
**ATHABASCA CHIPEWYAN FIRST NATION
INDUSTRY RELATIONS CORPORATION**

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May 21st, 2009

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RE: DRAFT EIA TERMS OF REFERENCE – MACKAY RIVER SAGD PROJECT - ATHABASCA OIL SANDS CORP.

The Athabasca Chipewyan First Nation Industry Relations Corporation (ACFN IRC) is writing on behalf of the Athabasca Chipewyan First Nation (ACFN) regarding the draft terms of reference for the environmental assessment of the planned MacKay River SAGD project by Athabasca Oil Sands Corp. The ACFN is a registered First Nation with reserve and traditional lands and having aboriginal and treaty rights in the area affected by the application.

We have reviewed the draft terms of reference for the environmental assessment of this planned project, with the technical assistance of DS Environmental Consulting Inc. This review revealed a number of issues and deficiencies that should be addressed in the final terms of reference and reflected in the environmental impact assessment of the planned project. We have attached our report on the review of the draft terms of reference. Included in this are a number of comments and specific changes that we are suggesting to strengthen and improve the final terms of reference. These are made largely to ensure that the rights and interest of ACFN are adequately addressed in the application and supporting environmental impact assessment of the planned project.

The ACFN IRC appreciates the opportunity to review and comment on the draft terms of reference. We request that the Director provide us with a written response on how these comments and proposed changes were addressed in the final terms of reference; and if they were not used, then a justification and explanation as to why our comments were not incorporated. We reserve the right to raise additional concerns, should they arise.

Sincerely,

Lisa King
Director, ACFN IRC

cc: Jerry Demchuck, AOSC

Athabasca Chipewyan First Nation Industry Relations Corporation
Review of and Comments on the Draft Terms of Reference for the
Athabasca Oil Sands Corporation (AOSC)
MacKay River SAGD Project (“the Project”)

1. INTRODUCTION

On behalf of Athabasca Chipewyan First Nation (ACFN), the ACFN Industry Relations Corporation (IRC), with technical assistance from DS Environmental Consulting Inc., has reviewed the proposed terms of reference (ToR) for the Environmental Impact Assessment (EIA) for the Athabasca Oil Sands Corp.’s (AOSC) MacKay River SAGD Project (the Project). The purpose of this review was to identify gaps in the proposed ToR with respect to the interests of ACFN, and to make recommendations to Alberta Environment on how to address those gaps.

The document reviewed is entitled “Proposed Terms of Reference Environmental Impact Assessment Report for the Proposed MacKay River SAGD Project, Approximately 27.5 km West from Fort McMurray, Alberta” and was issued by Athabasca Oil Sands Corp on March 16, 2009.

In general, the ToR contain a number of deficiencies, which we outline in this document and provide suggested changes for. As well, while the ToR identify the information required by government agencies for the EIA, but do not address the legal duty of the Crown (and Industry, where appropriate), to consult with First Nations and to seek to address the rights and interests of First Nations.

The standard practice in Alberta has been to adopt a standard terms of reference, with very little incorporation, if any, of input from First Nations, or from stakeholders in general. In this way, inviting comment on ToR could be considered a meaningless opportunity for public input, and is, at times, demoralizing. Instead of this discouraging us from presenting this review, we consider this a new opportunity for Alberta Environment to demonstrate leadership and vision in changing the EIA process for the better by establishing robust ToR that are based on sound principles for environmental assessment and ecosystem management, and that consider First Nations input in a meaningful way. Incorporating our input, as presented in this document, into the final ToR for the Project, would be a significant step towards achieving a more democratic and sound approach to EIA, that takes into account the rights and interests of First Nations.

We request that Alberta Environment demonstrate to us, in writing, where our input has been incorporated. Where our input has not been incorporated, we request written justification for why it has not been.

2. PROJECT DESCRIPTION

There are two non-contiguous leases associated with the Project. These leases are located approximately 28 km west and northwest of the town of Fort McMurray in Townships 88, 89, 90,

91, 92, and 93, Ranges 12, 13, 14, 15, and 16W4M. The MacKay River runs between the two leases, and the Athabasca River lies to the east of the leases.

AOSC submitted an application to Alberta Environment in October 2008 for approval to build, operate, and reclaim the MacKay River Pilot Project (the Pilot). The Pilot is planned to disturb 22.8 ha of land. It is being applied for as a small central plant and a single set of well pairs. If approved, the Pilot is expected to produce 2,200 barrels of bitumen per day (bpd). Start-up is planned to begin in 2010 and continue for a period of 5 years.

In early April, 2009 AOSC disclosed a modest sized commercial scale in-situ project on their MacKay River leases utilizing SAGD extraction technology. If the first commercial phase of the Project is approved, AOSC plans to begin plant construction and drilling in the first half of 2012 and begin producing bitumen in 2014. Phase 1 of the Project is planned to produce 50,000 bpd of bitumen. In subsequent phases of the Project, planned to be filled in separate applications, AOSC plans to increase production to 150,000 bpd. The Project (including all phases) is planned to operate for a 30 year period. Reclamation of the first well pad is planned for 2024.

The first phase of the Project would consist of multiple well pads (each with a life of 10-12 years), a central processing facility, a remote steam facility, roads, fuel supply pipeline, electrical power lines, and a diluted bitumen pipe. The Project area would cover approximately 21,500 ha and within this area, 3,400 ha of land would be disturbed.

3. REVIEW RESULTS

The ToR contain a number of deficiencies. Our explanation of these deficiencies and our recommendations to address them are laid out below and organized according to the ToR section. Where possible the recommended changes are made to specific terms, but in other cases a more general suggestion is made.

➤ General Observations and Information Requirements

(a) First Nations Consultation

The ToR are deficient in a number of ways with respect to consultation with potentially affected First Nations, including ACFN. In addition to the specific comments offered throughout the ToR review (below), the main problems are as follows:

1. The ERCB has been mandated through legislation to deal with constitutional issues. Of concern to ACFN are constitutional issues concerning the sufficiency of consultation with First Nations and issues to the potential impacts of Projects on First Nations' Treaty and Aboriginal rights and interests. Numerous legal cases have also made it clear that the Crown (federal and provincial) has constitutional and common law duties to consult with First Nations, to seriously consider and address First Nations' concerns, and to seek to accommodate those concerns within any proposed plan of action. There is no discussion of how Crown consultation will take place in relation to the Project including, but not limited to:
 - Crown consultation with ACFN about the design of the Terms of Reference for the EIA report and not merely through a public stakeholder process;

- Crown consultation concerning the design of the environmental review/regulatory process for the Project;
- Crown consultation concerning land use planning within ACFN's Traditional Lands and, specifically, within the areas that may be impacted by the Project (LSA, RSA);
- Crown consultation/assessment of the direct, indirect, and cumulative impacts of the Project, together with other existing and reasonably foreseeable industrial activities in the vicinity of Phase 3 on the Treaty and Aboriginal rights and interests of ACFN; and,
- Crown consultation about existing and future grants of tenure within ACFN's Traditional Lands.

Crown consultation is particularly important, since issues such as land use planning, cumulative impacts assessment, consultation at the tenure-granting stage, and other similar matters are beyond Industry's legal authority or jurisdiction to address.

2. Since the ERCB, as a quasi-judicial body, cannot engage in consultation with ACFN, the ToR need to address not only how Crown consultation (and any legally permitted consultation by AOSC) will take place as in 1. Above, but also how the sufficiency of any such consultations will be measured and the role that ACFN will have in providing input on the sufficiency of any such consultation.
3. There needs to be specific recognition in the ToR that the direct, indirect, and cumulative impacts of industrial development, including large-scale oil sands mega-projects (those in existence or being proposed by other proponents), on the Treaty and Aboriginal rights and interests of ACFN must be addressed, in addition the impacts of the Project. There is a further need for the ToR to address how those impacts will be measured (qualitative and quantitative measures/standards), what studies will be required, and how ACFN will be involved in/consulted about the identification of required studies/information gathering and the design and implementation of such studies and related planning.

When considering the impacts of the Project on the rights and interests of ACFN, there are specific constitutional considerations that must be borne in mind and reflected in the ToR:

- Section 35(2) of the Constitution Act, 1982 is to be construed in a purposive way. A generous, liberal interpretation is demanded given that the provision is to affirm aboriginal rights: R. v. Sparrow;
- When considering the environmental impacts of projects on First Nations' rights and interests, the term "environment" must be construed broadly and includes the cumulative impacts of a planned activity and other current and reasonably foreseeable activities on those rights and interests: Dene Tha' First Nation v. MOE.

- The potential negative derivative impacts of a project on those rights and interests must also be taken into account: Taku River Tlingit First Nation v. British Columbia (Project Assessment Director); and,
- The injurious affection that a project causes on the exercise of rights and interests within the vicinity of that project or activity must be taken into account Mikisew Cree First Nation v. Canada.

Whether termed “cumulative”, “derivative”, or “injurious affection”, it is not enough to consider only the direct or “site specific” impacts of the Project on ACFN’s rights and interests. The above-mentioned case law clearly indicates that the impacts of development within a First Nation’s Traditional Territory are felt within a far larger area than the direct footprint of a project or activity. Mere reliance on ERCB Guidelines or Alberta Government guidelines for the assessment of impacts may not be sufficient to meet the unique constitutional obligations owed to First Nations.

4. With respect to issues that are within AOSC’s authority/jurisdiction to address, all potential Project impacts as identified in the various sections of the proposed ToR must explicitly take into account and be measured against the exercise of Treaty and Aboriginal rights and interests by ACFN, including traditional uses, current uses and traditional knowledge related thereto. There needs to be further detail on how such impacts will be avoided, minimized, or mitigated. Moreover, selection of the LSA and RSA, including development of criteria/measures to assess the direct, indirect and cumulative impacts related to the Project, should be done in consultation with ACFN, to ensure that the rights and interests of ACFN are taken into account in the EIA in a proper fashion.

(b) Pre-Industrial (1965) Baseline

It is not appropriate to use existing conditions as the baseline for assessment. While a baseline based on existing conditions may be useful for regulatory purposes, such a narrow temporal scope obscures impacts, resulting in flawed predictions that do not accurately depict the impacts of a Project on First Nation’s section 35 rights, and interests.

Each new project will produce an incremental change from what was there before all the land disturbance began. Looking at it only within the very limited frame of what already has been approved does nothing to address the cumulative changes that have occurred over time. A full 100-year window (i.e. 40 years of historical & 60 years of future projections) is critical to the evaluation of potential impacts to or infringements upon the constitutionally protected aboriginal and treaty rights of ACFN.

Recommendation(s):

- *Assessment scenarios and temporal boundaries should include a true pre-industrial (1965) baseline, not just a baseline that includes the approved projects.*
- *The temporal dimensions of the assessment should include consideration of the following, in addition to the Application and CEA assessment cases:*
 - *Pre-industrial(1965) Baseline – a true ‘pre-industrial’ baseline before major industrial activities were initiated in the region*

- *Current – information on what is currently happening; such as, the current rates of water withdrawals or emissions of air pollutants, the current amount of land disturbed or reclaimed, the current amount of tailings held in ponds, etc.*
- *Historic – the trends over the last 40 years in the region (i.e. from 1965 to present) with respect to changes in environmental and Socio-Economic parameters*
- *The EIA should describe the pre-industrial (1965) conditions and the changes to these conditions to-date, assessing the impacts of these changes on key indicators (defined in consultation with First Nations), including, but not limited to:*
 - *Air quality;*
 - *Surface water quality and quantity;*
 - *Groundwater volumes and availability and quality;*
 - *Wildlife;*
 - *Vegetation;*
 - *Landscape Features; and*
 - *Traditional use of the land and the impacts to First Nation's cultures, rights and interests.*

(c) Cumulative Impacts Assessment

ACFN is concerned with ensuring that the direct, indirect and cumulative impacts of existing, planned and reasonably foreseeable development does not interfere with ACFN's ability to meaningfully exercise their constitutionally protected section 35 rights, and interests. The trend for EIAs in Alberta has been to assess cumulative effects, rather than cumulative impacts, and to do so only from a limited and narrow standpoint thereby resulting in flawed or incomplete predictions. The assessments are usually limited in their scope, do not include all of the projects/developments that could contribute to impacts (for example, those projects which do not in themselves trigger an environmental assessment), and generally do not give an accurate picture of cumulative effects and the significance of those effects to First Nations rights and interests. Characterizing impacts, and evaluating impact significance, requires input from First Nations.

Recommendation(s):

- *Focus on cumulative impacts, rather than cumulative effects.*
- *The cumulative impact analysis should not just be documented, but should provide information on plans to mitigate all the identified residual impacts. Cumulative impacts that the Project contributes to and that are considered significant adverse impacts for the regional area should be given special attention. This should include mitigative measures which go above and beyond regulated requirements that the proponent will take to ensure continuous improvement with respect to reducing these impacts.*
- *The CEA should also include and consider the impacts on Treaty and Aboriginal Rights of First Nations in the region over the extended time periods that are involved, including the incremental withdrawals of traditional lands.*

- *The traditional lands of the regional First Nations should be used as one of the baselines for any CIA.*

(d) Benchmarks, Targets and Thresholds

Alberta has recognized that proper cumulative impact assessment requires targets and thresholds against which changes to environmental (socioeconomic, cultural and ecological) can be compared. In October 2007, Alberta Environment announced a new approach to cumulative effects management. In addition, on the issue of cumulative effects, we have been referred by various government departments to the Lower Athabasca Regional Plan, which is meant to provide the cumulative effects framework for the region.

