

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

TABLE OF COMMENTS

Archaeology	3
Acid rock drainage.....	6
Closure	11
Cumulative Effects.....	16
First Nations Consultation	26
Fish	28
Geotechnical Issues.....	28
Mine Plan	33
Miscellaneous	33
Monitoring	35
Navigable Waters.....	37
Pipelines	37
Social and Cultural Effects.....	39
Terrestrial Ecosystems.....	42
Water Quality	43
Wetlands	55
Wildlife.....	55

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Acronyms:

Application	Galore Creek Copper-Gold Silver Project Application for an Environmental Assessment Certificate
CEA Agency	Canadian Environmental Assessment Agency
DFO	Department of Fisheries and Oceans
EAO	Environmental Assessment Office
EC	Environment Canada
MEMPR	Ministry of Energy and Petroleum Resources
MOE	Ministry of Environment
MOFR	Ministry of Forests and Range
NovaGold	NovaGold Canada Inc.
Project	Galore Creek Copper-Gold-Silver project
TCC	Tahltan Central Council
THREAT	Tahltan Heritage Resources and Environmental Assessment Team

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
Archaeology	1.1.1.1	The reader should refer to Section 5.6 of the document 'Tahltan Comments on the Application by NovaGold Canada Inc. for an Environmental Assessment Certificate for the Galore Creek Project, October 18, 2006' for detailed background information on these comments.	Comment noted. Commitment: None required.	View is that all obsidian finds in the Archaeological Impact Assessment should be assumed to be sourced to Mount Edziza.
Archaeology	1.1.1.2	<p>Given the importance of the trade of obsidian from the Mt. Edziza deposit to the history and past movement patterns of the Tahltan, we request that an analysis be done on the obsidian found in the NovaGold archaeological investigations to determine its source.</p> <p>Cairns, or “rock piles” are archaeological features that have high Tahltan ethnographic significance and some methods, e.g. flight over the study area, will not produce evidence of them. We have seen photographs from the lower Stikine where these features have been covered by organic material -- soil build up and plant growth.</p> <p>Fladmark (1985:30-36) describes tephra layers (volcanic ash layers) as a means of establishing chronological marker horizons and identifies four layers within this region. Attempts by archaeological consultants to document these four tephra markers in their excavations would make a great contribution to the archaeological knowledge of the Tahltan Territory.</p> <p>Rock, or cliff, or cave shelters have been located in other regions of Tahltan territory (Fladmark 2005, pers. comm.). These archaeological features, and the research findings associated with their excavated contents, have made a tremendous contribution to the archaeological record. These shelters have been demonstrated to be a real useful sediment trap, especially if the floor of the shelter is sloped inwards. Ancient archaeological data have been excavated from these features. In the cases of Charlie Lake Cave site (HbRf39), (Fladmark et al. 1988) and On Your Knees Cave site (Site 49-PET-408) (Lee 2001), the research provided extensive remarkable archaeological data, including radio-carbon dates exceeding 10,000 B.P.</p> <p>Potential for ice patch archaeology within the Galore Creek project area has not been considered in the report. Although ice patch archaeology is in its infancy, there are multiple examples of sites today in Alaska and Yukon, both similar and comparable regions to that of Tahltan territory (Dixon et al. 2005; Hare et al. 2004; Lee 2001). Dixon et al. (2005) conclude that the archaeology of glaciers and ice patches is an exciting new interdisciplinary research frontier contributing new insights into high latitude and high altitude human adaptations, prehistoric</p>	<p>NovaGold recognizes the importance of obsidian to the cultural heritage of the Tahltans. NovaGold will discuss the potential value of confirming the source of a representative sample of obsidian pieces with experts in the field before deciding whether to proceed with analyses.</p> <p>Archaeological studies for the Project will continue to monitor for the presence of cairns or rock piles. Future archaeological assessments will consider the sampling of tephra layers noted during excavations. Ice patch archaeology is, as noted by the reviewer, in its infancy. NovaGold will consider the inclusion of ice patch archaeology where appropriate within the Project footprint.</p> <p>NovaGold is undertaking geochemical analysis to determine the source of a representative sample of obsidian pieces.</p> <p>Commitment: Once the obsidian source(s) has been determined, NovaGold will follow up with the Tahltan to confirm the approach for determining possible routes back to Raspberry Path (Mount Edziza).</p> <p>Archaeological studies for the Project will continue to monitor for the presence of cairns or rock piles and rock, or cliff, or cave shelters. Future archaeological assessments will consider the sampling of tephra layers noted during excavations. NovaGold will consider the inclusion of ice patch archaeology where appropriate within the project footprint.</p>	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		technological systems, and new opportunity for paleoenvironmental analyses (2005:141).		
Archaeology	1.1.1.3	The trade in obsidian, and the routes across which it was traded, is a key component of the archaeological story of the Stikine River valley that extends over 10,000 years into the past. Despite the importance of the obsidian trade, there was little reference to it in the Application.	Locating trade routes beyond the study area is beyond the scope of the Galore Creek archaeology study. Commitment: None required.	Comment noted.
Archaeology	1.1.1.4	Page 7-506 states that 'some potential for past human uses were identified and marked on maps.' We are interested in further information about how the potential past human uses were identified. Upon what was this based?	A Tahltan Elder examined project maps, and identified some possible traditional camp locations. (This information is located in Volume II, page 7-617). Commitment: None required.	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.
Archaeology	1.1.1.5	7.14.1.3 -- Spatial boundaries. There is a large statement that past inhabitants were nomadic (note: this is unsourced); that the study area is part of a larger cultural area; and that a larger region must be considered when interpreting study results and assessing site significance. This point has been discussed in great detail by THREAT and certainly we agree. We also recognize that by contributing with documents such as this, there is greater chance of providing a more complete and comprehensive assessment. We also recognize that there are cumulative impacts and risks to archaeological and heritage data by numerous proposed developments within Tahltan territory.	There was a typo in the report and it should read that past inhabitants were semi nomadic as stated by Sylvia Albright (1984). NovaGold acknowledges that there are numerous other proposed developments within Tahltan territory that may cause cumulative impacts and risks to archaeological and heritage data. However, at the time the assessment was completed NovaGold did not have information on the archaeological potential of the footprint of those projects. They will have to be assessed independently. Commitment: None required.	Comment noted.
Archaeology	1.1.1.6	7.14.1.4 -- The temporal boundaries include the past 9,000 years (page 7-506). This is limited in scope considering the archaeological record of On Your Knees Cave site 49-PET408 (see Section 5.6, 'Tahltan Comments on the Application by NovaGold Canada Inc. for an Environmental Assessment Certificate for the Galore Creek Project, October 18, 2006'). Expansion of the temporal range would add breadth and current archaeological record to this research.	According to E. James Dixon, principal investigator of archaeology at 49-PET-408, humans were exploiting the maritime resources of the Northwest Coast by at least 9,500 BP (or 10,150 cal BP). This date is 500 years older than the temporal boundary used for the study. NovaGold now recognizes that there may have been human activity in the project area several hundred years earlier than the temporal boundary used for the assessment, but is of the opinion that the difference does not affect the outcome of the assessment. Commitment: None required.	Comment noted.
Archaeology	1.1.1.7	7.14.1.5 -- When speaking to the ethnographies of the turn of the century it is stated that, by that time, a considerable amount of integration had already taken place, and many of the elders with traditional knowledge had succumbed to one	This information was obtained from the following sources referenced in the Application: George Emmons (1911), James Teit (1906 and 1914), Dawson (1889),	Comment noted.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter	Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
	of the many epidemics. This may be accurate; however, without a source for this information it is difficult to assess.	Commitment: None required.	
Archaeology	1.1.1.8 7.14.2 -- The evidence presented and sourced to Ryder and Clague (1989) can certainly be refuted or at least challenged with the new archaeological evidence of On Your Knees Cave, which of course speaks to movement of people and resources from Tahltan territory 10,300 years ago.	Comment noted. Commitment: None required.	Comment noted.
Archaeology	1.1.1.9 7.14.2 -- The Application makes an unsubstantiated statement by saying that Tahltans originated in the interior and moved into the Stikine region about 300 years ago. What is the source for this information? According to our information, dates have yet to be determined for migration of Athapaskans into the region. Such a statement can be refuted and is inaccurate.	The source for the Tahltan being an Athapaskan-speaking Dene group who originated in the interior and moved to the upper Stikine region is Emmons (1911 The Tahltan Indians. University of Pennsylvania Museum Anthropological Publications IV(1)). MacLachlan (1981 Tahltan. In Handbook of North American Indians, Volume 6, Subartic, edited by J. Helm, pp. 458-468. Smithsonian Institution, Washington) suggests that this migration may have occurred approximately 300 years ago. NovaGold acknowledges that this date is contentious and does not take a position regarding its accuracy. Commitment: None required.	Comment noted
Archaeology	1.1.1.10 Table 7.14-2 (page 7-518) raises an issue also of great concern to Tahltan -- stewardship, protection and preservation of heritage resources. The document states the need for orientation programs for all employees and site visitors to ensure that the sites are not contaminated. Not having this important training for employees poses a potential risk and mitigating this issue would require such professional development for all employees. There is a need for a training plan and policies to ensure protection of potential sites in the future.	NovaGold recognizes the importance of heritage resources to British Columbia and the Tahltans and will develop and implement an archaeological chance find procedure to protect archaeological sites and artefacts. Commitment: NovaGold will develop and implement an archaeological chance find procedure to protect archaeological sites and artefacts.	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.
Archaeology	1.1.1.11 THREAT is interested in the status of the artefacts recovered during this study. Where are the artefacts presently? And when will they be given to the repository (we believe this to be the Royal British Columbia Museum in Victoria).	The artefacts are in Vancouver and will be sent to the Royal British Columbia Museum in Victoria once it is clear that there is no longer a requirement to retain them for further analysis. Commitment: The artefacts will be forwarded to the repository once they are no longer required for study.	Comment noted.
Archaeology	1.1.1.12 In the future, in an effort to address place and context, it would also be helpful to receive a map of the study area plotted on a Tahltan Territory map. It would also be useful to have copies of the references cited included with the document.	References cited in the document are listed in Volume III, Section 18, References, and in Volume XIV, Appendix 6-R, Galore Creek Project Archaeological	Comment noted.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			Resource Baseline Assessment. Commitment: NovaGold commits to include a map of the study area plotted on a Tahltan Territory map in future archaeology reports.	
Archaeology	1.1.1.13	9.9.4 Effects of Other Projects 'The potential Johnny Mountain and Schaft Creek developments lie within the cumulative effects assessment study area, but they have not been included here because no local inventories of archaeological sites are available.' Page 9-72 Archaeological assessments for several resource development projects are limited or absent. This lack of adequate information on archaeological sites could lead to destruction of sites just because their existence is unknown. This is a significant data gap in the cumulative impacts assessment and needs to be identified as such and the resulting limitations of the assessment need to be brought forward in a section at the beginning of this section-data gaps and uncertainties. If you don't look for impacts you will not find any.	It is beyond the scope of the Project to conduct archaeological assessments outside the study area identified in the <i>Heritage Conservation Act</i> permit issued by the Archaeology Branch for this Project. Commitment: None required.	NovaGold's archaeological assessment addresses the requirements set out in the Terms of Reference for the EA Application.
Acid rock drainage	2.1.1.1	The discussion of acid production and buffering capacity in section 5.3.6.5 (Potential for acid rock drainage) ignores critical issues about space and time. Regarding time, actual in-situ buffering capacity and actual in-situ acid production do not necessarily occur at the same time. In other words, available buffering capacity (higher pH water) does not necessarily occur when acid production (low pH water) occurs, meaning that buffering could happen before or after acid production but in either case not effectively buffer acid production. As a result, on paper there is a strong appearance that buffering capacity will 'treat' acid production, but that does not necessarily happen in the field. Regarding space, the Application's analysis ignores that waste and the waste rock piles are not homogenous - buffering production does not necessarily happen in the proximity of acid production and vice versa. In the environmental assessment the net buffering amount is added and the net acid production amount allowing the environmental assessment to possibly erroneously conclude that acid produced will be neutralized and acid mine drainage will thereby be controlled. This may not be the case. NovaGold should be required to fully prepare for acid mine drainage production - taking into account when and where acid will be produced and establish a plan to prevent acid production and a contingency plan(s) to treat acid mine drainage if it should occur.	This comment implies that potentially acid generating (potentially acid generating) rock will be mixed with non-potentially acid generating rock. This is not the case. NovaGold has proposed conservative waste rock segregation criteria that will result in the potentially acid generating rock being placed under water and non-potentially acid generating rock in upland aerial dumps. Therefore, acid rock drainage will not be produced and the timing and spatial issues raised in the comment do not need to be considered. For the non-potentially acid generating dumps, every kinetic test has demonstrated that acid produced by oxidization of sulphide minerals is immediately neutralized by contact with acid consuming minerals and there is no issue with timing and availability of neutralization potential in rock classified as non-potentially acid generating. Commitment: Will assess the need for water treatment for operations, closure and post closure, including but not limited to, a water treatment plant during permitting as possible mitigation measures to address water quality concerns.	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.
Acid rock	2.1.1.2	8.7 Metal Leaching/Acid Rock Drainage Prediction and Prevention Management	There are several precedents in BC for blast hole	MEMPR supports the Proponent's

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
drainage		<p>Plan Identifying Potential Acid Generating Materials Section 8.7.2 identifies that blast hole sampling for potentially acid generating will be undertaken, but appears to defer to a yet-unwritten 'permit' for the details of this testing: 'Potential for acid rock drainage would generally be determined by the measurement of neutralization potential/acid generation potential (or surrogates). Appendix 5-A describes development of a site-specific neutralization potential/acid generation potential criterion (1.3) based on calcium and magnesium carbonate neutralization potential. Actual permit conditions will specify the operational criterion.' [p. 8-103] In section 8.7.7 the environmental assessment further describes the testing for unoxidized waste rock: 'Routine samples for waste classification will be obtained from blast hole cuttings. In the initial stages of mining, all blast hole samples will be analyzed. As mining progresses and knowledge of the distribution of acid rock drainage potential increases, the sampling frequency may decrease.' [p. 8-110] This approach not only precludes the public from commenting on the standards to be applied. NovaGold should determine the standards that will protect the environment and develop a plan that will not degrade water quality at any discharge point. This is particularly important because the mine proposes to use non-potentially acid generating waste rock for construction. Whether or not the handling of potentially acid generating waste rock is considered sufficient, if the method used to identify potentially acid generating materials fail to accurately and precisely identify potentially acid generating materials then the handling and disposal of potentially acid generating materials is suspect if not guaranteed to fail. For this reason, the potentially acid generating identification should not use surrogates or blends and should be taken by representative samples from each blast hole drilled. Timely analysis is critical to ensure that the results are available before blasted rock is handled and managerial oversight is important to ensure that the analytical results translate into actual materials handling. These steps are made more important because the delay in acid production will mean that the success of the plan will not be known until the mine actually nears closing and the results will be impossible to reverse.</p>	<p>sampling to characterize waste rock during mining. The concept is therefore demonstrated but it is fully expected the details of the management plan (sampling design, analysis, implementation) will be prescribed in the <i>Mines Act</i> Permit. Volume V, Appendix 5-A (attachment Appendix K) specifies in detail the proposed standards that will be applied to different types of waste rock proposed for construction or disposal in waste rock dumps. The standards recognize the need to prevent acid rock drainage from developing and the particular need for protective standards for rock placed downstream of the impoundment.</p> <p>Commitment: NovaGold has committed to 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 $IC_{Ca,Mg}/AP$ is needed. An annual program will be designed to continually re-evaluate this distribution. NovaGold has also committed to 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.</p>	<p>commitment to set out details of the management plan in the <i>Mines Act</i> permit application.</p> <p>EAO notes the commitments are reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.</p>
Acid rock drainage	2.1.1.3	<p>Appendix 5-A, Executive Summary, Water Quality Predictions Operational runoff chemistry from the pit walls was calculated assuming that rubble on benches is the main contributor of load and that the walls behave as a waste rock dump equal in height to the number of benches multiplied by the assumed thickness of rubble on the benches (one meter). [p. iv, emphasis added] Assuming a thickness of one meter for the fractured zone of the pit walls is probably the minimum thickness that would be fractured by blasting. A more conservative fracture thickness should be used for the potential geochemical effects of the pit</p>	<p>NovaGold believes that the approach used to estimate loadings from pit walls was appropriate. In any case, during operations, the loadings from the pit walls will be small compared to loadings from waste rock and tailings supernatant. This is illustrated in Figures 6.2-1 and 6.2-2 in Appendix 7-D. During closure the pit wall chemistry will be more important.</p> <p>During the Application review, NovaGold submitted a</p>	<p>EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		walls.	<p>report to provide information on pit water quality post closure.</p> <p>Commitment: NovaGold has committed to, during operations and after closure, monitor and manage drainage from the tunnel, not-potentially acid generating dumps, ore and marginal 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 <i>Environmental Management Act</i> effluent discharge permit limits and federal Metal Mining Effluent Regulation discharge criteria that are applicable at the time.</p>	
Acid rock drainage	2.1.1.4	Page 6-78 of Application- It is stated in the Application: 'In gossans, copper leaching is occurring under neutral pH conditions'. What are the implications of this for far future metal (copper) loadings from the weathering of exposed waste rock dumps that were considered non-potentially acid generating?	<p>As described in Section 3.4.2.1.5 of Appendix 5-A, Volume V, leaching effects observed for the gossan were incorporated into the predictions.</p> <p>Commitment: None required.</p>	Comment noted.
Acid rock drainage	2.1.1.5	Table 3-3: Summary Statistics for Consolidated Rock Groups Used to Select Central, Southwest and West Fork Zone Samples for Humidity Cells The neutralization potential/acid generation potential ratio does not match the values for neutralization potential and acid generation potential given in the Table. Either the neutralization potential and acid generation potential values are incorrect, or the calculation of the ratio of neutralization potential/acid generation potential is incorrect.	<p>The neutralization potential/acid generation potential column in these tables shows the distribution of neutralization potential/acid generation potential, they are not calculated from the neutralization potential and acid generation potential values in the table.</p> <p>Commitment: None required.</p>	Comment noted.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter	Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses	
Acid rock drainage	2.1.1.6	<p>3.3.2.2 ABA Correlation with Rock Type In this section there is a description by SRK of the assumptions for ABA criteria used to differentiate potentially acid generating (potentially acid generating) rock from Not potentially acid rock drainage generating (not-potentially acid generating) rock. In these sections, screening ABA criteria are used to classify potential for acid rock drainage. These criteria are: - neutralization potential/acid generation potential. 2 - Not potentially acid rock drainage generating (not-potentially acid generating). [p. 48] The assumptions utilized by SRK for their analysis do not represent a conservative basis for differentiating potentially acid generating from non-potentially acid generating material. The most accepted (published) distinction between potentially acid generating and non-potentially acid generating material is: - neutralization potential/acid generation potential. 3 - Not potentially acid rock drainage generating. Could this result in material in the 1</p>	<p>As explained in this section, these are screening criteria. Following the presentation of these criteria, the report states "As described elsewhere in this report, site specific methods have been used to calculate neutralization potential and neutralization potential/acid generation potential and are subsequently used in the acid rock drainage block model. The screening criteria are not used for waste classification purposes, but site specific criteria were developed based on mineralogical assessment and kinetic test results. A theoretical neutralization potential/acid generation potential criterion was developed (1.3) but NovaGold has elected to use a value of 2 to ensure that acid rock drainage does not form. NovaGold has committed to:</p> <ul style="list-style-type: none"> • use a conservative neutralization potential ratio of 2 to segregate the 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 MEMPR and MOE for approval whenever significant changes occur. • 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. 	EAO notes these commitments are reflected in Appendix F (Table of Proponent's commitments) of the Joint Report and Schedule B of the EA Certificate.
Acid rock drainage	2.1.1.7	<p>The environmental assessment's conclusion that acid production will take place after 22 years (5.3, p.5-41) - if one accepts the accuracy of that prediction - does not reduce the threat acid production poses to the environment. It pushes the threat beyond the environmental assessment's primary timeframe and thereby does not fully consider how to measure or treat acid mine drainage that is produced. The estimated 22-year delay does allow the company to remove the</p>	<p>Potentially acid generating waste rock will be placed within the tailings storage facility, so that all potentially acid generating rock will be under water at closure. As a result acid rock drainage will not be produced from this rock. During the lifetime of operations and into the closure period, NovaGold will monitor runoff from the</p>	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		value from the land before substantial acid is produced, or environmental impacts from that production, are known.	<p>sub-aerially exposed waste rock dumps which will be composed of non-potentially acid generating. Remedial action will be undertaken if these waste dumps are found to generate acid rock drainage.</p> <p>Commitment: NovaGold has committed to during operations and after closure, monitor and manage drainage from the tunnel, not-potentially acid generating dumps, ore and marginal 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 <i>Environmental Management Act</i> effluent discharge permit limits and federal Metal Mining Effluent Regulation discharge criteria that are applicable at the time.</p>	
Acid rock drainage	2.1.1.8	The environmental assessment strongly suggests that acid that is formed will be naturally neutralized - and therefore not present a problem. The threats to surface and ground water are great if acid is not naturally neutralized as described. The environmental assessment relies on not having an acid problem in many places (see e.g. 7.7.5 Residual Environmental Impacts). Should acid not be naturally neutralized it will cost tens of millions of dollars to contain and clean the acid mine drainage released.	<p>The mine plan has been specifically designed to ensure that acid rock drainage is not produced. potentially acid generating waste rock will be placed within the tailings storage facility, so that all potentially acid generating rock will be under water at closure. As a result acid rock drainage will not be produced from this rock. During the lifetime of operations and into the closure period, NovaGold will monitor runoff from the sub-aerially exposed waste rock dumps which will be composed of non-potentially acid producing material. Remedial action will be undertaken if these waste dumps are found to generate acid rock drainage.</p> <p>Commitment: See commitment for 2.1.1.7.</p>	See commitment for 2.1.1.7.
Acid rock drainage	2.1.1.9	It is imperative that NovaGold develop detailed contingency plans, and allow First Nations and public review/comment, on how the company will respond to acid mine drainage problems.	NovaGold submits that the design of the mine already incorporates a high level of conservatism in the geochemical criteria and facility design and that no additional measures are needed to address potential for acid rock drainage. NovaGold will monitor water flows from the mine site and will be prepared to treat flows as necessary to meet discharge standards. The Participation Agreement requires that the Tahltan be consulted on all permits and monitoring plans.	See response for 2.1.1.7.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
Acid rock drainage	2.1.1.10	5.3.6.5 Potential for acid rock drainage 'Geochemical testing has shown that some of the rocks at Galore Creek are potentially acid generating over long time scales. Evaluation of test results has led to the identification of a site-specific ratio of $IC_{Ca,Mg}$ to acid potential (acid generation potential) that defines potentially acid generating and non-potentially acid generating rock. This relationship is: $IC_{Ca,Mg} / \text{acid generation potential} = 1.3$ ' [p.5-35] This is apparently contradicted by both the SRK report and the NovaGold report on acid rock drainage: 'NovaGold has decided to use a criterion of 2, which provides an additional factor of safety.' [Appendix 5-A, Galore Creek Project metal leaching/acid rock drainage Characterization Report, SRK Consulting (Canada) Inc., May 2006, p.88] This could result in material in the $IC_{Ca,Mg} / \text{acid generation potential} = 1.3 - 2.0$ range being used for dam construction, or placed in the not-potentially acid generating waste. If so, acid rock drainage problems could result in the long term. The value for $IC_{Ca,Mg} / \text{acid generation potential}$ that will be used to determine potentially acid generating rock should be clearly stated.	Commitment: See commitment for 2.1.1.7. Interpretation of test work results has shown that rock with $IC_{Ca,Mg} / \text{neutralization potential} > 1.3$ will not generate acid rock drainage. NovaGold has decided to use a value of 2 for waste management purposes. As described in Appendix K attached to Appendix 5A, Volume V, the 1.3 value is not used for waste classification purposes. Commitment: See commitment for 2.1.1.7.	See response for 2.1.1.7.
Acid rock drainage	2.1.1.11	Page 7-2 and 7-199 of Application - A temporal boundary for the environmental assessment has been established to end approximately 250 years after the end of project decommissioning. This does not seem to be appropriate for assessing impacts on water quantity or quality considering that a dam will need to be maintained forever and that peak acid rock drainage production on remaining exposed surfaces (e.g., pit walls above overflow level) may not occur for hundreds of years.	NovaGold feels that a time frame of 250 years is sufficient to assess the important impacts of the mine site development. Predicting water quality beyond this time frame would require extrapolation of the available field data and model results to an extent where the results will have such a large uncertainty as to be meaningless. The mine site closure plan will be updated during the lifetime of the mine. During operations ongoing monitoring will allow NovaGold to obtain a much better understanding of the chemistry of runoff from pit walls and the waste rock dumps and these data will be used to make more accurate and informed predictions of closure water quality. Commitment: The mine site closure plan will be updated during the lifetime of the mine. During operations ongoing monitoring will allow NovaGold to obtain a much better understanding of the chemistry of runoff from pit walls and the waste rock dumps and these data will be used to make more accurate and informed predictions of closure water quality.	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.
Closure	3.1.1.1	It is good that topsoil is to be salvaged in two lifts (root zone separately from lesser-developed materials below it). However, the mine should salvage the two	The calculations indicate that there is a net positive balance of reclamation material (Volume III, Chapter 14,	EAO notes that reclamation requirements are set out in the Health,

