

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Tundra Oil and Gas Partnership
PROPOSAL NAME: Cromer Pipeline Project
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Pipe lines
CLIENT FILE NO.: 5552.00

OVERVIEW:

The Proposal was dated November 22, 2011, and received on November 29, 2011. The advertisement of the Proposal read as follows:

“A Proposal has been filed by Tundra Oil and Gas Partnership to construct and operate an oil pipeline of approximately of 21 km located within sections 2, 11, 14 and 23-10-29W, sections 25, 26, 27, 28, 35 and 36-9-29W and sections 16, 19, 20, 21 and 30-9-28W, and includes associated temporary and permanent aboveground facilities located in the Rural Municipalities of Pipestone and Wallace.”

The Proposal was distributed to the Technical Advisory Committee (TAC) for review and was advertised in the Reston Recorder on December 30, 2011, and Virden Empire-Advance on December 29, 2011 with comments due January . The proposal was also placed in the Public Registries at the Millennium Public Library, the Manitoba Eco-Network, Western Manitoba Regional Library in Brandon and the Conservation Library (Main).

COMMENTS FROM THE PUBLIC:

The following public comments were received in response to the Environment Act advertisement of the Proposal.

Dan Soprovich

- The proponent indicates the Great Gray Owl as an observed species. Highly unlikely for the species to be found in the area even under winter conditions of movement due to population decline.
- Ignored many wetlands that are obvious from the aerial photography (i.e., as basins). Problem in part by looking at the site in the fall, as opposed to the spring. These kinds of wetlands are known to be used by amphibians in the vicinity of the proposed development.
- Amphibian surveys were not conducted. Species at risk (Great Plains Toad) and other species of interest (e.g., spadefoot) known from personal observation. Need to conduct amphibian surveys for species at risk under appropriate survey conditions.

- Breeding bird surveys not conducted. Species at risk may occur in the area.
- The environmental assessment inaccurately identifies the Piping Plover as a potential species at risk for the Project Area. Marten and Fisher species would also not occur in this area.
- There are better practices to minimize/mitigate impacts to native prairie habitat.
- Rehabilitation plans lack adequate detail.
- The document does not provide the species that would be planted on site.
- The maps provided do not identify ‘grassland’.
- Failure to provide the basis for the scale of the Local Study Area.

Disposition: Comments regarding wetland identification/restoration, revegetation and wildlife surveys were forwarded to the proponent with a request for further information (see ‘Request for Additional Information’ section of this summary). Concerns related to the impact of the development to amphibians are addressed with licence conditions. The Environmental Impact Statement includes maps (Figures 3 – 9) identifying grassland areas.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Canadian Environmental Assessment Agency

- Based on their staff survey, application of the *Canadian Environmental Assessment Act* by a federal authority will not be required for this project.
- Environment Canada provided the following comments:
 - To minimize disturbance to breeding migratory birds in the Prairie ecozone of Manitoba, in areas where migratory birds may be nesting, habitat destruction activities should be avoided between April 15 and July 31. Also wetlands attractive to migratory birds should be cleared between April 1 and August 31.
 - The proponent should clarify their plans and commitment for crossing and rehabilitation of wetlands.
 - Field surveys in September may not have identified all migratory birds and species at risk in the area.
 - The Local Study Area of 200m should be reviewed given that certain species at risk may be impacted at setbacks greater than 200m.

- While the project will be carried out in the winter, several species at risk have year-round setbacks from their wintering and breeding ponds. Ferruginous Hawks nests and Burrowing Owl burrows may be present within the recommended setbacks surrounding the Local Study Area.
- Recommendation that wintering sites and breeding ponds are protected by a year-round with a 200m setback.
- Recommendation that the proponent minimize clearing and stripping in native prairie.
- Reclamation should include seed mixtures that mimic the dominant native vegetation and consideration should be given to controlling invasive species and noxious weeds.

Disposition: Comments regarding wetland identification/restoration, setback distances, revegetation and wildlife surveys were forwarded to the proponent with a request for further information (see ‘Request for Additional Information’ section of this summary). Comments related to time restrictions on clearing can be accommodated as licence conditions.

Manitoba Conservation, Aboriginal Relations Branch

- A Crown Aboriginal consultation initial assessment and record of conclusion should be completed.

Disposition: An initial review has been conducted on the proposed development. No First Nations communities are located adjacent to or near pipeline right-of-way. The current land tenure consists entirely of privately owned property and land-use would preclude the possibility of traditional activities being practiced on these lands.