Recommendation(s):

- *Given the changes that are coming to the way Alberta Environment, and other government departments, will be managing cumulative effects in this region in the near future, we recommend delaying the preparation of the EIA until specific place-based outcomes and stringent environmental targets for air, land, water (quantity and quality) have been developed for the region in consultation with ACFN.*
- *Should AOSC choose to proceed immediately with its Project application, and should Alberta Environment choose to review the Project application, we recommend that the ToR be amended to include requirements for developing environmental outcomes and targets in consultation with ACFN.*
- *Include First Nations traditional resources in milestones and targets and provide evidence for how First Nations were involved in determining the targets and the measurement of achieving the targets.*

(e) First Nation Values & Impact Significance

Criteria (e.g., thresholds) used to evaluate impact significance in terms of magnitude, extent, duration, frequency, and irreversibility, as well as the significance of residual effects, should be justified based on stakeholder values, especially those of First Nations. These assessments are always value-laden, and the values of First Nations should be considered in the characterization and evaluation of impacts.

For example, take a project that results in a 10% reduction of an ecosystem component, and assume this impact is deemed, by the Proponent, to be of low or moderate significance – not requiring mitigation. For this threshold to be acceptable the Proponent should demonstrate that the potential 10% loss of the resource, without further mitigation, is acceptable to First Nations.

Establishing appropriate ecological, economic and sociocultural thresholds for the meaningful practice of section 35 Treaty and Aboriginal rights would support the incorporation of First Nations values into evaluating impact significance. At the very least, consultation with First Nations is required on characterizing impacts and evaluating their significance.

Recommendation(s):

- *Amend the ToR to include instructions for incorporating First Nations values into characterizing impact significance. This will, at minimum, involve consultation with First Nations on the criteria used to evaluate and characterize impact significance.*

(f) Traditional Knowledge and Traditional Use Information

Traditional knowledge and information about impacts to traditional land use should be used meaningfully and integrated throughout the assessment.

Recommendation(s):

- *For each issue, and/or each valued environmental component, each discipline should discuss the implications of effects (and impacts) for First Nations traditional use. This discussion should demonstrate how First Nations traditional knowledge and values informed the assessment and should demonstrate how the concerns of First Nations in relation to those impacts were addressed.*

(g) Mitigation

ACFN is concerned that projects are being approved on the basis of mitigation strategies that are not proven technologies. This does not adhere to the principles of a precautionary approach. Furthermore, a true adaptive management approach would require assessing the effectiveness of mitigation strategies currently employed before making further decisions based on the use of that mitigation strategy is a new instance.

Recommendation(s):

- *The proponent should provide examples of real cases where each proposed mitigation has been used. If examples of real-world success using a proposed mitigation strategy cannot be cited, this should be clearly indicated and explained.*

(h) Scales for Mapped Information

We have noticed that recent EIAs have used as many as 50 different map scales throughout the EIA report – making direct comparison between maps (within and between sections of the EIA) quite difficult. While we recognize that the scale of the study area may differ according to specific disciplines and/or valued environmental components, we suggest that the maps presented in the EIA report should use a minimum of different scales, and clearly mark the scale on the legend for each map.

Recommendation(s):

- *We suggest that the proponent instruct their EIA consultants to use a standard set of map scales throughout the EIA and technical appendices. This would also have the added benefit of allowing direct comparisons between EIAs. The number of map scales should be kept under 10. Suggested standard scales are 1:15,000, 50k, 100k, 250k, 500k, 750k, 1000k, (or 1250k).*

➤ **Scope of the EIA Report**

(a) Cross References

ToR Reference: Page 2

It is often difficult to locate cross-referenced information when reviewing an EIA.

Recommendation(s):

- *Cross references in the EIA should be as specific as possible. If any referenced subsection is more than five pages, then a more specific reference should be given to aid the reader in locating the information (for both text and CD-Rom versions of the EIA documents).*

(b) Summary Report Contents

ToR Reference: Page 2, Section [A]b

Proper baseline information is needed to understand the potential direct, indirect and cumulative impacts on ACFN's (and other First Nations) Treaty and Aboriginal Rights. The use of existing conditions as the baseline against which to assess impacts serves to obscure impacts. It is necessary for the assessment to take pre-development (i.e. pre-1965) baseline conditions into account.

Recommendation(s):

- *Revise [A]b to read: "...existing" and pre-industrial (1965) "conditions in the Study Area..."*

➤ **Content of the EIA Report:**

1 Public Engagement and Aboriginal Consultation

(a) Aboriginal Consultation Program

ToR Reference: Page 2, Section 1 [B]

Meaningful consultation has been difficult to achieve on the EIAs in the region. Much of the consultation is focused on creating records of communication, rather than truly informing ACFN about a Project, and assessing the effects of the proposed Project on ACFN. Standard consultation processes often result in minimizing ACFN's concerns, and/or "mitigating" concerns through vague promises or misinformed commitments, and/or leaving concerns outstanding. As a result, the true impacts of development on ACFN's Treaty and Aboriginal rights are not being addressed, and ACFN's interests are not being reconciled appropriately, in the EIA process.

The Terms of Reference also should reflect that consultation does not only occur at the decision-making stage for the Project, but will continue through the various ongoing and future Project activities.

In addition to the requirements explained in Appendix A, we suggest the following recommendations to this portion of the ToR.

Recommendation(s):

- *Please add the following:*
 - *consult all First Nations and Métis communities that may be directly, indirectly, and cumulatively affected.*

- *work with each community to develop an appropriate consultation plan for that community, taking community-specific consultation protocols into consideration.*
- *consult with the recognized land users of the Local Study Areas and Regional Study areas for each discipline/valued environmental component.*
- *describe the division of the consultation responsibilities between the Crown and the proponent and how these responsibilities relate to the regulatory process, and provide the proponent's assessment of the effectiveness of its Aboriginal consultation process.*
- *provide the proponent's assessment of the effectiveness of its Aboriginal consultation process.*
- *In addition to the consultation program for the EIA process, the ToR should include requirements for the Proponent to outline the steps that they will undertake to involve ACFN, and other First Nations, in the various ongoing and future Project activities.*

➤ 2 Project Description:

2.3 Evaluation of Alternatives

(a) The Need for the Project

ToR Reference: Page 3, Section 2.3.1[A]a)

Section 2.3.1[a]a) of the ToR asks the proponent to provide any alternative means of carrying out the Project, as one of the information requirements addressing the *need* for the Project. A discussion of means does not justify the ends. That is to say, an assessment of alternative means for developing a Project does not address the fundamental question (i.e. the public interest decision) of whether or not there is a need for a Project.

The types of trade-offs to consider in determining whether or not there is a need for development of this type is part of the regional planning process to be undertaken in the LARP. We question how the need for the Project can be justified previous to establishing regional goals and outcomes, such as which will be established in the LARP.

Recommendation(s):

- *We recommend delaying the preparation of the EIA until the fundamental trade-offs that are undertaken in public interest decisions of this type are dealt with through the LARP, in consultation with ACFN.*
- *Should AOSC choose to proceed immediately with its Project application, and should Alberta Environment choose to review the Project application, we recommend that the ToR be amended to include requirements for a section in the EIA that justifies the need for the Project (as opposed to the examination of alternative means for conducting the Project itself). This section should make explicit the fundamental trade-offs at stake in the public interest decision, including trade-offs of section 35 Treaty and Aboriginal rights.*

(b) Describing Alternatives

ToR Reference: Page 3, Section 2.3.1[A]

More information is required on alternatives for project components.

Recommendation(s):

- *When describing alternatives for project components, including mitigative measures, provide an explicit (qualitative and quantitative) comparison of the benefits and drawbacks of each. The comparison should evaluate alternatives from these points of view: environmental performance, safety, technical feasibility, and economic feasibility. For the technology choices where environmental performance and safety are not maximized, provide an explanation of why this is not done.*

➤ **2 Project Description:**

2.5 Transportation Infrastructure

ToR Reference: Page 4-5, Section 2.5

(a) Impacts on Treaty and Aboriginal Rights

The Traffic Impact Assessment must address the indirect, direct and cumulative impacts of Transportation Infrastructure on First Nations section 35 rights and interests. Consultation with ACFN is required on the impacts of Transportation Infrastructure on ACFN section 35 rights and interests.

Recommendation(s):

- **Add to 2.5: Provide the results of consultation with First Nations, and other Aboriginal groups, about the indirect, direct and cumulative impacts of Transportation of Infrastructure. Describe:**
 - a. How transportation infrastructure plans/options relate to community-specific land use (past, present and future), including any community-specific community development and/or land use plans.**
 - b. How First Nations input and concerns were incorporated and addressed in Transportation Infrastructure planning.**
 - c. Access management strategies, defined in consultation with First Nations, and other Aboriginal groups, to address access management issues associated with Transportation Infrastructure.**

(b) Spill Dispersion Analyses

ToR Reference: Section 2.5[G], Page 5

Protection of water resources is an issue of utmost concern to ACFN and the Traffic Impact Assessment should take this into account.

Recommendation(s):

- **Add to 2.5 [G]: a comprehensive spill dispersion analyses.**

➤ 2 **Project Description:**

2.7 Air Emissions Management

ToR Reference: Section 2.7[A], Page 5

Recommendation(s):

- *Revise 2.7 [A] j) to read:* “upset condition scenarios (e.g., frequency, duration”, **and intensity**) “and proposed measures to ensure upset conditions are minimized;”
- *Add to 2.7[A]:* **the potential effects on human health from ingesting plants with high deposition loads or fish harvested from affected water.**
- *Add to 2.7[A]:* **the amount and nature of any nitrogen emissions, the likely atmospheric transformations of these emissions, resulting probable deposition area and the effects on vegetation with regard to eutrophication.**
- *Add to 2.7[A]:* **the amount and nature of any emissions, including fugitive emissions that have potential effects on human health.**
- *Add to 2.7:* **Project mass balance of sulphur relating to SO2 emissions**
- *Add to 2.7:* **Project mass balance of carbon relating to CO2 emissions**

➤ 2 **Project Description:**

2.8 Water Resources

ToR Reference: Section 2.8[A], Page 6

Recommendation(s):

- *Revise 2.8.1[A] a) to read:* “the expected **hydrological** water balance during all stages of the Project **including actual evaporation, soil water and runoff and discuss assumptions made or methods chosen to arrive at the water balance . . .**”
- *2.8.1 [A] add:* **potential climate change over the life of the Project.**

➤ 2 **Project Description:**

2.10 Conservation and Reclamation

ToR Reference: Section 2.10, Page 7-8

Recommendation(s):

- *Add:* **Demonstrate how end pit lakes, wetlands and other components of the reclaimed landscape will be integrated with the plans of other operators in the area.**
- *The reclamation plan (or elsewhere in the EIA) should discuss how the closure plan would be affected by changes and variability in the climate regime over the time periods that reclamation would be taking place.*

- *Add to the end of 2.10[A]c):* **Provide an estimate of outstanding reclamation liability for intervals throughout the project (e.g., 10 years, 20 years etc.);**
- *2.10[A]d) change as follows:* “*discuss any constraints to reclamation such as timing of activities, availability of reclamation materials (including plant propagules) and influence of natural processes and cycles*”
- *2.10[A]i) change to:* **establishment or restoration of self-sustaining functional watersheds (the ability to capture, store and release water) that are integrated with the surrounding landscape and the near-surface drainage**
- *2.10[A] add:* **target erosion rates that do not exceed the natural rate of soil formation. Provide modeling results that demonstrate post-development erosion rates targets.**
- *2.10 [A] add:* **Discuss how the proponent will involve Aboriginal communities in reclamation planning.**
- *2.10[A] add:* **indicate how the proposed reclamation methods have performed in similar situations, including the establishment of a diversity of ecosites and ecosite phases and the repopulation of these areas by plant and wildlife species of importance. Include in this discussion the plants and animals that are of significance for the practice of Treaty and Aboriginal rights, including those that may not be of specific use, but are indicators of the ecological conditions necessary to support the meaningful practice of such rights.**
- *2.10[A]f) add:* **plans for developing suitable sources of native plant materials**
- *2.10[B] add to end:* **traditional use and should also include the conceptual schedule and timeframes for this restoration.**
- *Add:* **Provide an evaluation of the ecological goods and services provided by the reclaimed landscape compared to pre-disturbance conditions.**
- *Overall, the ToR are weak in that they lack specific details relating to performance targets and benchmarks for evaluating the assessment over time, and for reclamation. 2.10 add:* **[E] Explain how regional control sites were used as benchmarks for comparison with reclaimed areas, and how Alberta Biodiversity Monitoring Program protocols, or similar protocols (with suitable rationale and justification) were used in this comparison.**
- *2.10 Add [F]* **Explain and discuss local and regional measures of “success” and “effectiveness” of reclaiming the landscape for wildlife populations.**
- *2.10 Add [G]* **Provide a conceptual map showing future traditional resource use of the reclaimed landscape by First Nations.**
- *Add:* **Discuss the feasibility of returning the land back to pre-development conditions. Discuss the actions that will be taken if pre-development conditions cannot be met.**

➤ **2 Project Description:**

2.12 Regional and Cooperative Initiatives

ToR Reference: Section 2.12, Pages 8-9

Recommendation(s):

