



December 14, 2012

Chuck Hubert  
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Mackenzie Valley Environmental Impact Review Board  
Suite 200, 5102 – 50<sup>th</sup> Avenue  
P.O. Box 938  
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Dear Mr. Hubert:

**Undertaking #2 – Consolidated Commitment Table**

De Beers is pleased to provide the Mackenzie Valley Environmental Review Board with Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kue Project Environmental Impact Review Process.

Should you have any questions regarding this submission, please contact our office.

Regards,

Veronica Chisholm  
Permitting Manager

Attachment



**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process**

Commitment Description	Commitment Type	Documents/Public Hearings
<b>Socio Economic Commitments - Agreement with GNWT</b>		
De Beers will enter into a Socio Economic Agreement with the Government of the Northwest Territories which will be for the benefit of the entire population of the Northwest Territories.	Management	Technical Report Responses (November 2012) GNWT 18
<b>Socio Economic Commitments – Employment, Education and Training</b>		
<p>De Beers commits to recruiting and employing as many Aboriginal and Northwest Territories (NWT) residents as possible, building on our current experience with recruitment, training and development and retention strategies already implemented for the Snap Lake Mine.</p> <p>De Beers has established hiring priorities.</p> <p>De Beers will have pick-up locations and travel allowances such that these optimize the employment of NWT residents.</p> <p>Maintain a 1-800 Number in the NWT for employment information and job opportunities.</p> <p>De Beers will offer incentives to assist Project employees who live in the Northwest Territories, including establishing and implementing northern benefits and relocation packages.</p> <p>De Beers will implement the <i>Gahcho Kué Human Resources Strategy</i>.</p> <p>De Beers will collaborate with the Government of the Northwest Territories (GNWT), Aboriginal communities and others on initiatives to plan, design and coordinate the delivery of education and literacy, pre-employment and on-the-job training, skill development, professional development and other related education and training programs and services that support and inform northern labour market and that enable participants to further improve their qualifications towards employment.</p> <p>During the life of the Project, De Beers commits to supporting training positions at the Project. These will include apprenticeships, trades training positions and the development of professional occupations.</p> <p>De Beers will ensure there is adequate space on the Company's premises to pursue and successfully complete the training programs for site-based employees and contractors. An on-site learning centre will be equipped and resourced with computers and a learning centre resource library.</p> <p>Provide Financial Management Training</p> <p>Promoting the participation of women in the workforce and providing scholarships for female students attending college and/or university</p> <p>Establishing a mine orientation program for all new employees</p> <p>De Beers, through its tendering and contracting process will:</p> <ul style="list-style-type: none"> <li>• Require all Contractors to outline in their bids, a plan to hire and develop Aboriginal and NWT Resident employees in accordance with De Beers' Hiring Priorities;</li> <li>• Include in the bid evaluation an assessment of the Contractors' plan for the above;</li> <li>• Incorporate into the contract document for the successful bidder, commitments to report on the employment data required by De Beers to provide the Project hiring and employment information by Hiring Priority, heritage and gender.</li> </ul>	Management	<p>2010 EIS Section 12 (December 2010)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) TG 18, 35</p> <p>Technical Report Responses (November 2012) GNWT 9, 10, 12 NSMA 5c, 11 TG 6, 8 YKDFN 13</p>
<b>Socio Economic Commitments - Procurement and Business Development</b>		
<p>De Beers commits to source its procurement needs from NWT and Aboriginal businesses as much as possible for the Project and to working in collaboration to help them pursue new business opportunities with the Project.</p> <p>Develop a flexible contracting approach by size and scope to match the capacity of Aboriginal businesses and NWT businesses where feasible and share business-related expertise with industry contracts to support NWT min-related business initiatives;</p> <p>De Beers will inform Aboriginal and NWT Businesses of its business opportunities first, as a measure to assist them to prepare for competitive bids.</p> <p>De Beers has established and will maintain a position with the key role and responsibility of working with NWT and Aboriginal Businesses.</p> <p>De Beers will maintain its NWT Business Policy.</p>	Management	<p>2010 EIS Section 12 (December 2010)</p> <p>Technical Report Responses (November 2012) GNWT 15, 16</p>

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
<b>Socio Economic Commitments – Health, Wellness and Culture</b>		
<p>De Beers will coordinate and welcome special site visits with Aboriginal leaders</p> <p>De Beers will provide a comprehensive benefits plan to all its employees (plan concerns services to assist with family issues, work performance, career development and general health and wellness)</p> <p>De Beers will work with the GNWT and Aboriginal communities to promote cultural preservation, sustainability and traditional language use and will support Cultural events in communities</p> <p>With sufficient notice and flexibility in their rotation schedule, De Beers will provide opportunities for employees who wish to be engaged in traditional activities;</p> <p>De Beers will provide financial or in-kind support for local cultural programming, language support programs and/or on-the-land programming in communities</p> <p>De Beers will provide and maintain space at the mine site for spiritual and cultural pursuits</p> <p>De Beers will provide core policies in Chipewyan, Tâîchô, as well as in French and English</p> <p>De Beers will offer drug and alcohol programming</p> <p>De Beers will provide cross-cultural training for northern Aboriginal and non-Aboriginal workers</p> <p>De Beers will provide family counselling services for mine employees and their families.</p> <p>De Beers will include among its benefits an employee volunteer incentive program</p> <p>De Beers will collaborate with GNWT and NWT communities to disseminate information to employees and in communities related to awareness prevention areas such as: substance abuse, sexually-transmitted infections, and family violence.</p> <p>De Beers commits to work with the Tâîchô Government and with the Tâîchô Community Services Agency to learn about the alternative services and programs that the Tâîchô Government or its service agencies offer for on-the-land counselling programs and to adaptively manage opportunities in the area of health, education and social services that enhance the ability of Tâîchô citizens to participate successfully in the Project.</p> <p>De Beers commits making information regarding alternative services and programs of Tâîchô Government or its service agencies available to its Employee Assistance Program (EAP) provider.</p> <p>De Beers will make information available on site to its employees regarding its EAP and will ensure toll-free access to the EAP service provider both on and off site.</p> <p>De Beers will implement the health and wellness commitments made to GNWT and filed on the public registry on October 19, 2012</p>	<p>Management</p>	<p>2010 EIS Section 12 (December 2010)</p> <p>GNWT De Beers Meeting Commitments Submitted to the Panel on October 19, 2012</p> <p>Technical Report Responses (November 2012)</p> <p>GNWT 13</p> <p>NSMA 7, 9</p> <p>TG 7, 9</p>
<b>Socio Economic Commitments – Reporting</b>		