Manitoba Conservation, Wildlife and Ecosystem Protection Branch

Please accept the following comments from the Wildlife and Ecosystem Protection Branch:

- The wildlife survey within the Cromer pipeline environmental assessment appears to have been conducted at the incorrect time of year. It is important to survey for the species that utilize the study area during the spring and summer. A survey in mid-September would not detect migratory birds or most flowering plants. It is recommended that the proponent conduct surveys in the spring or summer to adequately assess for the presence of rare or endangered species.
- This Cromer pipeline project (EA 5552.00) qualifies for review under the *draft Habitat Mitigation Program* administered by the Wildlife and Ecosystem Protection Branch – Manitoba Conservation. As per the programs policies, lands

classified as wetlands, native prairie, and uplands that are developed for industrial purposes require habitat mitigation. While it is apparent from the environmental assessment that on-site mitigation measures will be used to minimize the negative impacts to the environment, specifically wetlands and native uplands, on-site impact minimization techniques cannot fully compensate for the spatial, temporal and functional losses to the habitat. Mitigation for these areas will require off-site compensation. As part of the mitigation process, Manitoba Conservation and Water Stewardship will require that a review of the habitat mitigation outcomes be conducted three years after construction to assess the extent to which on-site mitigation measures have been successful. A third-party consultant will need to be contracted for this assessment. This assessment will serve as the basis to determining the requirement for off-site compensation.

- The environmental assessment for the Cromer pipeline project describes the baseline habitat conditions that are found in the study area and pipeline right-of-way (ROW)::
 - 2.1 ha of native grassland;
 - 6 ha of upland habitat (shrublands, riparian, woodlands);
 - 3.3 ha of Class 1-5 wetlands(Manitoba Water Stewardship will provide more detailed wetland analysis that will account for the entire size of wetlands intersected by the pipeline ROW);
- Options for providing compensation are outlined below;
 - Securing nearby land and restoring, enhancing, or creating habitat;
 - Securing alternate high-value wildlife habitat and transferring ownership to a conservation agency;
 - Contributing to the *Habitat Compensation Fund*, to be administered by a conservation agency;
- Habitat compensation: loss ratios, as described in the program, are outlined below:

Table 1: Wetland Habitat Compensation: Loss Ratios

Compensation Activity	Class 1*	Class 2*	Class 3*	Class 4-5*
Wetland Restoration/Enhancement/Creation	8:1	6:1	5:1	3:1
Wetland Securement	15:1	12:1	6:1	3:1

- *Based on the wetland classification system developed by Stewart and Kantrud, 1971.*

Table 2. Upland Habitat Compensation: Loss Ratios

Compensation Activity	Class 1*	Class 2*	Class 3*	Class 4-7*
Upland Restoration/Enhancement/Creation	8:1	6:1	5:1	3:1
Upland Securement	15:1	12:1	6:1	3:1

- Based on the Canada Land Inventory habitat classification system.

Table 3: Native Prairie Habitat Compensation: Loss Ratios

Compensation Activity	Class A	Class B	Class C	Class D
Grassland Restoration/Enhancement/Creation	8:1	6:1	5:1	3:1
Native prairie securement	15:1	12:1	6:1	3:1

- Based on the native prairie habitat classification system.
- As an alternative to relying solely on post-construction habitat mitigation assessments, the proponent may discuss with Manitoba Conservation how compensation requirements could be addressed in advance of construction, understanding that it will not be possible to fully mitigate some habitats on-site.

Disposition Comments were forwarded to the proponent for information. Comments regarding wildlife surveys were forwarded to the proponent with a request for further information (see ‘Request for Additional Information’ section of this summary). Wildlife and Ecosystem Protection Branch has indicated that they are satisfied with the response to the additional information request provided by the proponent. Inclusion of the Habitat Mitigation Policy cannot be accommodated since the policy is still in draft form; however, habitat compensation may be required pursuant to a Water Rights Licence issued by Water Stewardship Division.

