December 10, 2015

Mackenzie Valley Environmental Impact Review Board
200 Scotia Centre
Box 938, 5102-50th Ave
Yellowknife, NT X1A 2N7

Attn: Kate Mansfield, Environmental Assessment Officer

Re: **EA1516-01, Selwyn Chihong, Howard's Pass Access Road Upgrade Project: The Developer's Proposed Terms of Reference**

Dear Ms. Mansfield:

Thank you for the opportunity to comment on *The Developer's Proposed Terms of Reference* for *EA1516-01, Selwyn Chihong, Howard's Pass Access Road Upgrade Project***.** We are submitting comments in our respective capacities as Wildlife Conservation Society (WCS) Canada scientists[1] specializing in wildlife ecology, conservation biology, and landscape ecology in Canada.

We are particularly concerned about the effects of proposed mining developments and the associated heavy, constant industrial traffic along the Howard's Pass road on seasonal movements, use of critical habitats, and survivorship of the Nahanni Caribou Herd and grizzly bears. The many and substantive detrimental effects of new mines and roads – even a single development – into remote country on vulnerable wildlife and ecosystem integrity have been well documented in the scientific literature. This is especially critical for maintaining the ecological integrity of the renowned National Park Reserves and World Heritage Site.

Based upon the scientific information, we believe that the Terms of Reference for the Howard's Pass Access Road (HPAR) can be strengthened by incorporating more explicit examination of environmental effects at appropriate geographic and temporal scales for the Nahanni Caribou Herd and grizzly bears as prioritized lines of inquiry. Although we are encouraged by the explicit incorporation of cumulative effects in the TOR, we have some suggestions for strengthening this further. We have provided several comments, rationale, and recommendations in this letter that we are submitting through the on-line submission.

One of us - Dr. John Weaver, Senior Scientist for WCS Canada - conducted 5 years of field research on grizzly bear, Dall's sheep, and woodland caribou throughout the South Nahanni River watershed,

WCS CANADA
344 BLOOR STREET WEST M5S 3A7
TORONTO, ONTARIO M5S 2T9 CANADA

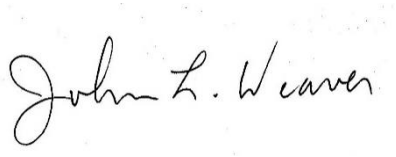
PHONE: (CAN) 416 850 9038 X 22
FAX: 416 850 9040
JRAY@WCS.ORG
WWW.WCS.ORG

including the headwaters area known as *Nááts'ihch'oh*. John obtained extensive, on-the-ground experience in this very remote area and published the WCS Canada *Conservation Report* Big Animals and Small Parks: Implications of Wildlife Distribution and Movements for Expansion of Nahanni National Park Reserve (2006). This scientific report provided much pertinent data that informed the momentous decision to expand Nahanni National Park Reserve and to create Nááts'ihch'oh National Park Reserve. We have attached a copy of that report for your background and reference (available for download from http://wcscanada.org/Wild-Places/Nahanni-National-Park-Reserve.aspx).

Moreover, Dr. Justina Ray, Senior Scientist and Executive Director of WCS Canada, is co-chair of the Terrestrial Mammal Subcommittee of COSEWIC and led the recent assessments of grizzly bear (2013) and mountain caribou (2014) in Canada. Justina served as science advisor to Environment Canada on identification of critical habitat for boreal caribou across Canada and to the Ontario government on caribou and wolverine recovery. She is co-author (with Monte Hummel) of the book *Caribou and the North: A Shared Future* (2008) and other relevant publications.

Our specific comments on the draft TOR are in the pages that follow. Thank you for carefully considering these comments and recommendations.

Sincerely,



John Weaver, Ph.D.
Senior Conservation Scientist

Justina Ray, Ph.D.
President and Senior Scientist

---

1 WCS Canada (www.wcscanada.org) was established in May 2004 as a Canadian non-government organization with a mission to conserve wildlife and wildlands by improving our understanding of and seeking solutions to critical problems that threaten key species and large wild ecosystems throughout Canada. We implement and support comprehensive field studies that gather information on wildlife needs and then seek to resolve key conservation problems by working with First Nation communities, Government and regulatory agencies, conservation groups, and industry.

