor workplace contaminants to ensure compliance with occupational health exposure limits pursuant to permitting requirements.
  45. Will abide by the British Columbia Open Burning Smoke Control Regulation.
  46. Will monitor noise levels in the accommodation complex once operations begin, in order to ensure appropriate noise levels.
  47. Will compare the results of noise monitoring in the accommodation complex to noise levels related to sleep disturbance in the World Health Organization Guidelines for Community Noise (1999), and in the event that noise levels exceed these guidelines then mitigation measures that are technically and economically feasible will be undertaken.
  48. Will install monitoring wells to monitor groundwater plume and assess potential impacts to drinking water in the event of a chemical spill near wells supplying drinking water to camps.
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Traditional Knowledge	<p>49. Will continue to work with the Tahltan Central Council on the development of Traditional Knowledge studies and the continued application of Traditional Knowledge to the Project.</p> <p>50. Will develop environmental monitoring programs that incorporate both Traditional Knowledge and science.</p> <p>51. Will participate with the Crown and Tahltan Central Council to help expand collective knowledge of potential cumulative impacts of resource development on all valued ecosystem components.</p>
Climate	<p>52. Will use pipelines for moving concentrate and diesel fuel to reduce the number of haul truck trips and the consequent amount of diesel emissions and fugitive dust.</p> <p>53. Will continue to examine energy reduction programs to minimize CO<sub>2</sub> emissions.</p> <p>54. Will implement various methods of power reduction and energy conservation.</p> <p>55. Will consider energy efficiency when purchasing new and replacement equipment.</p> <p>56. Will consider energy efficiency policies of outside service providers when acquiring services.</p> <p>57. Will monitor fuel and electrical consumption.</p> <p>58. Will replace land area cleared by deforestation during reclamation.</p> <p>59. Will conduct glacier mass balance monitoring starting in 2007 with a monitoring plan to be developed and reviewed by relevant agencies and the Tahltan Nation.</p>
Surface Water and Groundwater Quality and Quantity and Sediment	<p>60. Will retain an independent consultant to determine the Probable Maximum Flood snow depth for the Galore Creek basin, the Probable Maximum Flood hydrograph using a defensible snow-melt rate, and, by the end of January 2007, prepare a technical report that summarizes the assessment and provides a recommended Probable Maximum Flood hydrograph. The report will be provided to the Ministry of Environment, Ministry of Energy, Mines and Petroleum Resources, Environment Canada and Tahltan Central Council.</p> <p>61. Will establish and staff a field laboratory for the construction phase, capable of analysing paste and rinse pH, conductivity, total sulphur and carbon and modified neutralization potential.</p> <p>62. Will employ and train environmental monitors to monitor construction of the access road, mine site facilities and transmission line.</p> <p>63. Will treat initial waste rock blasts as potentially acid generating and test to evaluate the possible preferential enrichment of sulphide minerals in the fine fraction of blasted rock. Whole rock and the -2 mm fraction will be analyzed to determine whether adjustment to the <math>IC_{Ca, Mg} / AP</math> is needed. An annual program will be designed to continually re-evaluate this distribution.</p>

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64. Will conduct additional comparative testing of not-potentially acid generating and acid base accounting to refine the not-potentially acid generating pH boundaries and ensure that there are no biases related to rock type and mineralogy.
65. Will conduct additional testing prior to mining to refine the adjustment of neutralization potential to estimate  $IC_{Ca, Mg}$ , using the same methods used in the environmental assessment, which were Rietveld X-ray defraction, carbonate analyses and microprobe testing on mineral particles. This program will be repeated until the  $IC_{Ca, Mg}$  can be accurately estimated.
66. Will maintain a database of analytical results, truck counts and disposal locations to provide an inventory of rock management.
67. Will continue some of the humidity cell tests started during the environmental assessment review to monitor the progress of neutralization potential depletion, continue on-site barrel tests and bi-annual monitoring of toe seeps from upland dumps, maintain an overall up-to-date site water and load balance to compare predictions of metal loadings with actual conditions, and conduct annual audits of management potentially acid generating and non-potentially acid generating rock at the drill face in pit.
68. Will use a conservative neutralization potential ratio of 2 to segregate potentially acid generating from not-potentially acid generating waste rock for underwater disposal. Will continue to monitor to verify pre-mining conditions and update the operational management plan for waste rock, tailings, low grade ore and construction materials as more information is gained from the site. This document will be a living document with updates submitted to the Ministry of Energy, Mines and Petroleum Resources and the Ministry of Environment for review and approval whenever significant changes occur.