Manitoba Conservation, Sustainable Resource and Policy Management Branch

The Local Study Area (LSA) should be modified to exclude private land held by Manitoba Habitat Heritage Corporation (MHHC) in NE 20-9-28W, and exclude all of SW29-9-28W. Manitoba Habitat Heritage Corporation (MHHC) owns part of NE20-9-28 W and is managing this land for habitat conservation. This has been acknowledged in the EA proposal (p. 4-16). It appears that the LSA outlined in the proposal may extend onto the MHHC lands. As the LSA was designed to include the area most directly impacted by development activities, it is recommended that no activities carried out under this license, if issued, occur on MHHC lands. It is also recommended that any activities occurring next to the MHHC lands under this license, if issued, be carried out in a way that does not negatively impact the conservation lands owned and managed by MHHC. These lands contribute to species at risk habitat protection in southwest Manitoba. The LSA also crosses into the corner of SW29-9-28W. This quarter-section is under review for protection and inclusion in the Protected Areas Network through the *Critical Habitat - Southwest Manitoba Crown Land Review Process* being led by the Protected Areas Initiative (PAI). It is recommended that no activities carried out under this license, if issued, occur on the SW29-9-28W. It is also recommended that any activities occurring next to SW29-9-28W under this license, if issued, be carried out in a way that does not negatively impact the Crown land targeted for protection and inclusion in the protected areas network. These lands contribute to habitat protection in southwest Manitoba.

Southwest Manitoba retains little Crown land and a low percentage of this area is protected and included in the protected areas network. Protected areas are land,

freshwater, or marine areas where logging, mining, hydroelectric development, oil and gas development, and other activities that significantly and adversely affect habitat are prohibited by law.

This fragmented landscape supports increasingly threatened grassland, wetland, and river bottom forest communities. These important remnant habitats are essential to maintaining biodiversity and they support high rates of rare and at risk species, notably species listed under Manitoba's *Endangered Species Act* and the federal *Species at Risk Act*.

Disposition: Comments regarding protected areas were forwarded to the proponent with a request for further information (see 'Request for Additional Information' section of this summary). Sustainable Resource and Policy Management Branch confirmed that the additional information provided by the proponent was sufficient and addressed their concerns.

Manitoba Local Government

- The proponent is obligated to obtain a Development Permit for that portion of the pipeline in the RM of Wallace.
- The proponent is not required to obtain a development permit from the Dennis County Planning District Board for that portion of the pipeline in the RM of Pipestone.

Disposition: Comments were forwarded to the proponent for information.

Manitoba Conservation, Pollution Prevention Branch, Air Quality Section

- There is inadequate information in the proposal about the pumps/metering facilities. It would be helpful if information such as the type and purpose of pump (ex. transfer, booster), power source or fuel type, capacity and other operational details are included in the proposal.
- If the pump is fired by gaseous fuel, significant air emissions may be generated from the its operation. In accordance with the national air quality management system currently under development and if the pump is at or above the specified threshold (currently > 75 kW is under consideration but subject to change and confirmation), base level industrial emission requirements (BLIERS) might apply in the future to these units.
- Noise and dust generated during construction will not have significant impact because of the short duration of concentrated construction activity at any specified location (1-2 weeks) and construction will be during the winter/spring period.

Disposition: Comments regarding pump/metering facilities were forwarded to the proponent with a request for further information (see ‘Request for Additional Information’ section of this summary). Air Quality section confirmed that the additional information provided by the proponent was sufficient and addressed their concerns.

Water Stewardship

- The Licencee is required to enter into a wetland habitat compensation agreement, including provisions for a wetland mitigation bank, with the Water Stewardship Division, prior to the commencement of construction.
- Under *The Water Resources Administration Act* (Manitoba), a Licencee must obtain authorization for any works or structures, prior to the commencement of construction, on a “provincial waterway.” A “provincial waterway” is a water control work, natural water channel, or lake designated under *The Water Resources Administration Act* (Manitoba).
- The withdrawal of water for hydrostatic testing will require the Licencee to obtain an authorization under *The Water Rights Act*. The proponent is required to obtain authorizations from the Water Stewardship Division. The discharge of hydrostatic test water into surface waters requires the Licencee to obtain an authorization from the Water Stewardship Division:
- Any handling and/or transportation of fish and mussels during salvage operations will require the Licencee to obtain a “Live Fish Handling Permit,” prior to the commencement of this work, from the Water Stewardship Division:
- The Licencee is required to comply with the Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat (attached).
- The Licencee is required to develop and implement an environmental protection plan.
- Prior to the commencement of any work to cross rivers, streams, or creeks, the Licencee is required to consult with the Water Stewardship Division.
- In order to protect riparian areas, including during trenchless drilling, the Licencee is required to establish and maintain an undisturbed native vegetation area located upslope from the ordinary high water mark and adjacent to all water bodies and waterways connected to the provincial surface water network.
- A 30-metre undisturbed native vegetation area is required for lands located adjacent to surface waters.