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter	Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
	lifts of material from all areas disturbed by mining. Plant re-establishment, and thereby reclamation, is greatly improved by increased depths of soil and subsoil. Section 5.5.7 describes areas that will 'typically' be salvaged and excludes numerous large areas, such as those to be flooded by tailings or underwater waste rock placement (p.5-106). Soil is critical to reclamation success and therefore all available soils and subsoils should be salvaged to maximize the amount of available material for reclamation. This would increase the amount of material available for reclamation use by the reclamation plan (see e.g. 14.3.2.1, Table 14.3-2).	Page 14-24) and if topsoil deficits arise, salvage will be taken from other affected areas. The goal is to have a cover thickness of 1 m over the waste materials. This depth of soil cover should provide a good basis for plant establishment and growth. Salvaging soil from the tailings pond when it is not needed may have the effect of increasing sediment to downstream areas. As well, the some of the valley borrow areas do overlap portions of the tailings pond. Commitment: None required.	Safety and Reclamation Code for Mines in BC (Ministry of Energy and Mines, 2003).
Closure	3.1.1.2 Soil salvage should not be governed by a salvage-to-replacement ratio (p.5-106) and, again, no area should be excluded from soil salvage. Instead, all available soils should be salvaged thereby maximizing available material for replacement. There is no reason to only salvage high-quality soils: The mine already proposes removing soil in two lifts - which will facilitate salvaging poorly developed or rocky soils that might otherwise not be suitable for replacement as horizon A or horizon B substitutes. These latter low-quality soils can be salvaged and stored with the other less-developed (low horizon) materials.	The salvage-to-replacement ratio is used to insure that sufficient salvage is retained to achieve good reclamation results without causing more disturbance that may not be required or which can detrimentally affect the environment. The soils have been assessed for suitability for reclamation purposes and the plan has been developed such that there is a net positive balance of reclamation material (Volume III, Chapter 14, Page 14-24). Commitment None required.	See response for 3.1.1.1.
Closure	3.1.1.3 The 'progressive revegetation' (14.3.2.2, p. 14-19) proposed for the soil salvage stockpiles is important. The environmental assessment does not discuss the matter, but species used for these nurse crops should be native species and similar to those planned for reclamation seeding/planting.	Native seed is difficult to obtain and generally has poor viability. The goal with a temporary soil stockpile is to protect it from erosion and weeds and a rapid establishing agronomic species that provides good coverage will work better in this situation. Commitment: NovaGold will seed temporary stockpiles appropriately to protect them from erosion and weeds. NovaGold will develop some test plots during mining to help determine what species work best.	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.
Closure	3.1.1.4 The proposal to use 'just enough organic matter to allow native seed propagation' (8.2.2.5) on waste rock piles is not sufficient. Maximum available soils and organics should be calculated based on available materials and depth thereby maximized. The documents mention 'excavated surface soils, organic matter' in numerous places but it is only in 6.12.3.6 that organic forest soils (organics and A and B horizons) are salvaged. It is unclear whether the volumes will be sufficient for intended placement and whether or not the salvaged	Based on the calculations, a sufficient amount of material will be salvaged. It is recognized that the organically enriched surface materials are high in nutrients and are important in terms of successful plant establishment. The soils will be removed in two lifts where possible to take advantage of this material. In terms of the pH of the soils, currently the soils can	MEMPR notes that reclamation requirements are set out in the Health, Safety and Reclamation Code for Mines in B.C. (Ministry of Energy and Mines, 2003).

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		materials will be of suitable pH (forest soils and organics are often acidic which may inhibit plant growth).	support the native vegetation. Fertility issues such as a low pH level are generally not a major concern as they can be easily rectified with amendments. Commitment: NovaGold will prepare comprehensive reclamation and mine closure plans as part of permitting.	
Closure	3.1.1.5	The topsoil resource is described as including 'forest litter and the developed mineral horizons to the depth of common rooting (typically includes the A and B horizons).' [14.3.2.1, p. 14-12]. If forest litter and in particular woody debris are significant, the carbon to nitrogen ratio in the topsoil could become unfavourable for plant regeneration. The soils used for reclamation should therefore be tested for nutrients and carbon in the material before reapplying it during reclamation, and nitrogen applied if needed.	The litter will be mixed in with the mineral soil diluting the concern of the C:N ratio which decreases over time with decomposition. The fertility of the soils will be assessed to insure successful reclamation. Commitment: NovaGold will prepare comprehensive reclamation and mine closure plans as part of permitting.	See response for 3.1.1.4.
Closure	3.1.1.6	The environmental assessment proposes that: 'The replacement root zone thickness of 0.5 m is based on results of the soil investigations undertaken within this area (Rescan, 2005). An additional thickness of 0.5 meters of overburden, to act as a buffer or barrier, is assumed for areas where the quality of mine substrates is not known and may be unsuitable for root development. A total thickness of one meter (0.5 meters of topsoil overlying 0.5 meters of overburden) is to be replaced in the upland, reclaimed terrain overlying exposed bedrock or waste rock. The need for the 0.5 meter buffer of overburden material on various post-mine landforms will be further investigated in a series of reclamation test plots during mine operations.' [14.3.3.2, p.14-19] Because potentially acid generating materials should be separated by analysis during blasting (see discussion above) non-submersed waste rock should not be acid producing. If material is chemically or physically unsuitable for plant/root development then the reclamation plan should require a sufficient capillary barrier to ensure that moisture in the waste rock can not migrate upwards to the soil material or root-zone. The proposed test plots should therefore not only investigate the need for a buffer, but should determine whether 0.5 meters is sufficient and whether the overburden material proposed will physically provide a sufficient capillary barrier.	A capillary barrier would be required if the cover is placed on acid generating waste rock. However, the acid generating material will be submerged. Commitment: NovaGold will prepare comprehensive reclamation and mine closure plans as part of permitting.	See response for 3.1.1.4.
Closure	3.1.1.7	The Reclamation Plan should include revegetation standards (percent cover, alpha and beta plant diversity, etc.) that must be met and specific steps that will be taken to ensure that these goals are met.	The reclamation plan will use plants that will set the stage for natural succession and the establishment of plant communities that reflect the ecology of the area. Commitment: NovaGold has committed to conduct test	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			plots during operations to support appropriate revegetation of reclaimed areas and to use plants that will set the stage for natural succession and the establishment of plant communities that reflect the ecology of the area.	
Closure	3.1.1.8	The environmental assessment should identify the actual post-mine land use that is sought. This should include post-mine plant types and zones, such as grassy meadows versus forest zones. See e.g. 14.3.5.2 where the environmental assessment proposes that reclaimed waste rock piles could become suitable forest zones.	The post-mining land use is for wildlife habitat, forestry, and parkland (Volume III, Chapter 14, page 14.-8) Commitment: NovaGold will prepare comprehensive reclamation and mine closure plans as part of permitting.	See response for 3.1.1.4.
Closure	3.1.1.9	Amended overburden should not be used as a substitute for soil. The environmental assessment states: 'The practicality of placing separate lifts of topsoil and overburden on the steep (2H:1V) slopes of waste rock of irregular particle size will be tested during operations. An alternative may be to place 1.0 m of overburden instead of the preferred topsoil/overburden combination. The overburden would need to be amended with commercial fertilizers and/or organic materials to make up for the initially reduced fertility. During operations, field test plots will be established to test various methods of applying soil materials to slopes.' [14.3.3.2, p.9-22] Amended materials are not suitable substitutes for, and certainly not comparable to, topsoil. Where steep slopes prohibit topsoil placement, erosion controls including erosion mats, dozer basins and terraces should be employed to create a suitable surface. Field tests implemented during mining will not necessarily demonstrate the suitability of this method because such tests are relatively short-duration and therefore can not accurately predict long-term success. Amendments and organics on these plots will often sustain the plants until exhausted after which revegetation will likely fail. The chances are small that the mine can create a soil suitable for long-term plant establishment, especially in this wet environment. Field tests employed should evaluate the depth of soil materials and ensure that the proposed depths (generally relatively thin) could actually support the proposed post-mine revegetation, especially trees.	The reclamation plan will include overburden to provide a base for the topsoil on waste materials. There is a net balance of topsoil based on a thickness of 50 centimetres over mineral soil and one meter over waste material. Depths greater than those proposed will offer no benefits to the plants as there is sufficient rooting depth material. Commitment: NovaGold has committed to salvage and stockpile topsoil for use in reclamation and protect topsoil stockpiles through revegetation and other practices as described in the environmental assessment.	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.
Closure	3.1.1.10	It is unclear whether or not the development of Riparian (Channel Crossings and Re-established Creeks) and Littoral Areas (14.3.3.2, p.14-23) would be beneficial. An appropriate evaluation of potential riparian channels and littoral areas should be included in the reclamation plan and available for First Nations and public review.	The goal is to provide as much riparian/wildlife habitat as possible as a means to providing a range of ecosystems and uses which reflect current conditions. Commitment: NovaGold will prepare comprehensive reclamation and mine closure plans as part of permitting and the Tahltan will be consulted about the proposed	See response for 3.1.1.4.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			reclamation plan as required under the Participation Agreement.	
Closure	3.1.1.11	The discussion of the open pits' Facility-Specific Post-Mine Capability (14.3.5.1) does not consider that these pits may be full of acidic water resulting from acid mine drainage formation in the pit walls. Acidic metals contaminated lakes should not be permitted. Therefore, the environmental assessment and reclamation plan should consider this possibility and identify how acidic pit water would be prevented and/or reclaimed.	<p>Predictions based on currently available information indicate it is unlikely that water in pits will be acidic. However, NovaGold agrees that the uncertainties that exist regarding pit lake water quality can be addressed as mining proceeds. The configuration of the site offers opportunities to ensure that contaminated water does not reach the receiving environment either on the surface or in groundwater. The pits are all upstream of the tailings impoundment which will ensure drainage from the pits is captured and treated if needed.</p> <p>Commitment: NovaGold has committed to monitor water quality after closure until regulatory agencies determine that conditions are stable and predictable and to regularly monitor the water quality of Galore Creek, and the Scud River, Iskut and Stikine rivers during operations and after closure to confirm modeling and ensure discharges meet permit criteria until regulatory agencies determine that conditions are stable and predictable.</p>	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.
Closure	3.1.1.12	The reclamation assessment parameters (14.3.6.1) require that specific standards be developed for each feature being evaluated. The reclamation plan should also identify contingency plans to meet those standards if evaluation indicates that they are not being met. Further, the reclamation plan should identify a duration (at least ten years) of successful reclamation assessment (see 14.3.6.2) before reclamation can be considered successful and the reclamation security returned. This is particularly important because it can take many years for problems/failures to develop or become evident. Examples include the years it takes for acid mine drainage to develop and be recognized/measurable; the potential for materials placement failures (mass wasting, piping, slippage); and revegetation failures. Regulatory oversight must continue until the reclaimed mine site is deemed reasonably stable.	<p>NovaGold will prepare a reclamation plan as part of the <i>Mines Act</i> permitting process. The plan will evolve during operations as NovaGold gains experience with the site. The reclamation plan will detail reclamation objectives and will be subject to consultation with the Tahltan as a condition of the Participation Agreement. The reclamation plan and related security will be reviewed by the MEMPR every five years as a matter of policy.</p> <p>Commitment: NovaGold will prepare a reclamation plan as part of the <i>Mines Act</i> permitting process. Tahltans will be consulted on the development of the <i>Mines Act</i> permit as a condition of the Participation Agreement.</p>	See response for 3.1.1.4.
Closure	3.1.1.13	14.6 Closure Cost Estimate The total estimated closure and monitoring costs associated with the Galore Creek project is \$19.75 million Canadian dollars	The costing for the closure and monitoring costs was estimated using a standard spreadsheet developed by	MEMPR notes the financial security is ultimately determined by the Chief