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
<p>De Beers commits to report publicly on the following with respect to recruitment and employment and procurement outcomes:</p> <ul style="list-style-type: none"> <li>• Hiring by Hiring Priority and job category in total numbers and percentage of total hires.</li> <li>• Hiring by NWT community in total numbers and percentage of total hires</li> <li>• Total employment in person years by hiring priority and job category in total numbers and percentage of the workforce</li> <li>• Total employment in person years by NWT community in total numbers and percentage of the workforce</li> <li>• Participation in and results of training activities undertaken by the company to increase NWT and Aboriginal employment in the Project</li> <li>• Report on the gross value of goods and services purchased annually through or from NWT and Aboriginal Businesses.</li> <li>• De Beers will report annually regarding the number of current and cumulative placements in training positions by hiring priority.</li> <li>• De Beers will upgrade its existing socio economic tracking systems, established for the Snap Lake Mine, to incorporate annual tracking and reporting for the Project. The upgrade will be completed upon receipt of permits to proceed and will build on its existing operations, procedures and systems, and current reporting processes it has already established with Aboriginal communities.</li> </ul> <p>De Beers will monitor and report on the outcomes of its programs and initiatives identified and committed to in the Gahcho Kué Project Human Resource Strategy.</p> <p>De Beers, through its tendering and contracting process will require its contractors to provide all relevant information to allow for reporting on hiring and employment according to the Hiring Priorities by incorporating into the contract document for the successful bidder, commitments to report on the employment data required by De Beers to provide the Project hiring and employment information by Hiring Priority, heritage and gender.</p> <p>De Beers will also work with its contractors to obtain information annually regarding their training with respect to training and apprenticeships for NWT Residents. This information will be included in the annual report produced by De Beers.</p> <p>De Beers will report on activities related to promote cultural preservation, sustainability and traditional language use in its annual report.</p> <p>De Beers will review with the NSMA how best to incorporate their cultural activities in the company's annual reporting.</p>	<p>Management</p>	<p>2011 EIS Update Section 10 (July 2011)</p> <p>Technical Report Responses (November 2012) GNWT 9, 10, 12, 13, 15 NSMA 4c, 6a,c</p>
<p><b>Socio Economic Commitments - Adaptive Management</b></p>		
<p>De Beers will meet with the GNWT to review annual report results, to discuss challenges and to identify opportunities for collaboration to overcome those challenges or to optimize NWT resident participation in the Project</p> <p>De Beers commits to meet with Aboriginal groups annually, throughout the life of the Project, to review and discuss socio-economic results and report, including reports produced by De Beers that are specific to the Aboriginal communities participation in the Project, seeking input from communities</p> <p>Meet at least annually with contractors to review their performance, including their success in contributing to the employment of Aboriginal and NWT residents and to discuss ways to work together to grow Aboriginal and NWT Resident participation in the Project.</p> <p>De Beers NWT Business Policy will apply to the Project.</p>	<p>Management</p>	<p>Technical Report Responses (November 2012) GNWT 10, 15, and 16 NSMA 2a,c,d and 6b</p>
<p><b>Socio Economic Commitments - Closure</b></p>		
<p>In the case of temporary closure, De Beers will, where operationally feasible, collaborate with the GNWT so the GNWT can optimize its preparedness for NWT resident employees affected by a temporary closure.</p> <p>With respect to permanent closure, De Beers will meet legislative requirements and collaborate with the GNWT leading up to permanent closure to ease employee transition to new jobs.</p> <p>De Beers will continue to engage Aboriginal Communities regarding the Project during all phases and will discuss employee transition to new jobs leading up to permanent closure as part of its engagement process.</p> <p>Three years prior to Closure, De Beers will undertake a study to assess the effects of closure to assist the company with its planning for Closure to transition employees.</p>	<p>Management</p>	<p>Technical Report Responses (November 2012) GNWT 11</p> <p>Public Hearing – December 5, 2012</p>

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
<b>Socio Economic Commitments - Other</b>		
Staff a position with the responsibility to act as a liaison between De Beers, and the GNWT and Aboriginal groups De Beers commits to work with the Tâîchô Government and with the Tâîchô Community Services Agency on adaptively managing opportunities in the areas of health, education and social services that enhance the ability of Tâîchô citizens to participate successfully in the Project.	Management	Public Hearing – December 5, 2012
<b>Traditional Knowledge</b>		
De Beers is committed to considering and incorporating Traditional Knowledge (TK) into all stages to the Project life: the assessment, permitting, construction, operations and closure of the Project. This will be achieved by: <ul style="list-style-type: none"> <li>• When the results of Traditional Knowledge / Traditional Land Use (TK/TLU) studies are made available, De Beers will use that information to further inform impact predictions, to evaluate whether additional mitigation or refinements to proposed mitigation is needed, and to identify additional opportunities for incorporating traditional knowledge into monitoring programs.</li> <li>• Develop annual engagement plans in an effort to meet its commitments.</li> <li>• Continuing to advance engagement activities with communities that will provide opportunities to discuss the Project and any traditional knowledge that the community is willing to provide;</li> <li>• Hosting site visits on a regular basis to enable the exchange of information between elders, TK holders and De Beers staff. Visiting communities regularly to provide updated information regarding the project and incorporating an opportunity in this visit for TK holders to meet with the company to provide expertise and advice;</li> <li>• From time to time, the company will provide community based workshops as part of the company's planning processes or to address specific topics;</li> <li>• Involving elders and students from their home communities together in on site and field monitoring programs from time to time;</li> <li>• Featuring the events and activities that the company undertakes with the involvement of elders in the company's internal newsletters to employees and in the on-site the cultural centre as a means to sharing the knowledge and advice of elders with all staff; and</li> <li>• Working together with Aboriginal authorities in the development of the closure plan.</li> </ul>	Management	2010 EIS Section 5 (December 2010)  1 <sup>st</sup> Round Information Request Responses (April 2012) LKDFN 2, 3, 4, and 10 TG 1, 3, 5, 6, 7, 8, 9, 19, and 27 YKDFN 4.43 and 4.44  Technical Sessions (May 2012)  2 <sup>nd</sup> Round Information Request Responses (September 2012) LKDFN 1 TG 1 YKDFN 2.3, Response 2  Technical Report Responses (November 2012) TG 10 YKDFN 12  Public Hearing – December 5, 2012
De Beers acknowledges the request of the Tâîchô Government for the Company to work more closely with Aboriginal authorities in the planning of sessions that will engage Traditional Knowledge holders, particularly when there are sessions that will inform the Wildlife Effects Management Program (WEMP) and/or Aquatic Effects Monitoring Program (AEMP). De Beers commits to work with the leadership of Aboriginal communities to determine the appropriate approach and level of involvement in the opportunities that the company is providing, and to discuss how best to engage Traditional Knowledge holders.	Management	2010 EIS Section 5 (December 2010)  1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 2, 3, and 10  Technical Sessions (May 2012)  2 <sup>nd</sup> Round Information Request Responses (September 2012) TG 1 YKDFN 2.3-2  Technical Report Responses (November 2012) TG 4  Dettah Community Hearing – November 30, 2012
<b>Risk Management, Emergency Response and Waste Management</b>		