- Permanent development is prohibited within an undisturbed vegetation area. The combined alteration—including new and existing structures—within this undisturbed native vegetation area is limited to a maximum of 25 % of the shoreline length (for example: 25 metres per 100 metres of shoreline length) of each lot for a boat house, path, dock, etc.; and,
- Alteration within this undisturbed native vegetation area—including a dock and/or the removal of near shore or stream aquatic habitat—shall not occur unless an activity conforms to a Department of Fisheries and Oceans Canada Operational Statement or an activity is reviewed by the Department of Fisheries and Oceans Canada.
- The Licencee is required to comply with the provincial Drainage Policy. The net loss of semi-permanent or permanent wetlands shall not occur. Wetlands are defined as areas that are periodically or permanently inundated by surface or ground water long enough to develop special characteristics including persistent water, low-oxygen soils, and vegetation adapted to wetland conditions. These include but are not limited to swamps, sleughs, potholes, marshes, bogs and fens..
- Where culverts and erosion control structures are required as part of a mitigation plan for wetland protection, prior to the commencement of construction, the Licencee is required, by *The Water Rights Act*, to submit an application for a Water Rights Licence to Construct Water Control Works to the Water Stewardship Division:
- The withdrawal of water from wetlands for hydrostatic testing must not result in an alteration to the wetland’s classification or function.
- The Licencee is required to develop a standard protocol to prevent the introduction of foreign biota.
- The Water Stewardship Division recommends installing the oil pipeline with a minimum of 18 inches (450 mm) vertical separation between it and the water pipeline, with the oil pipeline below the water pipeline if possible. The owner of the water pipeline must be contacted prior to installation of the oil pipeline to give an underground location and to provide input on excavation and backfill requirements to protect the water pipeline.
- The proposal notes, in Table 4-13, that the proposed oil pipeline will cross one water pipeline as well as several other “buried pipelines” without identifying the contents. With respect to pipelines carrying non-potable liquids (sewage, raw water, oil etc.) which cross pipelines carrying potable water, the Water Stewardship Division’s Office of Drinking Water uses the provisions of the Recommended Standards for Water Works, published by the Great Lakes-Upper Mississippi River Board of State and provincial Public Health and Environmental Managers, as a guideline to recommended practice. The Recommended Standards for Water Works recommends a minimum of 18 inches (450 mm) vertical separation between potable water mains

and pipes carrying non-potable liquids, with the non-potable liquid pipe below the water pipe if possible.

- The standard mitigation hierarchy of “Avoidance, Minimization and Compensation” is the accepted method of addressing the negative environmental and social impacts of a proposed Development on wetland habitat. Based on the environmental assessment report provided by the proponent, it appears that the proposed Development will be constructed in a manner that will limit its spatial and functional impacts to the environment. However, it is also clear that the construction of the proposed Development will cause some disturbance to existing wetland habitats and will decrease the wetland habitat overall function, although it is suggested that recovery will occur within one to ten years. Based on the potential for permanent loss of wetland habitat function, the Water Stewardship Division recommends implementing “Compensation,” the third level of the mitigation hierarchy.

- The following information was found in the Geographic Information System data provided by the proponent:

Total number of wetlands that intersect with the right-of-way	37
Total area of wetlands connected to the right-of-way	66.7 acres (27.0 ha)
Maximum percentage of total wetland area within the right-of-way	80.2%
Average percentage of total wetland area within the right-of-way	20.3%
Total area of native grassland within the right-of-way:	5.2 acres (2.1 ha)
Total area of habitat within the right-of-way	23.0 acres (9.3 ha)

- The following information is Recommended Compensation Requirements for wetland habitat:

Total wetland area potentially impacted	66.7 acres
Average proportion of wetland covered by the right-of-way	20.3%
Average functional impact	20%
Potential functional recovery	95% (obtained via on-site mitigation)
Time required for 95% recovery	5 years

Total compensation required	27 acres of preservation 14 acres of restoration
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- Figure 1 provides a theoretical schematic of the compensation based on the permanent and temporal losses of wetland habitat function. Assumptions on wetland function and the impact of the pipeline construction on these functions were made because functional assessments of the wetland habitat were not provided. In addition, it is unclear as to the level of assessment that will occur post-construction, in terms of being able to identify net changes in habitat function. Given more data on pre- and post-construction habitat impacts, further analysis of compensation could be performed. In absence of this, the compensation requirements presented above are based on estimates of on-site restoration success (i.e. 95% recovery of the habitat in 5 years).

