

Appendix G- YESAB Recommendations

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EXHIBIT 9.1

YESAA Designated Office Evaluation Report

1) Environmental and Socio-economic Assessment File Information

Project Title Selkirk First Nation Long Term Sewage Disposal Facility	Project File Number 2007-0036
Proponent Name Selkirk First Nation	Evaluation Start Date February 28, 2007
Contact Person Danny Van Bibber/Jillian Chown	Evaluation Finish Date March 28, 2007
Designated Office Recommendation Summary Pursuant to Section 56(1) of the Yukon Environmental and Socio-economic Assessment Act it is recommended that the project be allowed to proceed, subject to specified terms and conditions, as the Designated Office has determined that the project will have significant adverse environmental or socio-economic effects in or outside Yukon that can be mitigated by those terms and conditions;	

2) Designated Office Assessment Officer Identification

Designated Office Mayo	Assessment Officer Loralee Johnstone
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3) Decision Body or Bodies and Potential Authorization Identification

Decision Body	Potential Authorization(s) Required	Act or Regulation
Yukon Government	Land disposition Water license	Territorial Lands (Yukon) Act, Lands Regulation -Waters Act, Waters Regulations

4) Project Activity or Activities Included in Schedule 1 of the Regulations* and not Excepted

Proposed Activity	Part	Item
Other than an Indian reserve the construction, operation or any activity in relation to a solid waste disposal facility.	8	8

* *Assessable Activities, Exceptions, and Executive Committee Projects Regulations*

5) Project Location

Latitude and Longitude or UTM Coordinates		
NW Boundary 62.7850 Lat, 136.5852 Long	NE Boundary	
SW Boundary	SE Boundary	
NTS Map Sheet # 115I	Nearest Community Pelly Crossing	Distance 5km
First Nation Traditional Territories Involved		

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Selkirk First Nation
Watershed(s) and Drainage Region Major Drainage Area: Yukon River Sub-Sub Drainage: N/A Sub-Drainage: Pelly River
Nearby Watercourse(s) or Waterbody(s) Unnamed Tributary ~1km away

6) Statement of Project Scope

The principal activity of this project is to construct a long term sewage disposal facility to handle sewage disposal for the community of Pelly Crossing.

Principal activities include:

- Construction of 2 treatment cells and 1 evaporation cell
- Clearing of site and access road
- Construction of access road

Accessory activities include:

- Construction of perimeter fence
- Sewage hauling and treatment
- Sludge storage and removal
- Decommissioning

Access to the proposed site will be via the Klondike Highway and the new access road.

7) Project Notification List

Proponent – Jillian Chown Yukon Government –DB – YG Community Services YFN Government- Selkirk First Nation- Bev Brown Selkirk RRC- Dorothy Bradley		
Kelly Hayes Loralee Johnstone Russell McDiarmid Graham Van Tighem	Bev Brown Jillian Chown YG Community Services Dean Gill	Kerri Bianic Dorothy Bradley

*See Appendix I - Summary of Responses from Interested Persons and Others

8) Potential Effects Assessment Summary and Reasons for Recommendation

Context of this assessment:

1. The assessment of environmental and socio-economic effects, including cumulative effects is in accordance with Section 42 of *YESAA*.
2. The mitigations identified herein are proposed to address project effects that the assessor believes to be potentially significant and adverse. They do not preclude the application of other mitigations as required by relevant legislation.

The following valued components have been considered in this evaluation of the proposed project:

1	Heritage Resources
2.	Environmental Quality
3.	Soil Quality
4	Health and Safety

1. Heritage Resources

1.1 Temporal and spatial overlap summary

The proposed project involves the construction of a long term sewage disposal facility and associated activities for the community of Pelly Crossing. The facility will be located five kilometers south of Pelly Crossing on the west side of the North Klondike Highway, with a design life of twenty years. First Nations people are known to have traveled throughout the region for hundreds if not thousands of years.

1.2 Effects characterization and significance determination

The project may adversely affect historic resources by disrupting or destroying artifacts or historic resources, as a result of activities associated with the project that require the movement of earth including construction of treatment cells, clearing of the site and access road.