- *2.12 [A] add:* **staff resources, time and fiscal resources**
- *2.12 [B] add:* **describe how the proponent will involve First Nations, including First Nations environmental monitoring programs (e.g., community based monitoring) in the design and assessment of environmental monitoring and research activities**
- *2.12 [B] add:* **for monitoring activities describe the thresholds that will be used (or the mechanisms that will be put into place to determine the thresholds) to trigger mitigation or other adaptive management approaches. Describe how First Nations input was used, or will be incorporated, into monitoring and the definition of thresholds.**
- *2.12 [B] add:* **in general, for the environmental assessment and planned monitoring and adaptive management, use key indicator resources, criteria and thresholds that have been defined by CEMA, WBEA and RAMP. If these are not being used, describe the rationale.**

➤ **3 Environmental Assessment:**

3.1 Assessment Requirements

(a) Scenarios

ToR Reference: Section 3.1, Page 9

Recommendation(s):

- *3.1.1[A]a) add:* **a Pre-industrial Case (1965), which includes environmental conditions that existed prior to oil sands activities**
- *3.1.1[A] add:* **an existing case, which outlines current environmental conditions**

(b) Modelling

ToR Reference: Section 3.1.5, Page 11

Recommendation(s):

- *3.1.5[A] add:* **validation, verification and/or calibration of the model using available baseline data, addressing sources of error and relative accuracy of predictions for use in forecasting the impact statement and CEA.**
- *The information available for baseline conditions should be used to validate, verify and/or calibrate model predictions, and not just be presented as factual baseline data.*

➤ **3**

➤ **Environmental Assessment:**

3.2 Study Areas

(a) Local and Regional Study Areas

ToR Reference: Section 3.1.2.2, Page 9

Recommendation(s):

- *Identify and discuss previously contamination sites within the RSA.*
- **3.1.2.2 [D] add to end: including those related to regional or cumulative effects consistent with the direction of cumulative Environmental Management Association (CEMA) and Regional Sustainable development Strategy (RSDS) process where possible and considering the results of comprehensive oil spill dispersive analyses.**
- **3.1.4 [A] add: specifics of the data used for assessment including time series and number of replicates for collected data; process and original data set used for computer generated data, provide relevant statistical measures including, but not limited to, range, standard deviation, mean and median.**
- **3.1.4 [A] b) vi) add to end: Discuss how this incorporates TK and the values of First Nation's communities in the region.**
- **3.1.4.[A] b) add: Identify any residual effects resulting from an impact prediction or mitigation with a moderate (or worse) level of uncertainty should be accompanied by a management plan.**

➤ **3 Environmental Assessment:**

3.2 Air Quality, Climate and Noise

(a) Baseline Information

ToR Reference: Section 3.2.1, Page 11

Recommendation(s):

- *Clarify what information should be presented (i.e. monitoring data or modeling data). Frequently, industry monitoring data is not included in the review of baseline conditions, and should be, since this is one of the main reasons for collecting this data in the first place.*
- *There should be specific requirements for the expected scope and purposes of the baseline modeling.*
- *The proponent should demonstrate that the air quality model is reasonably predicting baseline conditions.*
- *Baseline information must be put in a form that is useful for the impact assessment (i.e. allow consideration of the available room for further emissions within the air shed and the ability to meet ambient guidelines).*
- **Revise 3.2.1 [A] b) to read: "local and/or regional air quality monitoring data for appropriate ambient air quality parameters such as SO₂, CO, H₂S, total hydrocarbons (THC), NO_x, VOC mixtures including Nitrous oxide (NO), Nitric oxide NO₂, nitrogen deposition, ground-**

level ozone, PAH, individual hydrocarbons of concern in the THC and the VOC mixtures, ground level ozone (O₃), representative heavy metals, and particulates (road dust, PM₁₀ and PM_{2.5} and odors and visibility.”

- *Add to 3.2.1 [A]:*
 - c) **comparison of predicted baseline air quality for existing operations (as appropriate) and regional background using average annual emission rates from baseline air quality monitoring data. Discuss relative accuracy of the model predictions and suitability of the model for impact assessment forecasting; and,**
 - d) **provide a detailed modeled description of baseline air quality using existing local and regional licensed air quality emission rates.**

(b) Impact Assessment

ToR Reference: Section 3.2.2, Pages 11-12

Recommendation(s):

- *The air quality assessment should focus on more than just exceedences and the point of maximum impingement. The assessment should also consider and discuss the changes in the patterns, rates, and trends in the overall air quality (locally and regionally)*
- *Amend 3.2.2 [A] b) add to read: estimate ground-level concentrations of **CAC (criteria air contaminants) and other** appropriate air quality parameters. **Show on isopleths maps (as appropriate).***
- *Amend 3.2.2[A]f) to read: describe air quality (**direct or drainage basin**) impacts...*
- *Add to 3.2.2[A]:*
 - a) **modeling CAC to determine the Project impacts without background air quality and with background air quality to 10% of ambient air quality objectives/guidelines/standards.**
 - b) **Routine and non-route flaring must meet EUB D060 flaring requirements and combustion efficiencies.**
 - c) **The central processing facility fenceline must be clearly identified on plot plan maps (for each central facility).**
 - d) **Air quality modeling should be performed at the proposed licensed emission rates.**
- *Add to 3.2.2: [F] **Describe the cumulative impacts on air quality. Cumulative impacts on air quality should be modeled using the Licensed emission rates for all local, regional and proposed License or maximum air quality emissions for planned sources.***

(c) Monitoring

ToR Reference: Section 3.2.3, Page 12

Recommendation(s):

- *The location of all existing (and planned/proposed) monitoring stations should be indicated on the maps. The predicted air quality concentration should be compared to the existing (monitored) concentrations, not just modeled conditions. The discussion on climate change effects should include the effects on factors such as acid deposition, reclamation, etc.*
- *Keeping Clean Areas Clean – the EIA should discuss the ‘Keeping Clean Areas Clean’ protocol that is part of the Canada Wide Standards for PM and Ozone, as it relates to remote areas of the region. This is essentially and non-degradation protocol for air quality for non-urban areas.*
- **3.2.3 add: Conduct an air quality dispersion model run using wind data from the WBEA air monitoring network and compare and discuss the results in relation to any other air quality model runs conducted using other meteorological wind datasets).**

➤ **3 Environmental Assessment:**

3.3 Hydrogeology

(a) Baseline Information

ToR Reference: Section 3.3.2, Page 12

Recommendation(s):

- *Revise 3.3.1[A] iv) to read: “water well development and groundwater use, including a **field-verified** inventory of groundwater users.”*
- *Add to 3.3.1[A]: x) **provide the frequency of testing and location of test sites.***
- *Add to 3.3.1: [B] **Discuss groundwater issues with respect to the rights and interests of First Nation communities in the region. Demonstrate how TK was used to inform the assessment. Demonstrate First Nations interests and concerns raised in these discussions were addressed. Cross reference this with other sections of the EIA as appropriate.***

(b) Impact Assessment

ToR Reference: Section 3.3.2, Page 12

Recommendation(s):

- *Revise 3.3.2[B] c) to read: “changes in groundwater quality and quantity.”*
- *Revise 3.3.2[D] to read: **Identify any other activities that could potentially impact local groundwater resources (e.g., casing failures) and discuss measures to reduce the environmental risks from these activities.***

➤ **3 Environmental Assessment:**

3.4 Hydrology

(a) Baseline Information

ToR Reference: Section 3.4.1, Page 13

Recommendation(s):

- *3.4.1 [A] add:* **Include seasonal hydrographs for rivers and streams and variations in lake-levels, as appropriate.**

➤ **3 Environmental Assessment:**

3.5 Surface Water Quality

(a) Baseline Information

ToR Reference: Section 3.5.1, Page 14

Recommendation(s):

- *3.5.1[A] revise to read (emphasis added):* “Describe **the pre-industrial (1965) baseline** of watercourses...”

(b) Impact Assessment

ToR Reference: Section 3.5.2, Page 14

Recommendation(s):

- *3.5.2 [B] add:* **(f) describe how the proponent is addressing the concepts of keeping clean areas clean and BATEA in the context of water management planning**
- *3.5.2 add:* **[E] water recycle and other water conservation and minimization strategies, plans for water sources (including on-site or off-site storage and management strategies to manage low-flow restrictions).**

➤ **3 Environmental Assessment:**

3.6 Aquatic Resources

Recommendation(s):

- *Explain how First Nations input was incorporated into each portion of this section of the EIA.*

➤ **3 Environmental Assessment:**

3.7 Vegetation

(a) Baseline Information

ToR Reference: Section 3.7.1, Page 15

A significant gap in this section is the lack of inclusion of vegetation species that are integral to the meaningful practice of First Nations rights, and interests, including traditional (past, present and future) use.

Recommendation(s):

- 3.7.1 [A] *revise to read:* “Describe and map vegetation communities for each ecosite phase, **including vegetation species that are integral to the meaningful practice of First Nations rights, traditional (past, present and future) use, and interests.**”
- 3.7.1[C] *add to end:* **File all rare plant survey locations with the Alberta Natural Heritage Information Centre (ANHIC).**
- 3.7.1[E] *add to end:* **...including, but not limited to the plants integral to the meaningful practice of First Nations.**

(b) Impact Assessment

ToR Reference: Section 3.7.2, Page 16

Recommendation(s):

- 3.7.2 [C] *b) revise to read:* “...the sensitivity to disturbance (including acid deposition **and eutrophication**), as well as the techniques used to estimate sensitivity to disturbance and reclamation, of each vegetation community (**document examples**);”
- 3.7.2 [H] *add:*
 - (b) **Vegetation species that are integral to the meaningful practice of First Nations. Include implications for these mitigation actions as they relate to reclamation planning (e.g., what traditional plant species will be used in reclaiming particular ecosites, which rare plant species will be targeted for re-establishment).**
 - (c) **Any impacts on plants which are considered significant to First Nations should be mitigated with the goal of no net loss. To be sure this is achieved, monitoring programs for these species must be implemented and documented in the EIA.**
 - (d) **Discuss how the mitigation plans include vegetation species that are integral to the meaningful practice of First Nations.**

➤ **3 Environmental Assessment:**

3.8 Wildlife

(a) Baseline Information

ToR Reference: Section 3.8.1, Pages 15-16

Recommendation(s):

- *The proponent should validate the Habitat Sustainability Index (HSI) models used for wildlife habitat with actual field (local) abundance data before using the results in the assessment. HIS model components and the results from these that have not been validated should be clearly indicated. The Proponent should discuss their plans to validate these components with local field data.*

- *Explain and discuss local and regional measurements of “success” and “effectiveness” of reclaiming the landscape for wildlife populations.*
- **3.8.1 add to end: Indicate to what extent the information is based on actual survey data and/or hunting data, TK, scientific peer-reviewed literature and modeling (include citations).**
- **3.8.1 add:**
 - [C] cite studies indicating the required corridor width for relevant species**
 - [D] consult with First Nations to identify wildlife species of concern, to obtain input on how to collect and incorporate TK for information on key wildlife species and wildlife use areas, and on the assessment of impacts to these species and areas.**
 - [E] discuss data sharing agreements with other operators and how this data was incorporated into the environmental impact assessment.**
 - [F] habitat models used to evaluate impacts should be modified/calibrated by comparing model predictions with wildlife data from the Study Areas. If field data do not correlate with habitat models, the habitat model parameters should be revised (at minimum) and the data collection process should be revisited. If data are deemed insufficient in establishing a meaningful baseline scenario for wildlife populations, additional data collection will be required.**
 - [G] provide specific benchmarks and targets for wildlife populations over the lifetime of the project (in set increments), in association with recolonization of reclaimed landscapes and other future development scenarios in the region. Discuss the time required to recolonize and sources for recolonization.**

(b) Impact Assessment

ToR Reference: Section 3.8.2, Page 17

Recommendation(s):

- **3.8.2 [B] b)i) revise to read: “anticipated effects on wildlife as a result of changes to air, water, including both acute and chronic effects on, at minimum, all wildlife Key Indicator Resources and, explain how First Nations input was considered meaningfully.**
- **3.8.2 [B] d) revise to read: “...anticipated changes due to the project and other planned, existing and reasonably foreseeable activities...”**
- **3.8.2 [B] add:**
 - e) anticipated effects on the quality of traditionally consumed species including ungulates, rabbits and game birds.**

f) discussion and consideration of the effects of ecosystem shifts with respect to reclamation success, prediction confidence and wildlife recolonization of the LSA and RSA.