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		(2006). Table 14.6-1 provides a summary of estimated closure costs. The reclamation cost estimate presented in Table 14.6-1 does not give the public enough information to comment on the adequacy of the estimate.	MEMPR. The Ministry will establish a security amount based on its own calculations after consideration of NovaGold's estimate during the <i>Mines Act</i> permitting process. The Tahltan are assured of consultation on the application as a condition of the Participation Agreement. Commitment: NovaGold will consult the Tahltan on the application as a condition of the Participation Agreement.	Inspector of Mines after reviewing the <i>Mines Act</i> permit application.
Cumulative Effects	4.1.1.1	9.9 Archaeological and Heritage Resources page 9-70, 9.9.3 Effects of Other Human Activities ' Resource use activities such as hunting, trapping and fishing may increase within the general area as a result of access improvements, representing a source of potential additional disturbance to archaeological resources, both known and unknown. Exploration throughout the Galore/More valleys will be the primary source of potential additional disturbance to archaeological resources. This large region has not been thoroughly examined for archaeological resources, and it is quite likely that additional sites are present; however, all evidence suggests that this particular area was peripheral to the intensive-use areas of Mt. Edziza, the upper Stikine drainage system and the Klappan Plateau. Therefore, although some potential effects are predicted, they are anticipated to be minor. The potential for significant cumulative effects is therefore negligible.' Page 9-70 The cumulative impact assessment acknowledges that opening up access to this regions and increased human activity will result in disturbance to known and unknown archaeological resources. The environmental assessment states the region has not been thoroughly examined for archaeological sites and that there is likelihood that there are additional unknown sites. However, they dismiss analyzing the significance of disturbance of known and unknown sites because the cumulative impacts study area was 'peripheral to the intensive-use areas of Mt. Edziza, the upper Stikine drainage system and the Klappan Plateau.' We do not agree that the cumulative impacts study area was peripheral to intensive use areas.	The assessment that the cumulative impacts study area was peripheral to intensive use areas was based on the information supplied to NovaGold by the Tahltan at the time of the archaeological study. Commitment: None required.	The Ministry of Sports, Tourism and the Arts (Archaeology Branch) notes that within the limits of current knowledge, the Proponent's conclusions are not unreasonable related to the intensity of use of the Project area. However, the results of the archaeological assessment cannot preclude the possibility that at some time in the past, a group lived in the area at locations removed from but still near the study area.
Cumulative Effects	4.1.1.2	Volume 3, Section 9 Cumulative Impacts One of the primary concerns of the Iskut and Tahltan First Nations is the cumulative impact of all past, present and future industrial activities in their whole traditional territory. The traditional territory of the Tahltan people is larger than the designated cumulative assessment study area. The study area should be expanded to include all culturally important historical use areas.	The traditional territory of the Tahltan people shown on the cumulative effects assessment study area maps was based on established ethnographic data. NovaGold recognizes that the territory boundary illustrated in the cumulative effects assessment differs in places from that provided by TCC. The total cumulative effects assessment study area includes all the Tahltan	See response to 4.1.1.1.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			<p>traditional territory provided by the TCC with the exception of (i) an area along the Alaskan border at the western extent of the study area, (ii) an area along Turnagain River, (iii) an area at the eastern extent of the study area to Thutade Lake. The Tahltan traditional territory provided by the TCC is recognized; however, expanding the study area would not alter the results of the cumulative effects assessment for the Project.</p> <p>Commitment: None required.</p>	
Cumulative Effects	4.1.1.3	<p>The cumulative assessment considered a study area that encompasses most of the Stikine, Iskut and Scud watersheds (Figure 9.2-1). However, in practice, each individual analysis within the cumulative impact assessment was done on isolated areas, (for example Figure 9.3-2 Cumulative Effects Assessment Linkage Map for Surface Water Quality, Figure 9.5-1 Cumulative Effects Assessment Linkage Map for Aquatic Resources). The spatial and temporal definitions of the cumulative assessment are applied in a manner that limits the analysis a great deal. The limitation on the scope of the cumulative impact assessment results in the artificial segregation of individual areas (river sections, wildlife habitats) from the entire study area. This method of analysis sets up a circular argument. The spatial and temporal definitions are so restrictive that they, by definition, result in a finding of no overlap. This is interpreted as there being no cumulative impact. This method of analysis limits the scope of the cumulative assessment greatly - to the point of it being ineffective. The assumptions the cumulative impact assessment is based on need to be revised to solve this problem and the analysis needs to be conducted again.</p>	<p>Temporal boundaries were established based upon CEA Agency guidance documents. NovaGold selected examples that provided a longer, and therefore more inclusive, time span. The study areas shown on the Linkage Maps were developed based upon where the residual effects of the Project are predicted to occur, and demonstrate how these areas might directly overlap with the effects of other activities. It is acknowledged that the assumption that there has to be a direct spatial overlap for a cumulative effect to occur is limiting. However, the mandate and available resources for a cumulative effects assessment for a single project are restrictive, and as such the cumulative effects assessment focussed on the environs immediately surrounding the Project. In addition, it is difficult for a single proponent to obtain what may be confidential information about other activities. Mineral and energy exploration is one example, where the timing and location of future exploration work is not known, and available information about the impacts of individual exploration projects is limited. To fully evaluate cumulative effects, a strategic assessment at a regional scale, e.g., of the Cassiar Iskut-Stikine Land and Resource Management Plan area, would need to be undertaken by government.</p> <p>Commitment: None required.</p>	<p>CEA Agency notes the cumulative effects assessment prepared by NovaGold followed federal guidelines and the approved Terms of Reference for the Galore Creek project.</p>
Cumulative Effects	4.1.1.4	<p>All previous and existing industrial activity (from all industry sectors), including all projects in the exploration and development phase, must be included in the</p>	<p>The developments selected for inclusion in the CEA were based on the requirements of the approved Terms</p>	<p>See response for 4.1.1.3.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter	Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses	
	<p>cumulative impact study to adequately assess cumulative impacts. All potential resource development, including on-line staked areas, must be included in the cumulative assessment to fully analyze potential impacts. The NovaGold analysis states that they did not include all future development '...because the probability of these events occurring is unknown at this time' (page 9-43). Mineral extraction projects have been proposed in the study area-this is certain. The cumulative impact assessment must assume these projects will go forward as proposed. As it stands, the cumulative impact assessment says it will be inclusive, but then systematically eliminates from analysis the very items that could cause cumulative impacts. This is a fatal flaw of the impact assessment, and severely limits its usefulness. This cumulative impact assessment does not meet the needs of the Iskut First Nation. NovaGold should amend the cumulative impact assessment to include all industrial activity (from all industry sectors), including all projects in the exploration and development phase. NovaGold should conduct a data gap analysis on the cumulative impact assessment to assess what information is missing. The missing information needs to be collected and incorporated into the next version of the cumulative impact assessment.</p>	<p>Of Reference and CEA Agency guidance documents. The 'Reference Guide: Addressing Cumulative Environmental Effects' (CEA Agency, 1994) states: 'This implies that, at a minimum, (only) projects or activities that have already been approved must be taken into account. The environmental effects of uncertain or hypothetical projects or activities need not be considered. Nevertheless, it would be prudent to consider projects or activities that are in a government approvals process as well.' The cumulative effects assessment considered all potential developments within the study area that were in the BC <i>Environmental Assessment Act</i> process at the time of submission, and also included the proposed Schaft Creek Project - not in the BC environmental assessment process at the time of submission - due to its proximity to Galore Creek. Exploration projects since 2001 were also recognised (e.g., Volume III, Figure 9.2-3). This approach was agreed at a meeting between NovaGold and the CEA Agency on 19 January 2006. It is beyond the mandate of the Galore Creek cumulative effects assessment to consider the effects of regional development over the long term. Such an evaluation would require government assessment at a strategic level.</p> <p>Commitment: None required.</p>		
Cumulative Effects	4.1.1.5	<p>Table 9.2-2, pg 9-5. Summary of Closed Mining Projects in the CEA Study Areas. Several properties were not included in Table 9.2 including, but not limited to Sulphurets Creek mine, Anyox Slag Heap, Mt. Klappan Exploration, Cassiar Mine, Cateer and others. This table is an incomplete listing of the previous mining activity in the study area. A source like MINFILE can provide a lot of info (http://webmap.em.gov.bc.ca/mapplace/minpot/minStats.cfm#). Industrial impacts should not be limited to just mining. Oil and Gas exploration and hydroelectric developments should be included in the assessment of previous industrial impacts.</p>	<p>The purpose of Table 9.2-2 is to summarize mining projects within the study area since 1964 (the past temporal boundary) that proceeded to full operation. Cassiar mine is on the boundary of the CEA study area; its omission is acknowledged. Anyox Slag Heap is outside of the study area. Major mineral exploration projects since 2001 (as per BC Mineral Exploration Reviews), including Mount Klappan, are shown on Figure 9.2-3. It is acknowledged that some smaller and older locations of mineral exploration activity, and oil and gas exploration, are not shown. NovaGold is not aware of any previous hydro-electric projects in the study area. The proposed Forrest Kerr hydro-electric</p>	See response for 4.1.1.3.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			<p>project is included in the cumulative effects assessment.</p> <p>Commitment: None required.</p>	
Cumulative Effects	4.1.1.6	Table 9.2-4, pg 9-6. Summary of Reasonably Foreseeable Future Projects within the Cumulative Effects Assessment Study Areas Industrial impacts should be expanded to include all mining exploration and development, Oil and Gas exploration, access road development, and hydroelectric developments.	<p>The developments selected for inclusion in the cumulative effects assessment were based on the requirements of the approved Terms Of Reference and CEA Agency guidance documents. The 'Reference Guide: Addressing Cumulative Environmental Effects' (CEA Agency, 1994) states: 'This implies that, at a minimum, (only) projects or activities that have already been approved must be taken into account. The environmental effects of uncertain or hypothetical projects or activities need not be considered. Nevertheless, it would be prudent to consider projects or activities that are in a government approvals process as well.' The cumulative effects assessment considered all potential developments within the study area that were in the BC <i>Environmental Assessment Act</i> process at the time of submission, and also included the proposed Schaft Creek project - not in the BC environmental assessment process at the time of submission - due to it's proximity to Galore Creek. Exploration projects since 2001 were also recognised (e.g., Volume III, Figure 9.2-3). This approach was agreed at a meeting between NovaGold and the CEA Agency on 19 January 2006. It is beyond the mandate of the Galore Creek cumulative effects assessment to consider the effects of regional development over the long term. Such an evaluation would require government assessment at a strategic level.</p> <p>Commitment: None required.</p>	See response for 4.1.1.3.
Cumulative Effects	4.1.1.7	9.3.1 Surface Water Quantity; 9.3.1.1 Residual Project Effects 'Project components within the More Creek, Sphaler Creek, Scotsimpson Creek and Iskut River watersheds did not produce any residual environmental effects on surface water quantity.' Pg 9-17. This statement negates any impacts of mixing zones on surface waters. Please see our comments under sections 5.7.2.3 and 7.6.4.1.	Consistent with the cumulative effects assessment methodology, environmental effects were not considered in the cumulative effects assessment unless they were identified as having a residual effect in Volume II, Section 7.	See response for 4.1.1.3.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
Cumulative Effects	4.1.1.8	9.3.1.3 Linkage with Other Human Actions 'Exploration activity, however, does not affect surface water quantity.' Pg 9-17. This statement is too broad. Exploration can divert water from streams and rivers and wetlands into treatment works.	Commitment: None required. Comment noted. Exploration activity can affect surface water quantities, but not to the same extent as operational mines. Commitment: None required.	No response required.
Cumulative Effects	4.1.1.9	9.3.1.4 Residual Cumulative Effects 'There are no anticipated linkages between the residual effects of the project and of other human actions with regard to surface water quantity. Therefore, there is no potential for cumulative effects.' Pg 9-17. There are a tremendous number of stream diversions associated with this project and river crossings. Is the environmental assessment really claiming that none of these will have affects on water quantity?	Consistent with the cumulative effects assessment methodology, environmental effects were not considered in the cumulative effects assessment unless they were identified as having a residual effect in Volume II, Section 7. The environmental effects of the various projects components on surface water quantity are considered in Volume II, Section 7.5. Infrastructure such as the access road will have some effect on surface water quantity, but the assessment concluded that these effects were not significant. As a result the effects were not carried forward to the cumulative effects assessment. Commitment: None required.	See response for 4.1.1.3.
Cumulative Effects	4.1.1.10	Table 9.3-2 doesn't find any links with past, present or proposed industrial activity because of the definition of the spatial boundary of the assessment area, not because of an overall assessment of impacts. The Iskut Nation wants to know what the overall cumulative impacts of all development will be on all valued ecosystem components in the whole area defined for cumulative assessment. Please revise the cumulative impact assessment accordingly.	The study areas shown on the Linkage Maps were developed based upon where the residual effects of the Project are predicted to occur, and demonstrate how these areas might directly overlap with the effects of other activities. It is acknowledged that the assumption that there has to be a direct spatial overlap for a cumulative effect to occur is limiting. However, the mandate and available resources for a cumulative effects assessment for a single project are restrictive, and as such the cumulative effects assessment focussed on the environs immediately surrounding the Project. In addition, it is difficult for a single proponent to obtain what may be confidential information about other activities. Mineral and energy exploration is one example, where the timing and location of future exploration work is not known, and available information about the impacts of individual exploration projects is limited. As suggested by Tahltan Heritage Resource and Environmental Assessment Team comments, it is	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			<p>the Crown's responsibility to take the lead in cooperation with Tahltans to better understand the implications of developments in Tahltan territory.</p> <p>Commitment: NovaGold will participate with the Crown and Tahltans to help expand collective knowledge of potential cumulative impacts of all development on all valued ecosystem components.</p>	
Cumulative Effects	4.1.1.11	'Filter plant effluent will only be discharged into the Iskut River during operations, when concentrate is being produced. Therefore, the temporal boundary for filter plant effluent effects is only until 2029 (i.e., 22 years from the start of the mine in 2007).' Page 9-29 Filter plant effluent will likely discharge some solids into the Iskut River which may build up over time. These sediments will contain heavy metals and could be a source of metal contamination over time, continuing after the mine stops operation. The temporal timeframe needs to be expanded to include this possibility and the possibility of sediment contamination needs to be integrated into the cumulative impact assessment and ecological impact assessment.	<p>The effluent from the filter plant will contain only 0.5 milligrams per litre of suspended solids (see Appendix 5-H). The grain size of the suspended solids will be < 0.45 microns; clay sized particles. Given the flow regime in the Iskut River these particles will be carried downstream and mixed with the natural suspended solid load in the river (up to 170 milligrams per litre in freshet, 7 milligrams per litre under low flow conditions). It is very unlikely that the particles will be deposited close to the diffuser or will form accumulations of sediment with high metal content.</p> <p>Commitment: None required.</p>	EAO notes that NovaGold has committed to monitor the water quality of Galore Creek and the Scud, Iskut and Stikine rivers during operations and after closure to confirm modelling and ensure discharges meet permit criteria until regulatory agencies determine that conditions are stable and predictable.
Cumulative Effects	4.1.1.12	Terrestrial Ecosystems -- A clear overall scope of the residual project effects on valued ecosystem components is not provided in this section. Nor is it provided in relevant sections pertaining to specific valued ecosystem components such as chapter 7. What is expected is a table that provides an area summary by valued ecosystem component for ecosystem units potentially influenced by all development types (road, filter plant, aerodrome and mine area) and what percentage that relates to with respect to the regional and local Project area.	<p>Residual project effects were identified in Volume II, Table 7.12-5 of the effects assessment. Volume III, Section 9.7.1 of the cumulative effects assessment identifies the residual effects on valued ecosystem components that are discussed in the cumulative effects assessment and why they were selected. Area summary tables of the nature described in the comment are provided throughout Volume II, Section 7-12 (e.g. Tables 7.12-7, 8, 9, 11, 12, 14, 15, and 16). Effects identified in Section 7-12 focus on those associated with the project. The effects discussed in the cumulative effects assessment cannot be as quantitative due to the lack of specific information on the potential impacts of other developments.</p> <p>Commitment: None required.</p>	EAO notes a table summarizing potential residual effects has been included in the Joint Report prepared by the EAO and Federal Authorities and CEA Agency.
Cumulative Effects	4.1.1.13	Application Page 9-45 Residual Project Effects -- 'Residual effects are predicted to occur through the permanent loss of terrestrial ecosystems in the Galore	NovaGold agrees with the comment. Effects were not assessed at a regional scale because NovaGold	The Ministry of Forests and Range (MOFR) notes the Special Use Permit

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		Creek valley due to the submergence of the pits and tailings area, and the loss of terrestrial ecosystems in the medium term as a result of the construction and operation of the access road. These residual effects were assessed as being significant.' Residual effects are considered significant on a local scale, but not a regional scale. If the road is kept open beyond the life of the mine, there is the possibility that residual effects could become regionally significant.	intends to close the road after mine operations have finished. Should this intention change, then a reassessment of the residual effects of the road at a broader (regional) scale will be considered. NovaGold recognizes that, as holder of the Special Use Permit for the access road, NovaGold has an obligation to meet the conditions of the Special Use Permit. If the access road is to be kept open after it is no longer required for the project, then the new proponent should conduct a reassessment of the residual effects of the road at a regional scale.	will require the road to be decommissioned when the mine closes.
Cumulative Effects	4.1.1.14	Page 9-45 Temporal Boundaries - We do not agree with the statement 'ecosystems will recover given sufficient time'. In some cases, ecosystem may never recover depending on the nature of the disturbance or may be altered significantly resulting in an altered or degraded ecosystem, particularly high elevation alpine areas.	NovaGold agrees that the long term ecosystems may not be identical to those that exist at the site today. This idea is alluded to in Volume III, Section 9.7.2.2 which states that "residual effects will be apparent for approximately 200 years following decommissioning and reclamation activities". However, the long term ecosystems will be equivalent in terms of overall productivity. Commitment: None required.	No response required.
Cumulative Effects	4.1.1.15	Application Section 9.8, Wildlife and Wildlife Habitat -- Grizzly Bear The cumulative effects assessment focused on the potential residual effects to coastal grizzly bear population, salmon habitats, and the potential ability to not secure adequate fat reserves to ensure survival and reproductive success. While this is not disputed, it is suggested that the interior grizzly bear populations should have been included due to higher impacts from the habitat loss and the direct and indirect impacts as a result of higher than reported traffic during construction and mine operations, and the potential cumulative impacts from future human activities east of More Creek. The spatial boundary is too small an area and should be the same area as defined for mountain goats which would allow the inclusion of the interior grizzly bear population.	In response to comments received during the Application review, NovaGold prepared a separate assessment of potentially cumulative effects for interior grizzly bears. Pursuant to the Participation Agreement, the Tahltan will be consulted about the draft Wildlife Mitigation and Monitoring Plan.	MOE notes the Wildlife Mitigation and Monitoring Plan will include all aspects of project effects to wildlife and their habitats. The plan will deal with surveys, continuous inventory requirements, time windows and compensation. EAO notes that Appendix F and Schedule B of the EA Certificate contain a number of commitments related to wildlife.
Cumulative Effects	4.1.1.16	The Tahltan Nation Development Corporation holds the tenure to harvest timber in the Bob Quinn area; the area has a recent history of timber harvesting; there is easy access to highway 37; and the Tahltan Nation Development Corporation has a licence that allows for log exports through Stewart. It is very likely that if saw log timber became marketable again from Bob Quinn that logging could	Forest management practices in BC are regulated by Ministry of Forests and Range; with input from MOE The practices include extensive consideration of wildlife conservation, including that of grizzly bears. It is therefore anticipated that concerns relating to the	See response for 4.1.1.15.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>occur. This would have an effect on interior grizzly bears from habitat loss, habitat fragmentation, and direct/indirect effects from increased access and road building. In addition, given the pace of mineral exploration in the area, potential power requirements, and the power needs for the Red Chris project and Galore Creek, it is possible that an upgraded transmission line will be constructed through the Bob Quinn area to Iskut or Dease Lake. It will be considerably larger than the existing line and would require a wider Right of Way than currently exists and may not be able to follow the same Right of Way. This would be another effect on the interior grizzly bear population and should be considered when finalizing the monitoring plan. In addition, the sampling of hair should be continued in forest and alpine habitats to determine the impact on the interior grizzly bear population.</p>	<p>potential effects of any future logging on interior grizzly bears would be addressed by the forest development plan. Similarly, a new or upgraded power line and associated right of way would be subject to their own environmental effects assessment should the proposal go ahead. It is anticipated that this assessment would include interior grizzly bears, and provision would be made for mitigation and management of any identified effects to this species. With regard to the potential for cumulative effects of these projects with Galore Creek.</p> <p>In response to comments received during the Application review, NovaGold prepared a separate assessment of potentially cumulative effects for interior grizzly bears. Logging and power development were included in this assessment as effects that could act in combination with the effects of the Project to produce cumulative effects. Pursuant to the Participation Agreement, the Tahltan will be consulted about the draft Wildlife Mitigation and Monitoring Plan.</p> <p>Commitment: A Wildlife Mitigation and Monitoring Plan will be completed for review by regulators and, consistent with the Participation Agreement, by Tahltan Central Council representatives.</p>	
Cumulative Effects	4.1.1.17	<p>Application Section 9.8, Wildlife and Wildlife Habitat -- Mountain Goats The impacts to mountain goats are not the residual effects as described in the environmental assessment. It is our opinion that due to overestimation of suitable high value habitats, the underestimation of impacts from aircraft, and the number of unknown effects to mountain goats, residual effects will be much higher than reported.</p>	<p>NovaGold assessed the potential for significant adverse residual effects to be considerable for mountain goats. Although the significance of these adverse residual effects was assessed as uncertain, it remains that there is considerable potential for them to be significant.</p> <p>Commitment: NovaGold will prepare a monitoring program for mountain goats as an important component of the overall Wildlife Mitigation and Monitoring Plan for the Project.</p>	See response for 4.1.1.15.
Cumulative Effects	4.1.1.18	<p>Application Section 9.8, Wildlife and Wildlife Habitat -- Mountain Goats While there are concerns to the amount of suitable mountain goat habitat estimated for the study area, the locations of both the RDN and Foremore properties are on mountain blocks with very high mountain goat habitat areas. It is likely that</p>	<p>Exploration at the RDN and Foremore properties was considered for the mountain goat cumulative effects assessment. Should activities increase for any of the exploration projects mentioned, certainly to the point of</p>	See response for 4.1.1.17.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		effects are occurring, and if the Project were to increase its activities while construction was ongoing then the distribution of serious effects from blasting, aircraft, and sensory disturbances would be at a landscape level.	proposed operations, each project would be required to undergo formal environmental effects assessments. The effects of the projects on mountain goats, the scale of effects, and the cumulative effects would be determined at that time. Commitment: None required.	
Cumulative Effects	4.2.1.1	<p>9.3.2 Surface Water Quality 'Effluent discharge from the tailings facility and the filter plant has the potential for residual effects on water quality. However, these effects were judged to be not significant based on the magnitude, geographic extent and duration of effect (see Section 7.6).' pg9-20.</p> <p>'Effluent from the filter plant will be discharged into the Iskut River via a diffuser. Potential effects to water quality are limited to a localized area (<100 meters) of the Iskut River downstream of the diffuser based on annual average flow (average over 12 months). However, during the annual seven-day low flow (average seven lowest flow days in one year), potential effects, related mainly to total copper concentrations, extend downstream approximately 6 kilometres to the confluence of Iskut River and More Creek. As a result of the additional volume of water from More Creek, the effects do not extend below the confluence and therefore do not extend to the Stikine River (see Section 7.6).'</p> <p>pg 9-19.</p> <p>We do not agree that there are no effects from the proposed effluent discharges, nor do we agree that there will be no cumulative impacts. Please see our discussion of this issue under sections 5.7.2.3, 7.6.4.1, and Section 9.</p>	<p>According to the definition of significant residual effects, and based on the magnitude, geographic extent and duration of effect, the residual effects on water quality will not be significant due to their limited spatial scale.</p> <p>Commitment: NovaGold has committed to monitor the water quality of Galore Creek and the Scud, Iskut and Stikine rivers during operations and after closure to confirm modelling and ensure discharges meet permit conditions until regulatory agencies determine that conditions are stable and predictable.</p>	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.
Cumulative Effects	4.2.1.2	9.3.2.1 Residual Project Effects, 9.3.2.2 Assessment Boundaries, Spatial Boundary, page 9-20 The environmental assessment restricts its analysis by just focusing on 'Galore Creek and the Scud River, from below its confluence with Galore Creek to above its confluence with Contact Creek. Effects will not extend to the Stikine River (see Section 7.6).' page 9-20. This spatial boundary of cumulative impacts is too narrow to address the concerns of the Iskut First Nation.	<p>Comment noted.</p> <p>Commitment: None required.</p>	No response required.
Cumulative Effects	4.2.1.3	9.3.2.2 Assessment Boundaries, Temporal Boundary, page 9-20 The environmental assessment assumes that tailings impoundment water quality will improve at mine closure. This is not necessarily true. Solids and associated contaminants can become re-suspended in the tailings impoundment waters through wind induced wave action in the impoundment. Avalanches into the	Calculations based on wave forecasting curves (US Army Corps of Engineers Shore Protection Manual) suggest a bottom current of 0.09 meters per second at five meter depth with 15 meters per second (about 30 knot) wind. Only 0.3 % of the time do winds in the	NovaGold has committed to monitor and manage drainage from the tunnel, not-potentially acid generating dumps, ore storage stockpiles, pits, seeps and other mine areas, including the