There are no known heritage sites in the proposed area; however heritage resources can be uncovered at any time throughout the life of the operation. Heritage sites include cabins, caches, graves, bush camps and other man-made structures, feathers and objects that have been abandoned and are of greater than 50 years antiquity. Historic resources include artifacts related to heritage sites and human activities. Archaeological and palaeontological resources are protected as historic resources as well. The value of heritage resources rests within their context upon the land in which they are located, in essence, when they are *in situ*. Once disturbed or removed the value of these resources, from cultural and scientific perspectives, may be diminished. Damage to any archaeological or heritage resource is considered significant and adverse.

1.3 Mitigations

The following mitigative measures shall be complied with in order to eliminate, reduce or control potentially significant, adverse effects of the proposed project, as it/they relates to Heritage Resources.

- Any archaeological resources uncovered during operation shall be reported to the Yukon Archaeology Program, Government of Yukon.
- Any palaeontological resources uncovered during operation shall be reported to the Yukon Palaeontology Program, Government of Yukon.

1.4. Cumulative Effects

Projects and activities known to be occurring in the area include: drilling of test wells, installation of a piped water system and septic field installation for the community of Pelly Crossing. The discovery of heritage resources may occur incidentally during the conduction of activities that occur on previously undisturbed areas. It is the conclusion of this assessment that the proposed project will not result in residual effects that, in combination with the effects of the above identified projects, contribute to

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significant cumulative effects.

2) Environmental Quality

2.1) Temporal and spatial overlap

The proposed project involves the construction of a long term sewage disposal facility and associated activities for the community of Pelly Crossing. The facility will be located five kilometers south of Pelly Crossing on the west side of the North Klondike Highway, with a design life of twenty years. The proponent has proposed to use heavy equipment while constructing the long term sewage disposal system. Equipment will be re- fueled at Pelly Crossing service station.

2.2) Effect characterization and significance

Raw sewage will be pumped out of septic fields in and around the community of Pelly Crossing and hauled to the site for disposal. Sludge from the treatment site will occasionally be hauled to the local landfill for final disposal. The potential release of raw sewage into the environment as a result of accident or malfunction while transporting the material could have a significant adverse effect on the environmental quality of the surrounding area.

2.3) Mitigations

- The proponent shall obtain appropriate sewage disposal authorizations required by law from the appropriate authorities.
- The proponent shall ensure that all equipment is maintained and in good working order prior to transporting sewage and sludge.
- The proponent shall at all times have on site and during hauling a sufficient sewage spill clean-up equipment and material in readiness to clean up all sewage which may be spilled.

2.4) Cumulative Effects

Projects and activities known to be occurring in the area include: drilling of test wells, installation of a piped water system and septic field installation for the community of Pelly Crossing. The assessor is unaware of any other existing or proposed projects in the area that may affect environmental quality. After the proposed mitigations the residual effects of this project on environmental quality are not likely to be significant.

3) Soil Quality

3.1) Temporal and spatial overlap

The proposed project involves the construction of a long term sewage disposal facility and associated activities for the community of Pelly Crossing. The facility will be located five kilometers south of Pelly Crossing on the west side of the North Klondike Highway, with a design life of twenty years. The proponent describes the area as having discontinuous permafrost associated with wetlands, a dryer upland consisting predominantly of white spruce, trembling aspen and balsam popular.

3.2) Effect characterization and significance

The use of heavy machinery on unstable or permafrost areas may cause significant rutting and gouging that could lead to slumping. The construction of treatment cells, constructing an access road, removing and hauling sludge all require the use of heavy machinery. The potential effects if not mitigated can be

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long term and significant. The removal of vegetation, topsoil and overburden can also cause soil to become unstable and prone to erosion.