- 3.8.2 [C] *revise to read*: “Provide **and implement** a strategy and mitigation plan to minimize impacts on wildlife habitat through the life of the Project and to return productive wildlife to the area **and involve First Nations through all phases of mitigation plan development and implementation.**”
- 3.8.2[C] *b) add*: **Discuss habitat enhancement and wildlife species populations it will support.**
- 3.8.2[C] *c) add*: **Discuss movement corridor data already collected.**
- 3.8.2 [D] *add*: **Identify impacts on wildlife species for each scenario to the opportunities for local Aboriginal residents to hunt and trap successfully compared to pre-industrial (1965) conditions.**
- *Add*: [E] **Discuss and consider the effects of ecosystem shifts with respect to reclamation success, prediction confidence, and wildlife recolonization of the LSA and RSA.**
- *Add*: [F] **Demonstrate how TK was used to inform the assessment and how First Nations interests and concerns raised regarding wildlife impacts, and regarding wildlife impacts and the relationship to First Nations rights and interests, were addressed. Cross reference this with other sections of the EIA as appropriate.**

(c) Monitoring

ToR Reference: Section 3.8.3, Page 18

Recommendation(s):

- *Add*: [B] **Discuss plans for mitigations and monitoring programs to achieve the goal of no net loss on a regional basis for any impacts to wildlife considered significant to First Nations.**
- *Add*: [C] **Discuss how wildlife monitoring programs will involve regional First Nations communities and/or the community-based monitoring programs of those communities.**
- *Add*: [E] **Explain how the monitoring program will be designed with actual end land use and wildlife recolonization in mind and actually relate the results of any monitoring programs to baseline conditions to better understand cause-effect relationships (if any) between the Project and wildlife distribution and abundance?**

➤ **3 Environmental Assessment:**

3.9 Biodiversity and Fragmentation

(a) Baseline Information

ToR Reference: Section 3.9.1, Page 18

Recommendation(s):

- **3.9.1 [A] add: the biodiversity assessment should include an integrated index of biodiversity, so that the assessment of effects on biodiversity looks at more than just the individual components.**

(b) Monitoring

ToR Reference: Section 3.9.3, Page 18

Recommendation(s):

- **3.9.3 add: Discuss how First Nations communities may be involved in biodiversity monitoring, such as through on-going dialogue about the process and results of monitoring efforts and/or partnering with the community-based monitoring programs (currently being developed by First Nation's communities in the Regional Municipality of Wood Buffalo).**
- **3.9.3[A] add: Monitoring programs including wildlife surveys using standardized protocols (i.e. those developed by the Alberta Biodiversity Monitoring Plan) and utilizing First Nations community based monitoring programs.**

➤ **3 Environmental Assessment:**

3.10 Terrain and Soils

(a) Baseline Information

ToR Reference: Section 3.10.1, Page 18

Recommendation(s):

- **3.10.1[A] a) add to end: including a detailed description and location of strata that have a high potential to leach saline salts.**

(b) Impact Assessment

ToR Reference: Section 3.10.2, Page 18

Recommendation(s):

- **3.10.2 [A] b) add to end: The impact assessment should discuss how much the classes have changed in area, not just the percentage change.**
- **3.10.2 [A] d) add to the end: ...and eutrophying impacts on soils and discuss the significance.**

➤ **3 Environmental Assessment:**

3.11 Land Use

(a) Baseline Information

ToR Reference: Section 3.11.1, Page 18-19

Recommendation(s):

- ***Add:* Identify the past, current and future First Nations land uses, including, but not limited to, reserve lands, treaty land entitlement areas, traditional lands, community plans, land use plans, traditional and historic sites, harvesting (e.g., hunting, fishing, trapping and plant collection) areas, unique cultural and/or spiritual areas, and other activity areas.**
- ***3.11.2 [A] b) add to end:* The impact assessment should discuss how much the classes have changed in area, not just the percentage change.**

(b) Impact Assessment

ToR Reference: Section 3.11.2, Page 19

Recommendation(s):

- ***3.11.2 [A] b) add to end:* The impact assessment should discuss how much the classes have changed in area, not just the percentage change.**
- ***3.11.2 [A] i) add to end:* ...and how First Nations will be consulted regarding access management and how access for traditional users will be maintained.**
- ***3.11.2 [C] add:* Significant residual impacts where an existing or emerging mitigation technique was not used due to technical or economic feasibility. In these cases the Proponent should provide a detailed quantitative justification to how this feasibility was determined. State which alternate mitigations will be used, and their cost and effectiveness relative to the technique that was not used.**

➤ **4 Historic Resources**

Recommendation(s):

- ***The findings of the 4 [A] revise to read: “...concerning the need for a Historic Resource Impact Assessment (HRIA) for the Project. Consultation with First Nations should acknowledge their priority right to use the land and include but not be limited to their knowledge of existing historical resources, their concerns and recommendations regarding these and opportunities for participation (e.g., blessing ceremonies on known burial grounds, participation in HHRA field studies, presentations to the community about the results of the HHRA).”***

- **Add: Demonstrate how First Nations were consulted and how their concerns and values were incorporated into the assessment, including into the evaluation of impact significance.**
- **Add: Explain how the historical (including archaeological) resource assessment findings were shared with First Nations communities.**

➤ 5.0 Traditional Ecological Knowledge and Land Use

Recommendation(s):

- **Add: Describe the results of the consultation with Aboriginal communities with respect to traditional ecological knowledge and traditional land use. Include a clear summary table of traditional land uses, project-related concerns and recommended mitigation measures as well as the proponent's response to these.**
- **Add: Identify any First Nations land use policies and management initiatives pertinent to the Project.**
- **Add: Provide a description of the methodology used to collect TEK and TLU information, including, but not limited to:**
 - **The provision of detailed, audience-appropriate, project information to First Nations, and other Aboriginal communities** (e.g., maps containing lease boundaries, wellpads, locations of other project facilities, trap lines, site visits, etc.).
 - **The system for referencing information gathered during consultation/interviews.** It is preferred that this system follow a format similar to literature citations (e.g., Last Name or Participant Code and date) to clearly identify information sources.
 - **The means by which the Proponent committed to protecting the confidential and proprietary knowledge of the First Nations communities, and other Aboriginal group.** For example, provide evidence that the Proponent entered into information-sharing agreements stipulating that the Aboriginal group has the right to control how TEK and TLU information is used and presented.
 - **Where relevant, demonstrate how the Proponent worked with First Nations communities to obtain consent to use and reference TEK and/or TLU information that was published in a previous EIA or summary book.** *Information about traditional land use for a particular First Nation published in a previous EIA or summary book is not considered first hand traditional knowledge and should not be used without specific permission.*
- **5 [B] revise to read: “Determine the impact of development from a pre-development (1965) baseline on traditional uses, culture, and on the rights of First nations, and identify possible mitigations. Demonstrate how the First Nations were consulted, and their concerns addressed.”**

- **Add: Describe how TEK and TLU information was gathered, from whom, and how it was incorporated into in a meaningful way into the assessment. Also describe how TEK will be used and incorporated into operational and reclamation planning.**
- **Add: Develop a Traditional Use Resource Plan that includes:**
 - a) **Inventories of traditional land uses and of plants and wildlife used by ACFN;**
 - b) **Strategies to minimize and mitigate the direct, indirect, and cumulative impacts to traditional uses and to plants and wildlife used by ACFN;**
 - c) **Strategies to ensure that dustfall does not reduce the quantity and quality of native berry harvests in the area affected by the development;**
 - d) **The establishment of offsets to compensate for the loss of irreplaceable plant and/or animal species and communities;**
 - e) **Strategies to expedite progressive reclamation to native plant communities important to traditional use;**
 - f) **Plans for developing seed and plant material banks and nurseries of native plants important for traditional use;**
 - g) **Plans to address the propagation of recalcitrant traditional use plants (e.g., tissue culture);**
 - h) **Plans to implement “successional infill planting” to augment species diversity and native forest structure.**
- **Add: Describe monitoring programs proposed to measure impacts due to the Project on traditional uses and the success of the traditional use resource plan mitigation measures.**
- **Add: Discuss possible mitigative strategies to address impacts on land use by the Project and opportunities to sustain the needs of First Nations communities.**

➤ **6.0 Public Health and Safety**

Recommendation(s):

- *The assessment should use a broader definition of ‘health’ that encompasses all aspects and determinants of health, not just the exposure-response to chemicals of concern. The IRP uses the concept of ‘population health’ to encompass all the determinants of health of the population within the region. Focusing on a single factor (such as exposure to air or water pollutants in the EIA) does not accurately portray the actual status of human health, nor does it effectively allow for mitigations that have a reasonable chance of actually improving the health, nor does it effectively allow for mitigations that have a reasonable chance of actually improving the health status of individuals (and populations) within the region.*
- **6[A]e add to end: ...as well as the impact that this may have on opportunities and desire (resulting from perceptions of health risks and food safety) for traditional activities.**

- 6[A] add:
 - l) **The potential health implications, if any, for compounds for which no exposure guidelines currently exist.**
 - m) **Discuss the impacts from highway traffic accident, injury and death rates based on a unit volume of traffic and indicate the changes in unit volume for the project and cumulatively.**
 - n) **Identify and discuss potential health and safety impacts due to higher regional traffic volumes and the increased risk of accidental leaks and spills.**
 - o) **Consult with First Nations regarding the impact of the project and cumulative industrial activities on overall community health and well-being and possible mitigation strategies.**
 - p) **Describe a contingency plan for evacuation of workforce and local residents during an emergency.**
- 6[B]c) *add to end: ...specifically related to First Nations traditional lifeways, culture, and overall community health and well-being.*
- 6[B] *add: determine the potential impact of the Project on the health of First Nations communities and people, and identify possible mitigative strategies.*
- *Add: [C] Identify how First Nations communities were consulted on this portion of the EIA, how their input was incorporated, and how their concerns were addressed.*

➤ 7.0 Socio-Economic Factors

Recommendation(s):

- *The discussion of socio-economic impacts should make use of a comprehensive indicator of socio-economic well-being, such as: the Genuine Progress Indicator (GPI). The GPI provides an index of well-being for a population. This index makes use of indicators (e.g. crime and family breakdown) over and above those used for traditional economic based views of well-being. This indicator could be used for purposes of establishing a baseline and to track changes to that baseline over time.*
- 7.1[B] a) *add to end: "in each community within the Study Area."*
- 7.1 [B] *add: the potential for increased crime and potential impacts (such as substance abuse or depression) to project workers resulting from isolation and separation for their families.*
- 7.2 [A] a) i) *revise to: local training, employment and business opportunities, and job transportation including Aboriginal hiring and procurement policies and programs and how the proponent will maximize local Aboriginal workers, show its increases in hiring over time and state how many foreign workers it intends to bring in.*

- 7.2 [A] a) vi) *revise to read:* **Impacts to First Nations and Métis trapping, hunting and fishing and gathering, and loss of land required to carry out the meaningful practice of traditional pursuits guaranteed under Treaty 8 and the Constitution of Canada.**
- 7.2 [A]a) *add:* **the systemic barriers that obstruct advancement in Aboriginal education, training, employment and business development and describe how the proponent will address those barriers.**
- 7.2 [A] *add:*
 - q) **describe and provide copies of the proponent's policies and practices that will be implemented to design, manage, monitor and evaluate the company's employment and business development opportunities for First Nation and Métis peoples in the region**
 - r) **the impact on local services and infrastructure by community, taking into consideration other projects that are reasonably anticipated during the life of the Project. This will include consideration of transportation, education/training, social services, urban and regional recreation use, law enforcement and emergency preparedness.**
- 7.2 *add:* **[D] Identify how First Nations communities were consulted on this portion of the EIA, how their input was incorporated, and how their concerns were addressed.**

➤ **7.3 Monitoring**

Recommendation(s):

- **Add: [B] Discuss how First Nations may be included in monitoring efforts, such as through participation, consultation or partnerships with community-based monitoring programs.**

**Athabasca Oil Sands Corp MacKay River SAGD – Proposed Terms of Reference
Consideration of Athabasca Chipewyan First Nation – IRC**

Specific information related to study areas, traditional ecological knowledge, cumulative effects and modeling is not addressed separately in each environmental media section. Separate sections have been developed to reduce duplication. The information requirements in the standard sections for study areas, traditional ecological knowledge, cumulative effects and modeling for example, apply to all applicable environmental media sections. Many comments provided by Athabasca Chipewyan First Nation with respect to data, data quality, data verification, limitations, mitigation, consultation and incorporation of traditional ecological knowledge are covered in Sections 1[B], 3.1.4, 3.1.5 and 5 and apply to all environmental media sections.

Some of the comments provided relate to the information available in the *Guide to Preparing Environmental Impact Assessments in Alberta*. The document is located at <http://environment.alberta.ca/3397.html> and will be updated based on comments received on the Athabasca Oil Sands Corp. MacKay River SAGD as well as any additional comments received during the same period.