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>tailings impoundment can also re-suspend solids. Re-mobilization of solids and associated contaminants could enter surface waters through released tailings impoundment water post mine closure. These impacts need to be accounted for and included in the cumulative impact assessment and long-term environmental assessment for this project. The environmental assessment states 'a conservative estimate for the future temporal boundary of effects from tailings effluent is 20 years from closure, or 2049.' (page 9-20) This is not an adequate temporal boundary if the issue addressed above is accounted for. The temporal boundary for the estimation of impacts from the tailings impoundment needs to be extended to the life of the tailings impoundment, which is in perpetuity.</p>	<p>Galore Creek valley exceed 7.5 meters per second. These calculations suggest that re-suspension of tailings at an eight meter depth from wind-induced waves is unlikely. During operations NovaGold will have an active avalanche program to minimize the size and consequence of avalanches affecting the tailings impoundment. Post closure there is potential for large avalanches to enter the impoundment from time to time. The dam is designed to withstand the forces of an avalanche-induced wave without damage. A large avalanche may re-suspend tailings within the impoundment. However, calculations of settling time for characteristic tailings particles using Stokes equation indicate that tailings will re-settle in about 1.23 hours. Since avalanches are most likely during the winter when flows from the impoundment will be lowest, the amount of suspended tailings that would escape from the impoundment would be minimal.</p> <p>Commitment: None required.</p>	<p>impoundment, and manage or treat problematic water sources as required to ensure site discharges meet both the <i>Environmental Management Act effluent discharge</i> permit limits and federal Metal Mining Effluent Regulation discharge criteria that are applicable at the time.</p>
Cumulative Effects	4.2.1.4	<p>The impacts from the project's proposed 200-plus stream crossings needs to be included in the cumulative assessment of surface water impacts.</p>	<p>NovaGold acknowledges the importance of proper road crossing design and measures to control sedimentation to surface waters. NovaGold will implement erosion and sediment control practices during construction to ensure that water quality is protected.</p> <p>Commitment: NovaGold will implement Erosion and Sediment Control plans during construction to ensure that water quality is protected. Additionally there will be an Aquatic Effects Monitoring Program to assess the effects of construction.</p>	<p>EAO notes that NovaGold has committed to ensuring that water quality is protected. Additionally there will be an Aquatic Effects Monitoring Program to assess the effects of construction.</p>
Cumulative Effects	4.2.1.5	<p>9.5.2.2 Temporal Boundary 'The rate of recovery of aquatic communities in the Galore Creek project area will depend on the particular effect. Effects related to tailings effluent discharge into Galore Creek will most likely be highest during operations and should decrease in magnitude and extent as the aquatic species adapt to the altered environment. This assumes that discharge concentrations of contaminants of concern during post-closure will not increase, based on adaptive management and monitoring that will continue through operations and beyond closure to protect water quality. Because no additional tailings will be</p>	<p>Predictions of water quality within the tailings storage facility are described in Volume XV, Appendix 7-D. In addition, NovaGold is undertaking additional model runs for the closure period and these will be reported in a memo.</p> <p>Commitment: NovaGold will undertake additional model runs of water quality for the closure period and the</p>	<p>See response for 2.1.1.3.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter	Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
	deposited in the tailings facility after closure, tailings pond water quality is expected to gradually improve over time. Natural silt deposition from upstream glacial till will gradually cover the tailings, reducing contaminant transfer to the water column. Some metal leaching from waste rock is predicted to continue, but acid rock drainage should be controlled by the sub-aqueous submergence of high-risk acid rock drainage waste rock and tailings. Water quality modeling predicts that water quality in the tailings facility will improve to levels approaching baseline conditions within 10 years. Therefore, a conservative estimate for the future temporal boundary of effects from tailings effluent is 20 years from closure, or 2049.' Page 9-29 These conclusions contain many assumptions. There is no data or analysis provided for these conclusions. NovaGold must justify all such conclusions about long-term performance of mine facilities with adequate, concrete and transparent analysis of data.	results of this modelling will be reported in a memo.	
First Nations Consultation	5.1.1.1 The discussion about a reclamation and closure plan (Section 14) is largely a plan to develop and submit a reclamation plan. NovaGold and the regulatory agencies should give First Nations and the public an opportunity to review and comment on this document before it is approved.	The Participation Agreement ensures that the TCC will have an opportunity to review all permit applications and management plans. Commitment: NovaGold commits to consult with the Tahltan on all permits, mitigations and management plans.	Addressed
First Nations Consultation	5.1.1.2 Overall the consultation that NovaGold directed has been satisfactory for Tahltan standards.	Comment noted. Commitment: None required.	Addressed
First Nations Consultation	5.1.1.3 Special Assembly: NovaGold did not 'host' a special assembly in Dease Lake in January 2005; it was a TCC special assembly on the Galore Creek project. NovaGold was invited to the assembly and sponsored it by covering the costs (see p. 3-1 and section 3.1.3).	Comment noted. Commitment: None required.	Addressed
First Nations Consultation	5.1.1.4 Participation Agreement: The Participation Agreement was presented to the Tahltan leadership that includes the board of directors of the TCC, and the chief and council for both the Tahltan and Iskut bands in October 2005. In the application on page 3-7 it states that only the TCC board and the Tahltan band council were present; the Iskut band council was also present.	Comment noted. Commitment: None required.	Addressed
First Nations Consultation	5.1.1.5 The transcripts from the special assembly should have been made available at the open houses.	NovaGold will provide transcripts of the January 2005 Special Assembly if requested by the TCC. Commitment: NovaGold will provide transcripts of the January 2005 Special Assembly if requested by the TCC.	No response required.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
First Nations Consultation	5.1.1.6	NovaGold newsletters should be mailed to Tahltan members on the TCC mailing list for broader distribution.	<p>As outlined in the Participation Agreement, the parties will maintain effective communications between each other and will develop plans to ensure that Tahltan members remain informed.</p> <p>Commitment: As outlined in the Participation Agreement, the parties will maintain effective communications between each other and will develop plans to ensure that Tahltan members remain informed.</p>	No response required.
First Nations Consultation	5.1.1.7	The TCC finds that the consultation with the Crown was not up to Tahltan standards because: the environmental assessment process did not adequately address Tahltan concerns around the social and cultural impacts assessment; the TCC is being overwhelmed by the volume of land and resource referrals, including environmental assessments, without being adequately resourced by the Crown; The province has not come to an agreement with the Tahltan on what a deep consultation process will look like and how the environmental assessment process fits into this larger consultation process. The Crown has not provided any accommodation on the Galore Creek project.	<p>Comment noted. This issue is beyond the scope of NovaGold's application under the environmental assessment process and must be resolved between the TCC and the Crown.</p> <p>Commitment: None required of NovaGold.</p>	<p>EAO notes the Province and Tahltan are engaged in discussions related to socio-cultural/socio-economic impact assessment. Through these discussions, it is anticipated that agreement will be reached on approaches for assessing these types of impacts.</p> <p>The Tahltan will be consulted by federal and provincial government agencies during the permitting stage.</p>
First Nations Consultation	5.1.1.8	<p>5.5.5.2 potentially acid generating and non-potentially acid generating Segregation</p> <p>The criteria that will be used for delineating potentially acid generating from non-potentially acid generating waste material are not clearly stated in the environmental assessment. For example, it is stated:</p> <p>'The possibility of using total carbon as a surrogate for carbonate will be evaluated. Initial muck samples from blasting will be screened to obtain samples of blast rock size fractions. These samples will be analyzed for the same parameters to determine if partitioning of sulphide or carbonate minerals into the fines is occurring. This approach may lead to adjustment of management criteria.'</p> <p>and;</p> <p>'Management and disposal will be determined using the following criteria:</p> <ul style="list-style-type: none"> - upland disposal within containment area above final flood level - neutralization potential/acid generation potential > 2, and paste pH or Cu/S > x. - dam construction rock - paste pH > 6, neutralization potential/acid generation potential > 3, Cu/S < x. <p>The value of x is currently being evaluated by leach column tests.' [p. 5-104, 5-</p>	<p>NovaGold has proposed criteria in the environmental assessment based on information available at the time the environmental assessment was prepared. The main waste rock criterion is 2.0, the development of which has been described in detail. The actual procedures for implementing waste rock classification as part of mining will be specified in the <i>Mines Act</i> Permit. Requirements to report results of analysis and monitoring will also be specified in the permit. The Participation Agreement commits NovaGold to consulting with the Tahltan on the permit application, which will detail NovaGold's proposed procedures, monitoring and reporting. Pursuant to the Participation Agreement, NovaGold will consult with the Tahltan on the <i>Mines Act</i> permit application.</p> <p>Commitment: NovaGold has committed to using a conservative neutralization potential ratio of 2 to</p>	EAO notes this commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>105] While more data will undoubtedly make the choice of the parameters that define potentially acid generating from not-potentially acid generating waste material more dependable, this means the procedures defining this segregation process are still under study, and that the both the information leading to the final choice of parameters will not be available to the public, and the rationale for the parameters will likely be made behind closed doors by a selected few individuals, with little or no opportunity for experts from the public to review or comment on these critical decisions. Conservative potentially acid generating non-potentially acid generating segregation criteria should be developed based on the information available, and if changes are to be made to these important criteria, then both the data and information should be made available to the public before any changes to the criteria are made.</p>	<p>segregate potentially acid generating from not-potentially acid generating material subject to adaptive management as more information is gained from the site.</p>	
First Nations Consultation	5.1.1.9	The Tahltan must be involved in the development of a suitable fish habitat compensation plan.	<p>The Fish Habitat Compensation Plan will be developed in conjunction with the Department of Fisheries and Oceans. The Participation Agreement requires that NovaGold involve the TCC in the development of environmental monitoring and management plans. As such the TCC will be consulted in the development of the fish habitat compensation plan.</p> <p>Commitment: The TCC will be consulted in the development of the fish habitat compensation plan.</p>	Fisheries and Oceans Canada and MOE note that the Tahltan will be consulted as the fish habitat compensation plan is developed.
Fish	6.1.1.1	The most serious impacts of concern on fish are likely to result from changes in water and quality, rather than the loss of physical habitat (see our comments on water quality).	<p>Comment noted.</p> <p>Commitment: None required.</p>	No response required.
Fish	6.1.1.2	As for impacts on the Porcupine River with respect to aerodrome construction, use, and maintenance, this facility will be sited on the drier portion of the floodplain well removed from the active floodplain and so impacts on habitat and fish populations will in all likelihood be minimal. However, as a cautionary comment, in a highly braided system like the Porcupine, the distribution of channels and dominant flows can change markedly with major floods, which could result in major bulldozer works and siltation downstream in efforts to divert flows away from the aerodrome site.	<p>NovaGold has designed the aerodrome to be above the active floodplain. If remedial earthworks are required, sediment and erosion control plans will be utilized to minimize any impacts on the Porcupine River. As part of the Participation Agreement, Tahltans will be consulted regarding all permits for such work.</p> <p>Commitment: Sediment and Erosion Control Plans will be utilized to minimize impacts from any remedial earthworks to protect the aerodrome near the Porcupine River. As part of the Participation Agreement, Tahltans will be consulted regarding all permits for such work.</p>	EAO notes this commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
Geotechnical Issues	7.1.1.1	It is noted in Section 12.5.3 (Mitigation Measures): 'The waste dump slopes will be designed to resist earthquake forces as well by allowing for deformations without catastrophic failures. During operations and closure, the slopes will be designed with a safety factor for the 1:475 year return period earthquake, which has a peak ground acceleration of 0.097g. All final outer slopes will be designed to withstand the Maximum Credible Earthquake without allowing catastrophic failure.' [p. 12-24] There is some ambiguity in the statements above. Will the final waste dump design be based on the Maximum Credible Earthquake or the 1:475 year event?	Intermediate (i.e. temporary) slopes will be designed for 1:475 year event, however final (i.e. permanent) slopes will be designed for the Maximum Credible Earthquake. Commitment: None required.	Issue has been addressed.
Geotechnical Issues	7.2.1.1	5.5.3 Mine Design The avalanche dangers described at 5.5.3 (p.326) do not adequately consider avalanche dangers/impacts after the mine closes. A large avalanche or rockslide could significantly harm the tailings impoundment. The regulatory agencies should require a contingency plan - including a means to pay for to implement it, if the tailings impoundment is harmed by an avalanche or rockslide after mine closure.	Effects of a snow avalanche impacting the tailings impoundment and generating a wave was addressed in NovaGold's feasibility reports. This analysis showed that freeboard is sufficient to withstand snow avalanche generated waves. During operations, there will be an O&M manual in place that will describe avalanche management. The tailings dam will be included in the avalanche management plan. At closure, there will be yearly inspections of the dam. Equipment will be left in the vicinity of the dam in a covered facility for dam maintenance Commitment: During operations, there will be an Operations and Maintenance manual in place that will describe avalanche management for the tailings dam. At closure, there will be yearly inspections of the dam. Equipment will be left in the vicinity of the dam in a covered facility for dam maintenance.	EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.
Geotechnical Issues	7.2.1.2	5.9.4.5 Geomembrane Liner The environmental assessment states that a: 'Coletanche bituminous geomembrane liner has been proposed on the upstream dam face as a temporary measure to ensure the dam can store tailings in a timely fashion.' [5.9.4.5, p.5-189] The remainder of the tailings impoundment design calls for a: '...rockfill structure with an impervious (i.e. clay till) central core and a synthetic liner on the upstream face.' [5.9.4.3, p.5-165] These liners will only protect the integrity of the dam itself. They will not prevent seepage from the tailings impoundment from migrating into groundwater below and beyond the dam. Since this dam will impound material that can generate metals either through acid generation or metals leaching, the most protective approach would be to line the entire tailings impoundment to minimize seepage from the impoundment. The tailings impoundments should employ both compacted clay	The BGC report 'Waste and Water Management - Feasibility Geotechnical Report' issued in April 2006, (Volume VII, Appendix 5-1) states that a geomembrane liner has been proposed on the upstream dam face as a temporary measure to ensure the dam can store tailings in a timely fashion. The liner will hold water, while the impervious core will be constructed downstream. The till core will be relied on to minimize seepage through the dam for the entire life of the mine with the exception of the first year of operations. High-density polyethylene was not recommended for the liner on the upstream slope of the tailings dam. A Coletanche bituminous	EAO notes that NovaGold has committed to install groundwater wells downstream of the main dam to intercept any seepage exceeding effluent permit limits.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>liner and a double-synthetic liner with leak detection system - over the entire tails impoundment - in order to provide maximum protection from metals contamination. This is the closest design available to ensure that the impoundment survives in perpetuity - that is, forever. The need for double liners is further supported by the seepage analysis presented in section 5.9.4.10. A double liner would also enhance the visual surveillance described in section 8.4.3 - because visible inspection can only observe the surface or dam face, which is not where leaks are most likely to occur. The compacted material underlying the high-density polyethylene liner should be specified/required as swelling clays, compacted to a minimum permeability of 1x10-8 centimetres per second. Using a double-synthetic liner with leak detection system, and underlying it with compacted swelling clays, increases the chance that if a leak occurs it will be more quickly detected, and that the underlying material may be able to re-seal, limiting the distribution/extent of contamination. This is particularly important because of the significant faulting identified in Section 5.9.4.2. The liner design should further employ a sand layer below and above the synthetic liner to protect it from compacting rock-punctures or human error (driving over the liner with heavy equipment or other vehicles).</p>	<p>geomembrane liner was proposed instead because it meets the rupture criteria for the anticipated working load of five MPa; has a better longevity than high-density polyethylene; and meets all the constructability constraints expected at Galore Creek. To minimize the risk of rupture of the liner from the underlying 76 millimetres minus waste rock shell material and prevent the migration of tailings through the liner in the event of a leak, a cushion/filter of select waste rock will be placed over the 76 millimetres minus waste rock and a geotextile will overlie this cushion/filter layer. The Coletanche membrane will then be installed on top of the geotextile. During operations, tailings will eventually be deposited on top of the geomembrane. The gradation of the cushion/filter is 19 millimetres (¾ inches) gravel to meet filter criteria between the tailings and the 76 millimetres (three inches) minus waste rock. The cushion/filter layer will be approximately four meters thick (horizontal thickness) to facilitate placement, and will be compacted to minimize deformations. To further protect the Coletanche liner from damage due to tailings deposition off the dam crest, a geotextile may be required under the slurry pipelines where the lines rest directly on the liner. As for lining the entire basin, this option has not been considered because it is assumed that the seepage out of the tailings dam and foundations will be dischargeable. As a contingency, in case seepage water quality is poorer than predicted, a seepage collection and pump back system has been designed immediately downstream of the dam.</p> <p>Commitment: None required.</p>	
Geotechnical Issues	7.2.1.3	<p>An omission in the avalanche discussion was the possibility of avalanche release being inadvertently initiated through ground/air vibrations generated by large mass explosive use to fracture rock in the pit operations. Such releases have been documented in: Russian-Norwegian project on seismicity-induced avalanches P. Chernouss et. al., Proceedings, International Snow Science Workshop, 2002, Penticton, BC Canada.</p>	<p>Closure of the snow avalanche danger zones during winter open pit blasting operations would be standard operating procedure. During operations the Operations and Maintenance manual will have procedures outlining closure of snow avalanche danger zones affected by winter open pit blasting operations.</p>	Issue addressed.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
Geotechnical Issues	7.2.1.4	Re Avalanches -- The development of a safety and operating plan covering every aspect of the feasibility study findings and recommendations is essential, and I would say necessary to be in place as a working document before the development permitting is granted. This would help insure that sufficient funding resources will be available to affect the program which to share holders and investors, would seem to be superfluous to the mining venture itself. As for environmental concerns, they really pale in the face of the mining/processing elements of this massive Project. However an effective avalanche mitigation program is essential to protect from spills of hazardous/toxic materials and maintain a safe workplace which is conducive to maintaining environmental controls. Worker health and safety is also a paramount concern, even more so as native/local persons are being asked to work for the company and insure its success. This avalanche project is probably the greatest undertaking of this nature, thus far in North America, and must be conducted conservatively to protect both the environment and human resources.	During operations, there will be an O&M manual that will contain the avalanche management plan.	Comment addressed by NovaGold.
Geotechnical Issues	7.2.1.5	Table 4.1 shows that debris-related hazards affects a total road length of 14.9 kilometres (11.5%) while snow avalanche hazards affects 22.9 kilometres (17.3%) of total road length. Combined, these geohazards affect 37.8 kilometres (29.3%) of the road length. The annual probability for pipeline rupture is 0.81 (an annual event would be 1.00). With mitigation, this figure is reduced to 0.01 for a reduction of 99%. Mitigation is defined as burial in a ditch on the upside of the road to a depth of 1.6 meters (Section 4.3). 'The burial will protect the pipe from snow avalanches except where suspended above ground for river crossings. ... At locations where the pipe is exposed, a reinforced design (e.g. as steel or concrete) could be considered. Specific impact forces should be calculated in final design. Alternatively, the pipeline could be suspended above dense-flow avalanches and reinforced for powder avalanche impacts.' (Section 6.0) Where the pipeline is suspended for river crossings it appears to be integrated into bridge design, at least at this stage of feasibility and analysis documentation. I concur that, at this level of analysis and proposed mitigation, that pipeline rupture probability is as described: negligible where buried.	Comment noted. Commitment: None required.	No response required.
Geotechnical Issues	7.2.1.6	The nature of avalanche dynamics are such that flowing, sliding and entrained snow does not incorporate significant material at the sliding surface though avalanches can entrain some rock and soil which deposited in the debris cone. Significance is measured in contrast with debris flows which entrain rock from pebble though gravel and cobble to boulder size from their paths and create channels and levee walls which may form on debris fans. These channels will	NovaGold agrees that there are differences in entrainment characteristics between avalanches and debris flows. BGC specified the sections of debris flow channel crossings where burial depth is to be exceeded. BGC is not aware of any cases where the ditching has exacerbated the propensity of scour. Since	EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		not always form at the same location and may develop adjacent to earlier channels or at the margins of debris fans. These channels may or may not carry perennial water flows. I believe that channels can incise to the level of the buried pipeline and may threaten its integrity. It is possible that the disturbance created by the burial process (ditching) could exacerbate the tendency for debris flows to downcut from the surface disturbance to the level of the buried pipe.	the pipeline ditch is running perpendicular to the channel direction there will be no changes in slope geometry. Commitment: NovaGold has committed to bury the pipeline except where it crosses streams on bridge structures, with deeper burial in areas assessed as having high geohazard potential.	
Geotechnical Issues	7.2.1.7	Other hazards to the pipeline not mentioned in the document would include. 1. ditch (road) maintenance which may uncover the pipeline; 2. frost heaving; 3. earthquake (this may be covered in another document) 4. failure of road bed due to earth movement, caused by slope integrity compromised from road construction, or plugged culverts.	The pipeline will usually be buried below average frost penetration depth. Regardless, the heat of the pipeline will likely keep the soil from freezing thus preventing frost heave. Pipeline burial will be maximized in "native" soil (not fill) to minimize the risk of movement. Pipeline markers will be installed and marker tape buried in the trench above the line to warn diggers of the pipe. The pipeline will not be installed in areas where liquefaction is a risk (i.e. earthquakes) and special burial design (commercially proven around the world) will be incorporated at any potentially active fault. Earthquake is a very low risk/impact to the buried pipeline. Pipeline operation will include regular right of way patrols to monitor for any earth movement which might jeopardize the pipeline. The patrols would identify plugged culverts, road bed movement, etc. Routine minor earthworks repairs are anticipated for the life of the project for road/pipeline integrity. Commitment: NovaGold will ensure that pipeline installation will address potential earth movements due to frost, earthquake and road settling. The pipeline location will be marked and a marker tape will be laid in the trench above the pipes to warn diggers of the proximity of the pipe. NovaGold will prepare an Operations and Maintenance manual, that will include pipeline inspections, for operation of the pipeline.	EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.
Geotechnical Issues	7.3.1.1	5.9.3.2 Hydrologic Design Criteria Overflow/overtopping the dam would release contaminated water into the environment via the emergency spillway. The dam is designed to contain the 1 in 200 wet year discharge volume. 'For every year of operation, contingency will be provided to allow storage of all water inflows such	There is an error in Section 8.4.2.2 pg 8-53. It says that the tailings dam is sized to contain the Probable Maximum Flood. This is incorrect; the tailings dam is sized to pass the Probable Maximum Flood through the	Comment addressed by NovaGold.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>as tailings supernatant, winter flows and freshet runoff for a nine month period (16th October to 15th July), if required. ... The dam is designed to contain the 1 in 200 wet year volumes.' [p. 5-158] However, for reclamation and closure the dam will be sized to contain the Probable Maximum Flood. [Section 8.4.2.2, p. 8-53] If the final dam design is one that will contain the Probable Maximum Flood, and there is non-potentially acid generating material available throughout the mine life (which will be stored in external waste dumps), why not build out the tailings dam so that it will also contain the Probable Maximum Flood during operation, instead of using a 1 in 200 year event as the dam design basis storm [see 5.9.3.2 Hydrologic Design Criteria]? Since there should be adequate construction material available to extend the height of the dam the few feet additional feet that would be necessary to contain the Probable Maximum Flood during mine operation, it would add significant safety and very little additional cost to provide this measure of safety. The dam and impoundment should be designed to hold water generated by the Probable Maximum Flood, plus residual snowmelt, not only for final closure, but also during the operational life of the mine.</p>	<p>emergency spillway on the east abutment. The Galore Creek tailings facility is designed to be able to retain water without discharge from 15th October to 15th July (i.e., nine months) in any year of mine operations, under runoff conditions up to 1 in 200 wet year conditions. These design criteria were chosen as the winter months were considered the critical months for water quality in the Galore Creek watershed. The design criteria provide for a very large volume of available storage within the tailings facility (>45 cubic millimetres for most of the operational life of the mine). Figure 7.5-13 (Volume II) of the environmental assessment illustrates the available storage volume within the storage facility and compares it to the volume of water produced in a 1 in 200 year storm event. It is clear that the facility will easily store a Q200 with no discharge through the spillway. For most of the lifetime of the mine (Year 2 to closure) the facility will be able to store between 85 to 100 % of the volume associated with a Probable Maximum Flood. In the first year of operations around 50 % of the volume would be able to be stored.</p> <p>Commitment: None required.</p>	
Mine Plan	8.1.1.1	<p>Filter Plant - 5.7.2.4 Concentrate Storage This section of the environmental assessment (5.7.2.4, p. 5-146-47) provides for concentrate storage but does not provide for storing concentrate water, which would be necessary if the treatment plant failed, froze, or otherwise could not treat water being sent thru the pipeline and separated from the concentrate. Therefore the concentrate storage facility and treatment plant both should include water storage capacity. The concentrate storage capacity is based on seven-days of production (p. 5-146, p.380) and therefore a comparable storage is necessary for the slurry water. Moreover, the mine should commit to not discharging untreated water to the Iskut or any other location should the treatment plant not clean water to the permitted/required standards. That commitment must be maintained even if it necessitates stopping slurry transport.</p>	<p>Commitments: The final design for the filter plant will incorporate sufficient redundancy and storage capacity to deal with any equipment maintenance and unplanned shutdowns. NovaGold commits to not discharge effluent which does not meet permit standards.</p> <p>Commitment: NovaGold commits to ensure that the final design for the filter plant will incorporate sufficient redundancy and storage capacity to deal with any equipment maintenance and unplanned shutdowns. NovaGold commits to not discharge effluent which does not meet permit standards.</p>	<p>EAO notes that NovaGold's commitments are included in Appendix F of the Joint Report and Schedule B of the EA Certificate.</p>
Miscellaneous	9.1.1.1	<p>5.7.3.2 Spillage and Dusting Control System -- Trucking It is proposed that the trucks that will carry concentrate from the filter plant to the port site will use tarpaulins or composite covers to keep the concentrate from blowing off the trucks during transit. 'Concentrate trucks and trailers will have tarpaulin or</p>	<p>Tarpaulins are used successfully by several BC mines. It is in Nova Gold's best interests to not lose concentrate to dusting and the company does not intend to use a concentrate cover type that promotes</p>	<p>EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter	Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses	
	composite covers to reduce loss of concentrate due to dusting while underway.' [p. 5-148] Tarpaulin-covered trucks have a notoriously poor record for keeping finely ground concentrate from contaminating road corridors. Heavy metals from ore movement can accumulate along the haul roads and create long-term contamination problems with country foods and fish and wildlife impacts. Concentrate trucks should not use tarpaulins, which are notoriously 'leaky.' Hard-top covers should be used on concentrate trucks.	loss of concentrate. Commitment: NovaGold will ensure that appropriate covers are used for concentrate trucks to minimize the loss of concentrate due to dusting. NovaGold has committed to participate with other industrial users of Highway 37 and government agencies to monitor for potential metals contamination resulting from contaminant dusting along the highway.		
Miscellaneous	9.1.1.2	5.11.2.1 Hazardous Wastes --Transportation The environmental assessment provides that during bad-weather lower speed limits and transportation of hazardous wastes may be enforced. (5.11.2.1, p.5-200). The mine should establish a detailed and concise travel plan that identifies conditions when restrictive speed limits or restrictive travel will be implemented, how they will be enforced, and a plan to handle/resolve unforeseen travel situations or events.	Once the access road construction is complete NovaGold will develop a management plan for use of the road. This plan will be adapted over time based on experience. Commitment: NovaGold will develop Emergency Response and Spill Contingency Plans for all aspects off the Project, including the access road, filter plant, tunnel and processing plant.	EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.
Miscellaneous	9.1.1.3	The environmental assessment should identify exactly how specific wastes created at the mine will be stored, transported, and otherwise handled - on an item (waste) by item basis. This is generally described in Table 5-11.2 and is discussed in more detail in Section 5.12.1.9 but neither sufficiently identifies or considers restrictions on timing (when amount of wastes allowed to be delivered or stored in individual locations or in removal areas), transport, containment measures, emergency spill response, spill notification triggers and protocols, etc. There are no clear limits and restrictions on hazardous waste handling, storage, and/or disposal. This is necessary and appropriate to minimize human and decision-making errors. These steps also provide a measuring-stick against which the mine's performance may be compared.	Commitment: NovaGold will develop Emergency Response and Spill Contingency Plans for all aspects off the Project, including the access road, filter plant, tunnel and processing plant.	EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.
Miscellaneous	9.1.1.4	Catastrophic Dam Failure -- Naturally, the potential for a catastrophic failure of the tailings and waste rock impoundment dam is of great concern to us. It is likely that such a failure would result in severe, largely unmitigable impacts on the Stikine River system, including the salmon that are such a central part of our culture and way of life. We do not believe that NovaGold has provided an adequate description of the potential consequences of such a failure in their Application, and request that they provide such a description as a supplemental report.	Commitments: NovaGold has committed to: <ul style="list-style-type: none"> • establish an ongoing initiative with the Tahltan and relevant Canadian and U.S. federal and B.C. and Alaska state agencies to assess, at a conceptual level, the effects of a catastrophic dam failure and to develop a program for remediation of those effects; • construct the tailings dam to Canadian Dam 	EAO notes that NovaGold's commitments are included in Appendix F of the Joint Report and Schedule B of the EA Certificate.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			<p>Association guidelines (1999) to withstand a 1 in 10,000 year earthquake and avalanche induced wave and to safely pass a Probable Maximum Flood;</p> <ul style="list-style-type: none"> • equip the dam with instrumentation to monitor geotechnical performance during operations and after closure; • maintain earthmoving equipment near the dam to support inspection, maintenance and repair functions after closure; and • 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. 	
Monitoring	10.1.1.1	It is proposed that 'A modified environmental effects monitoring program will commence at closure and extend into post-closure, until it can be determined that no effects to water quality are occurring' (Page 7-256 of the Application). Furthermore, it is stated on Page 7-311 that, following closure, 'Discharge or water use management may be required, and if these measures were unsatisfactory then treatment may be used, based on the environmental effects assessment program results'. Is NovaGold making a commitment to do the post-closure environmental effects monitoring (perhaps for many years until the onset of acid rock drainage generation from pit walls) and to implement any measures that might be required to mitigate potential water quality issues that might develop?	Commitment: NovaGold will undertake post-closure environmental effects monitoring as per permit conditions. Monitoring is expected to continue until regulatory agencies are confident that the site has achieved a stable and predictable condition.	EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.
Monitoring	10.1.1.2	Section 7.13.3.3 -- The access route does come close to some important ridges (mountain goat survey units 6A, 6B, and 9) that have summer and winter observations of mountain goats. While a local effect, it should be part of the monitoring plan for the road.	Commitment: A detailed wildlife monitoring plan will be completed for review by regulators and, consistent with the Participation Agreement, by TCC representatives.	EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.
Monitoring	10.1.1.3	8.7.9 Post-Closure Monitoring Post-closure monitoring can be a very important element of waste management. If critical conditions, like impending dam or waste dump failure, or the onset of acid mine drainage, are not detected in a timely manner, the costs of remediation can escalate exponentially. It is stated in	The five-year monitoring frequency applies only to mine area seeps. Post-closure monitoring will be a component of the closure and reclamation plan that will also define dam safety inspection frequency. The dam	EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>the environmental assessment: 'The post-closure monitoring program will be designed to continue the sampling of seeps monitored during operations. Monitoring will be relatively infrequent, possibly every five years, immediately after mine closure. Depending on possible indications of accelerating oxidation and potential acid rock drainage onset, such as increased metal leaching, monitoring may be done more often, perhaps yearly. This program would be combined with the overall monitoring program for the tailings and waste rock impoundment following closure.' [p. 8-114, emphasis added] Monitoring once every five years, especially immediately after mine closure, will not be adequate to detect problems in time to devise and implement effective remediation measures. A detailed post-monitoring plan should be devised that adequately outlines the monitoring required to detect environmental and structure-related maintenance issues and the budget needed to support these activities incorporated into post-closure funding.</p>	<p>safety inspection program will be consistent with the Canadian dam safety guidelines.</p> <p>Commitment: Post-closure monitoring will be a component of the closure and reclamation plan that will also define dam safety inspection frequency. The dam safety inspection program will be consistent with the Canadian dam safety guidelines.</p>	
Monitoring	10.1.1.4	<p>The Application indicates that fish (Dolly Varden) flesh will be monitored for mercury every three years or more frequently if the discharge water from the Galore Valley impoundment has a mercury concentration of 0.1 micrograms per litre or more. It is not clear in the Application whether other metal concentrations in fish flesh will be measured at this time, but we believe they should be. The Tahltan expect to be involved in finalizing the monitoring plan for this aspect of the Project.</p>	<p>Commitment: NovaGold has committed to monitor fish health and tissue quality, including but not limited to, analysis of the full suite of 30 metals used in the, in Galore Creek and other potentially affected rivers as part of the Aquatic Effects Monitoring Program pursuant to the Environmental Management Act and the federal metal Mining Effluent Regulation.</p>	<p>EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.</p>
Monitoring	10.1.1.5	<p>Application Section 10.5, Wildlife and Wildlife Habitat The monitoring program for focal species needs to be able to determine whether a change has occurred, whether that change is the result of the project, and whether the mitigations described in Section 8 are effective. The way it is currently described, it does not provide enough detail on the types of monitoring techniques being employed, the degree of rigour of the techniques, and to what extent the results are measurable. It would be beneficial to have it better defined. For example, winter moose population surveys are proposed for both coastal and interior populations but it is not indicated what type of survey technique would be used. In regards to mountain goats, the surveys for population status should be in summer and given that sightability estimates are unknown, repeated surveys of the same units would be good to see variability of baseline estimates. Winter surveys should be considered for adjusting habitat mapping with existing survey data and to better determine whether lower elevation habitats are being used to greater extent in winter. It is described but more detail is required. In addition, monitoring on the effects of noise and other effects on mountain goats needs to</p>	<p>Commitment: A Wildlife Mitigation and Monitoring Plan will be completed for review by regulators and, consistent with the Participation Agreement, by TCC representatives.</p>	<p>EAO notes that NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>be included to determine whether reproductive stress or habituation is occurring at the local and landscape level. The monitoring for western toads needs further clarification to better understand whether the methods proposed will provide the desired results. The continued DNA collection for grizzly bears of both populations is great and can add to the long term monitoring of both populations. Although it may not be statistically feasible to estimate separate coastal/interior population sizes in the north study area, absolute numbers of coastal vs. interior bears should be reported in future for ease of trend comparison. Will the same sites be used or will another sampling scheme be used? It would be beneficial to capture movements across the access route for the interior bear population. Further detail on the proposed monitoring for grizzly bears would be useful. It would be useful to have additional monitoring for grizzly bears identified and detailed for the Porcupine River and Sphaler Creek. Collection of plant and animal material for environmental contaminants should continue to occur in the mine and access footprint but also within the study area. This could be accomplished through support of the Tahltan Environmental Contaminants Collection Program. Periodic monitoring for waterfowl, raptors, and songbirds should also be considered, given they are valued ecosystem components, and an important obligation under the <i>Migratory Bird Convention Act</i>.</p>		
Navigable Waters	11.1.1.1	<p>Flood Events and Water Crossings/Conveyances The roads discussion proposes to use the 100-year flood event for road design. This is not an adequate safety standard, in particular because the roads will be used to transport hazardous and toxic materials, and some of the bridges may be used for concentrate pipe and diesel pipe crossings. The mine should employ at least the 500-year event flood as the basis to design any water crossing where anything less than the 500-year event could significantly damage a road or pipe crossing. At a minimum, the inadequacy of the 100-year flood standard is supported by the use of the 200-year event level for navigable water crossings. (See 5.12.1.9, p.5-236). The same comment applies to culverts and other water conveyances. The mine will operate for approximately 25 years. The 100-year event is not sufficiently protective of natural resources in this unspoiled area.</p>	<p>The road has been designed to standards consistent with or exceeding those used for other resource roads in BC.</p> <p>Commitment: None required.</p>	<p>Ministry of Forests and Range notes that it is satisfied with standards being used to design the access road.</p>
Navigable Waters	11.1.1.2	<p>The goal of any bridge spanning a fish-supporting water body should be to set the span of the bridge sufficiently back from the water body so that no water diversion or containment (including rip-rap) is required. In other words, rather than contain the water to accommodate the bridge, the bridge should be longer and/or higher, thereby avoiding entirely contact with the footprint of the water body. This will eliminate the impacts from riprap and other 'protective' measures. (See 5.12.2.4, p.5-247).</p>	<p>All Commitment: All crossings will be designed to span and not encroach upon the bankful width of the stream. Riprap will be used to protect bridge abutments.</p>	<p>EAO notes that NovaGold has addressed the comment.</p>
Pipelines	12.1.1.1	5.7.1 Concentrate Pipeline, 5.7.1.1 Pumping System, Alignment, Specifications	NovaGold proposes independent pipeline monitoring	EAO notes that NovaGold has