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
<p>Management of risks, including preparation for the unexpected (emergency response and contingency planning) is integral to De Beers' Sustainable Development Policy. De Beers will ensure that management systems are in place to minimize the risk of accidents affecting people, the environment, and the facilities. Risks will be managed for the Project through the following means:</p> <ul style="list-style-type: none"> <li>• prevention of accidents and malfunctions through engineering design, construction and operations training, awareness, education, and equipment maintenance;</li> <li>• assessment of risks of accidents and malfunctions throughout the Project phases;</li> <li>• employment of adaptive management to ensure continual appraisal of risks;</li> <li>• design and implementation of effective emergency response and contingency plans; and</li> <li>• implementation of a site environmental management plan.</li> </ul>	<p>Management</p>	<p>2012 EIS Supplement Section 3 (April 2012)</p>
<p>Standard operating procedures are a key part of accident prevention and emergency response; Project-specific procedures will be developed before construction of the Project begins. The Snap Lake Mine currently has an International Organization for Standardization (ISO) -14001 certified environmental management system (EMS). This system will be extended to the Gahcho Kué Project before operations start.</p>	<p>Management</p>	<p>2012 EIS Supplement Section 3 (April 2012)  Public Hearing - December 5, 2012</p>
<p>The Emergency Response and Spill Contingency Plan was developed to establish a guidance document for emergency responses at the Gahcho Kué Project (Project) site. The plan provides:</p> <ul style="list-style-type: none"> <li>• a clear chain of command for all emergency activities;</li> <li>• accountability for the performance of the spill response;</li> <li>• well-defined task and operational hazards/risk; and</li> <li>• reporting and record keeping requirements to track program progress.</li> </ul> <p>The plan will be a "living" document and will be updated on a regular basis to address operational changes, as new information comes to light or procedures, permits, and authorizations change. Mitigation identified in the Emergency Response and Spill Contingency Plan, and other environmental design features (e.g., containment dykes, liners, proper storage conditions) will be in place to minimize the frequency and extent of spills that result from Project activities</p>	<p>Management</p>	<p>2012 EIS Supplement Section 3 (April 2012)</p>

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
<p>De Beers is committed to the implementation and adaptive management of Waste Management Plans as listed below. De Beers has developed Air Quality and Emissions Monitoring and Management Plan (AQEMMP) and Incinerator Management Plan (IMP) which were submitted to the Mackenzie Valley Environmental Impact Review Board (MVEIRB) Public Registry in October 2012. De Beers commits to the development of other management plans in support of the Water Licence and Land Use Permit applications for the Project.</p> <p>De Beers is developing a memorandum of understanding (MOU) with Environment Canada and Environment and Natural Resources (ENR) on the implementation of the AQEMMP and IMP and the responsibility of Environment Canada and ENR in providing a review of monitoring data and participating in adaptive management. Having already developed the Project's AQEMMP and IMP in sufficient detail, and considering the MOU, a specific follow-up measure from the Panel may not be required in this case.</p> <ul style="list-style-type: none"> <li>• Air Quality and Emissions Monitoring and Management Plan - Provided to Environment Canada and GNWT in September 2012. Revised and submitted to the Panel in October 2012. The AQEMMP will be revised as necessary in consultation with Environment Canada. MOU being developed. The document will form part of the Mackenzie Valley Land and Water Board (MVLWB) application.</li> <li>• Incinerator Management Plan - Provided to Environment Canada and GNWT in September 2012. Revised and submitted to the Panel in October 2012. The AQEMMP will be revised as necessary in consultation with Environment Canada. MOU being developed. The plan will form part of the MVLWB application.</li> <li>• Wildlife and Wildlife Habitat Protection Plan - Submitted to the Panel in September 2012 following input received by the wildlife working group parties. Will be revised as necessary in consultation with ENR. MOU being developed. The plan will form part of the MVLWB application.</li> <li>• Sediment and Erosion Management Plan - MVLWB application</li> <li>• Mine Rock Management Plan - MVLWB application</li> <li>• Effluent and Surface Water Management Plan - MVLWB application</li> <li>• Explosives Management Plan - MVLWB application</li> <li>• Hazardous Materials Management Plan - MVLWB application</li> <li>• Landfill Management Plan - MVLWB application</li> <li>• Landfarm Management Plan - MVLWB application</li> </ul> <p>The specific plans listed above may be combined into more general plans (e.g., Waste Management Plan) as the regulatory process advances.</p> <p>De Beers commitment to monitoring and adaptive management of the water management pond, fine and coarse processed kimberlite mine rock piles and other project components throughout operations as defined in monitoring and management plans.</p>		<p>2010 EIS Sections 7 and 11 (December 2010) 2012 EIS Supplement Section 3 (April 2012)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) DFO&amp;EC 52b, 53 EC 9, 13 EC&amp;GNWT 3 GNWT 3-1, 5</p> <p>Technical Sessions (May 2012)</p> <p>Responses to Technical Reports (November 2012) AANDC 7 DFO 5 EC 5.1 GNWT 1, 2, and 7 NRCAN 3 and 4 YKDFN 10</p> <p>Public Hearings - December 5, 2012</p>
<b>Potentially Acid Generating Rock</b>		
<p>Less than 6% of the mine rock that will be excavated through open-pit mining will have to be managed as being potentially acid generating (PAG). This rock will be managed appropriately to avoid the generation of acidic leachate and limit the release of the metals and other elements. The management strategy will involve sequestering any PAG mine rock, as well as any barren kimberlite, within the interior (typically 2 m) of the mine rock piles. Till from on-going pit stripping will be used to cover PAG rock placed within the interior of the structure to keep water from penetrating into that portion of the repository. Further, the PAG rock will be enclosed within enough non-acid generating (non-AG) rock, such that the active zone will not extend into the enclosed material, and water runoff will occur on the non-AG rock cover areas.</p> <p>De Beers will monitor for the effects of climate change on the Project. Thermistors will be installed to monitor temperatures within the Mine Rock Piles, the Coarse PK Pile and the Fine PKC Facility. The resulting information will be used to track the development and possible regression of permafrost within these structures. De Beers will also monitor the quality and quantity of the water passing through the operational water management system to verify the conclusions of the analysis outlined herein. Finally, De Beers will periodically review its operating procedures during the life of the Project, and adjust them, if and as required, to account for the influence of climate change.</p> <p>De Beers will use only non-reactive mine rock for mine site construction (roads, airstrips, dykes, berms, etc.).</p>	<p>Environmental Design Features Monitoring</p>	<p>2010 EIS Sections 5, 7, and 11 (December 2010) 2011 EIS Update Section 8 (July 2011)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) AANDC 5, 11, 14, and 16, Responses 2 DFO&amp;EC 43a and 53b DKFN 23 EC 8 and 13 NRCAN 1-4, 1-5, and 1-8 TG 12</p> <p>Technical Sessions (May 2012)</p>
<b>Aquatic Effects Monitoring Program</b>		