No.	pTOR Section	Comment	Result of Consideration
1.	General	General Observations and Information Requirements First Nations Consultation	No changes were made to the TOR in response to this comment. Government of Alberta's Policy on First Nations Consultation and Alberta Environment's Consultation Guidelines deal specifically with First Nations consultation during the regulatory process. Consultation and Traditional Ecological Knowledge and Land Use are addressed in Sections 1[B] and 5 in the TOR.
2.	General	General Observations and Information Requirements Pre-industrial (1965) Baseline	No changes were made to the TOR in response to this comment. Alberta Environment (AENV) believes that to fully understand and evaluate the effects of a project, there needs to be a well-defined, scientifically verifiable benchmark to use for comparison. The difficulty of using a pre-development scenario is that for many parameters we lack the data needed to properly describe the scenario so that appropriate modeling, etc. can be conducted to forecast project effects. The Canadian Environmental Assessment Agency's February 1999 Cumulative Effects Assessment Practitioners Guide states at s. 3.2.3.2: <i>The further back in time...the greater the dependence on qualitative analysis and conclusions due to lack of descriptive information... and increasing uncertainty in predictions.</i>

No.	pTOR Section	Comment	Result of Consideration
3.	General	General Observations and Information Requirements Cumulative Impacts Assessment	No changes were made to the TOR in response to this comment. Cumulative environmental effects are discussed in Sections 3.1.1[A](c) and Sections 3.1.3. As per Section 3.1.1 Proponent's are expected to discuss anticipated future environmental conditions based on existing and approved projects or activities plus planned projects or activities reasonably expected to occur. This includes projects which do and do not trigger the need for an EIA. See Guide 3.3.
4.	General	General Observations and Information Requirements Benchmarks, Targets and Thresholds	No changes were made to the TOR in response to this comment. The development of regional benchmarks, targets and thresholds and the delay of project EIAs is not the responsibility of the Proponent and is considered a broader government level decision and not related to EIA.
5.	General	General Observations and Information Requirements First Nations Values and Impact Significance	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1 [B] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
6.	General	General Observations and Information Requirements Traditional Ecological Knowledge and Traditional Use	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1 [B] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
7.	General	General Observations and Information Requirements Mitigation	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Monitoring Sections for each discipline.
8.	General	General Observations and Information Requirements Scales for mapped information.	No changes were made to the TOR in response to this comment. See Guide Section 6.4.
9.	Scope	Scope of the EIA report Cross references in the EIA should be as specific as possible. If any referenced subsection is more than five pages, then a more specific reference should be given to aid the read in locating the information (for both text and CD-Rom versions of the EIA document)	No changes were made to the TOR in response to this comment. See Guide Section 6.3

No.	pTOR Section	Comment	Result of Consideration
10.	Scope [A] (b)	Scope of the EIA report Revise clause to read ...”existing” and pre-industrial (1965) “conditions in the Study Area...”	No changes were made to the TOR in response to this comment. AENV believes that to fully understand and evaluate the effects of a project, there needs to be a well-defined, scientifically verifiable benchmark to use for comparison. The difficulty of using a pre-development scenario is that for many parameters we lack the data needed to properly describe the scenario so that appropriate modeling, etc. can be conducted to forecast project effects. The Canadian Environmental Assessment Agency's February 1999 Cumulative Effects Assessment Practitioners Guide states at s. 3.2.3.2: <i>The further back in time...the greater the dependence on qualitative analysis and conclusions due to lack of descriptive information... and increasing uncertainty in predictions.</i>
11.	1[B]	Content of the EIA Report Public Engagement and Aboriginal Consultation Add: Consult all First Nations and Métis Communities that may be directly, indirectly and cumulatively affected.	No changes were made to the TOR in response to this comment. As per Alberta Environment's Guidelines on First Nations Consultation the list of First Nations to be consulted is provided in the AOSC's First Nations Consultation Plan. AOSC's Plan has been reviewed by Alberta Environment and deemed satisfactory.
12.	1[B]	Content of the EIA Report Public Engagement and Aboriginal Consultation Add: work with each community to develop an appropriate consultation plan for that community, taking community-specific consultation protocols into consideration	No changes were made to the TOR in response to this comment. As per Alberta Environment's Guidelines on First Nations Consultation AOSC was required to develop a First Nations Consultation Plan discussing how they will consult with First Nations. AOSC's Plan has been reviewed by Alberta Environment and deemed satisfactory.
13.	1[B]	Content of the EIA Report Public Engagement and Aboriginal Consultation Add: Consult with the recognized land users in the Local Study Area and Regional Study Areas for each discipline/valued environmental component	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
14.	1[B]	Content of the EIA Report Public Engagement and Aboriginal Consultation Add: describe the division of the consultation responsibilities between the Crown and the proponent and how these responsibilities relate to the regulatory process, and provide the proponent's assessment of the effectiveness of its Aboriginal consultation process	No changes were made to the TOR in response to this comment. See the Government of Alberta's Policy on First Nations Consultation and AENV's First Nations Consultation Guidelines.

No.	pTOR Section	Comment	Result of Consideration
15.	1[B]	<p>Content of the EIA Report Public Engagement and Aboriginal Consultation Add: provide the proponent's assessment of the effectiveness of its Aboriginal consultation process</p>	<p>No changes were made to the TOR in response to this comment. AENV makes a decision on the adequacy of consultation prior to issuing an approval. AENV reviews Proponent's consultation efforts regularly throughout the regulatory process.</p>
16.	1[B]	<p>Content of the EIA Report Public Engagement and Aboriginal Consultation In addition to the consultation program for the EIA process, the TOR should include requirements for the Proponent to outline the steps that they will undertake to involve ACFN and other First Nations in the various ongoing and future project activities.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 1[C]</p>
17.	2.3.1[A](a)	<p>Project Description Evaluation of Alternatives We recommend delaying the preparation of the EIA until the fundamental trade-offs that are undertaken, in public interest decisions of this type are dealt with through the LARP, in consultation with ACFN.</p>	<p>No changes were made to the TOR in response to this comment. The decision to delay the preparation of an EIA is a broader government level decision and not related to EIA.</p>
18.	2.3.1[A](a)	<p>Project Description Evaluation of Alternatives Should AOSC choose to proceed immediately with its Project application and should AENV choose to review Project application, we recommend that the TOR be amended to include requirements for a section in the EIA that justifies the need for the Project (as opposed to the examination of alternate means for conducting the Project itself). This section should make explicit the fundamental trade-offs at stake in the public interest decision, including trade-offs for section 35 Treaty and Aboriginal rights.</p>	<p>No changes were made to the TOR in response to this comment. AENV reviewed the TOR as inclusive of this item. See Final TOR Section 2.3.1 [A]. Proponents are required to discuss the need for the project including those items listed under [A].</p>

No.	pTOR Section	Comment	Result of Consideration
19.	2.3.1[A](b)	<p>Project Description Evaluation of Alternatives When describing alternatives for project components, including mitigative measures, provide an explicit (qualitative and quantitative) comparison of the benefits and drawbacks of each. The comparison should evaluate alternatives from these points of view: environmental performance, safety, technical feasibility and economic feasibility. For the technology choices where environmental performance and safety are not maximized, provide an explanation of why this is not done.</p>	<p>No changes were made to the TOR in response to this comment. Added to Guide, Section 4.2.2</p>
20.	2.5	<p>Project Description Transportation Infrastructure Add: Provide the results of consultation with First Nations, and other Aboriginal groups, about the indirect, direct and cumulative impacts of Transportation and Infrastructure. Describe:</p> <ul style="list-style-type: none"> a) how transportation infrastructure plans/options relate to community-specific land use (past, present and future), including any community specific community development and/or land use plans. b) How First Nations input and concerns were incorporated and addressed in Transportation Infrastructure planning. <p>Access management strategies, defined in consultation with First Nations, and other Aboriginal groups, to address access management issues associated with Transportation Infrastructure.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment See final TOR Section 1[B].</p> <p>AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>
21.	2.5[G]	<p>Project Description Transportation Infrastructure Add: a comprehensive spill dispersion analysis</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report.</p> <p>See final TOR Section 6[B](a)(f).</p>
22.	2.7[A](j)	<p>Project Description Air Emissions Management Revise: upset condition scenarios (e.g., frequency, duration and intensity) and proposed measures to ensure upset conditions are minimized.</p>	<p>No changes were made to the TOR in response to this comment. This is not an exhaustive list of requirements, Proponents are expected to discuss all appropriate factors when discussing upset condition scenarios.</p>

No.	pTOR Section	Comment	Result of Consideration
23.	2.7[A]	Project Description Air Emissions Management Add: the potential effects on human health from ingesting plants with high deposition loads or fish harvested from affected water.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 6 [A](d) and (e).
24.	2.7[A]	Project Description Air Emissions Management Add: the amount and nature of any nitrogen emissions, the likely atmospheric transformations of these emissions, resulting probable deposition area and the effects on vegetation with regard to eutrophication.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 2.7 [A](g) and 3.2.2(c) and (f).
25.	2.7[A]	Project Description Air Emissions Management Add: the amount and nature of any emissions, including fugitive emissions that have potential effects on human health.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 6 [A] (a)
26.	2.7[A]	Project Description Air Emissions Management Add: project mass balance of sulphur relating to SO ₂ emissions	No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report.
27.	2.7[A]	Project Description Air Emissions Management Add: Project mass balance of carbon relating to CO ₂ emissions	No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report.
28.	2.7[A]	Project Description Water Resources Revise: the expected hydrological water balance during all stages of the Project including actual evaporation, soil water and runoff and discuss assumptions or methods chosen to arrive at the water balance.	No changes were made to the TOR in response to this comment. Added to Guide Section 4.2.7.1.
29.	2.7[A](a)	Project Description Water Resources Add: potential climate change over the life of the Project	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 3.2.2[B]. See Guide Section 4.3.1

No.	pTOR Section	Comment	Result of Consideration
30.	2.10[A]	Project Description Conservation and Reclamation Add: Demonstrate how end pit lakes, wetlands and other components of the reclaimed landscape will be integrated with the plans of other operators in the area.	No changes were made to the TOR in response to this comment. See Section 4.2.7.1 of the Guide. AENV views this comment as relevant for mines and quarries only.
31.	2.10[A](c)	Project Description Conservation and Reclamation Add: Provide an estimate of outstanding reclamation liability for intervals throughout the project (e.g., 10 years, 20 years etc.)	No changes were made to the TOR in response to this comment. See Guide Section 4.2.9.
32.	2.10[A](d)	Project Description Conservation and Reclamation Add: Discuss any constraints to reclamation such as timing of activities, availability of reclamation materials (including plant propagules) and influence of natural processes and cycles.	No changes were made to the TOR in response to this comment. The proposed addition does not change the context of the request.
33.	2.10[A](i)	Project Description Conservation and Reclamation Add: Establishment or restoration of self-sustaining functional watersheds (the ability to capture, store and release water) that are integrated with the surrounding landscape and the near surface drainage	No changes were made to the TOR in response to this comment. AENV viewed the TOR and Guide as inclusive of this item. See final TOR Section 2.10[A](f)(i) and k. AENV does not use the term “restoration” preferring instead the regulatory term “reclamation”.
34.	2.10[A]	Project Description Conservation and Reclamation Add: Target erosion rates that do not exceed the natural rate of soil formation. Provide modeling results that demonstrate post-development erosion rates targets.	No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report.
35.	2.10[A]	Project Description Conservation and Reclamation Add: Discuss how the Proponent will involve Aboriginal communities in reclamation planning.	No changes were made to the TOR in response to this comment. AENV viewed the TOR and Guide as inclusive of this item. See final TOR Sections 1 [B] and 5[A] (a) (iii). AENV encourages ACFN to share information, knowledge and concerns with AOSC.

No.	pTOR Section	Comment	Result of Consideration
36.	2.10[A]	<p>Project Description Conservation and Reclamation Add: Indicate how the proposed reclamation methods have performed in similar situations, including the establishments of a diversity of ecosite phases and the repopulation of these areas by plant and wildlife species of importance. Include in this discussion the plants and animals that are significance for the practice of Treaty and the Aboriginal rights, including those that may not be of specific use, but are indicators of the ecological conditions necessary to support the meaningful practice of such rights.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 2.10[D] and 5.</p> <p>See Guide Section 4.2.9.</p>
37.	2.10[A](f)	<p>Project Description Conservation and Reclamation Add: Plans for developing suitable sources of native plant materials</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 2.10[A] (g)</p>
38.	2.10[B]	<p>Project Description Conservation and Reclamation Add: Traditional use and should also include the conceptual schedule and timeframes for this restoration</p>	<p><i>Traditional Use</i> added. See final TOR clause 2.10[B] Conceptual schedule and timeframes for reclamation included in final TOR Section 2.10[A] (d)</p>
39.	2.10[B]	<p>Project Description Conservation and Reclamation Add: Provide an evaluation of the ecological goods and services provided by the reclaimed landscape compared to pre-disturbance conditions.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report.</p>
40.	2.10[E]	<p>Project Description Conservation and Reclamation Add: Explain how regional control sites were used as benchmarks for comparison with reclaimed areas, and how Alberta Biodiversity Monitoring Program protocols, or similar protocols (with suitable rationale and justification) were used in this comparison.</p>	<p>No changes were made to the TOR in response to this comment. Proponents are expected to compare results to existing regulatory requirements as a standard practice; however, the information was added to the Guide (Appendix D)</p>
41.	2.10[F]	<p>Project Description Conservation and Reclamation Add: Explain and discuss local and regional measures of “success” and “effectiveness” or reclaiming the landscape for wildlife populations</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 2.10[C]</p>

No.	pTOR Section	Comment	Result of Consideration
42.	2.10[G]	Project Description Conservation and Reclamation Add: Provide a conceptual map showing future traditional resource use of the reclaimed landscape by First Nations.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 2.10[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
43.	2.10[G]	Project Description Conservation and Reclamation Add: Discuss the feasibility of returning the land back to pre-development conditions. Discuss the actions that will be taken if pre-disturbance conditions cannot be met.	No changes were made to the TOR in response to this comment. The regulatory requirement is the return of land to equivalent land capability.
44.	2.12[A]	Project Description Regional and Cooperative Initiatives Add: staff resources, time and fiscal resources	No changes were made to the TOR in response to this comment. AENV is not convinced this information would be useful to regulatory decision makers.
45.	2.10[B]	Project Description Regional and Cooperative Initiatives Add: Describe how the proponent will involve First Nations including First Nations environmental monitoring programs (e.g., community based monitoring) in the design and assessment of environmental monitoring and research activities.	<i>Including aboriginal groups</i> was added. See Final TOR Section 2.12 [B](c).
46.	2.10[B]	Project Description Regional and Cooperative Initiatives Add: For monitoring activities describe thresholds that will be used (or the mechanisms that will be put into place to determine the thresholds) to trigger mitigation or other adaptive management approaches. Describe how First Nations input was used, or will be incorporated into monitoring and the definition of thresholds.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 2.10[D]. See Guide Section 3.
47.	2.10[B]	Project Description Regional and Cooperative Initiatives Add: In general, for the environmental assessment and planned monitoring and adaptive management, use key indicator resources, criteria and thresholds that have been defined by CEMA, WBEA and RAMP. If these are not being used, describe the rationale.	No changes were made to the TOR in response to this comment. See Guide Section 3.