3.3) Mitigations

- The proponent shall suspend overland travel of equipment or vehicles if rutting occurs.
- The proponent shall not move any equipment or vehicle unless the ground surface is in a state capable of fully supporting the equipment or vehicle without rutting or gouging.
- The proponent shall prepare the site in such a manner as to prevent rutting of the ground surface.
- The proponent shall complete all clean up and restoration of all lands used upon the decommissioning of the site.

3.4) Cumulative Effects

Projects and activities known to be occurring in the area include: drilling of test wells, installation of a piped water system and septic field installation for the community of Pelly Crossing. At this time there are no other residual effects that the assessor is aware of nor were any identified during the assessment. It is the opinion of the assessor that after the proposed mitigations, cumulative effects associated with this project related to soil quality are not significant.

4) Health and Safety

4.1) Temporal and spatial overlap

The proposed project involves the construction of a long term sewage disposal facility and associated activities for the community of Pelly Crossing. The facility will be located five kilometers south of Pelly Crossing on the west side of the North Klondike Highway, with a design life of twenty years. The project proposes sludge to be removed once every 5-10 years and disposed of at the local land fill with other compost materials.

4.2) Effect characterization and significance

The proponent has proposed to store the removed sludge at the local community land fill so that it can be readily available for agricultural and/or remediation purposes. Health and Social Services raise the issue that there is inadequate information to ensure that the composting of sludge from human waste that likely contains plastics or latex, household cleaners and other toxins does not create adverse health effects when used for agricultural purposes. Correspondence from the proponent proposes that the sludge be stored at the local land fill in a separate contained area including final reclamation of the septic pits.

Human waste is known to be a vector for a number of known pathogens (ex. *E. coli* bacteria) and parasites (ex. *Giardia* spp.). Transmission occurs with the consumption of untreated/unfiltered water from contaminated sources. Effects can range from minor illness to death in some strains of bacteria. Parasites like *Giardia*, which causes "beaver fever", move throughout the environment using humans, pets, and wild mammals, and specifically their waste, as the distribution system. Improper management of human wastes or the failure of a waste management system has the potential to contaminate water sources, including deep water wells. A toxin such as sewage sludge that is stored in an easily accessible area to the public is considered a significant effect.

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4.3) Mitigations

- The proponent shall store sewage sludge in a separate contained area with appropriate fencing and signage keeping wildlife and unauthorized personnel out.
- The proponent shall comply with Occupational Health and Safety Regulations

4.4) Cumulative Effects

Projects and activities known to be occurring in the area include: drilling of test wells, installation of a piped water system and septic field installation for the community of Pelly Crossing. The foot print for this project is relatively small and at this time there are no other residual effects that the assessor is aware of, nor were any identified during the course of this assessment that might contribute to significant adverse cumulative effects.

9) Designated Office Recommendation

The Mayo Designated Office, in concluding its evaluation of Project #2007-0036 pursuant to Section 56(1) of the Yukon Environmental and Socio-economic Assessment Act:		
<input type="checkbox"/>	S56 (1)(a)	recommends to the decision body(ies) that the project be allowed to proceed, as the Designated Office has determined that the project will not have significant adverse environmental or socio-economic effects in or outside Yukon;
<input checked="" type="checkbox"/>	S56 (1)(b)	recommends to the decision body(ies) that the project be allowed to proceed, subject to specified terms and conditions, as the Designated Office has determined that the project will have significant adverse environmental or socio-economic effects in or outside Yukon that can be mitigated by those terms and conditions;
<input type="checkbox"/>	S56 (1)(c)	recommends to the decision body(ies) that the project not be allowed to proceed, as the Designated Office has determined that the project will have significant adverse environmental or socio-economic effects in or outside Yukon that cannot be mitigated; or
<input type="checkbox"/>	S56 (1)(d)	refers the project to the Executive Committee for a screening, as the Designated Office cannot determine whether the project will have significant adverse environmental or socio-economic effects after taking into account any mitigative measures included in the project proposal.