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
If monitoring or follow-up detects effects that are different from predicted effects, or the need for improved or modified design features, then adaptive management will be implemented. This may include increased monitoring, changes in monitoring plans, or additional mitigation. These will be incorporated into monitoring plans such as an AEMP as part of a Class A water licence.	Management Monitoring	2010 EIS Section 11 (December 2010)  1 <sup>st</sup> Round Information Request Responses (April 2012) AANDC 12
Effects monitoring programs will include a Surveillance Network Program (SNP) that focuses primarily on Project site operations as well as a more broadly focused Aquatic Effects Monitoring Program (AEMP). De Beers will develop the scope of the SNP and AEMP in consultation with regulators and aboriginal groups.  De Beers will consider the following documents in the development of an AEMP and related management response framework for the Project: <ul style="list-style-type: none"> <li>• <i>Guidelines for Designing and Implementing Aquatic Effects Monitoring Programs for Development Projects in the Northwest Territories: Recommended Procedures for Developing Detailed Designs for Aquatic Effects Monitoring Programs</i> (Zajdlik et al. 2009);</li> <li>• <i>Draft Guidelines for Adaptive Management – a Response Framework for Aquatics Effects Monitoring</i> (Wek'ezhii Land and Water Board 2011); and other related AEMP documentation publicly available from existing northern mines, as applicable.</li> </ul>	Monitoring	2011 EIS Update Sections 8, 9, and 10 (July 2011)  1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 2c DKFN 21, 22, 23  2 <sup>nd</sup> Round Information Request Responses (September 2012) AANDC 2-2  Technical Report Responses (November 2012) AANDC 6
The AEMP will incorporate the key components of the measurements endpoints presented in the EIS in its development. The AEMP will have an overall study design that will be developed according to currently accepted statistical design principles and regulatory guidance and will include hydrology, water quality (effluent and receiving water) and sediment quality components, components focused on lower trophic communities (i.e., plankton, periphyton, and benthic invertebrates), and fish and fish habitat. A groundwater monitoring program and habitat compensation monitoring will also be included as components of the overall aquatic ecosystem monitoring. The development of the AEMP will involve regulatory and aboriginal input, as well as consideration of available TK, and allow for adaptive management.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 3 Response c)  2 <sup>nd</sup> Round Information Request Responses (September 2012) DKFN 6
The recommended methodology with respect to the collection of sediment quality and benthic invertebrates data will be considered during the development of the AEMP.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 23
Baseline information for the downstream lakes in the L and M watersheds has been collected and is presented in 2010 EIS Section 8 and Section 9 Appendices. Supplemental monitoring information was collected in 2011, and is presented in the 2011 Supplemental Monitoring Reports (Golder 2012 a,b,c,d). These lakes will be assessed for inclusion in the AEMP. De Beers is committed to ongoing monitoring, with focussed work in 2012 including monitoring at five screened reference lakes during under-ice and open water conditions, and in the D-E-N lakes during open water conditions.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 18b YKDFN 2.31 and 2.26
Monitoring of fish populations will be conducted through the use of standardized, repeatable methods (e.g., a random, stratified, standard fish community monitoring program), which will be ratified according to currently accepted statistical design principles and regulatory and community guidance and review. The same rigor will be applied to chemical analyses. The data collected (e.g., presence, relative abundance, and population statistics of selected fish species) would be compared to metrics or benchmarks developed for the AEMP, associated with pre-construction conditions and to predicted effects of the Project during operations and closure. The AEMP will also incorporate a response framework, so that adaptive management, additional mitigation and/or monitoring can be applied, where necessary. Furthermore, in a post-closure perspective, the presence, relative abundance, and population data from Kennady Lake would be used to track fish species re-establishment in Kennady Lake.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 3b and 4c  Technical Report Responses (November 2012) DFO 14
Lake 410 will be a focal point for the AEMP and sampled on a scheduled basis- based on modelling predictions	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 18a
The criteria that will be used to evaluate sediment quality in the water management pond (WMP; Areas 3 and 5) and its acceptability to allow the reconnection of the refilled Kennady Lake to downstream waters will be developed during the detailed design phase of the AEMP. The monitoring program would also include other areas of Kennady Lake and receiving waterbodies throughout operations and during the refilling period.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 51
For the AEMP, the assessment endpoints for fish presented in the EIS are being further refined to more specifically reflect abundance and distribution, without the use of terms “desired” or “persistence”.	Monitoring	Technical Report Responses (November 2012) DFO 14
Monitoring stations will be selected during the detailed design phase of the AEMP, and will consider the type and magnitude of predicted effects and sensitivity of the affected habitat. Results of the AEMP will be used to evaluate the necessity for mitigation as part of adaptive management.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DKFN 22
The AEMP will allow for adaptive management, so that any unexpected adverse impacts to the aquatic ecosystem identified through the AEMP could be addressed (i.e., implementation of additional mitigation or compensation, as required). The AEMP will be developed with regulatory and aboriginal input.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 44a