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>and Operations The mine proposes to install pipelines from the mine to the Junction of Highway 37. 'The pipeline will be buried over its entire length to a depth in compliance with ASME B31.11. Depths will range from 1.6 to three meters depending upon the geotechnical risks at each site, with deeper burial proposed for sites, such as potential debris flow channels, with higher risk. The alignment will generally be under the access road ditch, but minor diversions will be required to maintain appropriate grades to avoid the settlement of solids in low points during shut downs. Directional drilling will be used to install the pipeline under four streams and it will be attached to bridges for another 19 crossings (Table 5.7-1). Elsewhere it will be buried in a trench under the crossing. Where the pipeline is attached to bridges it will be insulated to prevent freezing.' [5.7.1.1, p.5-135]. There is a presumption that the company would protect its concentrate, because that is the value extracted from the mine, but this significant pipeline network (both concentrate and diesel fuel) warrant physical protection beyond just burial (such as double-wall pipe with leak detection). This is supported by the euphemistic statement, 'Control of the system will be automatic in the steady state mode with operator intervention required during process upsets' (p.5-137) which essentially translates into 'the system is monitored and controlled in the field and there is little or no monitoring or control from the control room.' There is no indication that the 'control room' control can even indicate minor leaks. Nor is there any plan to access the pipeline if it leaks in winter and is covered by snow/ice. The suggestion that air and nitrogen will be used to evacuate the pipe does not indicate its ability to successfully remove liquids and solids, particularly during freezing weather and/or in low points, which could freeze/crack and release contaminants into the environment. There should also be a pre-planned pipeline inspection and maintenance program to ensure that the pipelines both maintain integrity. Finally, there should be a contingency plan to ensure a timely, adequate, and complete response to leaks. A full contingency and response plan should be developed and implemented to ensure that in any season any leak will be detected, the pipelines are shut-down, the pipelines are emptied, and leaked materials are extracted from the environment. The pipeline monitoring systems should be completely independent, so that a failure of one of the monitoring systems does not impair the monitoring of the other. Even with the independent monitoring systems, in the event of unplanned shutdown of one pipeline, the other pipeline should also be shut down to ensure that the disturbance/event that injured one pipeline did not injure the other.</p>	<p>systems for the concentrate and diesel pipelines as described in the PSI report on the pipelines posted to the EAO website under Concurrent Permitting.</p> <p>Commitment: A program of regular inspection and maintenance will be implemented and contingency and emergency response plans will be developed. Pursuant to the Participation Agreement, the TCC will have an opportunity to comment on the draft pipeline permit application.</p>	<p>committed to equipping 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. NovaGold has also committed to providing 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.</p>
Pipelines	12.1.1.2	5.7.1.2 (Slurry Pipeline) Protection System There are several potentially problematic issues with the slurry pipeline protection system that need further	Commitment: NovaGold will provide comprehensive plans for management of the pipeline as part of the	See response to 12.11.1.1.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter	Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses	
	analysis in the environmental assessment. It is stated: 'The pipe would have five pressure monitoring stations, one at the mine pump station, three at intermediate monitoring stations and one at the terminal station to support pipeline operations and for leak detection. The monitoring stations will be powered by independent propane-fuelled generators (two kilowatts each). The leak detection system will issue a warning and predict the location of a leak within two to fifteen minutes of an occurrence. The principles of leak detection are a comparison of the flow rates, pressures and densities along the pipeline based on the flow regime in the line and the position of the pipeline valves. Isolation valves will not be installed along the line. Experience elsewhere has shown that isolation valves in concentrate slurry pipelines disturb the flow pattern of the slurry, causing extensive scouring and abrasion leading to pipe failures.' [p. 5-138, emphasis added] There is no discussion of how much material could be lost during the fifteen minutes it might take to discover the presence and location of a pipeline break, or how much material would be lost in a worst case situation if a portion of the pipeline ruptured with no check valves in the system. A rupture of the slurry pipeline at a stream crossing could result in the discharge of the equivalent of (how) many truckloads of concentrate into the environment. Unlike dried concentrate, the slurry concentrate would be highly mobile. In this particular location, with avalanche danger of avalanches and rock slides, the slurry pipeline could actually pose more potential environmental danger than trucking the concentrate in hard-topped trucks. The environmental assessment needs more analysis of these potential failure situations.	permitting process under the <i>Pipeline Act</i> . NovaGold will assess potential pipeline failure scenarios and their consequences as part of emergency response planning prior to start up.		
Pipelines	12.1.1.3	The environmental assessment describes a 1,200 cubic meter internally supported covered tank to collect the concentrate pipe's contents in an emergency [5.7.1.2, p.5-138]. An emergency-tank/system (multiple locations if necessary) should be available to passively (gravity) empty/contain the entire pipeline content and also separately for the diesel fuel pipeline.	The current design calls for an emergency drain tank for the concentrate pipeline with capacity to hold all of the concentrate in a worst case scenario. The much smaller diameter diesel pipeline will be equipped with more check valves and has been designed to operate independently of the concentrate pipeline. Details of these systems can be found in the PSI report posted on the EAO website under Concurrent Permitting. Commitment: None required.	See response to 12.11.1.1.
Social and Cultural Effects	13.1.1.1	The reader should refer to Section 5.7 of the document 'Tahltan Comments on the Application by NovaGold Canada Inc. for an Environmental Assessment Certificate for the Galore Creek Project, October 18, 2006' for general background information on the comments in this section of the Issues Tracking Table.	Comment noted. Commitment: None required.	No response required.
Social and	13.1.1.2	Under the BC Environmental Assessment process, the Terms of Reference for	Comment noted. This is an issue for discussion	See response to 5.1.1.7.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
Cultural Effects		an Environmental Assessment do not adequately address social and cultural effects.	between the Tahltan and the provincial government. Commitment: None required.	
Social and Cultural Effects	13.1.1.3	The proposed project will result in a loss of pristine traditional land, which will adversely affect our cultural connection to the land.	It is recognized that development can have temporary impacts on the landscape. However, these impacts can be offset by economic benefits through the creation of jobs and business opportunities leading to more sustainable communities. For the Tahltan, the Participation Agreement includes measures to mitigate and enhance culture and heritage. Commitment: None required.	EAO notes that the Participation Agreement with the Tahltan is intended to address potentially negative effects of the Project. As part of the Tahltan-BC reconciliation table, the EAO is participating on a Social/Cultural Working Group to: discuss existing processes for addressing potential socio-cultural effects of resource developments within the Tahltan traditional territory; and identify the Tahltan's interests in socio-cultural effects assessment environmental assessment process. The EAO anticipates these discussions will lead to improvements in social cultural effects assessments for reviews of other projects in the Tahltan traditional territory.
Social and Cultural Effects	13.1.1.4	We recognize that the Project will have some positive economic effects (e.g., more jobs and income) on the Tahltan	Comment noted. Commitment: None required.	No response required.
Social and Cultural Effects	13.1.1.5	It is likely that the Project will contribute to a variety of adverse social and cultural impacts on the traditional structures and communities of the Tahltan, including: increased level of domestic violence; increased gambling and substance (alcohol and drugs) abuse; increased property crimes; marginalization of the elders; decreased interest in obtaining higher level education (or even basic literacy and numeracy skills) as young people choose immediate high paying employment at mine; changes in social status and structures within families and communities; loss of support systems through loss of Tahltan members to employment at mine; reduced interest and engagement in traditional activities, and resulting loss in ability to pass on this knowledge; Increased inter-generational dissociation; more single-family homes; loss of adult male role models in families; increased family stress as a result of two-week rotation fly-in-fly-out schedule at mines; loss of females to employment at the mine, and decreased practice of traditional lifestyles; influx of non-Aboriginal	It is agreed that a range of impacts, both positive and adverse, may occur as a result of the Project. These have been considered and assessed as part of the Galore Creek effects assessment (see Volume II, Chapter 7 and Appendix 6-S). Baseline conditions show the existence of some issues and trends which may be compounded by a new development, such as the Project, in Tahltan territory. The actual nature and extent of some of the potential Project effects are difficult to assess and predict, however, due to their dependency on individuals, their histories, their capacity to cope with change and choices made. As a result, the extent of change and cumulative nature of effects is often beyond prediction. Where the environmental	See response to 13.1.1.3.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter	Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses	
	<p>migrant workers into communities resulting in increased pressure on housing and community services (e.g. educational, policing, child welfare, drug and alcohol counselling, family counselling, justice systems, medical support, etc.) and dilution of traditional lifestyle and activities; greater likelihood of non-Aboriginals marrying or fathering children with Aboriginal women, leading to greater dissolution of the Tahltan Nation, an increase in the number of single parent households, and the loss of <i>Indian Act</i> status for children that arise from such unions; increased demand for intervention by front line community workers; loss of language, culture, and participation in traditional and historic activities; increased stress and stress related illnesses; increased prevalence of sexually transmitted diseases; increased incidence of Fetal Alcohol Syndrome; increased consumption of less healthy foods and increased incidence of diseases such as diabetes; increased accidents from heavier traffic along Highway 37; and increased deaths from accidents and suicides The specific adverse social and cultural effects that result from the Project will act cumulatively those adverse effects from other development projects in the Tahltan territory.</p>	<p>assessment has considered a high likelihood of effects, mitigation and management measures have been proposed. NovaGold is also aware that new or different issues and effects may arise at different stages of project development. Therefore, the Participation Agreement ensures on-going monitoring and assessment of social, cultural and heritage issues alongside environmental issues. The Participation Agreement aims for collaborative work with the Tahltan Nation to enhance socio-cultural and socio-economic elements. To this end, mechanisms such as the Human Resources Committee, workplace commitments, Tahltan Heritage Trust, and a scholarship fund have been agreed with the Tahltan.</p> <p>Commitment: NovaGold will honour the conditions of the Participation Agreement that provide avenues to mitigate social and cultural impacts of the Project on the Tahltan people.</p>		
Social and Cultural Effects	13.1.1.6	<p>The Application quotes the 2005 socio-economic overview assessment as stating that '...the effect of one mining development may be significant, while the impact of a second or third mining development would be less so.' This statement is not supported by any evidence that we are aware of, and is in fact contrary to our experience and common sense. As more mines and other development activities occur in Tahltan territory, there are clearly predictable cumulative impacts on our environment, health, social and cultural indicators.</p>	<p>This quote is from a report prepared for the provincial government and the context refers to employment. It is a secondary source for the environmental assessment Application. The statement has been used in the environmental assessment to highlight that the effects of projects subsequent to the first will not be experienced with the same level of intensity. With greater awareness of project components and processes, potential impacts and potential benefits from mitigation and enhancement measures, individuals and communities may be better placed to cope with the changes brought about by subsequent projects.</p> <p>Commitment: None required.</p>	See response to 13.1.1.3.
Social and Cultural Effects	13.1.1.7	<p>The NovaGold assessment of social and cultural effects was limited by the lack of an appropriate model for determining and measuring socio-cultural impacts. We recommend that the provincial government assist the Tahltan Nation to develop a specific and unique model should be developed for determining and measuring socio-cultural impacts that can be used both within and outside of future development assessment processes such as the environmental</p>	<p>The NovaGold assessment was developed after extensive methodological research and development across the disciplines. The model used covered both bio-physical and human environments and was developed to meet <i>BC Environmental Assessment Act</i> and <i>Canadian Environmental Assessment Act</i></p>	As part of the Tahltan-BC reconciliation table, the EAO is participating on a Social/Cultural Working Group to: discuss existing processes for addressing potential socio-cultural effects of resource developments within