69. Will use construction material with an NP/AP > 3 and paste pH > 6 and metals < 2 x crustal abundance and Cu/S < y (where y is still being determined by leach column tests), for the downstream dam fill and all other fill requirements located outside of the dam containment area.
70. Will restrict the use of potentially acid generating rock for construction to areas that will be submerged behind the dam.
71. Will assess acid rock drainage potential of excavated faces during access road and diversion channel construction, using an on-site laboratory, and develop appropriate mitigation, including mitigation for closure, for any acid rock drainage encountered.
72. Will stockpile excavated rock from tunnel construction and characterize excavated rock for metal leaching/acid rock drainage potential during construction. If the rock is potentially acid generating, it will be transported to the Galore Creek valley for proper disposal after tunnel construction is finished.
73. Will divert drainage from the tunnel into the tailings and waste rock impoundment.

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74. Will continue test work during mine operations to identify means to reduce the volume of waste rock requiring subaqueous disposal, thereby reducing the required impoundment size and dam height.
75. Will eventually submerge all potentially acid generating rock as an acid generation control measure.
76. Will submerge any remaining marginal ore stockpiles in the waste rock storage impoundment at closure.
77. Will conduct further water quality modelling during operations to characterize pit and impoundment water quality after closure.
78. Will use emulsion explosives as required to minimize ammonia and nitrate losses and contamination.
79. Will address potential for ammonia leakage from the explosives manufacturing and storage facility by using measures such as non-corrosive silos, an impermeable apron and a spill management plan.
80. Will control total suspended solids at 15 mg/L during operations to meet federal Metal Mining Effluent Regulation for discharge.
81. Will pace discharge into Galore Creek generally between May 15 and October 15 to mimic the natural hydrograph.
82. Will have pumping capacity to discharge up to 20 m<sup>3</sup>/s during high flow periods.
83. Will have the ability to store freshet flow behind main dam up to July 15 of each year as a contingency in event water quality is not acceptable for discharge in May or June.
84. Will monitor pumped outflow rates during operations.
85. Will install groundwater wells downstream of the main dam to intercept any seepage exceeding effluent permit limits.
86. Will monitor groundwater levels and quality outside of the Galore Creek valley of wells at the Porcupine aerodrome camp site, Round Lake heliport camp site and the filter plant site.
87. Will design the watercourses and the diffuser to accommodate navigable water requirements.
88. Will design main diversion channel to 200-year flood event.
89. Will construct the diversion channel with an impermeable liner in areas of high permeability.
90. Will design other diversion structures around the mine to 100-year flood event.
91. Will decommission pit de-watering wells at closure.
92. Will, during the permitting stage, assess water treatment options for operations and post closure, including, but not limited to, a water treatment plant.
93. Will maintain diversion channels as outlined in the environmental assessment to minimize mine-contact water inflows into the impoundment.
94. Will continue to collect hydrological data within the study area throughout the life of the Project to update the water balance and hydrological models.

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95. Will prepare and implement a Maintenance and Surveillance manual for all water management structures, diversion channels and stream crossings.
  96. Will prepare an Operations, Maintenance and Surveillance manual for dewatering of the pits and the manual will include steps on how to respond during a probable maximum flood.
  97. Will develop and implement Sediment and Erosion Control Plans and will monitor sediment transport in Galore Creek during construction and operations.
  98. Will establish Environmental Management Plans for all earth work structures and stockpiles.
  99. Will meet or exceed all water quality criteria established in permits to maintain water quality downstream.
  100. Will apply best management practices throughout the construction, operation and closure of the Galore Creek mine.
  101. Will, during operations and after closure, monitor and manage drainage from the tunnel, not-potentially acid generating dumps, ore and marginal ore storage stockpiles, pits, seeps and other mine areas, including the impoundment, and manage or treat problematic water sources as required to ensure site discharges meet both the Environmental Management Act effluent discharge permit limits and federal Metal Mining Effluent Regulation discharge criteria that are applicable at the time.
  102. Will plug wells and drains at mine closure.
  103. Will monitor water quality after closure until regulatory agencies determine that conditions are stable and predictable.