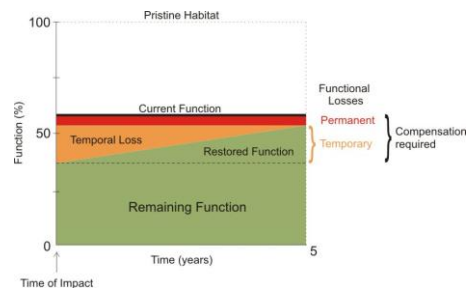


Figure 1: Compensation requirements for habitat impacts

- While it is apparent that on-site mitigation measures will be used to minimize the negative impacts to the environment, specifically wetlands, on-site impact minimization techniques cannot fully compensate for the spatial, temporal and functional losses to the habitat. Based on this understanding, off-site compensation is required. The Water Stewardship Division recommends that a minimum of 41 acres (16.6 hectares) of wetland habitat be permanently secured off-site.
- The Water Stewardship Division submits the following comments:
 - The Water Stewardship Division does not object to this proposal, at this time.
 - The Water Stewardship Division has observed that open cut watercourse crossings are difficult to stabilize and result in erosion and sedimentation. The Division prefers a proponent to implement directional drilling at crossing locations exhibiting a defined channel and the presence of water throughout the year or sufficient water during the spring runoff to provide spawning and nursery habitat, and contribute to downstream habitat.

- Concerning hydrostatic testing, the proposal notes the use of methanol as antifreeze during pipeline testing. Although the proponent intends to recover this material upon completion of testing, the Water Stewardship Division is concerned about potential leaks and discharges during pipeline testing as methanol is quite toxic in surface waters. The use of non-toxic or the least toxic, biodegradable antifreeze fluids such as food grade ethanol or propylene glycol is preferred.
- Maintaining an undisturbed native vegetation area immediately adjacent to the shoreline of lakes, rivers, creeks, and streams helps stabilize banks, provides aquatic and wildlife habitat and protects water quality through filtering overland runoff. The width of an undisturbed native vegetation area should be the widest width possible and practical. In conjunction with other best management practices such as eliminating fertilizer use adjacent to surface waters, and the proper management and disposal of waste water, maintaining an undisturbed native vegetation adjacent to water bodies is important to help prevent degradation of water quality.
- The Water Stewardship Division's recent policy direction recommending undisturbed native vegetation areas to protect water is founded, in part, on the 135 recommendations in the Lake Winnipeg Stewardship Board's (December 2006) report titled, "Reducing Nutrient Loading to Lake Winnipeg and its Watershed, Our Collective Responsibility and Commitment to Action." All 135 recommendations were accepted in principle by the Minister of the Department, on behalf of the Government of Manitoba.

Disposition: Comments were provided to the proponent. Comments related to erosion, fuel storage, Water Rights licensing, and monitoring can be accommodated as licence conditions. Habitat compensation may be required through the Water Rights Licensing process administered by Water Stewardship Division.

ADDITIONAL INFORMATION REQUEST:

Manitoba Conservation requested additional information from the proponent in an email dated January 31 2012. A response dated February 3, 2012 was received in response to this request.

1. As indicated by Wildlife and Ecosystem Protection Branch, Environment Canada and the public, the wildlife and vegetative survey within the Cromer pipeline environmental assessment appears to have been conducted at the incorrect time of year. A survey in mid-September would not detect most migratory birds, species at risk or most flowering plants. Also, surveys were conducted 200m on either side of the pipeline right-of-way. Several Species at Risk with the potential to be present in the project area have recommended setbacks greater than 200m, and

could be negatively affected by activity within this distance. Please address the concerns raised by TAC and public regarding the wildlife and vegetative survey.

Although the survey was conducted in September, habitat was classified for potential occurrence by species at risk and many species identified as potentially occurring, are not likely to occur due to the lack of preferred habitat. In the same way, potential for rare plant occurrence was also determined. Despite the late timing of the survey, mitigation was determined based on the potential occurrence of species at risk. The primary mitigation for wildlife is winter construction, when many wildlife species, including species at risk, are absent from the project area. This timing prevents disturbance to nesting and breeding.