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
Effects monitoring will involve programs focused on the receiving environment, with the objectives of verifying the conclusions of the EIS, evaluating the short-term and long-term effects on the physical, chemical and biological components of the aquatic ecosystem of Kennady Lake, estimating the spatial extent of effects, and providing the necessary input to adaptive management.	Monitoring	2011 EIS Update Sections 8, 9, and 10 (July 2011)  1 <sup>st</sup> Round Information Request Responses (April 2012) AANDC 12
<b>Aquatic Health</b>		
De Beers commits to monitoring of mercury concentrations in edible fish tissue in the raised D-E-N lakes prior to and following raising the lake and during operations using non-invasive techniques, to determine whether there is a potential issue. As per the response to Round 1 Information Request DKFN_37 and to Round 2 Information Request DFO 2-1, specific management response actions to any upward trend of mercury concentrations (adjusted for fish age, which is a major modifying factor) following water level increases would be determined, if and when necessary, through engagement with regulatory agencies, including EC, and Aboriginal communities.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 32b DKFN 25 and 37  2 <sup>nd</sup> Round Information Request Responses (September 2012) DFO 2-1  Technical Report Responses (November 2012) Environment Canada 3 and 4
<b>Downstream Flow Mitigation</b>		
De Beers commits to developing and implementing a downstream flow mitigation plan. One aspect of follow-up monitoring required in the downstream waterbodies is to define an appropriate mitigation flow regime to augment flows downstream of Kennady Lake during operations and refilling. The key aspects of this monitoring will be to better define an appropriate spring spawning flow for Arctic grayling, including determining the flow at which barriers to fish migration no longer exist, and defining a suitable flow for Arctic grayling rearing. The mine plan, does not contemplate the construction of excavated diversion channels from the raised lakes to the N watershed. However, as described in Section 8.10.3.3 of the EIS Update, the new stream channels will be evaluated to make sure that they provide spring spawning and rearing habitat for Arctic grayling and allow the seasonal passage of fish between lakes that approximates natural conditions. These streams will be temporary as Dykes E, F, and G will be removed at the end of the operations period, and the flows returned to Kennady Lake through the original stream channels.	Environmental Design Feature	2011 EIS Update Sections 8 and 9 (July 2011)  1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 55i, 55a, and 40  2 <sup>nd</sup> Round Information Request Responses (September 2012) DFO 2-1 and 2-2  Downstream Flow Mitigation Plan June 29, 2012- Downstream Flow Mitigation: Field report October 12, 2012
<b>Downstream Connections and Flow Monitoring</b>		
De Beers commits to work with the Water Survey of Canada to conduct hydrological monitoring of downstream water bodies including perceived connections to the Hoarfrost River.	Monitoring	Water Survey of Canada- Monitoring Water downstream of Gahcho Kue- November 13, 2012  Public Hearing - December 5, 2012
<b>Water Quality</b>		
Committed to not allowing changes to water quality that could adversely affect the drinkability of the water, the fish communities (lake trout, northern pike, Arctic grayling), or the ability to eat the fish in Lake N11 and Area 8 during operations, closure and post-closure, and in Kennady Lake in post-closure.	Monitoring	2 <sup>nd</sup> Round Information Request Responses (September 2012) AANDC 2-2  Technical Report Responses (November 2012) AANDC 7 LKDFN 3.2
It is planned that an initial iteration of proposed water quality benchmarks for Lake N11 during operations and Kennady Lake in post-closure and rationale will be prepared as a technical memorandum to the MVEIRB in 2012, which will form the basis for detailed consultation with government agencies and communities.	Management	1 <sup>st</sup> Round Information Request Responses (April 2012) YKDFN 2.20 AANDC 1 and 2 DKFN 19  2 <sup>nd</sup> Round Information Request Responses (September 2012) LK 04

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
Seepage water quality and thermal conditions in the waste storage facilities will be monitored throughout all stages of the Project. DBCI is committed to the development of a Mine Waste Management Plan De Beers is committed to the development of a monitoring program to verify the water quality predictions and the effectiveness of mitigation.	Management Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) AANDC 16, Response 1 and 3
If it is identified that the quality of runoff or seepage is worse than predictions, adaptive management strategies will be triggered to address the problem.	Management	1 <sup>st</sup> Round Information Request Responses (April 2012) EC 13
Prior to, and during the refilling process, De Beers will track the water quality within Kennady Lake and use adaptive management to make decisions with respect to dyke removal, in consultation with regulatory agencies. If monitoring indicates that water quality is not acceptable in Kennady Lake, De Beers have the option to defer the removal of the dykes, or restore the dykes, to identify the issue and determine appropriate mitigation to address the problem.	Management Environmental Design Features	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 50
Despite the predicted exceedances of the chronic effects benchmark (CEB), the potential for copper to cause adverse effects to aquatic life in Kennady Lake and Area 8 is considered to be low. The CEB for copper is based on the CCME guideline, which is intended to be conservative and protective of the most sensitive species. Follow-up monitoring will be undertaken to confirm this evaluation. As the biotic ligand model (BLM) is most sensitive to pH and the amount and quality of DOC, it is important that these parameters be measured during monitoring, and included in new BLM-derived CEB predictions. Monitoring of water quality will be carried out to verify model inputs, and predictions will be adjusted accordingly. The BLM model will be used update BLM-derived CEBs when monitoring data are available.	Monitoring	2011 EIS Update Section 8 (July 2011)  1 <sup>st</sup> Round Information Request Responses (April 2012) IR AANDC 9 IR DKFN 9
It is anticipated that water quality in the controlled area (e.g., water management pond) and receiving waters will be monitored during operations to compare to EIS predictions	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) YKDFN 2.20
The inclusion of a monitoring program that will include a range of applicable monitoring parameters at representative lakes in the local study area (LSA) so that potential changes to light attenuation and TSS concentrations as a result of the Project have a high likelihood of being identified	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 5b
De Beers is committed to monitor the site water quality in Areas 3 and 5 during operations, which will receive the loading from the Fine PKC Facility during closure (i.e. the refilling period) and post-closure	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DKFN 29 DFO&EC 43b
During construction and operations, pumped discharge from Kennady Lake will only occur while regulatory requirements, including total suspended solids (TSS) concentrations, in the discharge are met. Discharge will be sampled regularly to monitor for compliance with TSS discharge limits to be specified by the Mackenzie Valley Land and Water Board in the water license, which will be required before the Project can operate.	Management Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) YKDFN 2.30
Water quality will be closely monitored during operations and the re-filling process, and adaptive management will be implemented as required to ensure that the final water quality is sufficient to support a viable and self-sustaining ecosystem that is compatible with the regional watershed and maintains traditional use of the area prior to reconnecting the WMP to the downstream watersheds	Monitoring	Technical Report Responses (November 2012) AANDC 7 Environment Canada 3.3  Public Hearing - December 5, 2012
Further front-end design will be done on a comprehensive AEMP, with monitoring to be conducted during construction, operation and closure phases of the project. Monitoring data will be compared to predictions and periodically used to update and re-run models predicting future water quality (Environment Canada suggests every 3 to 5 years would be appropriate). At closure, modeling predictions for lake quality will be supplemented with bioassay testing (chronic and acute) prior to reconnection of Kennady Lake with Area 8	Monitoring	Technical Report Responses (November 2012) Environment Canada 3.1
De Beers commits to continue to evaluate AEMP water quality benchmarks applied to parameters that have a natural upper range of concentrations that are above their respective CCME guidelines for the protection of aquatic life. Proposed water quality benchmarks presented in the technical memorandum titled, "Water Quality Objectives (WQO) and Sediment Quality Objectives (SQO) for the Proposed Gahcho Kue Project – Recommendation", dated September 14, 2012, served to inform discussions on the development of details being considered in the preliminary design of an AEMP for the Project, which will be resolved during the regulatory process . W	Monitoring	Technical Report Responses (November 2012) Environment Canada 3.2  Water Quality Objectives (WQO) and Sediment Quality Objectives (SQO) for the Proposed Gahcho Kue Project- September 14, 2012
De Beers will include uranium, thorium, and possibly radium 226, in the suite of monitoring parameters, developed for the groundwater quality monitoring program.	Monitoring	Technical Report Responses (November 2012) NRCAN 5
<b>Fish and Fish Habitat</b>		