No.	pTOR Section	Comment	Result of Consideration
48.	3.1[A][a)	<p>Environmental Assessment Assessment Requirements Add: a pre-Industrial Case (1965), which includes environmental conditions that existed prior to oil sands activities</p>	<p>No changes were made to the TOR in response to this comment. AENV believes that to fully understand and evaluate the effects of a project, there needs to be a well-defined, scientifically verifiable benchmark to use for comparison. The difficulty of using a pre-development scenario is that for many parameters we lack the data needed to properly describe the scenario so that appropriate modeling, etc. can be conducted to forecast project effects.</p> <p>The Canadian Environmental Assessment Agency's February 1999 Cumulative Effects Assessment Practitioners Guide states at s. 3.2.3.2: <i>The further back in time...the greater the dependence on qualitative analysis and conclusions due to lack of descriptive information... and increasing uncertainty in predictions.</i></p>
49.	3.10[A]	<p>Environmental Assessment Assessment Requirements Add: an existing case, which outlines current environmental conditions.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 3.1.1[A](a)</p> <p>See Guide Section 3.2</p>
50.	3.1.5[A]	<p>Environmental Assessment Assessment Requirements Add: validation verification, and/or calibration of the model using available baseline data, addressing sources of error and relative accuracy of predication for use in forecasting the impact statement and CEA.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 3.1.5[A]</p> <p>See Guide Section 5.</p>
51.	3.1.2.2	<p>Environmental Assessment Assessment Requirements Add: Identify and discuss previously contaminated sites within the RSA.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 3.1.4[A](b)(i). Added to Guide Section 4.3.9.</p>
52.	3.1.2.2[D]	<p>Environmental Assessment Assessment Requirements Add: Including those related to regional or cumulative effects consistent with the direction of Cumulative Environmental Management Association (CEMA) and regional sustainable development strategy (RSDS) process where possible and considering the results of comprehensive oil spill dispersive analyses.</p>	<p>No changes were made to the TOR in response to this comment. See Guide Section 3.</p>

No.	pTOR Section	Comment	Result of Consideration
53.	3.1.4[A]	Environmental Assessment Assessment Requirements Add: specifics of the data used for assessment including time series and number of replicates for collected data; process and original data set used for computer generated data, provide relevant statistical measured including, but not limited to, range, standard deviation, mean and median.	No changes were made to the TOR in response to this comment. See Guide Section 5.
54.	3.1.4[A](b)(vi)	Environmental Assessment Assessment Requirements Add: Discuss how this incorporates TK and the values of First Nation's communities in the region.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 1[B] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
55.	3.1.4[A](b)	Environmental Assessment Assessment Requirements Add: Identify any residual effects resulting from an impact prediction or mitigation with a moderate (or worse) level of uncertainty should be accompanied by a management plan.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 3.1.4[A](b)(v) and 3.1.4[B](b) and (c)
56.	3.2.1[A]	Air Quality, Climate and Noise Baseline Information Clarify what information should be presented (i.e., monitoring data or modeling data). Frequently, industry monitoring data is not included in the review of baseline conditions and should, since this is one of the main reasons for collection this data in the first place.	No changes were made to the TOR in response to this comment. Proponents must select and provide a rationale for the selection of data used in the assessment. See Guide Section 5.
57.	3.2.1[A]	Air Quality, Climate and Noise Baseline Information There should be specific requirements for the expected scope and purposes of the baseline modeling.	No changes were made to the TOR in response to this comment. The purpose and scope of baseline modeling is to meet the requirements of the baseline scenario for air quality in the EIA.
58.	3.2.1[A]	Air Quality, Climate and Noise Baseline Information The proponent should demonstrate that the air quality model is reasonable predicting baseline conditions.	No changes were made to the TOR in response to this comment. See Guide Section 5.

No.	pTOR Section	Comment	Result of Consideration
59.	3.2.1[A]	<p>Air Quality, Climate and Noise Baseline Information Baseline information must be put in a form that is useful for the impact assessment (i.e. allow consideration of the available room for further emissions within the air shed and the ability to meet ambient guidelines)</p>	<p>No changes were made to the TOR in response to this comment. Because the EIA report is Proponent driven AENV does not generally specify how the results are to be presented in an EIA report. If results are not clear GoA reviewers will ask questions as required.</p>
60.	3.2.1[A]	<p>Air Quality, Climate and Noise Baseline Information Add: local and/or regional air quality monitoring data for appropriate ambient air quality parameters such as SO₂, CO, H₂S, total hydrocarbons (THC), NO_x, VOC mixtures, including nitrous oxide (NO), Nitric oxide (NO₂), nitrogen deposition, ground-level ozone, PAH, individual hydrocarbons of concern in the THC and the VOCs, ground level ozone (O₃), representative heavy metals, and particulates (road dust, PM₁₀ and PM_{2.5} and odors and visibility.</p>	<p>No changes were made to the TOR in response to this comment. The list of ambient air quality parameters is not meant to be exhaustive and the Proponent is expected to address all appropriate ambient air quality parameters.</p>
61.	3.2.1[A]	<p>Air Quality, Climate and Noise Baseline Information Add: comparison of predicted air quality for existing operations (as appropriate) and regional background using average annual emission rates from baseline air quality monitoring data. Discuss relative accuracy of the model predictions and suitability of the model for impact assessment forecasting.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.1.5. See Guide Section 5.</p>
62.	3.2.1[A]	<p>Air Quality, Climate and Noise Baseline Information Add: provide a detailed modeled description of baseline air quality using existing local and regional licensed air quality emission rates.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 3.1.5 and 3.2.1. Proponents must provide a rationale for the selection of data used in the assessment. See Guide Section 5.</p>

No.	pTOR Section	Comment	Result of Consideration
63.	3.2.2	<p>Air Quality, Climate and Noise Impact Assessment The air quality assessment should focus on more than just exceedences and the point of maximum impingement. The assessment should also consider and discuss the changes in the patterns, rates, and trends in the overall air quality (locally and regionally).</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report.</p>
64.	3.2.2[A](b)	<p>Air Quality, Climate and Noise Impact Assessment Add: estimate ground-level concentrations of CAC (criteria air contaminants) and other appropriate air quality parameters. Show on isopleths maps (as appropriate)</p>	<p>No changes were made to the TOR in response to this comment. Proponents are expected to discuss all appropriate air quality parameters including CACs if appropriate.</p> <p>Because the EIA report is Proponent driven AENV does not generally specify how the results are to be presented in an EIA report. If results are not clear GoA reviewers will ask questions as required.</p>
65.	3.2.2[A](f)	<p>Air Quality, Climate and Noise Impact Assessment Add: describe air quality (direct or drainage basin) impacts...</p>	<p>No changes were made to the TOR in response to this comment. AENV encourages the use of best practices and professional judgment in determining appropriate assessment methodology.</p>
66.	3.2.2[A]	<p>Air Quality, Climate and Noise Impact Assessment Add: modeling CAC to determine the Project impacts without background air quality data and with background air quality data to 10% of ambient air quality objectives/guidelines/standards.</p>	<p>No changes were made to the TOR in response to this comment. Proponents are required identify Project Impacts in order to establish the application scenario.</p>
67.	3.2.2[A]	<p>Air Quality, Climate and Noise Impact Assessment Add: routine and non-routine flaring must meet EUB directive D060 flaring requirements and combustion efficiencies.</p>	<p>No changes were made to the TOR in response to this comment. ERCB staff will review the EIA report to determine if the routine and non-routine flaring meets Directive (EUB Directive D060). Additional information will be asked of the Proponent through the review process as required.</p>
68.	3.2.2[A]	<p>Air Quality, Climate and Noise Impact Assessment Add: the central processing facility fenceline must be clearly identified on plot plan maps (for each central facility).</p>	<p>No changes were made to the TOR in response to this comment. As per Guide Section 6.4 all information presented on maps and diagrams must be clearly labeled. Clarification questions will be asked if maps and diagrams are not clear.</p>

No.	pTOR Section	Comment	Result of Consideration
69.	3.2.2[A]	<p>Air Quality, Climate and Noise Impact Assessment Add: Air quality modeling should be performed at the proposed licensed emission rates.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 3.1.5. Proponents must provide a rationale for the selection of data used in the assessment. See Guide, Section 5.</p>
70.	3.2.2[F]	<p>Air Quality, Climate and Noise Impact Assessment Add: Describe the cumulative impacts on air quality. Cumulative impacts on air quality should be modeled using the Licensed emission rates for all local, regional and proposed License or maximum air quality emissions for planned resources.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 3.1.1[A](c), 3.1.3 and 3.1.5. Proponents must provide a rationale for the selection of data used in the assessment. See Guide, Sections 3.3 and 5.</p>
71.	3.2.3	<p>Air Quality, Climate and Noise Monitoring The location of all existing (and planned/proposed) monitoring stations should be indicated on the maps.</p> <p>The predicted air quality concentration should be compared to the existing (monitored) concentrations, not just modeled conditions.</p> <p>The discussion on climate change effects should include the effects on factors such as acid deposition, reclamation etc.)</p>	<p>No changes were made to the TOR in response to this comment. As per Guide Section 6.4 all information presented on maps and diagrams must be clearly labeled. Clarification questions will be asked if maps and diagrams are not clear.</p> <p>No changes were made to the TOR in response to this comment. See Guide Section 5.</p> <p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 3.2.2[B] and Guide Section 4.3.1.</p>

No.	pTOR Section	Comment	Result of Consideration
72.	3.2.3	Air Quality, Climate and Noise Monitoring Keeping Clear Areas Clear – the EIA should discuss the ‘Keeping Clear Areas Clea’ protocol that is part of the Canada Wide Standards for PM and Ozone, as it related to remote areas of the region. This is essentially and non-degradation protocol for air quality for non-urban areas.	No changes were made to the TOR in response to this comment. A reference to the Canada Wide Standards for PM and Ozone was added to the Guide, see Appendix D.
73.	3.2.3	Air Quality, Climate and Noise Monitoring Add: Conduct an air quality dispersion model run using wind data from the WBEA air monitoring network and compare and discus the results in relation to any other air quality model runs conducted using other meteorological wind datasets).	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.1.5. See Guide Section 5.
74.	3.3.1[A](iv)	Hydrogeology Baseline Information Add: water well development and groundwater use, including a field verified inventory of groundwater users.	No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report. AENV encourages use of best practices and professional judgment in determining appropriate methodology.
75.	3.3.1[A](x)	Hydrogeology Baseline Information Add: provide the frequency of testing and location of test sites	No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report. AENV encourages use of best practices and professional judgment in determining appropriate methodology.
76.	3.3.1[B]	Hydrogeology Baseline Information Add: Discuss groundwater issues with respect to the rights and interests of First Nation communities in the region. Demonstrate how TK was used to inform the assessment. Demonstrate First Nations interests and concerns raised in these discussions were addressed. Cross reference with this or other sections of the EIA as appropriate.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 1[B] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
77.	3.3.2[B](c)	Hydrogeology Impact Assessment Add: changes in groundwater quality and quantity	Comment accepted, see final TOR Section 3.3.2[B](c).

No.	pTOR Section	Comment	Result of Consideration
78.	3.3.2[D]	Hydrogeology Impact Assessment Add: Identify any other activities that could potentially impact local groundwater resources (e.g., casing failures) and discuss measures to reduce the environmental risks from these activities.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 3.3.2[A] and 3.3.2[C].
79.	3.4.1[A]	Hydrology Baseline Information Add: Include seasonal hydrographs for rivers and streams and variations in lake-levels as appropriate	No changes were made to the TOR in response to this comment. As per Section 6.4 of the Guide Proponents are encouraged to use maps and diagrams as a valuable means of presenting information.
80.	3.5.1[A]	Surface Water Quality Baseline Information Add: Describe the pre-industrial (1965) baseline of watercourses...	No changes were made to the TOR in response to this comment. AENV believes that to fully understand and evaluate the effects of a project, there needs to be a well-defined, scientifically verifiable benchmark to use for comparison. The difficulty of using a pre-development scenario is that for many parameters we lack the data needed to properly describe the scenario so that appropriate modeling, etc. can be conducted to forecast project effects. The Canadian Environmental Assessment Agency's February 1999 Cumulative Effects Assessment Practitioners Guide states at s. 3.2.3.2: <i>The further back in time...the greater the dependence on qualitative analysis and conclusions due to lack of descriptive information... and increasing uncertainty in predictions.</i>
81.	3.5[B]	Surface Water Quality Baseline Information Add: describe how the Proponent is addressing the concepts of keeping areas clean and BATEA in the context of water management planning.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 2.3.1[A] (a) and (b) and 2.3.2[F].
82.	3.5.2	Surface Water Quality Baseline Information Add: Water recycle and other water conservation and minimization strategies, plans for water sources (including on-site or off-site storage and management strategies to manage low-flow restrictions).	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 2.8.1[A](b) and (h) and 3.4.2[F]. See Guide Section 4.3.3

No.	pTOR Section	Comment	Result of Consideration
83.	3.6	Aquatic Ecology Explain how First Nations Input was incorporated into each portion of this section of the EIA.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
84.	3.7.1	Vegetation Baseline Information A significant gap in this section is the lack of inclusion of vegetation species that are integral to the meaningful practice of First Nations rights, and interests, including traditional (past and future) use.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.7.1[A] and [E], 5[A](c) and (d)(ii). See Guide Section 4.3.6.
85.	3.7.1[A]	Vegetation Baseline Information Revise: Describe and map vegetation communities for each ecosite phase, including vegetation species that are integral to the meaningful practice of First nations rights, traditional (past, present and future) use and interests.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.7.1[E], 5[A](c) and (d)(ii). See Guide Section 4.3.6.
86.	3.7.1[C]	Vegetation Baseline Information Add: File all rare plant survey plant locations with the Alberta Natural Heritage Information Center (ANHIC)	No changes were made to the TOR in response to this comment. See Guide Section 4.3.6.
87.	3.7.1[E]	Vegetation Baseline Information Add: including but not limited to the plants integral to the meaningful practice of First Nations.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.7.1[A] and [E], 5[A](c) and d(ii). See Guide Section 4.3.6.
88.	3.7.2[C](b)	Vegetation Impact Assessment Revise: ...the sensitivity of disturbance (including acid deposition and eutrophication), as well as the techniques used to estimate sensitivity to disturbance and reclamation of each vegetation community (document examples).	No changes were made to the TOR in response to this comment. This is not an exhaustive list. Proponents are expected to discuss all appropriate factors when discussing vegetation and wetland sensitivity to disturbance.