  104. Will incorporate sufficient redundancy and storage capacity in the filter plant to accommodate any equipment maintenance and unplanned shutdowns.
  105. Will monitor water levels in Porcupine River and design a flood protection barrier adjacent to the Porcupine aerodrome.
  106. Will undertake a flood risk assessment during the final design for the Porcupine aerodrome which will include consideration of potential impacts of climate change.
  107. Will monitor pertinent glaciers to predict effects on mine safety and water management. Consideration will be given to monitoring of firn layer hydrology as part of the glacier monitoring program.
  108. Will ensure that discharge from the diffuser to the Iskut River meets federal Metal Mining Effluent Regulation criteria.
  109. Will modify the current 3D MODFLOW regional model used for pit dewatering predictions to accurately represent long-term post-closure conditions in the groundwater flow system.
  110. Will conduct revised local-scale numerical modelling to predict seepage from the Galore Creek impoundment.
  111. Will build sections of the access road located within floodplains atop a berm at least 1.2 metres in height to reduce the potential for road submergence.
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|  | <p>112. Will construct all culverts and bridges to a 100-year design flood, with major bridge crossings designed to the 200-year flood.</p> <p>113. Will place rip-rap at the inlet and outlet of the bridges and culverts to protect structures from erosion.</p> <p>114. Will incorporate at least 1.5 metres of clearance above the design flood elevation into bridge design to allow for debris passage and prevent bridge washout.</p> <p>115. Will develop an Emergency Response and Spill Contingency Plans for all aspects of the Project, including the access road, tunnel, pipelines, processing plant and filter plant.</p>  |
| <p>Aquatic,<br/>Fisheries and<br/>Wildlife<br/>Resources and<br/>Related<br/>Habitat</p> | <p>116. Will maintain intensive receiving environment, aquatic, fisheries and wildlife monitoring programs, throughout the life of the mine and developed in cooperation with university researchers, Canadian and U.S. federal, B.C. and Alaska State government agencies and the Tahltan Central Council, to ensure water quality, aquatic, fisheries and wildlife resources are not impacted by the Project and are protected for future generations.</p> <p>117. Will continue conducting environmental monitoring (collection and analysis of water, sediment, and biota, combined with chronic and acute toxicity testing of appropriate organisms in the receiving waters) throughout the life of the mine to ensure that downstream environments are not impacted by effluent discharged from the Project.</p> <p>118. Will add an additional monitoring site downstream on the Stikine River in Alaska at a depositional site to be determined during the permitting stage.</p> <p>119. Will monitor for polycyclic aromatic hydrocarbons in the lower Galore drainage and on the Stikine River below the mouth of the Scud River annually and more frequently in the event of an uncontained spill.</p> <p>120. Will provide annual reports and raw data from monitoring to appropriate Canadian and U.S. federal, B.C. and Alaska State government agencies and the Tahltan Central Council.</p> <p>121. Will provide raw data from baseline surveys to appropriate Canadian and U.S. federal, B.C. and Alaska State government agencies and the Tahltan Central Council.</p> <p>122. Will establish criteria, in conjunction with appropriate Canadian and U.S. federal, B.C. and Alaska State government agencies and the Tahltan Central Council, for assessing potential significant biological effects to the receiving environment identified by the monitoring programs.</p> <p>123. Will work with the Fisheries and Oceans Canada, Transport Canada and Tahltan Central Council, to ensure the design of the diffuser minimizes potential impacts on fisheries resources and waterborne traffic.</p> <p>124. Will incorporate information derived from monitoring in an ongoing process of adaptive management.</p> |

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125. Will participate in a winter 2007 low flow assessment of fish habitat in Galore Creek.
126. Will investigate low flow conditions in the lower reaches of Galore Creek in 2007- 2008 to establish mean flows and will supplement baseline flows in Galore Creek to maintain critical water levels for fish in extreme low flow periods.
127. Will further investigate the cumulative effects of the additive aspects of mixtures of metals and their effect on aquatic life, including testing of actual tailings effluent during the first year of operations prior to discharge to Galore Creek.
128. Will develop comprehensive fish and fish habitat compensation plans in cooperation with the Ministry of Environment, Fisheries and Oceans Canada and the Tahltan Central Council.
129. Will develop environmental management plans for construction of the access road and transmission line.
130. Will design access road stream crossings to not encroach upon the bankful width of fish bearing streams where possible.
