TECHNICAL MEMORANDUM

DATE March 23, 2012 **PROJECT No.** 10-1334-0049

TO Grant Chapman; Paul Gregoire
Alberta Sustainable Resource Development; Canadian Wildlife Service - Environment Canada

CC Andrew Phelps (Environment Canada), Medina Hansen, Curtis Campbell (Golder Associates)

FROM Shanon Leggo, Corey De La Mare **EMAIL** Shanon_Leggo@golder.com; Corey_Delamare@golder.com

NOVA GAS TRANSMISSION LTD. (NGTL) LEISMER TO KETTLE RIVER CROSSOVER PROJECT - METHODS FOR MIGRATORY BIRDS AND SPECIES AT RISK WILDLIFE SURVEYS

1.0 BACKGROUND

Through the information request (IR) process for the National Energy Board (NEB) Section 52 application for the Leismer to Kettle River Crossover Project (the Project), and at meetings regarding the Project, Environment Canada (EC) has identified specific concerns and provided recommendations regarding wildlife species at risk. Environment Canada recommended that NOVA Gas Transmission Ltd. (NGTL) conduct and provide the results of appropriately timed surveys for migratory birds and species at risk identified by the *Species at Risk Act* (SARA).

The NEB, in a letter dated 28 February 2012, directed NGTL to undertake appropriately timed field surveys for the following species:

- wolverine;
- woodland caribou;
- western (boreal) toad;
- yellow rail;
- common nighthawk;
- Canada warbler;
- olive-sided flycatcher; and
- rusty blackbird.

The letter also directed NGTL to file with the NEB the proposed methods for the field surveys, evidence of consultation with EC and Alberta Sustainable Resource Development (ASRD) on the proposed methods, and a

schedule for the filing of the survey results and appropriate mitigation, by 30 March 2012, and prior to conducting the field surveys.

In response to this letter, Golder Associates Ltd. (Golder) has prepared the following proposed methods to conduct field surveys and reporting for the identified species. Following the proposed methods, photographic non-reward bait stations will be completed to assess relative abundance and distribution of wolverine. Amphibian and yellow rail surveys will be completed to assess relative abundance and distribution during the breeding season for western (boreal) toad, yellow rail and common nighthawk. Breeding bird surveys will be completed to assess relative abundance and distribution of migratory birds including Canada warbler, olive-sided flycatcher and rusty blackbird. Incidental observations will be recorded during all field surveys, including observations of federally and provincially listed species, such as great blue heron colonies as mentioned in the letter from EC to NEB, dated February 15, 2012.

2.0 WOLVERINE SURVEYS

Wolverine is provincially listed as 'May be at Risk' (ASRD 2011) and federally as 'Special Concern' (COSEWIC 2010) and is not listed on the *SARA*. Wolverines are uncommon carnivores in the boreal region of Canada with large home ranges (1,450 km^2 and 525 km^2 for males and females, respectively [Magoun et al. 2005]).

Photographic non-reward bait stations will be used to determine the presence and distribution of wide-ranging, elusive carnivores, like wolverine. Survey methods will follow methods currently being used in oil sands Environmental Impact Assessments (EIA) in the region (Cenovus 2010; EnCana 2009; MEG 2008). Skinned beaver carcasses will be placed in closed buckets with small holes drilled on the side to release scent. Buckets will be suspended at least 3 m off the ground on a wire hung between two large-diameter trees separated by 5 to 8 m. Animals are able to investigate, but not retrieve, bait buckets suspended in this manner. Remote cameras triggered by an infrared motion detector will be used to photograph wildlife approaching the bait stations. Bait stations will be distributed in a manner designed to capture wide-ranging carnivores in the Project area. Consequently, photographic bait stations will be place at least 5 km apart (i.e., approximately one per 20 km^2) to provide sufficient sampling intensity. Photographic bait stations will be deployed in mid April and retrieved at the end of June. This will allow for an approximate 75 day sampling period.

3.0 WOODLAND CARIBOU SURVEYS

Ungulate aerial surveys were completed in the winter of 2011 to assess woodland caribou presence and distribution in relation to the proposed Project footprint and the results were included in the Environmental and Socio-economic Assessment (ESA) for the Project.