No.	pTOR Section	Comment	Result of Consideration
89.	3.7.2[H]	<p>Vegetation Impact Assessment Add: Vegetation species that are integral to the meaningful practice of First Nations. Include implications for these mitigation actions as they relate to reclamation planning (e.g., what traditional plant species will be used in reclaiming particular ecosites, which rare plant species will be targeted for re-establishment).</p>	<p><i>Plants for traditional, medicinal and culture purposes</i> was incorporated, see final TOR Section 3.7.2[H](a).</p> <p>No other changes were made to the TOR in response to this comment, see final TOR Section 2.10[A](g).</p>
90.	3.7.2[H]	<p>Vegetation Impact Assessment Add: any impacts on plants which are considered significant to First Nations should be mitigated with the goal of no net loss. To be sure this is achieved, monitoring programs for these species must be implemented and documented in the EIA.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as partially inclusive of this comment. See final TOR Section 3.7.3[A]</p> <p>The decision to request no net loss of plants which are significant to First Nations is based on broader government policy and not related to EIA.</p>
91.	3.7.2[H]	<p>Vegetation Impact Assessment Add: Discuss how the mitigation plans include vegetation species that are integral to the meaningful practice of First Nations.</p>	<p><i>Plants for traditional, medicinal and cultural purposes</i> was incorporated, see final TOR Section 3.7.2[H](a).</p>
92.	3.8.1	<p>Wildlife Baseline Information The proponent should validate the Habitat Sustainability Index (HIS) models used for wildlife habitat with actual field (local) abundance data before using the results in the assessment. HIS model components and the results from these that have not been validated should be clearly indicated. The Proponent should discuss their plans to validate these components with local field data.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.1.5[A] (b).</p> <p>See Guide Section 5.2.</p>
93.	3.8.1	<p>Wildlife Baseline Information Explain and discuss local and regional measurements of “success” and “effectiveness” of reclaiming the landscape for wildlife populations.</p>	<p>No changes were made to the TOR in response to this comment. This is based on broader government policy and not related to EIA. ACFN should discuss with ASRD how they wish to provide input on the EIA and subsequent project operations.</p>

No.	pTOR Section	Comment	Result of Consideration
94.	3.8.1	Wildlife Baseline Information Add: Indicated to what extent the information is based on actual survey data and/or hunting data, TK, scientific peer reviewed literature and modeling (including citations).	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 3.1.4[A](c)(ii) and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
95.	3.8.1	Wildlife Baseline Information Add: cite studies indicating the required corridor width for relevant species.	No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report.
96.	3.8.1	Wildlife Baseline Information Add: consult with First Nations to identify wildlife species of concerns to obtain input on how to collect and incorporate TK for information on key wildlife species and wildlife use areas, and on the assessment of impacts to these species and areas.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Sections 1[B] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
97.	3.8.1	Wildlife Baseline Information Add: discuss data sharing agreements with other operators and how this data was incorporated into the environmental impact assessment.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 3.1.4[A](c)(ii). See Guide Section 5.
98.	3.8.1	Wildlife Baseline Information Add: habitat models used to evaluate impacts should be modified/calibrated by comparing model predictions with wildlife data from the Study Areas. If field data do not correlate with habitat models, the habitat model parameters should be revised (at minimum) and the data collection process should be revisited. If data are deemed insufficient in establishing a meaningful baseline scenario for wildlife populations, additional data collection will be required.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this item. See final TOR Section 3.1.5. See Guide Section 5.2.

No.	pTOR Section	Comment	Result of Consideration
99.	3.8.1	<p>Wildlife Baseline Information Add: provide specific benchmarks and targets for wildlife populations over the lifetime of the project (in set increments), in association with recolonization of reclaimed landscapes and other future development scenarios in the region. Discuss the time required to recolonize and sources for recolonization.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as partially inclusive of this comment. See final TOR Section 3.8.2[B](g) and (h).</p> <p>The development of regional targets is not the responsibility of the Proponent and EIA is not the proper venue for their development.</p>
100.	3.8.2[B](i)	<p>Wildlife Impact Assessment Revise: anticipated effects on wildlife as a result of changes to air, water, including both acute and chronic effects on, at a minimum, all wildlife Key Indicator Resources and, explain how First Nations input was considered meaningfully.</p>	<p><i>Key indicator species</i> added, see final TOR Section 3.8.2[B] (Preamble).</p> <p>How First Nations input was considered is addressed in final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>
101.	3.8.2[B](d)	<p>Wildlife Impact Assessment Revise: anticipated changes due to the project and other planned, existing and reasonably foreseeable activities...”</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.1.1[A](c). See Guide Section 3.2.</p>
102.	3.8.2[B]	<p>Wildlife Impact Assessment Add: anticipated effects on the quality of traditionally consumed species, including ungulates, rabbits and game birds.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 3.8.2[B](e) and 6[A](c).</p>
103.	3.8.2[B]	<p>Wildlife Impact Assessment Add: Discussion and consideration of the ecosystem shifts with respect to reclamation success, prediction confidence and wildlife recolonization of the LSA and RSA.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 2.10[B] and [C] and 3.8.2[B](g) and (h).</p>
104.	3.8.2[C]	<p>Wildlife Impact Assessment Revise: Provide and implement a strategy and mitigation plan to minimize impacts on wildlife habitat through the life of the Project and to return productive wildlife to the area and involve First Nations through all phases of mitigation plan development and implementation.</p>	<p>No changes were made to the TOR in response to this comment. As part of their operating approval Proponents will be required to implement a mitigation plan. First Nations consultation/involvement is addressed in final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>

No.	pTOR Section	Comment	Result of Consideration
105.	3.8.2[C]	Wildlife Impact Assessment Add: Discuss habitat enhancement and wildlife species populations it will support.	No changes were made to the TOR in response to this comment. ASRD Fish and Wildlife is moving away from encouraging Proponents to implement habitat enhancement measures as the habitat surrounding the proposed projects is fully functioning wildlife habitat as is. The natural, undisturbed habitat is generally not in need of 'enhancement' and manipulation of the surrounding habitat to accommodate enhancement measures may actually decrease its effectiveness as wildlife habitat.
106.	3.8.2[C]	Wildlife Impact Assessment Add: Discuss movement corridor data already collected.	No changes were made to the TOR in response to this comment. AENV viewed the comment as requesting more detail than is required in an EIA report.
107.	3.8.2[D]	Wildlife Impact Assessment Add: Identify impacts on wildlife species for each scenario to the opportunities for local Aboriginal residents to hunt and trap successfully compared to pre-industrial (1965) conditions.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B] and Section 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
108.	3.8.2	Wildlife Impact Assessment Add: Discuss and consider the effects of ecosystem shifts with respect to reclamation success, predication confidence, and wildlife recolonization of the LSA and RSA.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 2.10[B] and [C] and 3.8.2[B](g) and (h)
109.	3.8.2	Wildlife Impact Assessment Add: Demonstrate how TK was used to inform the assessment and how First Nations interests and concerns raised regarding wildlife impacts and regarding wildlife impacts and the relationship to First Nations rights and interests were addressed. Cross reference this with the other sections of the EIA as appropriate.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
110.	3.9.1[A]	Biodiversity and Fragmentation Baseline Information Add: the biodiversity assessment should include an integrated index of biodiversity, so that the assessment of effects on biodiversity looks at more than just the individual components.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.9.1[A]. See also Guide Section 4.3.8.

No.	pTOR Section	Comment	Result of Consideration
111.	3.9.3	<p>Biodiversity and Fragmentation Monitoring Add: Discuss how First Nations communities may be involved in biodiversity monitoring, such as through on-going dialogue about the process and results of monitoring efforts and/or partnering with the community based monitoring programs (currently being developed by First Nation's communities in the Regional Municipality of Wood Buffalo).</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B] and 2.12[B](c). AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>
112.	3.9.3[A]	<p>Biodiversity and Fragmentation Monitoring Add: Monitoring programs including wildlife surveys using standardized protocols (i.e., those developed by the Alberta Biodiversity Monitoring Plan) and utilizing First Nations community based monitoring programs.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B], 2.12[B](c). See also Guide Section 4.3.8. AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>
113.	3.10.1[A](a)	<p>Terrains and Soils Baseline Information Add: including a detailed description and location of strata that have a high potential to leach saline salts.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.10.1[A](b) and 3.10.2[B](f).</p>
114.	3.10.2[A](b)	<p>Terrains and Soils Impact Assessment Add: the impact assessment should discuss how much the classes have changed in area, not just the percentage change.</p>	<p>No changes were made to the TOR in response to this comment. Because the EIA report is Proponent driven AENV does not generally specify how the results are to be presented in an EIA report. If results are not clear GoA reviewers will ask questions as required.</p>
115.	3.10.2[A](d)	<p>Terrains and Soils Impact Assessment Add: and eutrophying impacts on soils and discuss the significance.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.10.2 [A].</p>
116.	3.11.1	<p>Land use Baseline Information Add: Identify the past, current and future First Nations lands uses, including, but not limited to, reserve lands, treaty land entitlement areas, traditional lands, community plans, land use plans, traditional and historic sites, harvesting (e.g., hunting, fishing, trapping and plant collection) areas, unique cultural and/or spiritual areas, and other activity areas.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 3.11.1 [A] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>

No.	pTOR Section	Comment	Result of Consideration
117.	3.11.2[A](b)	Land use Baseline Information Add: the impact assessment should discuss how much the classes have changed in the area not just the percentage change.	No changes were made to the TOR in response to this comment. Because the EIA report is Proponent driven AENV does not generally specify how the results are to be presented in an EIA report. If results are not clear GoA reviewers will ask questions as required.
118.	3.11.2[A](b)	Land use Impact Assessment Add: the impact assessment should discuss how much the classes have changed in the area not just the percentage change.	No changes were made to the TOR in response to this comment. Because the EIA report is Proponent driven AENV does not generally specify how the results are to be presented in an EIA report. If results are not clear GoA reviewers will ask questions as required.
119.	3.11.1[A](i)	Land use Impact Assessment Add: and how First Nations will be consulted regarding access management and how access for traditional users will be maintained.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
120.	3.11.2[C]	Land use Impact Assessment Add: Significant residual impacts where an existing or emerging mitigation technique was not used due to technical or economic feasibility. In these cases the Proponent should provide a detailed quantitative justification to how this feasibility was determined. State which alternatives mitigations will be used, and their cost and effectiveness relative to the technique that was not used.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 2.3.1[A] (a) and (b) and 3.1.4[A](b)(v).
121.	4[A]	Historic Resources Add: Consultation with First Nations should acknowledge their priority right to use the land and include but not be limited to their knowledge of existing historical resources, their concerns and recommendations regarding these and opportunities for participation (e.g., blessing ceremonies on known burial grounds, participating in HHRA field studies, presentations to the community about the results of the HHRA)	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC. See Guide Section 4.4
122.	4[A]	Historic Resources Add: Demonstrate how First Nations were consulted and how their concerns and values were incorporated into the assessment, including into the evaluation of impact significance.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.

No.	pTOR Section	Comment	Result of Consideration
123.	4[A]	Historic Resources Add: Explain how the historical resources (including archaeological) resource assessment findings were shared with the First Nations communities.	No changes were made to the TOR in response to this comment. This information will be provided by the EIA report which is available to the First Nations for review.
124.	5[A]	Traditional Ecological Knowledge and Land Use Add: Describe the results of the consultation with Aboriginal communities with respect to traditional ecological knowledge and traditional land use. Include a clear summary of traditional land uses, project related concerns and mitigation measures as well as the Proponent's response to these.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC. See Guide Section 4.4
125.	5[A]	Traditional Ecological Knowledge and Land Use Add: Identify any First Nations land use policies and management initiatives pertinent to the Project.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 3.11.1[D].