Environment Canada provides guidelines to minimize impacts to species at risk and the construction timing will be outside the restricted activity period (RAP) for most species. Some species have year round restrictions but the potential for these species to occur (e.g., ferruginous hawk and burrowing owl) is quite low. There were no large stick nests or burrows with signs of owl nesting observed during the survey. Northern leopard frogs were observed at the Pipestone River but the crossing at this location will be a directional drill and the construction will be set back from the river so impacts to northern leopard frogs, which may be hibernating in the river, are not expected.

Section 5.5 - Wildlife Habitat in the EAP addresses potential impacts to amphibian, reptiles, birds and mammals and mitigation measures for observed and potential Species at Risk, should they be encountered during winter construction. Refer also to Section 5.19, Table 5.3, page 5-61, for mitigation measures that will be implemented to reduce effects to wildlife and wildlife habitat. No residual impacts are expected to occur within suitable amphibian foraging and hibernating habitat (class IV and V wetlands) along the ROW as these areas will be either crossed along the wetland margins or will be bored. Refer to Response 4a for additional details regarding wetland crossings.

Plant species at risk have the potential to occur along portions of the ROW that contain native grassland (e.g. Pipestone Creek valley). Pipestone Creek will be directionally drilled, resulting in avoidance of a large portion of the native grassland community along this portion of the ROW. Additional mitigation measures that will be implemented (refer to Section 5.19, Table 5.3, page 5-60) along this section of the ROW will include: stripping only the trench line (1.5 m width), winter construction to avoid the active growing season, proper soil separation and segregation to maintain seed bank integrity, topsoil replacement under dry conditions to avoid compaction, and revegetation with certified and Manitoba sourced native seed mixes (refer to EAP, Section 5.4, page 5-40). Post-construction monitoring will also be implemented for revegetation and weed control (refer to EAP, Section 8.5.3, page 9-92).

2. The Sustainable Resource and Policy Management Branch has identified two areas that are either currently being managed for habitat conservation or under review as potential protected area. These areas include parts of NE 20-9-28W and all of SW 29-9-28W. Please provide additional information on the potential impacts of the development and how they will be mitigated.

The managed habitat conservation areas identified by the Sustainable Resource and Policy Management Branch are within the Local Study Area (LSA). The LSA includes the 1.5 m trench line, the 25 m pipeline ROW as well as a 200 m buffer on either side of the ROW. The LSA boundary was used to examine baseline conditions for all environmental elements and heritage resources, where there was reasonable possibility for direct and indirect environmental and socio-economic effects (refer to EAP, Section 4.2 - Spatial Boundaries, p.4-8). The LSA boundary extends into the managed areas within the NE-20-9-28W1M and SW-29-9-28 W1M; however, the pipeline ROW does not extend into these areas (refer to EAP, Section 4.7.1 - Provincial Wildlife Management Areas and Appendix A - Survey Plans). Consequently, no construction activities will occur within or immediately adjacent to these potential protected areas, as construction activities will be confined to the 25 m ROW, resulting in no impacts to these potential protected areas.

3. Please provide additional information about the pumps/metering facilities including information on type and purpose, power source or fuel type as requested by Air Quality Section.

The proposed project will include the construction of two pump/metering station sites. Both stations will have the same operational design and will include two 25 horsepower electric drive pumps (refer to EAP, Section 2.7, page 2-6 for additional details regarding facilities). No other components of the operational pipeline will require electric or hydrocarbon generated power. Consequently, no additional emissions will result from the operation of the project.

Currently there are 18 to 22 trucks per day hauling product from the 12-24-10-19W1 battery to the Cromer terminal, a distance of approximately 20 km. An additional 10 to 11 trucks are hauling oil from the 8-28-9-29W1 battery to the Cromer terminal each day for a distance of approximately 20 km. During spring break-up, the travel distance from 12-24-10-29W1 battery to the Cromer terminal increases to over 80 km, one way. Consequently, the operational phase of the proposed project will result in the removal of up to 33 trucks per day from roads in the RSA, with an associated reduction in transportation related emissions and transportation related noise. The overall effect of the project to Air Quality is expected to be positive.