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
<b>Sediment and Erosion Control</b>		
<p>De Beers commits to develop and implement a sediment and erosion plan for dyke construction to control sediment release. This plan will include details of the sediment and erosion control measures for each dyke to be constructed, along with contingency plans. The Sediment and Erosion Plan will be submitted to the MVLWB as a component of the Water Licence Application.</p>	Management	<p>2<sup>nd</sup> Round Information Request Responses (September 2012) NRCan 2-1</p> <p>Technical Report Responses (November 2012) DFO 5</p> <p>Public Hearing – December 5, 2012</p>
<p>Release of sediment during construction of dykes in the A, B, D and E watersheds may change water and sediment quality, and affect fish habitat and fish: Changes to permafrost conditions in the flooded shoreline zone of the raised lakes due to increased water levels may lead to erosion and affect fish habitat: Alteration of water levels in Lakes A3, D2, D3, and E1 may result in shoreline erosion, re-suspension of sediment and sedimentation, and affect water and sediment quality, fish habitat and fish: Alteration of the A, B, D and E watershed areas and flow paths may change flows, water levels, and channel/bank stability in the Kennady Lake watershed, and affect water and sediment quality, fish habitat and fish:</p> <ul style="list-style-type: none"> <li>• all mine rock used to construct the dykes will be Non-acid generating (NAG)</li> <li>• construction of dykes will raise the water level in various areas and subsequently create new fish habitat</li> <li>• cobble and boulder placement to reduce erosion potential</li> <li>• silt curtains will be placed upstream and downstream of the construction area to control the release of suspended sediments</li> <li>• implementation of a quality assurance program during construction of each of the dykes so that construction-sensitive features of the design are achieved; the specific requirements and testing frequencies for the quality assurance process will be set out in the Construction Specifications prepared during final designs</li> <li>• monitoring of the performance of the dykes throughout their construction and operating life; instrumentation including piezometers, thermistors, and survey monitoring markers together with systematic visual inspection will provide early warning of many conditions that can contribute to dyke failures and incidents</li> <li>• active monitoring and maintenance plan for the new shorelines associated with the raised lakes</li> </ul> <p>Diversion outlet structures will be designed and managed to provide an outflow rating curve that approximates the natural outflow rating curve, to the extent possible, during construction and operations. The channels will be evaluated and mitigation applied as necessary to prevent erosion and to maintain stability in permafrost, and to provide fish passage and spawning habitat between the re-aligned lakes. Furthermore, a monitoring and mitigation program for the raised lakes will be incorporated in an adaptive management plan for shoreline erosion. For water quality, preparation of the areas to be flooded will be undertaken, where necessary, to limit the potential for long-term nutrient and metals releases to the lakes and mercury methylation.</p>	Management Environmental Design Features Monitoring	<p>2011 EIS Update Section 8 (July 2011)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) DFO&amp;EC 36</p> <p>Technical Report Responses (November 2012) DFO 5</p>
<p>Erosion of lake-bottom sediments in Lake N11 and Area 8 from pumped discharge may change water quality and fish habitat in downstream waterbodies, and affect fish habitat and fish:</p> <ul style="list-style-type: none"> <li>• pumped discharge to Lake N11 and Area 8 will be directed through properly designed outfalls/diffusers to prevent erosion</li> </ul> <p>The end-of-pipe discharge points for the lake dewatering operations will be placed at relatively deep water locations in Lake N11 and Area 8 so as to minimize the potential impact to lake bottom sediments.</p>	Environmental Design Features	<p>2011 EIS Update Section 9 (July 2011)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) DFO&amp;EC 35a</p>
<p>Release of sediment to Area 8 during the construction of Dyke A may change water and sediment quality, and affect fish habitat and fish:</p> <ul style="list-style-type: none"> <li>• silt curtains will be placed upstream and downstream of the construction area to control the release of sediment to Area 8</li> </ul> <p>Some general considerations in the use of turbidity barriers in dyke construction are presented in Page 8-128 of 2011 EIS Update (De Beers 2011). In the event that TSS concentrations approach monitoring thresholds, construction activities will be temporarily curtailed and additional measures would be implemented to meet the water quality requirements in Area 8. These contingency measures would include 1) installing additional rows of the turbidity barriers, 2) constructing a temporary filter berm to retain the excess suspended solids and allow the clean water to pass through, or 3) pumping the water with excess TSS to a temporary polishing pond.</p>	Environmental Design Features	<p>2011 EIS Update Section 8 (July 2011)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) DFO&amp;EC 26 YKDFN 2.30</p>