4.0 AMPHIBIAN AND YELLOW RAIL SURVEYS

The western (boreal) toad is provincially listed as 'Sensitive' (ASRD 2011) and federally listed as 'Special Concern' (COSEWIC 2010) and listed on Schedule 1 of the *SARA* (SARA 2011). Western toad has the potential to occur within the Project rights-of-way (ROW); however, optimal breeding habitat is not readily available, as summarized in recent information responses to the NEB (NEB IR NEB-001.15-R1-0).

Yellow rail are federally listed as 'Special Concern' (COSEWIC 2010) and included on Schedule 1 of the *SARA* (SARA 2011). Their status in Alberta is undetermined (ASRD 2011). Yellow rails are the most secretive and least understood North American birds (COSEWIC 2009). This species has only been recorded sporadically and in low numbers throughout northeast Alberta. Yellow rails have the potential to occur within the Project ROW based on documented habitat preference and the presence of this habitat type within the Project ROW.

Common nighthawk is federally listed as 'Threatened' (COSEWIC 2010) and included on Schedule 1 of the *SARA* (SARA 2011). Common nighthawk populations are considered large in Alberta; however, there has been an apparent decline (ASRD 2006). Common nighthawk detections can be difficult because of their crepuscular nature (COSEWIC 2007). Specific surveys will not be completed for common nighthawk but incidental observations will be recorded during amphibian and yellow rail surveys, and breeding bird surveys. Amphibian surveys will focus on wetlands habitat adjacent to areas with sandy soils. These open areas are also preferred habitat for common nighthawk, consequently there is a high degree of overlap between western toad over-wintering habitat and common nighthawk habitat.

Amphibian and yellow rail surveys will be focused on species occurrence in areas with high potential for western (boreal) toad, yellow rails and common nighthawks to occur as determined by desktop habitat assessments and in areas with available access. The survey methods will follow the North American Amphibian Monitoring Program (PWRC 2005), the Alberta Volunteer Amphibian Monitoring Program (ACA and ASRD 2006), the Alberta Marsh Monitoring Program for amphibians (MMP 2008) and standardized protocols for conducting yellow rail surveys (Bazin and Baldwin 2007). Access for surveys will be by truck, argo and on foot because they are completed at night when helicopters cannot fly. Surveys will be completed in early June during the optimal breeding period for amphibians and yellow rails. Project construction is currently scheduled to occur outside of the breeding period for amphibians and yellow rails.

5.0 BREEDING BIRD SURVEYS

The Canada warbler is provincially listed as 'Sensitive' (ASRD 2011), federally listed as 'Threatened' (COSEWIC 2010) and listed on Schedule 1 of the *SARA* (SARA 2011).

The olive-sided flycatcher is federally listed as 'Threatened' (COSEWIC 2010) and listed on Schedule 1 of the *SARA* (SARA 2011).

The rusty blackbird is provincially listed as 'Sensitive' (ASRD 2011), federally listed as 'Special Concern' (COSEWIC 2010) and listed on Schedule 1 of the *SARA* (SARA 2011).

Breeding bird surveys will focus on species occurrence in areas with high potential for these species to occur based on habitat associations and in areas with available access. Existing vegetation maps will be used to determine survey plot locations for these species. Survey methods will be in accordance with standard technical procedures for point counts, based on methods described in Ralph (1993). Access for surveys will be by truck, argo and on foot because bird surveys are completed between 30 minutes before sunrise and 10:00 am and helicopters cannot fly field personnel prior to start of surveys due to the lack of daylight. Surveys will be completed in mid-June during the optimal breeding period for migratory birds. Migratory birds are not expected to be present on the Project ROW during clearing and construction; however, should clearing need to occur during the *Migratory Bird Convention Act* (MBCA) restricted activity period (RAP), nest sweeps will be completed to locate and mark any active migratory bird nests and appropriate setback distances will be applied.

6.0 SCHEDULE

It is anticipated that the field surveys can be completed by the end of June 2012 and the results of the surveys will be filed with the Board as a supplemental report by the end of July 2012.

7.0 CLOSURE

We trust that the information provided suits the requirements to assist in consultation between NGTL, ASRD and EC on the proposed methods. If you have any questions or concerns, please contact the undersigned.

GOLDER ASSOCIATES LTD.

Shanon Leggo, B.Sc., P.Biol.
Wildlife Biologist

Corey De La Mare, B.Sc., P.Biol.
Associate, Terrestrial Biologist

SL/CD/CC/bh

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