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		assessment process. Such a model could be a process for determining what needs to be part of an environmental assessment's Terms of Reference, and could also be used in cases where the environmental assessment process doesn't apply, or more broadly in helping the Tahltan Nation to determine their own vision. The development of a comprehensive social impacts assessment model would include: establishment of a 'baseline' of social conditions in the community, including community consultation and research; identification of those social indicators that will be used to assess the impacts of the development; measurement and monitoring of social indicators; preparation of initial reports and recommendations; and delivery of recommendations to developer.	requirements. The Participation Agreement was structured such that the Tahltan Heritage Trust is a funding mechanism to address and mitigate social and cultural impacts of the project. Commitment: NovaGold will honour the conditions of the Participation Agreement.	the Tahltan traditional territory; and identify the Tahltan's interests in socio-cultural effects assessment environmental assessment process. The EAO anticipates these discussions will lead to improvements in social cultural effects assessments for reviews of other projects in the Tahltan traditional territory.
Terrestrial Ecosystems	14.1.1.1	The only reference to field sampling with respect to predictive ecosystem mapping is on page 3-12 of Appendix 6-J; it states that: 'There is no minimum field sampling requirement for predictive ecosystem mapping, however, efforts were made to collect sufficient data throughout the area to gain a reasonable understanding of the spatial relationship between site series and landscape features.' Table 3.6-1 indicates that no surveys were conducted. The documentation (i.e., Application and appendices) does not provide any indication of map reliability. Given that the project area is in previously un-described terrain, with unclassified ecosystems, the potential for predictive ecosystem mapping to be accurate is lower than most, for example compared to areas that are well documented and, provincially classified and described. It is recommended that the ground truthing for the predictive ecosystem mapping component of the mapping be described in more detail.	Table 3.6-1 reports applicable survey intensity level. In this case of predictive ecosystem mapping, N/A means not applicable, indicating that although surveys were completed, there is no standard level required. It does not mean that plots were not conducted for use in the development of the predictive ecosystem mapping. In the field, surveys are the same, regardless of the map base (terrestrial ecosystem mapping/predictive ecosystem mapping). The plots conducted for the Project served a dual purpose. 1) to thoroughly describe areas that were to be disturbed by mine activities, and 2) to try to reach the survey intensity levels outlined for terrestrial ecosystem mapping. All field plots fed into the models and relationships used to develop the predictive ecosystem mapping. Similarly, travel to/from sites during the day were also used as opportunities to make notes that would be fed into the predictive ecosystem mapping Commitment: None required.	EAO notes that this issue was discussed at a meeting on November 23, 2006 and the Tahltan Nation participated in that discussion.
Terrestrial Ecosystems	14.1.1.2	It was noted that at the end of Appendix 6-J, a long table of plots was provided for both terrestrial ecosystem mapping and predictive ecosystem mapping. This means that the reader must go through this table line by line to count the number of predictive ecosystem mapping plots. This method of reporting is not acceptable. A summary table should be provided indicating the number of plots, distribution of plots and a prediction or estimate of map reliability and/or limitations.	Plot details (numbers, distributions) are provided in Figures 4.3-2 and 4.3-3). The use of this field data to estimate map reliability is not appropriate as the information was used to refine the map. Map reliability assessments are separate undertakings, usually conducted by someone independent of the party that developed the map.	See response for 14.1.1.1.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
Terrestrial Ecosystems	14.1.1.3	Rare ecosystems -- It is not clear how rare ecosystems will be impacted overall. What is the status of these rare elements on a local perspective? Or a regional perspective? What is the predicted cumulative impact on these sensitive areas? Are certain projects such as mining project more likely to impact sensitive areas such as alpine areas in comparison to say forestry operations? What is the threshold of sensitive communities within a regional landscape to withstand certain influences by humans whether it be mineral exploration, mining, or recreation and tourism?	<p>Commitment: None required.</p> <p>Details pertaining to the effects of the Galore Creek project on rare ecosystems and alpine areas have been provided throughout Section 7.12. The local and regional perspectives of these elements are unknown. Rare ecosystem status has been provided by the CDC. Those identified in the Project are blue-listed and have therefore been identified elsewhere in the province. Cumulative impacts on these sensitive areas would be similar for those discussed generally in the cumulative effects assessment. Specific mention of the potential increase in disturbance of parkland/alpine areas due to the access road has been identified. It is not reasonable to compare the mining and forestry sectors because of the significant variability in the potential locations of these resources. Sensitive community thresholds are entities that require definition and are currently unknown at all scales (local to provincial and beyond). Thresholds can be defined as much by society as by ecology. The concept of thresholds encompasses an area of ecological study and theory that goes way beyond the scope and requirements of the current effects assessment.</p> <p>Commitment: None required.</p>	See response for 14.1.1.1.
Water Quality	15.1.1.1	We require more information on the analyses that were used to conclude that impoundment water will be suitable for direct discharge to the environment after mine operations have ceased. We also believe that the permitting for any discharge from the Galore Creek valley impoundment must clearly lay out the circumstances, and the decision making process, under which various types of mitigation, including water treatment, would be triggered. We anticipate that these triggers would be based primarily on monitoring information. We also expect that the Tahltan would be involved in developing the triggering conditions during permitting, and in the decision making process that might lead to additional types of mitigation.	<p>Details of the water quality prediction model for the Tailings Impoundment are provided in Appendix 7-D. In addition, NovaGold is preparing a report outlining additional modeling of pit lake and tailings facility water quality. As per the Participation Agreement, the TCC will be consulted on all permits.</p> <p>Commitment: NovaGold will prepare a report outlining additional modeling of pit lake and tailings facility water quality. As per the Participation Agreement, the TCC will be consulted on all permits.</p>	See response for 2.1.1.3.
Water Quality	15.1.1.2	Page 7-219 - Some rock faces exposed in the excavation of the eastern diversion channel may be potentially acid generating. It is not clear how these potentially acid generating rock faces, if found during the building of this	Commitment: Acid generation of excavated faces will be assessed during diversion channel construction. An on-site laboratory will be available for characterization of	EAO notes that NovaGold has committed to assessing acid rock drainage potential of excavated faces

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		diversion channel, will be remediated in a way that mitigates potential future acid rock drainage issues.	excavated rock. Appropriate long term mitigation will be developed for potentially acid generating rock encountered during construction.	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. Will continue to collect hydrological data within the study area throughout the life of the project to update the water balance and hydrological models.
Water Quality	15.1.1.3	We note that the location of the Filtration, Storage and Loadout facility has changed since the Application was submitted. We would assume that this would result in a new effluent discharge location in the Iskut River. Has the diffuser and water quality modeling been revised to look at the potential impacts of the discharge at this new location?	The location of the filter plant discharge has not changed; therefore modeling is based on correct information. Commitment: None required.	NovaGold has addressed the comment.
Water Quality	15.1.1.4	7.6.4.1 Effluent Discharge - Galore Creek Water quality in Galore Creek will be maintained by storing effluent during the winter low-flow periods and scheduling release during high-flow periods (mid-May to mid-October). [see p. 7-231] There is no treatment proposed for the tailings pond discharge to Galore Creek/Scud River, which requires a mixing zone in the Scud River [see 7.6.4.1 Effluent Discharge, p. 7-231]. The Scud River will be used as a mixing zone for the mine effluent discharge starting at the junction with Galore Creek. Galore Creek is now totally 'utilized' for dilution. In addition to Galore Creek, the Scud River will be used as a mixing zone for ammonia, selenium and cadmium the mine effluent discharge. There is no treatment proposed for the tailings pond discharge to Galore Creek/Scud River, which requires a mixing zone in the Scud River for many constituents, most notably ammonia, lead, zinc and cadmium. [see Galore Creek Application, 7.6.4.1 Effluent Discharge, p. 7-231, and Table 7.6-16] The Scud River already has metals levels that occasionally or always exceed regulatory guidelines. The metals that are always in excess of guidelines are aluminum, cadmium, copper, iron and lead. The metals that occasionally exceed guidelines are arsenic, cobalt, selenium and zinc. [see Table 7.6-12] As shown by the calculation for zinc in Table 7.6-11, the increase in the levels of contaminants can be significant. In addition, there is no prediction of the length of the 'mixing zone' required for the Scud River: 'As the geographic limit of the water quality model is Scud-2, there are no water quality predictions downstream of this point. In the absence of this information, it has been conservatively estimated that effects could potentially extend as far as the confluence of Contact Creek (approximately six kilometres downstream of Scud-	Detailed modeling of mixing within the Scud River was outlined in Volume II, Section 7.6. This modelling work was undertaken using the MIKE-21 hydraulic model. The model predicted that full mixing was obtained before the Scud-2 monitoring station. Potential toxic effects to aquatic life (benthos, fish, algae) were calculated using the hazard quotient method. It was concluded that the potential exists for low level effects to aquatic life within the mixing zone. Commitment: None required.	MOE notes that background conditions are taken into consideration and in some cases; proponents develop site-specific water quality objectives. There are certain restrictions (e.g., cannot be acutely toxic). Also have chronic toxicity and acute test work is required. The location of the compliance point will be determined during the permitting stage. . MOE has asked the Proponent to identify possible water treatment options As part of the permitting stage. EC notes the following: 1) The final discharge point under the Metal Mining Effluent Regulation (MMER) would be the discharge from the tailings impoundment. MMER effluent requirements must be met at this point. The MMER require non-acutely lethal effluent, and limit the deposit of deleterious substances. 2) EC does not recognize a mixing zone where regulated limits may be