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
<p>De Beers commits to develop and implement minimum water level thresholds in Area 8 during construction and operation, as well as Lake N11 during closure. In Area 8, winter water withdrawals from Area 8 for potable water will meet the Fisheries and Oceans Canada (DFO) <i>Protocol for Winter Water Withdrawal from Ice-Covered Waterbodies in the Northwest Territories and Nunavut</i>. In Lake N11, planned pumping rates during open water conditions will be set accordingly to ensure that the total annual discharge from Lake N11 does not drop below the 1-in-5 year dry condition.</p> <p>Hydrological monitoring will be conducted as part of the project, both for operational decision-making with respect to the water management plan, and also as part of the AEMP. Staff gauges will be installed to monitor water levels to protect littoral habitat; this was identified in the response to Round 1 Information Request DFO&amp;EC_61 for Area 8. If changes to water levels are greater than predicted (e.g., water levels approach benchmarks developed as part of the AEMP), then adaptive management will be applied, as appropriate.</p>	Environmental Design Features	<p>2011 EIS Update Section 8 (July 2011)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) DFO&amp;EC 35a</p> <p>Technical Report Responses (November 2012) DFO 6</p>
<b>No Net Loss Plan</b>		
<p>Fish habitat compensation to account for harmful alteration, disruption or destruction (HADD) of fish habitat associated with the Project will be developed in consultation with regulatory agencies and aboriginal groups</p> <p>De Beers is committed to continuing to work with DFO, Environment Canada and Aboriginal communities on the finalization of options, as part of the development of the detailed fish habitat compensation plan to achieve no net loss of fish habitat.</p> <p>Monitoring will also be conducted to evaluate the effectiveness of habitat compensation, and will include evaluation of both physical and biological characteristics.</p>	Management Monitoring	<p>2011 EIS Update Sections 8 and 10 (July 2011) 2012 EIS Supplement Section 3 (April 2012)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) DFO&amp;EC 56, 57, and 58 DKFN 25 and 39 GKP 14</p> <p>2<sup>nd</sup> Round Information Request Responses (September 2012) DFO 2-3 LK 01</p> <p>2012 Draft No Net Loss Plan- November 13, 2012 (Section 8.0)</p> <p>Public Hearing – December 5, 2012</p>
<b>Fish-out Plan</b>		
<p>A fish out will be conducted from Areas 2 through 7 of Kennady Lake to remove fish before and during dewatering. This will be undertaken as part of a DFO <i>Fisheries Authorization</i> in a manner that involves aboriginal communities, minimizes spoilage of fish and maximizes the potential to collect valuable scientific data on northern fishes. Where possible, the timing of the fish out will coincide with important aboriginal cultural events.</p>	Management Environmental Design Features	<p>1<sup>st</sup> Round Information Request Responses (April 2012) DFO&amp;EC 65</p> <p>Draft Fish Out Plan - October 4, 2012.</p>
<b>Water Management</b>		
<p>The performance of the dykes will be monitored throughout their construction and operating life; instrumentation monitoring together with systematic visual inspection will provide early warning of many conditions that can contribute to dyke failures and incidents. Additional mitigation will be applied, if required.</p> <p>In the unlikely event that degradation of foundation conditions over the relatively short life of the structure impact a dyke's stability, contingency measures will be applied. Contingency measures may include foundation grouting, downstream or upstream till blankets, ground freezing for temporary situations, cut off walls or dyke reconstruction. The measured ground temperatures and the results from regular site inspection and monitoring activities will be collected, analyzed and reported. The information from monitoring programs will be used to determine if contingency measures are required and will be implemented accordingly.</p>	Environmental Design Feature Monitoring	<p>2010 EIS Sections 5, 7, and 11 (December 2010)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) NRCan 1-12iii</p>
<p>The suggested 0.002 mg/L method detection limit (MDL) for total phosphorus (TP) will be utilized as a maximum MDL for all future analyses</p>	Management Monitoring	<p>1<sup>st</sup> Round Information Request Responses (April 2012) DFO&amp;EC 11a</p>
<p>De Beers is committed to complete monitoring and testing using standard field and laboratory procedures during the Project operation to evaluate groundwater quantity and quality. Where necessary, the water quality and quantity input profiles assigned to the loadings for groundwater will be revised and Project effects will be re-assessed, as appropriate. Where required, adaptive management strategies will be adopted</p>	Management Monitoring	<p>2011 EIS Update Section 8 (July 2011)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) AANDC 12</p>

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
It is anticipated that water column profiles in Kennady Lake will be monitored during closure and following reconnection with Area 8 to compare to EIS predictions. If it is identified that water column dissolved oxygen (DO) concentrations, particularly in the surface 6 metre depth zone, are worse than predictions, adaptive management strategies will be triggered to address the problem.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) DKFN 45
Ongoing monitoring of water quality in the LSA will include reporting of the TSI index.	Monitoring	1 <sup>st</sup> Round Information Request Responses (April 2012) YKDFN 2.29
During operations, Project activities associated with the water management plan will be designed to discharge site water to downstream waterbodies only when specific water quality criteria are met. During operations, water for use in the processing plant will be sourced from the WMP and recycled to the greatest extent possible. Parameters for discharge, mixing zones and monitoring points will be determined and regulated as part of the water licensing process.	Management Environmental Design Feature	2011 EIS Update Section 9 (July 2011)  1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 66  2 <sup>nd</sup> Round Information Request Responses (September 2012) AANDC 2-1
Dewatering of Kennady Lake to Lake N11 and Area 8 may change flows, water levels, and channel/bank stability in downstream waterbodies, and affect water quality, fish habitat and fish: <ul style="list-style-type: none"><li>• pumped discharge to Lake N11 and Area 8 will only occur while water quality discharge criteria are met</li><li>• discharge from Area 7 to Area 8 is proposed to cease after Year 2, when water levels in Area 7 drop to a level that turbidity levels exceed discharge criteria</li><li>• pumped discharge will be directed to the lake environment in Lake N11 and Area 8, and not directly to outlets, to attenuate flow changes</li></ul>	Environmental Design Features	2011 EIS Update Section 9 (July 2011)
To manage water that has higher levels of TSS, flocculants may be added through an in-line treatment process; for example, water that can no longer be pumped from Area 7 to Area 8 will be pumped to Areas 3 and 5 through a pumped system with in-line flocculation to minimize TSS in Areas 3 and 5 to allow for dewatering of this area to the maximum extent possible.	Management	2011 EIS Update Section 8 (July 2011) 2012 EIS Supplement Section 3 (April 2012)  1 <sup>st</sup> Round Information Request Responses (April 2012) AANDC 4, Response 6
Follow-up monitoring will consist of programs designed to verify key inputs to the effects analysis, such as the quality of the water pumped from the WMP to Lake N11. Results of follow-up monitoring will be used to reduce the level of uncertainty related to impact predictions. Future monitoring programs will apply the lowest available MDL to collected lake and stream samples.	Monitoring	2011 EIS Update Section 9 (July 2011)  1 <sup>st</sup> Round Information Request Responses (April 2012) DFO&EC 11c
<b>Wildlife Mitigation</b>		
De Beers will implement the Wildlife and Wildlife Habitat Protection Plan as submitted to the Panel on October 4, 2012. The Wildlife and Wildlife Habitat Protection Plan will be refined prior to construction to address the recommendations made by GNWT and Environment Canada in their technical reports. The Wildlife and Wildlife Habitat Protection Plan will be adaptively managed by De Beers during the Project life with input from GNWT, Environment Canada, and Ni Hadi Yati.	Management Environmental Design Feature	Wildlife and Wildlife Habitat Protection Plan, October 2012
Downward directional and low impact lighting will be used to reduce light pollution	Management Environmental Design Feature	Wildlife and Wildlife Habitat Protection Plan, next iteration
Low profile roads will be used so that they do not act as a barrier to movement for wildlife	Management Environmental Design Feature	Wildlife and Wildlife Habitat Protection Plan, next iteration
Winter road snow berms will be removed so that they do not act as a barrier to movement for wildlife	Management Environmental Design Feature	Wildlife and Wildlife Habitat Protection Plan, next iteration
De Beers will implement the Wildlife Effects Monitoring Program as submitted to the Panel on October 4, 2012. The Wildlife Effects Monitoring Program will be refined prior to construction to address the recommendations made by GNWT and EC in their technical reports. The Wildlife Effects Monitoring Program will be adaptively managed during the Project life by De Beers with input from GNWT, Environment Canada, and Ni Hadi Yati.	Monitoring	Wildlife Effects Monitoring Program, October 2012