Specific WCS Canada Comments and Recommendations:

TOPIC	COMMENT	RECOMMENDATION
SCOPE/3.1/Table 1, p.14	Grizzly bears have low reproductive rates and cannot sustain excessive mortality rates caused by humans. Human-based foods and garbage can attract grizzly bears, increase conflicts with humans, and lead to direct shooting or management removal of bears. Much progress has been accomplished in recent years in standards and techniques for appropriate handing of human foods and garbage to minimize the risk of conflicts. Grizzly bears occur commonly in the vicinity of the Howard's Pass road, so the potential for conflict is real.	Best management practices for securing food and garbage attractants from bears should be itemized under 'Temporary construction camps' in Table 1.
SCOPE-components/ 3.2/ Table 2 and pp. 16-17	Woodland caribou and grizzly bears are species that are highly vulnerable to human disturbance, habitat fragmentation, and excessive risk of mortality.	*Both* the Nahanni herd of woodland caribou and grizzly bear should be considered priority species and designated as 'key lines of inquiry' for this environmental assessment.
SCOPE-components/ 3.2/ Table 2 and pp. 16-17	Nahanni National Park Reserve is a World Heritage Site, and Nááts'ihch'oh National Park Reserve comprises much of the headwaters region of the South Nahanni River watershed. Ecological integrity is the policy mandate of Parks Canada. The Nahanni Caribou Herd and grizzly bears occur within the boundaries of these Park Reserves but also extend beyond them. Thus, impacts upon these trans-boundary components pertain to the ecological integrity of both of the Park Reserves.	Ecological integrity of Nahanni and Nááts'ihch'oh National Park Reserves should be a key line of inquiry, separate and distinct from "visitor access to park areas and visitor experience, park heritage and cultural resources".
Cumulative effects/s. 6 (p. 33), 7.1 (p. 35), 10 (p. 42)	The building of this road not only will bring increased traffic levels into this remote region, but also has the potential to spawn additional development interest and/or access, and increased hunting levels, creating what is known as "growth-inducing	We support the explicit inclusion of cumulative effects and suggest that this should be particularly targeted to the vulnerable wildlife species – woodland caribou and grizzly bear – and analyzed in the

	effects". Cumulative effects may result from the accumulation of similar effects or the synergistic interaction of different effects.	context of the ecological integrity of the Park Reserves. In this vein, some key questions for this assessment from a cumulative effects perspective include: 1) whether the development of the road will or could lead to new mining projects and an expanding footprint and/or greatly increase access to caribou range and the potential for unsustainable harvest? 2) Should the road effects be considered cumulatively with those associated with the mine, even if the activities are only exploratory at this stage in the development process?
SCOPE - geographic/ 3.3/ Table 3, p.18	Most of the Nahanni Caribou Herd (NCH) spends the winter near Virginia Falls in Nahanni National Park Reserve and the summer-fall at the head of the Little Nahanni River and adjacent highlands along the Yukon border (Weaver 2006). The annual range of this herd has been estimated at 17,500 km^2. Grizzly bears occur throughout the Greater Nahanni Ecosystem, with higher densities in the more mountainous landscapes (Weaver 2006). Very high survivorship (>0.92) of adult female grizzly bears is a key factor in population persistence. Adult females often seek remote areas to raise their cubs. Minimizing disturbance of family groups as well as potential for grizzly-human conflicts are important conservation measures.	The geographic scope of the Environment al Assessment for woodland caribou should include the annual home range of the Nahanni Caribou Herd (see Weaver 2006). For critical seasonal events, the geographic scale should include areas documented for calving and breeding by the NCH, especially within 3.2 km of the HPAR. The geographic scope of the Environment al Assessment for grizzly bears should be scaled at a minimum to the annual home range of adult females. Some data from the Mackenzie Mountains suggests their home ranges encompass 400-550 km^2.

		For both species, we note that the most recent surveys and radio-collaring data are over 5 years old. More recent data about distribution and movements will be necessary in this EA. To deliver the promise of cumulative effects analysis in the TOR, the study area must be large enough to encompass the total number of road crossings (and associated risk to aquatic environments) or sediment input into the watershed. We note mention of the potential for a regional approach (Table 4), which would be good assessment practice if there was a larger road network or the potential for new roads in the reasonably foreseeable future.