131. Will monitor fish health and tissue quality, including, but not limited to, analysis of the full suite of 30 metals used in the baseline studies, in Galore Creek and other potentially affected rivers as part of the Aquatic Effects Monitoring Plan pursuant to federal Metal Mining Effluent Regulation and the *Environmental Management Act*.
132. Will restrict use of the access road to persons on Galore Creek mine business, other legitimate tenure holders pursuant to an access agreement with the Tahltan Central Council and provincial permitting requirements.
133. Will develop and implement a Wildlife Mitigation and Monitoring Plan.
134. Will, where reasonably possible, avoid wildlife sensitive periods for construction activities and, where avoidance is not reasonably possible, will minimize the adverse impacts of these activities.
135. Will conduct production blasting in the open pits at consistent times during daylight hours to minimize adverse impacts on wildlife, particularly mountain goats, pursuant to the Wildlife Mitigation and Monitoring Plan.
136. Will follow the approach identified in NovaGold's application for an environmental assessment certificate for avoiding or minimizing disturbances to mountain goats by aircraft and helicopters, pursuant to Wildlife Mitigation and Monitoring Plan.
137. Will include pertinent noise monitoring as part of the Wildlife Mitigation and Monitoring Plan.
138. Will install electric fencing around residential and cooking/dining facilities at permanent camps and the aerodrome to minimize wildlife interactions.
139. Will modify the filter plant water treatment process if adverse aquatic effects are noted.

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	140. Will work with the Fisheries and Oceans Canada and use best management practices during the installation, operation and maintenance of the diffuser in the Iskut River.
	141. Will have on-site analytical capacity for water quality during operations.
	142. Will endeavour to maintain a 100 metre buffer for Harlequin duck breeding habitat where it is feasible to do so, and will minimize potential impacts and prevent removal of woody debris and riparian vegetation in order to maintain a 50 metre buffer along the road right of way along identified breeding reaches where possible.
Mine Reclamation	143. Will provide a financial security covering the Project pursuant to the Mines Act.
	144. Will salvage and stockpile topsoil for use in reclamation and protect topsoil stockpiles through revegetation and other practices as described in the environmental assessment.
	145. Will initiate progressive reclamation where possible to control sedimentation around the mine area.
	146. Will use adaptive management approaches to ensure advances in reclamation research are included in final closure planning efforts.
	147. Will conduct test plots during operations to support appropriate revegetation of reclaimed areas.
	148. Will reclaim using plants that will set the stage for natural succession and the establishment of plant communities that reflect the ecology of the area.
	149. Will ensure that dump angles create a stable configuration at closure.
	150. Will reclaim borrow and gravel pits to appropriate habitat when they are no longer required.
	151. Will initiate progressive reclamation where possible to control sedimentation around the mine area.
Wetlands, Terrestrial Ecosystem and Country Foods	152. Will, prior to disturbance, sample water in wetlands in the vicinity of the mine that were not previously sampled due to dry conditions.
	153. Will limit disturbance to the vegetation between the access road at the filter plant and the small (no name) lake.
	154. Will develop a plan to control and manage invasive and noxious plant species.
	155. Will monitor, with Tahltan Central Council participation, surface water, soil and vegetation concentrations of selected metals throughout the period of mine development and operation. A quantitative screening level risk assessment for country foods will be conducted if the quality of these environmental media is shown to decrease and should a specific country food appear vulnerable, monitoring of contaminant levels, if feasible, will be undertaken. In the case that fish tissue quality data obtained from monitoring indicates an increase in contamination levels, potential impacts to

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	human health from fish consumption will be assessed.
	156. Will re-evaluate contaminants of potential concern with respect to country foods.
Dam Stability	157. Will construct the tailings dam in accordance with the Canadian Dam Association guidelines (1999) to withstand a 1 in 10,000 year earthquake and the design will consider the effects of an avalanche-induced wave and the ability for the spillway to pass a Probable Maximum Flood.
	158. Will establish an ongoing initiative with the Tahltan Central Council and relevant Canadian and U.S. federal and B.C. and Alaska state government agencies to assess, at a conceptual level, the potential effects of a catastrophic dam failure and develop a program for remediation of those effects.
	159. Will equip the dam with instrumentation to monitor geotechnical performance during operations and after closure.
	160. Will maintain earthmoving equipment near the dam to support inspection, maintenance and repair functions after closure.