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
<b>Soils and Vegetation Monitoring</b>		
De Beers will submit a Soil and Vegetation Monitoring Plan to the MVLWB as part of the Land Use Permit application. The Soil and Vegetation Monitoring Plan will include a targeted study examining the correlation between dustfall and caribou Zone of Influence.	Management Monitoring	2010 EIS Section 11 (December 2010)
<p>The monitoring activities associated with Project construction, operations, and closure, are described below, and are designed to work in conjunction with other programs.</p> <ul style="list-style-type: none"> <li>• Identification of areas where vegetation is intact. A general site survey to identify areas where healthy vegetation is maintained and where vegetation is showing signs of degradation will be carried out on a regular basis. Estimates of the extent of intact (undisturbed) and degraded vegetation will be recorded.</li> <li>• Identification of areas where re-vegetation is required. Disturbed areas will be identified from the general site survey identified above, as well as from surveys conducted as part of the monitoring program associated with the closure and reclamation plan (Section 10). Disturbance estimates will include descriptions of areas that have been re-vegetated and an indication of treatment effectiveness. Test plots will be established at longer-term monitoring stations to evaluate treatment effectiveness as well.</li> <li>• Implementation of re-vegetation efforts. Areas identified as requiring re-vegetation (e.g., from the general site survey and/or closure and reclamation monitoring) will be assigned an appropriate treatment. Vegetative material (seed or otherwise) will be composed of non-invasive species. The long-term re-vegetation goal is to facilitate and encourage the re-establishment of native vegetation. Treatments will be designed such that they optimize success (e.g., timing will coincide with favourable weather events).</li> <li>• Survey timing. The timing of the surveys will be planned according to when the areas were re-vegetated and the potential for soil erosion. For example, areas with a high potential for soil erosion will likely be surveyed more frequently following treatment. Test plots will be established at longer-term monitoring stations.</li> </ul>	Management Monitoring	2010 EIS Section 11 (December 2010)
Additional surveys for plant species considered to be “at risk” within the Project footprint will be carried out in conjunction with other vegetation monitoring programs (e.g., those specified in the vegetation management plan, Kennady Lake dewatering, and dust monitoring program), as the compilation of a plant species list is included as a component.	Monitoring	2010 EIS Section 11 (December 2010)
<b>Air Quality Management</b>		
De Beers will implement the AQEMMP as submitted to the Panel on October 18, 2012. The AQEMMP will be refined prior to construction in consultation with Environment Canada and GNWT. The AQEMMP will be adaptively managed during the Project life by De Beers with input from GNWT, Environment Canada, and Ni Hadi Yati.	Management Environmental Design Feature	Air Quality and Emissions Monitoring and Management Plan, October 2012
De Beers will implement the Incinerator Management Plan as submitted to the Panel on October 18, 2012. The Incinerator Management Plan will be refined prior to construction in consultation with Environment Canada and GNWT. The Incinerator Management Plan will be adaptively managed during the Project life by De Beers with input from GNWT, Environment Canada, and Ni Hadi Yati.	Management Monitoring	Incinerator Management Plan, October 2012
De Beers will continue to evaluate alternative energy sources that will reduce the Project’s dependency on fossil fuel as part of adaptive management and De Beers’ sustainable development policy.	Management	2010 EIS Section 11 (December 2010)
De Beers is committed to continuously evaluate ways to improve energy efficiency that are both technically and economically feasible.	Management	2010 EIS Section 11 (December 2010)
<b>Archaeology</b>		
Protection of permafrost — all activities that affect permafrost around the site will be carefully planned so that areas not directly affected by the mine and plant site will be preserved	Management	2010 EIS Section 11 (December 2010)
<b>Proposed Park</b>		
De Beers recognizes that connections with the land exist, and it will work with Łutsek’e and Parks Canada, once the Park is established, on initiatives that might be identified as essential to keep the story on the land alive.	Management	2010 EIS Section 12 (December 2010)

**Undertaking #2 – Summary of Commitments Made by De Beers Canada Inc. in the Gahcho Kué Project Environmental Impact Review Process (continued)**

Commitment Description	Commitment Type	Documents/Public Hearings
<b>Reclamation and Closure</b>		
<p>Experience gained from closures of the Ekati and Diavik mines will be used at the Project site to develop a re-vegetation management plan to support the successful restoration of the site.</p> <p>Reclamation activities will include:</p> <ul style="list-style-type: none"> <li>• Implement monitoring and mitigation programs and adaptively manage to achieve closure objectives</li> <li>• Removal and disposal of site infrastructure and materials;</li> <li>• To the extent practical, the total amount of area disturbed by Project activities at any one time will be reduced through the use of progressive reclamation;</li> <li>• An evaluation will consider the physical aspects of re-vegetation, such as re-contouring, erosion control techniques, seedbed preparation, surface roughening, and the use of soil amendments, which collectively promote natural secondary succession;</li> <li>• Removal or breaching of dykes;</li> <li>• Evaluate opportunities to restore Area 7 earlier in the mine plan;</li> <li>• Refilling Kennady Lake;</li> <li>• Breaching of Dyke A that separates Kennady Lake from the Downstream will only occur once the water quality is at an acceptable quality as defined in the water licences discharge criteria;</li> <li>• Restoration of navigation</li> <li>• Reclamation plans will be developed iteratively during the Project in consultation with Regulators and Aboriginal Authorities; and</li> <li>• Traditional knowledge will be considered in reclamation and closure plans.</li> </ul>	<p>Management Monitoring</p>	<p>2010 EIS Sections 4, 5, 7, 11, and 12 (December 2010) 2011 EIS Update Sections 8 and 10 (July 2011) 2012 EIS Supplement Section 3 (April 2012)</p> <p>1<sup>st</sup> Round Information Request Responses (April 2012) DFO&amp;EC 29a, 39, 53b, and 57 DKFN 4 EC 11 and 12 GKP 6 and 14 NRCan 1-8 TC 3 YKDFN 4-40</p> <p>Technical Sessions (May 2012)</p> <p>2<sup>nd</sup> Round Information Request Responses (September 2012) EC 2</p> <p>Technical Report Responses (November 2012) AANDC 7 DFO 6 and 4 EC 3.1 and 3.3 LKDFN 3.2 NSMA 1 YKDFN 12</p> <p>Public Hearing – December 5, 2012</p>