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56(1)(b) Recommended Terms and Conditions for the Project

The following mitigative measures shall be complied with:

- 1 The proponent shall obtain appropriate sewage disposal authorizations required by law from the appropriate authorities.
- 2 The proponent shall ensure that all equipment is maintained and in good working order prior to transporting sewage and sludge.
- 3 The proponent shall at all times have on site and during hauling a sufficient sewage spill clean-up equipment and material in readiness to clean up all sewage which may be spilled.
- 4 Any archaeological resources uncovered during operation shall be reported to the Yukon Archaeology Program, Government of Yukon.
- 5 Any palaeontological resources uncovered during operation shall be reported to the Yukon Palaeontology Program, Government of Yukon.
- 6 The proponent shall suspend overland travel of equipment or vehicles if rutting occurs.
- 7 The proponent shall not move any equipment or vehicle unless the ground surface is in a state capable of fully supporting the equipment or vehicle without rutting or gouging.
- 8 The proponent shall prepare the site in such a manner as to prevent rutting of the ground surface.
- 9 The proponent shall complete all clean up and restoration of all lands used upon the decommissioning of the site.
- 10 The proponent shall store sewage sludge in a separate contained area with appropriate fence and signage keeping wildlife and unauthorized personal out.
- 11 The proponent shall comply with Occupational Health and Safety Regulations

10) Certification

Assessment Report Prepared By	
Signature Russell McDiarmid	Date March 28, 2007
Authorized By	
Signature Loralee Johnstone	Date March 28, 2007

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Appendix I - Summary of Responses from Interested Persons and Others

Contributor	Document Ref #	Summary of Comments	Consideration for Use
			<ul style="list-style-type: none"> - used as valued component - information - basis for information request - potential project effect - possible mitigation - expert opinion - policy or position - outside scope of evaluation - beneficial effect/consideration complete
Yukon Governments Comments			
Community Services (Alanna Quock)	2007-0036-022-1	<ul style="list-style-type: none"> -This project has been reviewed by a Community Infrastructure Engineer and no significant concerns were found with the project as proposed. - It was noted that the proposed facility is a significant improvement over the system that is currently in place. 	<ul style="list-style-type: none"> -Information -Beneficial effect/consideration complete
EMR Lands-Client Services (Sheila Smith)	2007-0036-022-1	<ul style="list-style-type: none"> -An application for Yukon Land will be required by the Selkirk First Nation Land Development Corporation. -Until this is received there can be no Tenure given to the land. 	<ul style="list-style-type: none"> -Information -Policy or position
EMR Lands-Land Use (Brenda Sproule)	2007-0036-022-1	-A Land Use Permit will not be issued for this project, terms and conditions will be covered under the lease issued by Lands Branch.	-Information
Health and social services (Lynn Richards)	2007-0036-022-1	<ul style="list-style-type: none"> -There is inadequate information in the proposal to ensure that the composting of sludge from human waste that likely contains plastics or latex, household cleaners and other toxins does not create adverse health effects when used for agricultural purposes. -To mitigate potential adverse affects the sludge should not be placed with other compost material; and if composted, is not to be used for agricultural purposes. 	<ul style="list-style-type: none"> -Issue addressed -Possible mitigation/issue addressed
Tourism Heritage resources (Ruth Gotthardt)	2007-0036-022-1	<ul style="list-style-type: none"> -No archaeological or historic resources are documented in the project area. -Should any heritage resources be discovered, the applicant is requested to notify Government of Yukon, Heritage Resources Unit at 667-5983. 	-Information
Renewable Resource Council Comments			
Selkirk Renewable	2007-0036-025-1	-Selkirk Renewable Resource Council (Council) read and reviewed the	-Information

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<p>Resource Council (Rodger Alfred and Dale Bradley)</p>		<p>Selkirk long term sewage disposal project and agrees with the site location and planned development. -However the council would make one recommendation to this project. It was noted in the project plans that this site was chosen many years ago for the refuge site for the community of Pelly. It is still the favored site because of the soil base and drainage which will not affect the Mica drainage. -There for the council recommends that the plans to move the refuge site to this location in the future should be considered. In the long term planning for this site these issues should be considered.</p>	<p>-Information</p> <p>-Policy or position</p>
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