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>2), the first significant tributary after Scud-2. It has been calculated that Galore Creek flow comprises 0.3% of the Stikine River flow (Appendix 6-C). Therefore, effluent release to Galore Creek is anticipated to not affect water quality in the Stikine River.' [p. 7-256] The limits for the mixing zone in the Scud River need to be defined, and the potential impacts on aquatic life in the mixing zone thoroughly discussed.</p>		<p>exceeded in the receiving environment. All effluent must meet MMER requirements and be non-acutely lethal.</p> <p>3) In practical terms, effluent obviously mixes with receiving environment waters. CCME water quality guidelines, or any site specific guidelines that are established, are recommendations, and the way effluent mixes will be a factor in how the guidelines are applied.</p> <p>4) Aquatic life site specific guidelines are derived to be protective of indigenous organisms under site conditions to which they are adapted. The CCME provides guidance regarding how to derive site specific guidelines.</p> <p>5) The MMER include requirements for environmental effects monitoring (EEM) in Schedule 5. A regulated facility is required to determine the extent, magnitude, and cause of any effluent effects it may cause on fish, fish habitat, or the use of fish resources. If effects are deemed unacceptable, further management actions may be required.</p> <p>6) As there is a risk that the proposed discharges may not attain site specific guidelines (or provincial water quality objectives) or may cause environmental effects, Environment Canada recommends that the proponent develop contingency plans. Point 5 is somewhat theoretical as no regulated facilities have progressed to this point in their EEM programs, but there are precedents (e.g., Eurocan (taint) and Port Alberni (low D.O.)).</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
Water Quality	15.1.1.5	<p>The discussion of nitrate contamination in section 7.7.3.1 states that: 'During the construction and operation phases, the amount of ammonium nitrate/fuel oil expected to be used is estimated to be approximately 221 Mkg (Hatch, 2005). With application of best practices to ensure maximum consumption of ammonium nitrate/fuel oil in the explosions, expected amount of undetonated ammonium nitrate/fuel oil is estimated to be 2.21 Mkg or 1% of the total. This undetonated amount of ammonium nitrate/fuel oil is significant and will contribute a significant amount of nitrate and ammonia to the surface and ground waters. However, since all surface and groundwater flow from the pit areas will be directed into the tailings impoundment, it is expected that most ammonium nitrate/fuel oil contaminated water will be captured and diluted to low concentrations in the tailings impoundment.' [7.2.8.3, p.315] Based on nitrate contamination and persistence at many other mines, these predictions are suspect. A contingency plan for dealing with nitrate-based compounds in surface or ground water should be developed.</p>	<p>Residual ammonium nitrate concentrations in the impoundment were modeled based on the mass balance model used for all water quality predictions. The amount of residual ammonia-N, nitrate-N and nitrite-N were derived using the modified EC model developed by Pommen MOE and modified by Ferguson and Leask EC. The projected total amount of ammonium nitrate used during the three year construction period and the 22 years of operation is 221 million kg (Hatch Feasibility Study). The predicted split of ammonium nitrate explosive as ammonium nitrate/fuel oil (dry-water soluble) and slurry (wet-waterproof) is 1:1. The amount of residual explosive loss as nitrogen based on the Environment Canada model was 0.94% for ammonium nitrate/fuel oil and 5.1% for slurry. The apportion of inorganic nitrogen load for predicting concentration in the impoundment was 87% as nitrate-N, 11% as ammonia-N and 2% as nitrite-N. Based on the above assumptions, the predicted concentrations for various nitrogen species in the impoundment were assessed downstream in lower Galore Creek and the Scud River. The levels predicted were well within safe levels for aquatic life in the receiving environment. The method used to derive the concentrations was based on MOE and EC methodology which is very conservative. The statement that the predictions are suspect is unfounded and not warranted. There will be an extensive monitoring program which will include regular sampling and analysis for nitrate, nitrite and ammonia in pit dewatering, waste dump runoff, tailings, and the impoundment. This monitoring will provide an early warning system of any changes from the model prediction. The main area of concern with explosive residue is primarily housekeeping, i.e., handling around drill pattern and during infilling of the drill holes. Appropriate loading of wet holes with water insoluble slurry explosive versus dry ammonium nitrate/fuel oil water soluble explosive is a key factor in minimizing the</p>	<p>MOE notes that nitrite, nitrate and ammonia levels will be set in the EMA permit.</p> <p>EAO notes that NovaGold has committed to use emulsion explosives as required to minimize ammonia and nitrate losses and contamination. NovaGold has also committed to 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.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			<p>amount of residual explosive. Fine tuning explosives handling procedures will be the main contingency plan in the event that residual species of nitrogen exceed the predicted concentrations in the impoundment.</p> <p>Commitment: NovaGold will address potential ammonia leakage from the explosives storage facility through mitigation measures including non-corrosive storage silos, an impermeable apron and a spill management plan.</p>	
Water Quality	15.1.1.6	<p>The tailings impoundment's impacts to water quality over time could be significant. The environmental assessment states that: 'Seepage of water from the tailings impoundment to the groundwater regime is expected since the K value of the underlying rock is estimated to be 10-5 meters per second to 10-7 meters per second (Table 7.7-4). The potential of groundwater contamination from the tailings impoundment is an issue if seepage below the impoundment dam is in fact carrying contaminants and the flow is not captured before discharging into Galore Creek or the Scud River.' [7.7.3.1, 7-287-88, p.318-19] The environmental assessment then goes on to describe methods to limit seepage below the tailings impoundment dam. As discussed elsewhere in this document, the best method to prevent seepage is to install proper liners to fully contain the tailings inside of the impoundment. Natural rock and other materials proposed are important but they are not substitutes for proper clay and geosynthetic liners and leak detection systems. Methods for this are described elsewhere in this document but simply stated, in addition to sub-liner protections (grout, monitoring, pumpback if necessary, etc) the tailings impoundment should at a minimum include a thick compacted swelling clay liner with a double synthetic liner incorporating a leak detection system. To be fully protective and able to respond to future leaks/problems, the tailings impoundment should also include a drainage collection system. This could be a sand layer below the impoundment with a network of perforated pipe to collect seepage, or a more complex system.</p>	<p>The BGC report 'Waste and Water Management - Feasibility Geotechnical Report' issued in April 2006, (Volume VII, Appendix 5-1) states that a geomembrane liner has been proposed on the upstream dam face as a temporary measure to ensure the dam can store tailings in a timely fashion. The liner will hold water, while the impervious core will be constructed downstream. The till core will be relied on to minimize seepage through the dam for the entire life of the mine with the exception of the first year of operations. To minimize the risk of rupture of the liner from the underlying 76 millimetres minus waste rock shell material and prevent the migration of tailings through the liner in the event of a leak, a cushion/filter of select waste rock will be placed over the 76 millimetres minus waste rock and a geotextile will overlie this cushion/filter layer. The Coletanche membrane will then be installed on top of the geotextile. During operations, tailings will eventually be deposited on top of the geomembrane. The gradation of the cushion/filter is 19 millimetres (¾ inches) gravel to meet filter criteria between the tailings and the 76 millimetres (3 inches) minus waste rock. The cushion/filter layer will be approximately 4 meters thick (horizontal thickness) to facilitate placement, and will be compacted to minimize deformations. To further protect the Coletanche liner from damage due to tailings deposition off the dam crest, a geotextile may be required under the slurry pipelines where the lines rest directly on the liner. As for lining the entire basin, this</p>	<p>In case seepage water quality is poorer, NovaGold has designed a seepage collection and pump back system immediately downstream of the dam as a contingency measure.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			<p>option has not been considered because it is assumed that the seepage out of the tailings dam and foundations will be dischargeable. As a contingency, in case seepage water quality is poorer than predicted, a seepage collection and pump back system has been designed immediately downstream of the dam.</p> <p>Commitment: None required.</p>	
Water Quality	15.1.1.7	<p>7.8.2 Discharges The environmental assessment discussion about mine discharges to water bodies (Section 7.8.2) is an exercise in using natural water bodies to treat untreated or less-than-fully treated mine waste. The environmental assessment makes many assumptions and predictions to support discharging polluted water and sediment from the tailings pond and other sources will not cause environmental degradation. Much of this is based on the ability of the currently healthy ecosystem to sustain degradation but not completely collapse. The environmental assessment discussion should instead focus on how to prevent the mine causing degradation in the first place.</p>	<p>The basis for the effects assessment for water quality is the water quality model which indicated that only some variables would increase, and these increases would not be expected to cause significant effects to aquatic resources.</p> <p>Commitment: NovaGold will ensure that discharge permit levels are not exceeded and that appropriate environmental monitoring is conducted to avoid impacts.</p>	
Water Quality	15.1.1.8	<p>7.8.4 Significance of Residual Adverse Effects The environmental assessment consistently and very optimistically concludes that there will be no adverse impacts from the mine's operations or long-term reclamation. For example, section 7.8.4 states that: 'No significant adverse residual effects to sediment quality were associated with project activities or components. Potentially serious adverse effects relating to catastrophic failures involving the tailings dam (breach or overspill events), pipeline ruptures, or filter plant accidents were all assigned a very low probability of occurrence. Best management practices and monitoring of structures and water quality of discharges by trained personnel will mitigate potential impacts.' [p.7-322] In spite of these predictions, there are virtually no examples of operating mines that have not caused significant environmental impacts onsite and/or offsite. As a result it is difficult to accept the environmental assessment's optimistic conclusions. The agencies should require more stringent environmental safeguards and require that the mine water be fully treated before discharge. To minimize the potential for offsite impacts, the most important thing that can be done is to treat the mine discharge water to meet or exceed the water quality of the receiving water body, or applicable water quality standards. This is underscored because of the many presumptions made in the environmental assessment. A key example is that: 'It is expected that the water quality from the tailings and waste rock impoundment will be suitable for direct discharge to the receiving environment without treatment. However, as</p>	<p>1. Water from the tailings impoundment will be sampled weekly (Table 10.6-1). The water discharge permit may require daily sampling for certain variables</p> <p>Commitment: 1. NovaGold will take effluent samples on frequency stated in the waste discharge permit. 2. NovaGold is investigating conceptual plans for a treatment facility that could be implemented should the already conservative provisions for water quality management not meet permit requirements.</p>	<p>MOE supports the Proponent's commitments. MOE notes the sampling frequency will be considered during the permitting stage.</p> <p>EC – see response for 15.1.1.4.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>part of NovaGold's proactive Environmental Policy and Operations, Maintenance and Surveillance manual, monthly water samples of the in impoundment water will be collected to monitor the water quality. Samples will be collected from defined collection points, and submitted to the lab for analytical testing. All results will be recorded and reported to the regulatory officials. This monitoring will ensure a track record of the in-impoundment water quality, and advise of any changes to the water quality.' [8.4.4, p.8-58-59] Where discharge is anticipated from the tailings impoundment, water quality samples should be taken weekly or more frequently. The mine should develop a contingency plan identifying how it will treat impoundment water in the event that impoundment water quality is lower than that of the proposed receiving waters.</p>		
Water Quality	15.1.1.9	<p>8.4.8 Surplus Water Discharge The environmental assessment states that the mine will comply with the Metal Mining Effluent Regulations under the <i>Fisheries Act</i>, Environment Canada LC50 standard toxicity testing protocols and the regulatory and permits conditions. These standards are not as protective as, and do not comport with, the environmental assessment's statement that: 'NovaGold Canada Inc. (NovaGold) intends the Galore Creek project to be a showcase of sustainable mining practices. Every reasonable effort will be made to minimize long-term environmental impacts and to ensure that the project provides lasting benefits to local communities while generating substantial economic and social advantages for shareholders, employees and the broader community.' [1.3, p.1-9] Based on NovaGold's own intentions, the mine should employ standards that protect pre-existing water quality the fishery, and not just those protected by the LC50 toxicity protocols. If the regulatory agencies allow the mine to proceed with the mine's proposed discharges, then at a minimum the agencies should require (before mining starts) detailed contingency plans describing how the mine will contain, control, and mitigate impacts that exceed the environmental assessment's very optimistic predictions.</p>	<p>Commitment: 1. NovaGold will work with MOE to develop site specific water quality objectives. 2. None required.</p>	<p>MOE notes the Tahltan will have an opportunity to participate in discussions during the permitting stage. The Tahltan will have an opportunity to review and comment on the permit application.</p> <p>EC – see response for 15.1.1.4.</p>
Water Quality	15.1.1.10	<p>11.7 Effluent Discharge Alternatives, Tailings Pond/Mine Water Discharge For purposes of the environmental assessment: 'It assumed that the pond water chemistry will be suitable for direct discharge to the environment after mining has been completed so all water exiting the spillway will be released without collection and treatment.' [see 5.9.7 Closure Concepts, p. 5-158] It is further stated: 'The effluent water quality from the tailings and waste rock impoundment is expected to be meet the quality criteria of the Metal Mining Effluent Regulations regulation discharge limits; therefore, treatment of the effluent is not required. However, throughout the life of the mine, should the discharge exceed the Metal Mining Effluent Regulations discharge limits, NovaGold will take immediate action to ensure the effluent does not enter the receiving</p>	<p>Commitment: NovaGold will model post-closure water quality and this modelling will assist to determine whether post-closure treatment will be required. Further assessments will be undertaken during the life of the mine so that post-closure water quality should be predicted with a high degree of confidence by the time that the mine closes. Appropriate bonding will be established, based on this information, for closure.</p>	<p>MEMPR and MOE support the Proponent's commitments. See response for 3.1.1.13.</p> <p>EC – see response for 15.1.1.4.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		environment. This will involve whatever combination of measures necessary for containment (accelerated dam construction, construction of containment berms, emergency containment impoundments, decreasing the water inflow to the tailings and waste rock impoundment, decreasing water inflow from the process plant) and treatment of the primary tailings and waste impoundment water.' [see 8.4.11 Contingency for Non-Compliant Effluent, p. 8-67] Since the discharge from the tailings pond might have to be treated, a cost estimate for treatment, and an appropriate financial surety should be held, until it is demonstrated that the discharge from the tailings pond will meet Water License standards.		
Water Quality	15.1.1.11	14.4.1.4 Tailings and Waste Rock Containment Facility The discharge scenario for mine operations relies on the use of mixing zones. Will a mixing zone for Galore Creek/Scud River also be needed for closure?	Water quality in the Galore/Scud River mixing zone is expected to improve post-closure as no new tailings inputs will be added, old tailings will be submerged, and tailings will be gradually covered with natural total suspended solid loads. So eventually water quality will improve and no mixing zone will be needed. Commitment: None required.	Addressed
Water Quality	15.1.1.12	9.5 Aquatic Resources, 9.5.1 Residual Project Effects 'Discharge of filter plant effluent into the Iskut River will cause some mortality and sub-lethal effects. Effects to water quality are limited to a localized area.		Addressed
Water Quality	15.1.1.13	5.5.8 Marginal Ore Storage Ore being stored (5.5.8-5.5.9, p.5-109) should be underlined and water that contacts the ore should be sent to the tailings impoundment or otherwise tested/treated to ensure that it does not contain acid or leached metals - particularly copper. The ore contains very high levels of copper which could leach-out and contaminate surface and/or ground water. Further, the buffering capacity and acid production discussion above underscores that the ore could cause contamination. The stockpiles will contain high volumes of ore and will be frequently disturbed, potentially increasing the potential for leaching/acid production. Therefore, stored ore should be protected from water and a water capture and containment/treatment system employed.	The calculated time of over 22 years before acid generation is initiated exceeds the expected residency in the stockpile by many years. It is in NovaGold's interests to minimize oxidation in the ore stockpile in order to maximize mineral recovery in the process plant. The ore storage area will be located adjacent to the impoundment and all drainage will be directed to the impoundment. Commitment: If drainage from the ore storage area adversely affects the overall chemistry of the impoundment it will be contained and treated.	MEMPR and MOE support the Proponent's commitment.
Water Quality	15.1.1.14	Mine Site -- 7.6.3.1 Metal Leaching and Acid Rock Drainage The Scud River and the undisturbed portion of Galore Creek will be used as the mine's treatment system - essentially diluting mine pollutants until water quality is achieved. The discharge from the mine workings - including but not limited to the tailings or waste rock impoundments, or waste rock piles - could meet existing water	The aquatic resource and fisheries effects assessments (Volume II, Section 7.9 and 7.10) concluded that given the predicted concentrations in the Galore Creek and Scud River, that there would be no adverse effects on aquatic life. However, an aquatic effects monitoring	MOE notes discharge limits will be set out in the EMA permit.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>quality for toxic contaminants at the point of discharge if appropriate water treatment were utilized. All such planning should include specific standards/levels that will trigger water treatment, pumpback, etc. - not only during mine operation but after the mine is being reclaimed and into perpetuity. Moreover, it is not appropriate to use rivers, streams, and other water bodies as mixing zones for water quality 'treatment' when mine water treatment is technically and economically viable.</p>	<p>program will be in place during mine operation, which will monitor for any downstream impacts.</p> <p>Commitment: NovaGold commits to meeting all regulatory requirements for effluent discharge.</p>	
Water Quality	15.1.1.15	<p>The environmental assessment states: 'ML/acid rock drainage from pit walls will be influenced by groundwater seeping through the northern and western walls. Static test results have shown that some areas of the pit walls are potentially acid generating. Water from the open pits will be routed to a pond adjacent to the process plant and used as plant makeup water. Metal leaching rates were assumed to be those of waste rock.' [7.6.3.1, p. 7-218, p.256] This does not consider what happens to the pit and water when the mine stops operating, the pit fills to the level of the water table, and the then-contaminated pit water is no longer used for mine processes. When pit water is no longer pumped from the pit to the tailings impoundment then the pit could become a lake contaminated with acid mine drainage and possibly nitrates. It would not be appropriate to leave a contaminated pit in perpetuity. A contingency plan to prevent or mitigate contamination of the pit water should be developed. A plan/contingency plan for how ground water discharging from the pit would be treated should also be developed - both in the ground and where that ground water comes to the surface as springs or seeps. The hydrologic connectivity is not clear, and could be significantly impacted by existing faulting and the mine's blasting and other operations.</p>	<p>Predictions based on currently available information indicate it is unlikely that water in pits will be acidic. However, NovaGold agrees that uncertainties exist regarding pit lake water quality which can be addressed as mining proceeds. The configuration of the site offers opportunities to ensure that contaminated water does not reach the receiving environment either on the surface or in groundwater. The pits are all upstream of the tailings impoundment which will ensure drainage from the pits is captured and treated if needed.</p> <p>Commitment: NovaGold will monitor during the mine life to model water quality and ensure that water quality objectives are achieved at closure.</p>	MEMPR and MOE note the issues raised will be assessed during closure planning.
Water Quality	15.1.1.16	<p>Filter Plant -- 5.7.2.2 Plant Layout and Process One of the statements in this section is somewhat misleading: 'The filter plant will be equipped to de-water the concentrate and treat all water received at the plant through the slurry pipeline prior to discharge. Consequently, the filter plant will include water treatment facilities to ensure that the discharge water is clean and readily meets discharge criteria.' [p. 5-140, emphasis added] The discharge from the water treatment plant at the filter plant will not meet aquatic water quality standards, so a mixing zone for contaminants in the Iskut River will be required. The statement that refers to 'discharge water is clean and readily meets discharge criteria' should be deleted.</p>	<p>1. Discharge permit limits are less stringent than guidelines for the protection of aquatic life (water quality standards). Guidelines for the protection of aquatic life do take into consideration mixing, as they are used for the receiving environment. The Iskut River (receiving environment) already exceeds guidelines (Table 7.6-19) for 13 variables, therefore site-specific water quality objectives will have to be developed. 2. The words "is clean and" may be deleted from the statement.</p> <p>Commitment: 1. NovaGold will ensure that filter plant effluent will meet discharge permit limits, water quality guidelines where baseline variables do not exceed guidelines, and water quality objectives that will be</p>	See response for 15.1.1.4.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			developed for variables that currently exceed guidelines. 2. The words "is clean and" may be deleted from the statement.	
Water Quality	15.1.1.17	It appears that a dilution of 120 in the Iskut River will be required for copper, which is highly toxic to fish. [p. 5-144] The copper load discharged daily, which could be very important given the naturally high background concentration, is not discussed. [see Table 7.6-12] In addition, the total load of copper discharged, compared to the present 'load' of copper being carried in the Iskut, should be disclosed along with the potential impacts on aquatic resources, fish and wildlife.	<p>The diffuser will discharge water with a total copper content of less than 0.17 milligrams per litre at a rate of about 0.016 cubic metres/second. This discharge will add about 0.24 kilograms of copper to the Iskut River each day. The Iskut River during freshet has an annual peak flow of about 750 cubic metres/second with a total copper content of about 0.00871 milligrams per litre, translating to a total copper load of about 564 kg per day. At average flows of about 110 cubic metres per second and averaging freshet and non-freshet total copper values, the average natural total copper load in the Iskut River calculated to be about 47 kilograms per day. The additional total copper loading from the diffuser is small relative to the total natural copper loading in the river.</p> <p>Commitment: NovaGold will regularly monitor the water quality of Galore Creek, and the Scud River, Iskut and Stikine rivers during operations and after closure to confirm modeling and ensure discharges meet permit criteria until regulatory agencies determine that conditions are stable and predictable.</p>	EAO notes NovaGold's commitment has been included in Appendix F of the Joint Report and Schedule B of the EA Certificate.
Water Quality	15.1.1.18	Filter Plant -- 5.7.2.3 Water Treatment and Discharge The environmental assessment states that: 'The clean water will be pumped through a 15 cm diameter high-density polyethylene pipeline, buried for much of its length alongside the concentrate pipeline, to the Iskut River where it will be discharged through a pipeline and diffuser system.' [5.7.2.3, p5-144] It is a misnomer to call this water clean, because in reality it is too toxic to meet standards and therefore requires that the Iskut River be used as a mixing/dilution zone. It is technologically possible, and probably economically feasible, to treat the contaminated pipeline water so that copper and other contaminants discharged to the Iskut River to pre-mine background levels. The two factors identified in the environmental assessment as critical to discharging to the Iskut River are when the copper concentration is high and when the Iskut River's flow is low. The environmental assessment states that: '... To meet the receiving water quality	<p>NovaGold acknowledges that there exists the potential for low level toxic effects to aquatic life (benthos, fish, algae) within the mixing zone.</p> <p>Commitment: NovaGold will regularly monitor the water quality of Galore Creek, and the Scud River, Iskut and Stikine rivers during operations and after closure to confirm modeling and ensure discharges meet permit criteria until regulatory agencies determine that conditions are stable and predictable.</p>	See response for 15.1.1.17.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>critterion of 0.002 milligrams per litre during the critical low flow period, a dilution of approximately 120:1 is required for an effluent at 0.02 milligrams per litre. There will be two operating conditions: one during which the pipeline flush water will be discharged at 90 cubic meters per hour (25 liters per second) and the other during which treated filtrate water will be discharged at about an average rate of 59 cubic meters per hour (16.5 liters per second). The more critical condition for dilution is the discharge of treated filtrate water when the total copper concentration is projected to be between 0.17 and 0.25 milligrams per litre. The Iskut River above More Creek has an annual predicted low flow of about 10.6 cubic meters per second with an average flow of 110 cubic meters per second and a maximum of 750 cubic meters per second. At annual low flow, a potential overall dilution (ratio of the entire river flow to filtrate plant discharge) of 10.6/.0165 or 642:1 is available. In actuality, mixing only occurs with part of the river flow.' [5.7.2.3, p5-144] As the calculations in section 5.7.2.3 (and Appendix 5-H) demonstrate, the mine will use up to 700 meters of River to treat its mine effluent. The proposed discharge does not sufficiently protect water quality or the fishery because the mixing zone itself will essentially be a toxic zone for fish, especially near the mine's diffuser. As a result, it will be a chemical barrier to fish migration and use. Moreover, the river should not become the mine's treatment facility. The mine is building a treatment facility, but building it to only minimally treat the mine effluent. The mine should be required to minimize or eliminate the need for any dilution by the Iskut River. The mine should actually discharge 'clean water,' not water that meets standards only after being sufficiently diluted by (thereby polluting) the Iskut River. The return on investment for this project is short and the overall economics appear favourable. NovaGold should install adequate treatment of all discharges from this project so that aquatic resources, fish and wildlife are fully protected.</p>		
Water Quality	15.1.1.19	<p>Discharges from Filter Plant and Tailings Impoundment - Although a proposed treatment scheme is discussed for the slurry filter plant, the technical feasibility and cost of constructing and operating a treatment plant(s) for the effluent discharges from the tailings impoundment and from the filter plant were not evaluated for either their technical feasibility or cost.</p>	<p>Commitment: NovaGold will assess the need for water treatment for operations, closure and post closure, including but not limited to, a water treatment plant during permitting.</p>	<p>EAO notes this commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.</p>
Water Quality	15.1.1.20	<p>Page 7-197, Table 7.5-22 - All three residual adverse effects in respect of surface water quantity have been rated as 'Non-Significant'. According to our interpretation of Table 7.1-5 (Effects Assessment Significance Ratings), the first two residual effects (alteration of baseline flow pathways; seasonal flow distribution at mouth of Galore Creek) should have been rated as being 'significant'.</p>	<p>The submission should have included an additional significance ranking table for surface water hydrology that noted that changes to the Galore valley (local) were not considered significant. A discussion of the assessment methodology for surface water hydrology is provided in Volume II Section 7.5.1.3</p>	<p>EAO notes this table was provided to the technical working group.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter	Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses	
			Commitment: None required.	
Water Quality	15.1.1.21	Pages 7-212 to 7-214, Table 7.6-4; and Page 303-304, Table 7.8-3 - The long list of effects related to water quality and sediments in these tables are all related to the construction or operation periods. There does not appear to have been a systematic approach to looking at the environmental effects on water quality during the post-closure period. This may be one of the most serious deficiencies in the Application related to water quality. There is an assumption in the Application, as stated on Page 8-67, that '... the impoundment water chemistry will be suitable for direct discharge to the environment after mining has been completed ...' and that treatment will not be required. The last paragraph on Page 7-316 does not provide as much certainty in respect of this assumption, stating that 'The free flow of surface waters from the tailings pond to the downstream environment will be contingent on water quality which will be assessed by the Environmental Monitor on site'. There does not appear to be a clear rationalization of the assumption that the water chemistry of impoundment water will be suitable for direct discharge to Galore Creek in the Application. Neither does there appear to be any modeling of water quality post-closure.	Commitment: NovaGold will conduct environmental monitoring (collection and analysis of water, sediment, and biota, combined with chronic and acute toxicity testing of the receiving waters) throughout the life of the mine to ensure that downstream environments are not impacted by effluent discharged from the Project.	EAO notes NovaGold's commitment is included in Appendix F of the Joint Report and Schedule B of the EA Certificate.
Water Quality	15.1.1.22	The water quality modeling that was done was for the operational period, when water affected by the mine project would be stored in the tailings impoundment/waste rock dump over the winter low flow period and released during the summer high flow period. Under these conditions, the modeling indicates that settling of particulates will result in a dramatic drop in total suspended solids in the receiving environment as compared to baseline conditions, along with a drop in total metal concentrations and metal loadings to downstream sediments. But the conditions in the post-closure environment will be far different. The tailings impoundment/waste rock dump will have continuous flow-through. The retention times within the 'reservoir' behind the dam are likely to be much shorter (at least in the winter) and particulate settling may not be as efficient. The flow from the entire Galore Creek watershed will have been re-routed to pass through this impoundment, including high flows with high total suspended solids levels. NovaGold should model the post-closure discharge water quality conditions and clearly define the water quality objectives they will be trying to achieve at the discharge from the impoundment.	Commitment: NovaGold will: <ul style="list-style-type: none"> • conduct further water quality modelling during operations to characterize pit and impoundment water quality after closure; • conduct environmental monitoring (collection and analysis of water, sediment, and biota, combined with chronic and acute toxicity testing of the receiving waters) throughout the life of the mine to ensure that downstream environments are not impacted by effluent discharged from the Project; and • assess the need for water treatment for operations, closure and post closure, including but not limited to, a water treatment plant during permitting as possible mitigation measures to address water quality concerns 	EAO notes NovaGold's commitments are included in Appendix F of the Joint Report and Schedule B of the EA Certificate.
Water Quality	15.1.1.23	In respect of the discharge from the tailings impoundment, the potential need for mitigation in the future after the mine closes needs to be considered in the	See response for 15.1.1.22.	See response for 15.1.1.22.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		calculations of the amount of bonding to ensure that proper mitigation (i.e., water treatment) takes place if necessary.		
Water Quality	15.1.1.24	Will dissolved metal concentrations in the discharge from the impoundment change after the mine is closed? While most potential for acid rock drainage would seem to have been mitigated by underwater storage of tailings and potentially acid generating waste rock, will there not still be some exposed pit walls above the pit overflow levels that might be potentially acid generating, maybe not for some time into the future (i.e., > 22 years)? How will this affect pit water chemistry and subsequently, water that is discharged from the tailings/waste rock impoundment to Galore Creek?	Potential for acid generation from pit walls was considered in the water quality predictions. Pit lake chemistry was assumed to be non acidic for the water quality modelling. See response for 15.1.1.22.	See response for 15.1.1.22.
Wetlands	16.1.1.1	There seems to be a discrepancy in relation to the exact numbers of hectares of wetland loss. The report on page 7-428 states that 4.4 hectares will be lost due to the More Creek Access and 7.9 hectares due to the mine site. A total of 12.3 hectares (4%) as stated on page 7-444. Yet, in Appendix 6-H on page 4-1 it states that 2.9 hectares on the proposed road route and 16.9 hectares within the mine footprint will be lost. Again on page 4-20 it states that 'approximately 16.9 hectares (7%) of wetland in this region is found within the mine footprint'. It is not clear exactly how much wetland area will be lost.	Since the wetland baseline report (Volume XIII, Appendix 6-H) was completed the wetland area within the mine footprint was reassessed using data regarding the soil types of the area. Through this reassessment it was determined that the extent of wetland area within the mine footprint had originally been overestimated. The new calculated value, which considered all available data including the soil data, was 7.9 hectares. The discrepancy in the area for wetland loss due to the access corridor reported in the baseline report and Chapter 7 is due to changes in the road alignment that occurred between the completions of the reports. The wetland area within the access corridor has since been recalculated using the most current road alignment. The most current and accurate value for wetland loss due to the access corridor is 3.0 ha. Commitment: None required.	Comment has been addressed by NovaGold.
Wetlands	16.1.1.2	22% of wetland area is down slope of the road route and 2% of the wetland area is downstream from the proposed Porcupine airstrip. What effect will this have on these wetlands? Will the hydrology change? Will this be included in the monitoring plan?	While NovaGold will attempt to minimize changes to natural water flows, it is acknowledged that the hydrology of wetlands down slope of development could be altered which in turn may result in a change in the dominant vegetation type. Commitment: None required.	EAO notes that NovaGold has committed to monitoring water levels in Porcupine River and design a flood protection barrier adjacent to the Porcupine aerodrome.
Wildlife	17.1.1.1	A central critique is that some impacts of development on wildlife species appear to be underestimated. For example, In Table 7.13-25, the significance of adverse effects is rated as uncertain or insignificant for all potential effects, even	Comment noted. NovaGold concluded that there is considerable potential for significant adverse residual effects for mountain goats and grizzly bears. Although	EAO notes that NovaGold has committed to incorporating information derived from monitoring in an ongoing