	161. Will develop a long-term maintenance and mitigation strategy for the dam and spillway for both operations and closure, including inspections annually and after significant events such as floods and earthquakes, and dam safety inspections, following Canadian Dam Association guidelines, every five years.
Tunnel	162. Will probe drill ahead of tunnel excavation to obtain information on rock geotechnical properties to allow use of appropriate ground support methods and to predict water inflows.
	163. Will implement a tunnel safety program including installation of lighting, fire extinguishers, telephones and refuge stations and a traffic management plan.
Pipeline	164. Will use a high density polyethylene pipe for the concentrate slurry pipeline to protect the pipe from abrasion from the slurry, and will use a coating and cathode protected anti-corrosion system.
	165. Will implement a comprehensive inspection program to monitor performance of the pipelines.
	166. Will bury the pipeline except where it crosses streams on bridge structures, with deeper burial in areas assessed as having geohazard potential.
	167. Will equip the pipelines with leak detection systems to permit rapid detection and response to leaks or ruptures due to erosion of the pipe or damage from external sources such as debris flows.
	168. Will provide shutdown procedures, shutoff valves, a spill response plan and an emergency drainage sump at the low point of the slurry pipeline alignment to minimize the extent and consequence of any spillage from the pipeline following a breach to the line.
	169. Will mark the location of the buried pipeline and lay a marker tape in the trench above the pipe to warn of the location in case of future excavation.



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	170. Will design pipeline aerial crossings to reduce the risk of failure in the event of bridge failure.
Filter Plant	171. Will provide for a vehicle pullout near the filter plant to maintain opportunities for the public to access Hot Springs Provincial Park. 172. Will bury the effluent pipe from the filter plant approximately 1 metre below the channel bed, with the diffuser ports extending up to the channel. 173. Will design the water crossings and diffuser to accommodate navigable water requirements.
Geohazards	174. Will develop and implement an Operations and Maintenance manual that will include avalanche management and monitoring and mitigation for rock falls and debris flows for the mine site and access corridor. 175. Will ensure that bridges constructed along the access road will have sufficient freeboard to pass anticipated debris flows. 176. Will implement the mitigation measures proposed to reduce geotechnical risks for the Project, as outlined in NovaGold Canada Inc.'s Application for an environmental assessment certificate. 177. Will monitor geohazards at the mine site and along the access road pursuant to permitting requirements.
Archaeology	178. Will, jointly with the Tahltan Central Council, develop an archaeological chance find procedure to protect archaeological sites and artifacts, and implement that procedure. 179. Will follow up with the Tahltan Central Council after the source(s) of obsidian has been confirmed to identify methods for identifying possible routes back to Raspberry Pass (Mount Edziza). 180. Will include monitoring for the presence of cairns or rock piles in future archaeological assessments and will consider the sampling of tephra layers noted during excavations. 181. Will include ice patch archaeology where appropriate within the Project footprint. 182. Will avoid all archaeological and heritage sites where possible. 183. Will include a map of the study area plotted on a Tahltan Traditional Territory map in future archaeology study reports.
Miscellaneous	184. Will develop and implement a Follow-up Program and enter into an agreement with the federal government to implement the Program. 185. Will ensure that appropriate tenure is obtained for the filter plant and will permit non-essential mineral claims to lapse. 186. Will initiate a comprehensive recycling program for the Project to minimize the volume of material going to landfills. 187. Will work with the Kitimat-Stikine Regional District to address concerns with the use of the Iskut landfill. 188. Will develop and implement industrial and domestic waste management strategies.

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189. Will ensure that fuel containment areas are adequately protected from excessive precipitation and will design these structures to minimize the amount of snow/water removal required.
  190. Will develop and implement a hazardous materials management plan that will include management of de-icing fluids required for the aerodrome, and will consult the Department of Fisheries and Oceans and Environment Canada on the management of de-icing fluids.
  191. Will place a berm or protective barrier upslope of the aerodrome to minimize wave energy and debris resulting from a flood that might otherwise cause substantial damage to the facility.
  192. Will design pit diversion channels to convey the peak discharge from the 200-year, 24-hour precipitation event. If this flow were exceeded, then runoff will drain to the tailings pond.
  193. Will conduct an intersection study and produce design drawings to Ministry of Transport specifications.
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