4. The proponent must clarify the following:

- a. In section 5.5, Wildlife and Wildlife Habitat, pages 5-42 to 5-43, notes that the proponent has committed that “trenching will not occur through any wetland areas with nesting and breeding potential (i.e., Class III, IV and V wetlands)”. The EIS also notes however, that in section 5.6.2, Wetlands, page 5-45 in Table 5.2, the proponent indicates that 5 Class III and 4 Class IV wetlands will be directly crossed by the trench line, and another 7 Class III wetlands and 4 Class IV wetlands will have their margins crossed by the pipeline ROW. In section 6.4.2, Vegetation and Wetland Communities — Wetland Vegetation Removal, page 6-77, the proponent indicates that 24 wetlands (including Class III wetlands) will be directly crossed by the pipeline. These statements appear to be in direct contradiction with each other. The EIS also states that impacts to the Northern Leopard Frog and Avifauna will be mitigated because no Class III and IV wetlands are directly crossed on the surface. The proponent should clarify their plans and commitment to mitigate impacts to wetlands, Northern Leopard Frogs and Avifauna.

The ROW is 25 m in width and represents the portion of greatest potential impact to wetlands. Prior to completing detailed surveys along the proposed pipeline ROW, preliminary assessment of the proposed ROW was conducted to identify environmental features such as wetlands and native vegetation communities. The preliminary ROW was subsequently aligned to avoid wetlands to the greatest extent possible. Because the project is located in the prairie pothole region, it is not possible to avoid all wetlands.

The pipeline ROW will only intersect 30 wetlands (directly or margins) during construction. However, the trench line will only intersect 12 wetlands comprising three Class I, three Class II, five Class III, and one Class V wetland. Page 6-77 contains an error, the number should state 30. Table 5.2 also contains an error. The four Class IV wetlands identified in Table 5.2, the column named “Number of Wetlands directly crossed by the trench line” should read zero for Class IV wetlands and not four. No Class IV wetlands will be affected by the trench line. The Class V wetland will not be trenched and will be crossed using boring techniques and thus will not be directly impacted by construction of the pipeline, preventing any surface disturbances to habitat and hydrology (refer to EAP, Section 5.6.2 , page 5-45). During construction, Tundra will re-examine all 30 wetlands identified along the entire ROW. If water is present, these wetlands will also be bored. If water is not present at the time of construction, these sections will be trenched. If water is encountered while trenching, then the trenching will be stopped and the wetland will be bored. This is a standard practice implemented for pipeline construction.

Detailed mitigation measures for soil handling, vegetation and wetlands that will be implemented during winter construction are identified in

Section 5.19, Table 5.3, page 5.57 to 5.66. A post-construction wetland monitoring program (refer to EAP, Section 8.5.5, page 9-92) will be developed, in consultation with Manitoba Conservation and Water Stewardship, that will ensure wetlands are restored to baseline conditions, restoring potential wildlife habitat in affected wetlands. Appropriate soil salvage techniques that will minimize permanent effects to wetlands will be implemented. Organic topsoils will be replaced providing a seed bank for natural regeneration to occur.

Natural regeneration is expected to restore wetlands to baseline conditions. However, compensation for lasting impacts to wetlands, if any, will be determined in consultation with Manitoba Conservation and Water Stewardship and others agencies, as required.

The wetlands identified as Class IV and Class V wetlands, are capable of providing overwintering habitat for the northern leopard frog (refer to EAP, Section 5.5 -Amphibians and Reptiles, page 5-42 and Section 4.7.3, Table 4.7, page 4-20).

No trenching will occur through any wetland areas classified as Class IV or Class V, or wetlands that have permanent open water zones. As discussed above, other wetlands encountered along the ROW with open water will also be bored. These measures will minimize potential impacts to hibernating amphibians. No effects to avifauna are expected because construction will be carried out outside of critical migration, nesting and breeding periods for all avifauna species (i.e. between February and April, 2012).

- b. Please clarify the total number of wetlands to be impacted by the development. The proponent indicates that 24 wetlands (page 6-77), or 16 wetlands, or 34 wetlands (16+18) (page 5-45) will be directly crossed by the pipeline).

A total of 30 wetlands are located within the proposed pipeline ROW. Of these 30 wetlands, only 12 wetlands will be directly intersected by the trench line. These 12 wetlands include three Class I, three Class II, five Class III and one Class V wetland. As discussed in the response to Question 4a, no Class IV wetlands will be trenched and the Class V will be bored under and will not be affected by trenching.

On page 5-45, the statement in the EAP that reads “A total 16 wetlands are directly crossed by the trench line and an additional 18 wetlands are crossed by the pipeline ROW. One Class V wetland will be directly crossed by the proposed pipeline...” contains an error, only 12 wetlands are directly affected by the trench line. Page 6-77 also contains an error, the number should state 30. Therefore, a total of 12 wetlands are directly crossed by the trench line and an additional 18 wetlands are crossed by the

pipeline ROW. No trenching will occur in these 18 wetlands. This results in a total of 30 wetlands within the ROW.