SCOPE - temporal/ 3.4/ Table 5, p.21	In spring (mid-April to mid-May), this Nahanni Caribou Herd migrates north-northwest up the South Nahanni River into the area at the head of the Little Nahanni River and adjacent highlands along the Yukon border. Here, adult female give birth to calves usually in mid-May to early June; this is a very critical event and time for caribou. Breeding (rut) usually occurs in the Little Nahanni River headwater basin in early October. The Howard's Pass Access Road (HPAR) passes through areas that are critical for these caribou during specific time periods. Grizzly bears are active from den emergence (April-May) until den entrance (October-November). Bears may also be susceptible to disturbance at dens (November-March). Different conservation measures are warranted during these different time periods.	The temporal scope of the Environment al Assessment for Nahanni Caribou Herd should include the spring migration, calving and post-calving period, the breeding rut, and fall migration. This would encompass mid-April to mid-November (see Weaver 2006). Due to the multi-decade existence of the HPAR and mine, the temporal scope should also address the cumulative effects over the entire time span of the proposed project on caribou. The temporal scope of the Environment al Assessment for grizzly bears should include both the active period (April/May → November) and the denning period (November → March/May). Due to the multi-decade existence of the HPAR and mine, the temporal scope should also address the cumulative effects over the entire time span of the proposed project on caribou.
ENVIRONMENT – wildlife/4.1.6, p. 24	New and/or upgraded roads and associated vehicle traffic introduce a 'new environment' that may displace animals, impede their movements, fragment habitats and populations, and impinge upon genetic exchange.	Description of the environment should include detailed discussion of location of the Howard's Pass Access Road relative to the movements and activities of the Nahanni Caribou Herd. We note the commitment to a fairly comprehensive list of wildlife, wildlife habitat, wildlife features that will be included in the inventory work.

		This raises some concerns for us about whether the work will be spread too thinly across these elements to constitute robust scientific practice. We urge careful decision making as it relates to information gathering and analysis around the key lines of inquiry and cumulative effects, especially vulnerable and wide-ranging wildlife and ecological integrity of the park reserves.
DEVELOPMENT – Construction Phase/ 5.2 /Table 6, p. 29	Human occupancy and associated foods and garbage introduce a 'new environment' for vulnerable species like grizzly bears. Grizzly bears have low reproductive rates and cannot sustain excessive mortality rates caused by humans. Human-based foods and garbage can attract grizzly bears, increase conflicts with humans, and lead to direct shooting or management removal of bears. Grizzly bears occur commonly along the Howard's Pass Access Road, so the potential for conflict is real.	Description of the environment should include detailed discussion about management of human foods and garbage at all camps to minimize attractants for grizzly bears. This plan should be reviewed by independent bear scientists.
DEVELOPMENT – Operations Phase/ 5.2 /Table 7, p. 30	Projected traffic volume along the HPAR during the operations phase is estimated to be 100 vehicles per day each way, or 200 total vehicle trips. Although the footprint of the road is relatively small, there will be a large truck passing through it every 7.2 minutes (contingent on a 24-h haul schedule).	The EA should describe measures to ensure safe passage or crossing of woodland caribou during critical periods (e.g., spring migration, calving, and rut). These measures should include the **seasonal** closure of the HPAR during critical time periods for caribou. Any mitigation plans should be reviewed by independent caribou scientists.

DEVELOPMENT – Closure Phase/ 5.2/Table 8, p. 31	Management of the HPAR upon completion of the mining project will have a major, long-term effect on the Nahanni Caribou Herd, grizzly bears, and other wildlife.	The plans for temporary or permanent suspension of the HPAR should explicitly address the different effects on caribou, grizzly bear, and other wildlife populations and the long-term ecological integrity of the National Park Reserves.
Harvest and Traditional land use harvesting/4.22 (p. 25), 7.9 (p. 39)	The TOR is mostly concerned with impacts of the project on traditional harvest. But impacts may arise from increased harvest by resident hunters as well, due to greater roaded access to the areas where caribou occur in fall.	Impacts from increased harvest and monitoring of the potential for overharvest as a result of access provided by the upgraded road should be explicitly considered for all phases of the project.
ASSESSMENT of ALTERNATIVES 9.1/p.42	A full and fair examination of the alternatives in an Environmental Assessment should consider a 'No-Action' alternative.	The EA should place serious consideration into a 'No-Action' alternative and compare the effects to other alternatives.