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>though the magnitude of all effects but one are rated as moderate (for example, where blasting for mine development and avalanche control will occur). Further emphasis is needed with regards to new road access and mine development in a relatively undeveloped wilderness area. The significance of such areas to populations of wilderness-dependent species such as grizzly bears, wolverine and other carnivores is very important. The overall impact of this project in combination with the cumulative effects from further exploration will surely have more than insignificant impacts on focal species.</p>	<p>the significance of these adverse residual effects were for the most part assessed as uncertain, it remains that there is considerable potential for them to be significant.</p> <p>Commitment: None required.</p>	<p>process of adaptive management.</p>
Wildlife	17.1.1.2	<p>5.5.1 Wildlife Habitat Suitability The legends for habitat mapping in this chapter indicate 'Very High' and 'High' rated habitats and the lumping of 'Very Low' and 'Nil' rated habitats but the standards do not lump these categories. The document states that standards were followed. However, it is not clear in this chapter or from Appendix 6-Q if this legend suggests a different ranking approach than provincial standards or just renaming of the six-class scheme.</p>	<p>The provincial 6 class ratings scheme was renamed, in part, for the Galore habitat suitability mapping studies as shown in the table below. RISC # RISC Term environmental assessment Term 6 Nil Nil 5 Very Low Very Low 4 Low Low 3 Moderate Moderate 2 Moderately High High 1 High Very High The terms 'very high' and 'high' (as opposed to 'high' and 'moderately high') were considered more appropriate for the Galore habitat suitability mapping work, both in terms of reflecting the value of the habitat in the study area, and for the effective communication of the models to a wide range of stakeholders. The remaining terms used in the Galore environmental assessment (Moderate, Low, Very Low and Nil) correspond to the same terms used in the RISC standards for the 6 class scheme. While technically they may be Nil rated habitat, it was anticipated that lumping very low and nil rated habitats would be more reflective of actual use. The lumping of these two classes had no bearing on the assessment.</p> <p>Commitment: None required.</p>	<p>EAO notes that NovaGold has addressed the comment.</p>
Wildlife	17.1.1.3	<p>Mountain Goat Enhanced Habitat Model (includes material in Appendix 6-Q) The enhanced model includes topographic variables to better define mountain goat habitat with an emphasis on escape terrain. Aspect and elevation are other variables included in the enhanced model. This is a consistent with other projects to define mountain goat habitat in the Skeena Region (Keim 2003; Keim 2004; Keim and Pollard 2005). The model appears to be cumulative with equal weighting to each variable. This approach is different than other mountain goat habitat models applied in the Skeena Region where escape terrain and the distance from escape terrain is weighted the highest component to estimate winter habitats (Keim 2004; Keim and Pollard 2005). In these models, elevation</p>	<p>Criteria for defining topography and the ratings scheme were presented, and agreed to, by the Galore Wildlife Working Group in Smithers at the MOE office on February 3, 2005. The mathematical mechanics of the model internally emphasize escape terrain. For example, habitat between 451 and 650 m can only achieve a wildlife habitat rating of 4 or less quality. Regionally, snow packs experienced along the Bell Irving River near Bell II are greater than those in the Galore study area (Rescan 2006, in prep). The</p>	<p>See response for 17.1.1.1.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>was the lowest weighted variable. The criterion used for defining escape terrain is similar to the above models, with a buffered approach to assign a value. The only question for this variable is assigning a value of two for distance of escape terrain >350 to 450 meters. Mountain goat winter surveys completed in the Bell II and North Coast areas, had no goat observations greater than 350 meters from escape terrain with >90% of locations within 150 meters of escape terrain (Keim 2004; Keim and Pollard 2005). This is not to suggest that goats may not be found greater than 300 m from escape terrain particularly in summer, but that it should not be ranked as high as it is in this model. For winter a value of four or five might be more applicable and a value of three for summer.</p>	<p>observed habitat use cited by the THREAT reflects this regional difference, but does not necessarily justify extension of the observed results to the Galore study area.</p> <p>Commitment: None required.</p>	
Wildlife	17.1.1.4	<p>Mountain Goat Enhanced Habitat Model Another issue is that northerly aspects may be rated too high, with a rating of two in the winter. Mountain goat winter habitat surveys for the Bell II, North Coast and the Nass had a low percentage of mountain goat observations on aspects 280 degrees. Similarly, the adjusted winter habitat models had these aspects rated as of low habitat value (Keim 2004; Keim and Pollard 2005). For winter, a value of four or five is more applicable. The summer rank is fine and a value of three for southern aspects could be used for summer.</p>	<p>It is important to note that, although north aspects are considered by the reviewer to have been rated higher than necessary for the Galore models, in relative terms, north aspects were consistently rated lower than south aspects. Thus the higher ratings do not affect the outcome of the model in predicting the relative importance of north aspects in winter.</p> <p>Commitment: None required.</p>	See response for 17.1.1.1.
Wildlife	17.1.1.5	<p>Mountain Goat Enhanced Habitat Model Our main concern with the model is that mountain goat habitat value is overestimated for both summer and winter habitat. This ranking is of greater concern in terms of winter range. By using a cumulative approach for these values, i.e. distance from escape terrain and aspect, there are cases where habitat is ranked as high or moderate and should actually be ranked lower. This would mean that habitats are more restricted than modeled and potential disturbance to mountain goats could be higher than reported. Typically winter range is more restricted than summer range and it is therefore important that both seasonal habitat models be used to consider adverse effects on mountain goats.</p>	<p>Field observations within the Galore study area suggest that an extensive area of escape terrain (and thus mountain goat habitat) exists; the habitat suitability model reflects this observation. It is, however, acknowledged that there may be some overestimation of habitat due to the conservative approach taken when developing the model. The conservative approach was taken for a number of reasons, as follows: 1. Local knowledge of goat habitat use is far from complete, and the literature available from other regions or areas is not necessarily relevant or directly applicable to the Galore study area. 2. Development of a conservative and broad model ensured no potential areas of impact associated with project development were overlooked. 3. It was assumed that topographic features capable of supporting goat habitat (i.e., escape terrain) were equally available in areas that will be impacted versus areas that will not be impacted within the study area. The conservative approach was therefore applied throughout the entire study area. 4. Digital data</p>	See response for 17.1.1.1.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			<p>available for habitat modeling has inherent inaccuracies which limit the detail that can be confidently used to model habitat. A conservative and simple approach to model development assisted in limiting the compounding effects of digital error on the final model.</p> <p>Commitment: None required.</p>	
Wildlife	17.1.1.6	<p>Mountain Goat Enhanced Habitat Model The best measure of the suitability of habitat is where goats are located. Mountain goats show a high degree of site fidelity (Taylor and Brunt 2003; Nichols 1985). We suggest that greater weight be given to high-quality survey data that is available. The models do appear to identify the important or very high seasonal habitats (Appendix 6-Q, Table 1) but very high habitats should be separated from high habitat in the assessment to allow for a more accurate assessment of the effects to mountain goats. It would be useful to see the percentage of winter observations within 100 meters (to account for location error) of very high winter habitats similar to how summer observations are reported in Table 1.</p>	<p>NovaGold agrees that actual observations of goat use are much better for determining important habitats in a location than theory-based models. For example, surveys in the study area revealed highly suitable habitat available that is not occupied by goats, and occupied habitat that is not rated as highly suitable. Survey results were a major consideration in the development of the model, and a combination of digital habitat modelling and survey data was used when assessing effects. As noted on page 2-31 of Appendix 6-Q (Volume XIV), 45% of winter observations were within 100 meters of the enhanced suitability rating 1 rated winter habitat and 85% were within the area rated as enhanced suitability rating 1 and 2.</p> <p>Commitment: None required.</p>	Addressed
Wildlife	17.1.1.7	<p>Mountain Goat Enhanced Habitat Model Although natal ranges are not defined at a large scale for the project, natal ranges could be considered as part of the winter range given the importance of escape terrain during that period. Winter range could also be considered as a surrogate in the short term.</p>	<p>Comment noted.</p> <p>Commitment: None required.</p>	Addressed
Wildlife	17.1.1.8	<p>Grizzly Bear Enhanced Habitat Model (includes material in Appendix 6-Q) It would be useful to have had the habitat mapping separated for the coastal and interior grizzly bear populations. It would then be easier to determine effects to the two populations since the DNA analysis suggests two isolated populations.</p>	<p>Comment noted.</p> <p>Commitment: None required.</p>	Comment noted.
Wildlife	17.1.1.9	<p>Grizzly Bear Enhanced Habitat Model It is not clear why only habitats rated for grizzly bears are shown in the buffered footprint and not for the complete study area like mountain goat, moose, hoary marmot, American marten, and western toad. It is considered necessary to evaluate grizzly bear habitats outside the footprint to consider the degree of adverse effects.</p>	<p>Grizzly bear chronological models for early and late spring, and phenotypic models for spring, summer and fall, using the predictive ecosystem mapping data (i.e., the complete study area), are part of Appendix 6-Q (see Maps 6 to 9 and Map 11) in Volume XIV.</p> <p>Commitment: None required.</p>	

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
Wildlife	17.1.1.10	Section 7.13 of Application, Wildlife and Wildlife Habitat -- This section is not well organized and difficult to read. It would read easier if all effects were summarized by individual species and not the effect summarizing for all species. It requires you to keep flipping back and forth to understand total effects and also check appendices to see if the interpretations are correct.	Comment noted. Commitment: None required.	Comment noted
Wildlife	17.1.1.11	Section 7.13.2 -- Table 7.13-15 indicates the amount and percentage of suitable habitat loss by valued ecosystem component species and its relative amount in the predictive ecosystem mapping study area. It would be useful to have it broken out by habitat rank so how much very high or high habitat can be evaluated for adverse effects on the landscape and local level.	Comment noted. Commitment: None required.	Comment noted
Wildlife	17.1.1.12	There is too much reliance on using the regional context to assess an adverse effect. It should be looked at within the study area first before relating it to the Land and Resource Management Plan boundary. Also, it is not clear how much grizzly bear habitat is being lost given the maps in the application. Same comment as above for terrestrial habitat loss to grizzly bears and therefore it is hard to consider degree of adverse effects. Given the comments regarding the habitat modeling for mountain goats, it is expected that winter range will be smaller and more restricted than summer range and needs to be treated separately. In addition, if winter ranges are accepted as a surrogate for natal ranges then the adverse effects to winter range needs to be reviewed as loss of natal range. The degree of the overall effect needs to be reconsidered in light of the suggested overestimation of mountain goat habitats that could increase the geographic extent to a landscape level.	Assessment of habitat loss within the local study area boundary (i.e., project footprint and one kilometre buffer) alone is not considered an appropriate scale over which to assess impacts for grizzly bears. Grizzly bears are a 'landscape species', hence the delineation of a large study area for the Galore Creek Project, and in turn the assessment of habitat loss in terms of the availability of suitable habitats remaining in the study area. NovaGold's assessment identified considerable potential for significant adverse residual effects for mountain goats. Although the significance of these adverse residual effects was assessed as uncertain, it remains that there is considerable potential for them to be significant. A monitoring program for grizzly bears and mountain goats will form important components of the overall wildlife monitoring program for the project. One of the purposes of the program is to enable the actual wildlife effects to be compared with those predicted in the environmental assessment (Volume III, Section 10.5). Commitment: A wildlife monitoring program will be completed for review by regulators and, consistent with the Participation Agreement, by TCC representatives.	EAO notes that NovaGold has committed to establishing a grizzly bear monitoring program will as part of the wildlife monitoring program that will be reviewed by regulators and the TCC. NovaGold has also committed to incorporating information derived from monitoring in an ongoing process of adaptive management.
Wildlife	17.1.1.13	Section 7.13.2.2 -- For all the species indicated in this section, what percentage of very high and high habitats are lost at the local and landscape scale? The information presented does not provide adequate detail for the reader to assess the degree of habitat loss.	Section 7.13.2.2 describes wetland and riverine habitat loss. A conservative approach was taken when calculating wetland habitat loss for each valued ecosystem component. Regardless of the habitat value of each wetland type for wildlife valued ecosystem	

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			<p>components (as reported in Volume XIII, Appendix 6-H), the amounts of wetland habitat loss provided in Section 7.13.2.2 were based on the calculations of total wetland loss in the local project area (as presented in Section 7.11, Wetland Functions Effects Assessment [Volume II]). Wetland habitat loss was not calculated at a landscape scale, as the wetlands effects assessment focused on the local project area only.</p> <p>Commitment: None required.</p>	
Wildlife	17.1.1.14	<p>Section 7.13.3.2 -- Other models such as risk models can be more effective in evaluating the consequences of human land use on wildlife populations. For example, work on population viability analysis of grizzly bears has shown that incidental mortality models more accurately reflect impacts on this species than do models relying on habitat loss (Maraj 2006; Nielsen 2005). This is because mortalities associated with increased human access such as human safety kills, road kills, and legal and illegal hunting have greater impacts on grizzly bears than the direct loss of habitat from roads or mines. The section does not include access effects during construction and the degree of effect on bears.</p>	<p>Comment noted. As stated in Volume II, Section 7.13.2.3, many authors consider the effects of indirect habitat loss for some species to be greater than those attributed to direct habitat loss (Jalkotzy et al., 1997). Hence, emphasis for the Galore environmental assessment was placed on assessing these indirect effects on wildlife valued ecosystem components, including disturbance and mortality.</p> <p>Commitment: None required.</p>	EAO notes that NovaGold has addressed the comment.
Wildlife	17.1.1.15	<p>Section 7.13.4.4 -- Is there a reference that indicates grizzly bears will habituate to aircraft over time? In Alaska, oil field companies plan their flight patterns to minimize disturbance to grizzly bears from aircraft. It should be considered an effect in Table 7.13-18. The adverse effects to mountain goats from aircraft noise are noted in this section but may not be negligible and it appears that aircraft noise during construction was not considered as part of the effects.</p>	<p>McLellan and Shackleton (1989) suggest that the moderate responses of grizzly bear to aircraft activity (including intensive periods of helicopter activity) observed in their study are attributable to habituation. The authors also cite literature pertaining to the rapid habituation of wolves to aircraft, and suggest that similar behaviour may be expected with bears. Table 7.13-18 (Volume II) assessed the effects on mountain goats of aircraft associated with the Porcupine River valley to be negligible given the distance of the valley from suitable habitat. It is true that aircraft noise during construction (in the Galore Creek valley in particular) is unlikely to be negligible. This was taken into account when concluding that there is considerable potential for significant adverse effects on mountain goats for the project.</p> <p>Commitment: None required.</p>	EAO notes that NovaGold has committed to following the approach identified in the Application for avoiding or minimizing disturbances to mountain goats by helicopters and incorporated in the Wildlife Mitigation and Monitoring Plan. Nova Gold has also committed to include pertinent noise monitoring as part of the Wildlife Mitigation and Monitoring Plan.
Wildlife	17.1.1.16	Section 7.13.4.5 -- It would be useful to provide a reference to the statement	The statement made in Section 7.13.4.5 relates to a	EAO notes that Nova Gold has

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
		<p>regarding displacement of grizzly bears dependent to habitat quality and the eventual habituation to the noise. It does not seem to make sense that bears will not be stressed or displaced from industrial noise if the bears are using high value habitats. It also is a concern that their habituation is the management strategy that makes the effect negligible.</p>	<p>general behavioural concept, where the decision of whether or not to move away from disturbed areas will be determined by factors such as the quality of the site currently being occupied, the distance to and quality of other suitable sites, the relative risk of predation or density of competitors in different sites and the investment that an individual has made in a site (for example, in establishing a territory, gaining dominance status or acquiring information) (Gill et al., 2001). (Full citation: Gill, J. A., K. Norris and W. J. Sutherland. 2001. Why behavioural responses may not reflect the population consequences of human disturbance. <i>Biological Conservation</i>, 97(2): 265-268). It is not to say that disturbance will not result in stress in high quality habitats. The individual may still be stressed, but the relative energetic benefits of the higher-quality forage outweigh the energetic-costs associated with the stress of the disturbance. So the animal may choose to remain in the high-quality habitat adjacent to the source of disturbance</p> <p>Commitment: None required.</p>	<p>committed to include pertinent noise monitoring as part of the Wildlife Mitigation and Monitoring Plan and to incorporate information derived from monitoring in an ongoing process of adaptive management.</p>
Wildlife	17.1.1.17	<p>The effect to mountain goats from industrial noise is indicated in Table 13-18 and mountain goats are sensitive to noise disturbance. It is hard to assess whether mountain goats will become habituated to it. Foster and RaHS (1983) found little or no evidence of habituation. Physiological stress has also been reported for animals that do show visual signs of habituation (Macarthur et al. 1982; Stemp 1983). Joslin (1986) showed association between industrial activity and reduced rates of productivity in mountain goats even when range was not abandoned for less productive sites. Given the necessary blasting for avalanche control and mine construction, the buffer distance of one kilometre could be too small. As an example, the guideline for commercial recreation use of helicopters is to stay greater than two kilometres away from known goat winter ranges in BC (Wilson and Shackleton 2001). We wish to see a buffer distance of at least two kilometres applied.</p>	<p>There is no reference to a one kilometre buffer distance for disturbance to goats in Volume II, Section 7.13.4.5. It is noted in this section that the salt lick identified is located outside the 1 km buffer along the access road; however, this distance is not related to the buffer distances proposed for minimizing disturbance to goats. Rather, as outlined in Section 8.13 (Volume III), tunnel construction and blasting (pg 8-242), and flight paths (pg 8-253) will be avoided within two kilometres of occupied goat habitat and/or kidding areas where possible.</p> <p>Commitment: The Wildlife Mitigation and Monitoring Plan will identify measures to mitigate potential effects on mountain goats.</p>	<p>EAO notes that NovaGold has committed to avoiding occupied goat habitat and/or kidding areas within two kilometres for flight paths and during tunnel construction and blasting where possible.</p>
Wildlife	17.1.1.18	<p>Section 7.13.4.6 -- Same comments for mountain goats apply as suggested for section 7.13.4.5 (above).</p>	<p>There is no reference to a one kilometre buffer distance for disturbance to goats in Volume II, Section 7.13.4.5.</p>	<p>See response to 17.1.1.17.</p>

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			<p>It is noted in this section that the salt lick identified is located outside the 1 km buffer along the access road; however, this distance is not related to the buffer distances proposed for minimizing disturbance to goats. Rather, as outlined in Section 8.13 (Volume III), tunnel construction and blasting (pg 8-242), and flight paths (pg 8-253) will be avoided within 2 km of occupied goat habitat and/or kidding areas where possible.</p> <p>Commitment: Tunnel construction and blasting, and flight paths, will be avoided within 2 km of occupied goat habitat and/or kidding areas where possible.</p>	
Wildlife	17.1.1.19	Section 7.13.5 -- The effect to mountain goats from disturbance to feeding, breeding, and rearing habitats is indicated in Table 13-20 and mountain goats are sensitive to these effects. It may be higher if the area of winter and natal range are lower than currently estimated.	<p>A monitoring program for mountain goats will be an important component of the overall wildlife monitoring program for the project. One of the purposes of the program is to enable the actual wildlife effects to be compared with those predicted in the environmental assessment (Volume III, Section 10.5). A wildlife monitoring program will be completed for review by regulators and, consistent with the Participation Agreement, by TCC representatives.</p> <p>Commitment: A Wildlife Mitigation and Monitoring Plan will be completed for review by regulators and, consistent with the Participation Agreement, by TCC representatives.</p>	EAO notes that NovaGold has committed to completing a Wildlife Mitigation and Monitoring Plan to be reviewed by regulators and the TCC.
Wildlife	17.1.1.20	Section 7.13.10 -- Table 7.13-25 indicates the assessment of residual adverse effects to grizzly bears and mountain goats. All of them are indicated as an uncertain significance except the effect from industrial noise to mountain goats. The residual effects on mountain goats are based on the assumption that mountain goats have a high capability of habituation to mining and industrial activity. However there is not sufficient research to support this assumption. And in actual fact, the literature suggests a higher sensitivity to disturbance (see Foster and Rahe 1983; Wilson and Shackleton 2001). With the information provided in the chapter and with the potential underestimation of mountain goat habitats it is likely the Residual Adverse Effects for mountain goats are higher than reported and until monitoring can indicate habituation or lesser adverse effects, the species should be managed at that higher status.	Volume II, Section 7.13.10.2 states that there is a high likelihood of habituation to industrial noise (not including noise associated with blasting, helicopter traffic, and avalanche control). The residual effects of industrial noise alone were therefore assessed as insignificant. However, this section, and section 7.13.5.2, also outline that while goats may habituate to one source of disturbance in some instances (e.g., Weech et al., 2003), they are unable or unlikely to habituate to the cumulative effects of more than one source of disturbance (e.g., industrial noise combined with helicopter traffic and blasting, for example). NovaGold therefore assessed the potential for significant adverse	MOE notes that mitigation measures will be identified in the Wildlife Mitigation and Monitoring Plan.

APPENDIX E - FIRST NATIONS COMMENT TRACKING TABLE

Parameter		Comment Received	Proponent Response/Mitigation Measure/Commitment	Government Responses
			residual effects to be considerable for mountain goats. Although the significance of these adverse residual effects was assessed as uncertain, it remains that there is considerable potential for them to be significant.	
Wildlife	17.1.1.21	Application Section 8.13, Wildlife Management Plan -- The wildlife management plan provides sufficient information on the type of mitigations measures but it is hoped that further participation will occur and better define how and where the mitigation measures should be applied. This will link to the monitoring plan to ensure mitigations can be effectively measured.	<p>A detailed wildlife monitoring plan will be completed for review by regulators and, consistent with the Participation Agreement, by TCC representatives.</p> <p>Commitment: A Wildlife Mitigation and Monitoring Plan will be completed for review by appropriate government agencies and, consistent with the Participation Agreement, by TCC representatives.</p>	EAO notes the commitment is reflected in Appendix F (Table of Proponent's commitments) and Schedule B of the EA Certificate.
Wildlife	17.1.1.22	We have a concern with regards to the location and proximity of borrow, and gravel pits in relation to high value habitats.	<p>Borrow and gravel pits will be temporary features, and the sites will be reclaimed to appropriate habitat when they are no longer required. The pits will be sited adjacent to the access road which has been designed to avoid important wildlife habitats where possible.</p> <p>Commitment: Borrow and gravel pits will be sited adjacent to the access road which has been designed to avoid important wildlife habitats where possible. Borrow and gravel pits will be temporary features, and will be reclaimed to appropriate habitat when they are no longer required.</p>	No response required.