- c. The EIS states the proponent plans to reclaim wetlands where disturbance is unavoidable (page 5-46), but also that the proponent plans to “allow natural regeneration to occur in wetlands, unless post construction monitoring indicates revegetation is required” (page 5-60). The proponent must clarify their plans and commitments regarding project related impacts to wetlands.

Where the trench line directly crosses a wetland (see response to Question 4a) construction techniques will follow a 3-lift procedure that will separate organic surface soils from subsurface layers. This will prevent admixing of organic soils with mineral soils allowing for the conservation of the seed bank in the organic layer. With the preservation of the organic layer and seed bank, it is expected that natural regeneration (i.e., reclamation) of wetland vegetation will occur, as observed for other pipeline projects in the prairie pothole region (Native Plant Working Group 2000). For the wetlands located within the ROW but outside of the trench line (18 wetlands total) only the margins of these wetlands have the potential to be affected. Because no soil stripping will occur in this area, impacts to vegetation are expected to be negligible during winter construction. No additional impacts that exceed existing impacts from cultivation and agriculture impacts to soils will occur.

As discussed in the response to Question 4a, a post-construction wetland monitoring program will be implemented to determine if wetlands are recovering or on a trajectory towards recovery to baseline conditions. If it is determined that natural regeneration (i.e., reclamation) is not occurring, seeding with native vegetation species will be considered to promote revegetation in these wetland areas (see EAP, Section 5.19, Table 5.3, page 5-58). If there are any lasting impacts to wetlands at the conclusion of the monitoring program, wetland compensation will be provided and will be determined in consultation with Manitoba Conservation and Water Stewardship and others agencies, as required.

References

Native Plant Working Group. 2000. Native Plant Revegetation Guidelines for Alberta. H. Sinton-Gerling (editor). Alberta Agriculture, Food and Rural Development and Alberta Environment. Edmonton, Alberta.

- d. The EIS repeatedly indicates that “only the trench line will be stripped (1 .5m to 1 .8m wide)” (pages 5-57, 5-60, 7-84, etc.) and also indicates that in areas of native grassland the amount of stripping should be minimized

(page 5-57 and 5-60). The proponent's plans for stripping in native grassland are unclear however, as Table 5.3 in section 5.19, Mitigation, page 5-57, recommends that in areas of native grassland, where practicable, stripping should occur 'only from travel lane, trench line and spoil' — a seemingly larger area than trench line alone. The proponent should clarify their intentions.

Stripping of soil will only occur to a maximum 1.5 m width (e.g., native grassland, wetland). The minimum depth of the trench is expected to be 1.8 m and the maximum depth is expected to be 2.8 m for crossings (e.g., road, foreign pipeline, wetlands).

The statement on page 5-57 "In areas of native grassland, minimize the amount of stripping, where practicable and strip soil only from travel lane, trench line and spoil." is an error and should only refer to the trench line. Tundra will not clear vegetation or strip soil in native grassland communities located on the travel lane or spoil stockpile areas. Only the 1.5 trench line will be stripped.

PUBLIC HEARING:

A public hearing is not recommended as there were no requests for a public hearing and comments received from the member of the public can be addressed by the proposed mitigation measures or as conditions of licensing.

CROWN-ABORIGINAL CONSULTATION:

The Government of Manitoba recognizes it has a duty to consult in a meaningful way with First Nations, Métis communities and other Aboriginal communities when any proposed provincial law, regulation, decision or action may infringe upon or adversely affect the exercise of a treaty or Aboriginal right of that First Nation, Métis community or other Aboriginal community.

Since no First Nations communities are located adjacent to or near to the right-of-way of the proposed development and the current land tenure consists entirely of privately owned property which would preclude the possibility of traditional activities being practiced on these lands, it is concluded that Crown-Aboriginal consultation is not required for this project.

RECOMMENDATION:

The TAC and public comments received on the Proposal can be addressed as conditions of licensing for the project, or have been forwarded to the Proponent for information. Therefore, it is recommended that the Development be licensed under The Environment Act subject to the limits, terms, and conditions as described in the attached Environment

Act Licence. It is further recommended that enforcement of the Licence be assigned to the Western Region prior to construction.

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