No.	pTOR Section	Comment	Result of Consideration
126.	5[A]	<p>Traditional Ecological Knowledge and Land Use Add: Provide a description of the methodology used to collect TEK and TLU information, including but not limited to:</p> <ul style="list-style-type: none"> • The provision of detailed, audience appropriate, project information to First Nations, and other Aboriginal communities (e.g., maps containing lease boundaries, wellpads, locations of other project facilities, trap lines, site visits, etc.). • The system for referencing information gathered during consultation interviews. It is preferred that this system follow a format similar to literature citations (e.g., Last name or Participant Code and date) to clearly identify information sources. • The means by which the Proponent committed to protecting the confidential and proprietary knowledge of the First Nations communities and other Aboriginal group. For example, provide evidence that the Proponent entered into information-sharing agreements stipulating that the Aboriginal Group has the right to control how TEK and TLU information is used and presented. • Where relevant, demonstrate how the Proponent worked with First Nations communities to obtain consent to use and reference TEK and/or TLU information that was published in a previous EIA or summary book. Information about traditional land uses for a particular First Nation published in a previous EIA or summary books is not considered first hand traditional knowledge and should not be used without specific permissions. 	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p> <p>See also Guide Section 4.5.</p>
127.	5[B]	<p>Traditional Ecological Knowledge and Land Use Revise: Determine the impact of development from a pre-development (1965) baseline on traditional uses, culture and on the rights of First Nations, and identify possible mitigations. Demonstrate how the First Nations were consulted, and their concerns addressed.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>

No.	pTOR Section	Comment	Result of Consideration
128.	5[B]	<p>Traditional Ecological Knowledge and Land Use Add: Describe how TEK and TLU information was gathered, from whom, and how it was incorporated into in a meaningful way into the assessment. Also describe how TEK will be used and incorporated into operational and reclamation planning.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B] and 5. AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p> <p>See Guide Section 4.5</p>
129.	5[B]	<p>Traditional Ecological Knowledge and Land Use Add: Develop a Traditional Resource Plan that includes:</p> <ul style="list-style-type: none"> • Inventories of traditional land uses and plants and wildlife used by ACFN • Strategies to minimize and mitigate the direct, indirect, and cumulative impacts to traditional uses and to plans and wildlife used by ACFN • Strategies to ensure that dustfall does not reduce the quantity and quality of native berry harvests in the area affected by the development. • The establishment of offsets to compensate for the loss of irreplaceable plan and/or animal species and communities. • Strategies to expedite progressive reclamation to native plan communities important to traditional use • Plans for developing seed and plant material banks and nurseries of native plants important for traditional use • Plans to address the propagation of recalcitrant traditional use plants (e.g., tissue culture). • Plans to implement “successional infill planting” to augment species diversity and native forest structure. 	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B], 2.10[A](f)(ii), 2.10[A](g) and 5.</p> <p>Mitigation measures are discussed for each specific discipline, including Section 5[B]</p> <p>AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>
130.	5[B]	<p>Traditional Ecological Knowledge and Land Use Add: Describe monitoring programs proposed to measure impacts due to the Project on traditional uses and success of traditional use resource plan mitigation measures</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Monitoring Sections for each discipline.</p>

No.	pTOR Section	Comment	Result of Consideration
131.	5[B]	<p>Traditional Ecological Knowledge and Land Use Add: Discuss possible mitigative measures to address impacts on land use by the Project and opportunities to sustain the needs of First Nation communities.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 3.11.2[B](b),(c) and 5[B].</p>
132.	6	<p>Public Health and Safety The assessment should use a broader definition of ‘health’ that encompasses all aspects of health, not just the exposure response to chemicals to concern. The IRP uses the concept of ‘population health’ to encompass all the determinants of health of the population within the region. Focusing on a single factor (such as exposure to air or water pollutants in the EIA) does not accurately portray the actual status of human health, not does it effectively allow for mitigations that have a reasonable change to actually improving the health, nor does it effectively allow for mitigations that have a reasonable chance of actually improving the health status of individuals (and populations) within the region.</p>	<p>No changes were made to the TOR in response to this comment. The decision to change the definition for health is based on broader government policy and not related to EIA.</p>
133.	6[A](e)	<p>Public Health and Safety Add: as well as the impact that this may have on opportunities and desire (resulting from perceptions) of health risks and food safety) for traditional activities.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B], 5[B] and 6[A](f).</p>
134.	6[A]	<p>Public Health and Safety Add: The potential health implication, if any, for compounds for which no exposure guidelines currently exist.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the comment as requesting more detail than is required in an EIA report.</p>
135.	6[A]	<p>Public Health and Safety Add: Discuss the impacts from highway traffic accident, industry and death rates based on a unit volume of traffic and indicate changes in unit volume for the project and cumulatively.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed this comment as requesting more detail than is required in an EIA report.</p>
136.	6[A]	<p>Public Health and Safety Add: identify and discuss potential health and safety impacts due to higher regional traffic volumes and the increased risk of accidental leaks and spills.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 6[A](j) and 6[B](e)</p>

No.	pTOR Section	Comment	Result of Consideration
137.	6[A]	Public Health and Safety Add: Consult with First Nations regarding the impact of the project and cumulative industrial activities on overall community health and well-being and possible mitigation measures.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
138.	6[A]	Public Health and Safety Add: Describe a contingency plan evacuation of workforce and local residents during an emergency.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 6[B](a) and (c).
139.	6[B](c)	Public Health and Safety Add: specifically related to First Nations traditional lifeways, culture and overall community health and well-being.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B], 5 and 6[A](h)
140.	6[B]	Public Health and Safety Add: determine the potential impact of the Project on the health of First Nations communities and people, and identify possible mitigative measures.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 6[A](h) and (k).
141.	6[C]	Public Health and Safety Add: Identify how First Nations communities were consulted on this portion of the EIA, how their input was incorporated and how their concerns were addressed.	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.
142.	7	Socio-Economic Factors The discussion of socio-economic impacts should make use of a comprehensive indicator of socio-economic well-being such as: the Genuine Progress Indicator (GPI). The GPI provides an index of well-being for a population. This index makes use of indicators (e.g., crime and family breakdown) over and above those used for traditional economic based views of well-being. This indicator could be used for purposes of establishing a baseline and to track changes to that baseline over time.	No changes were made to the TOR in response to this comment. Because the EIA report is Proponent driven AENV does not generally specify how the results are to be presented in an EIA report. If results are not clear GoA reviewers will ask questions as required.
143.	7.1[B]	Socio-Economic Factors Add: in each community within the Study Area	No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 7.2[A](vi).

No.	pTOR Section	Comment	Result of Consideration
144.	7.1[B]	<p>Socio-Economic Factors Add: the potential for increased crime and potential impacts (such as substance abuse or depression) to project workers resulting from isolation and separation for their families.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. As per Section 7.1[A] Proponent's are required to discuss the existing socio-economic conditions for communities. When discussing the impact of the Project it is expected that the impacts to the communities will be discussed. (See Section 7.1[B]).</p>
145.	7.2[A](a)(i)	<p>Socio-Economic Factors Revise: local training, employment and business opportunities, and job transportation including Aboriginal hiring and procurement policies and programs and how the proponent will maximize local Aboriginal workers, show its increases in hiring over time and state how many foreign workers it intends to bring in.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 7.2[C](a) and (b). See Guide Section 4.7.</p>
146.	7.2[A](a)(vi)	<p>Socio-Economic Factors Revise: Impacts to First Nations and Métis trapping, hunting and fishing and gathering and loss of land required to carry out the meaningful practice of traditional pursuits guaranteed under Treaty 8 and the Constitution of Canada.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 7.2[A](a)(v) and (vi).</p>
147.	7.2[A](a)	<p>Socio-Economic Factors Add: the systemic barriers that obstruct advancement in Aboriginal education, training, employment and business development and describe how the proponent with address those barriers.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 7.2[C](b).</p>
148.	7.2[A]	<p>Socio-Economic Factors Add: describe and provide copies of the proponent's policies and practices that will be implemented to design and manage, monitor and evaluate the company's employment and business development opportunities for First Nation and Métis peoples in the region</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 7.2[C](a) and (b).</p>
149.	7.2[A]	<p>Socio-Economic Factors Add: the impact on local services and infrastructure by community, taking into consideration other project that are reasonably anticipated during the life of the Project. This will include consideration of transportation, education/training, social services, urban and regional recreation use, law enforcement and emergency preparedness.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 3.1.1[A](c) and 7.2[A](e). See Guide 3.2.</p>

No.	pTOR Section	Comment	Result of Consideration
150.	7.2[D]	<p>Socio-Economic Factors Add: Identify how First Nations communities were consulted on this portion of the EIA, how their input was incorporated and how their concerns were addressed</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Section 1[B]. AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>
151.	7.3	<p>Socio-Economic Factors Monitoring Add: Discuss how First Nations may be included in monitoring efforts, such as through participating, consultation or partnerships with community-based monitoring programs.</p>	<p>No changes were made to the TOR in response to this comment. AENV viewed the TOR as inclusive of this comment. See final TOR Sections 1[B](c) and Section 2.12[B](c). AENV encourages ACFN to share information, knowledge and concerns with AOSC.</p>



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Re: Proposed Terms of Reference
Environmental Impact Assessment Report
Athabasca Oil Sands Corp – MacKay River SAGD Project

Dear Sir:

We have read the above mentioned public notification and wish to submit this letter and technical review on behalf of the Mikisew Cree First Nation (Mikisew Cree).

The Mikisew Cree leadership and membership have critical concerns with the growing cumulative effects of oil sands development on water quantity and quality, on our environment, culture and traditional land uses. These effects are putting at risk the future of the Mikisew Cree. Comprising approximately 2,400 members, or 55% of the First Nations people living within the Regional Municipality of Wood Buffalo, the Mikisew are directly affected by oil sands development.

The MacKay River SAGD Project (The Project) is located within Mikisew Cree's land use area. Mikisew Cree members actively exercise their rights protected by Treaty 8 within this area. The Project will directly, indirectly and cumulatively impact Mikisew Cree's rights and to injuriously affect those rights. The federal and provincial governments have a fiduciary obligation to justify any infringement on these rights and uphold the honour of the Crown, including a duty to consult meaningfully and accommodate the Mikisew Cree. The federal and provincial governments have not adequately consulted with the Mikisew Cree on the standardization of all oil sands development ToRs, and on the potential impacts that this Project will bring to the Mikisew Cree.

It is Mikisew Cree's inherent right and responsibility to protect and preserve the environment for the future use and benefit of the coming generations. These rights are protected by Treaty 8 and entrenched by s. 35(1) of the *Constitution Act*. Construction and operation of the Project will contribute to the significant cumulative infringement of those rights. The federal and provincial governments have a fiduciary obligation to justify this infringement and uphold the honour of the Crown, including a duty to consult meaningfully and accommodate the Mikisew Cree. Not only have they historically failed to consult or accommodate, the actions of both governments in concert with operators such as Suncor have meant wholesale destruction of Mikisew Cree traditional lands and have resulted in the degradation of Mikisew Cree culture, social structures, economy and health. The Mikisew Cree requests that meaningful consultation occur with both the proponent and most importantly with the Crown.

The Mikisew Cree have procured the services of Management and Solutions in Environmental Science (MSES) to conduct an independent general review of the Proposed Terms of Reference (PToR) for the Environmental Impact Assessment (EIA) report for the Project. Please find below a list of concerns identified as a result of this review.

General Comments

The following are several general or overarching comments on the PToR.

1. Like the majority of PToRs for oil sands development projects, the PToR for the AOSC Project is written in much generalized terms that are subject to interpretation that will likely affect the design and implementation of studies to collect information about the environment. As a result, the proponent has a great deal of room to adopt approaches that may not be acceptable to First Nation communities.
2. Although AOSC will be required to describe the confidence in the environmental assessments conducted, there is no apparent need for the confidence to be quantified (i.e., measures of variability such as confidence limits). Without such requirements, confidence in the various discipline assessments is low and based solely upon subjective professional judgment of assessment results.
3. The Thickwood Fen falls within the AOSC future subsurface development area and is in proximity to the proposed Central processing facility and initial subsurface development area. This major ecological feature on the landscape will require special attention should any proposed development project be approved.

Environmental Assessment Process

1. AENV has standardized the approach to ToR for oil sands SAGD and mining projects with no apparent First Nation consultation. In an attempt to better protect our Treaty and Aboriginal Rights, the Mikisew Cree and other First Nations have provided AENV myriad comments and suggestions for improvement of the approach taken for EIA reports, and the EIA process in general, only to have AENV either ignore or reject the majority of these potential improvements as requiring "policy change" (C. Powter, personal communication). The major common themes in these reviews include requests

for specific land use planning targets or benchmarks to measure relative mitigation success for:

- topography across lease holdings;
- watersheds;
- vegetation communities;
- wildlife and wildlife habitat;
- fish resources;
- reducing acidification; and
- improved groundwater and water quality monitoring programs.

Given that AENV appears to dismiss the majority of these requests at one time or another as being onerous or continues to rely upon development proponents to address these items in the future as the various projects proceed (post-EIA approval), for AENV to simply standardize ToRs for EIAs in the oil sands without any meaningful consultation of the Mikisew Cree is disappointing. Given such lack of regard for our input in strategic and operational levels of project execution, we conclude that the Government of Alberta repeatedly fails to adequately consult with the Mikisew Cree on a regular basis. The task of consultation is left to the proponent and this process is severely flawed because the issues of the Mikisew Cree cannot be addressed by one single proponent. These outstanding concerns need to be recognized and acted upon by all industry players and the Crown collectively and until this is done there will always be gaps and inconsistencies with the consultation process. Effective and meaningful consultation requires the opportunity for the Mikisew Cree—who will be directly and adversely affected by the Project—to raise issues and to have those issues adequately addressed.

It is not clear how AENV's environmental assessment process (EA Guide 2008-1) is adhered to, given that all ToRs are standardized. What is the point of seeking feedback from various stakeholders and the Mikisew Cree on PToRs if no meaningful consideration is given to respective input? In the standardized ToRs, including the one for the AOSC Project, AENV does not request that rigorous baseline data be collected as it believes that EIAs are "conceptual documents" (pers. comm., Chris Powter, AENV, April 8, 2008). Contrary to the assertion by AENV that a "greater level of detail is obtained during the approvals phase" (pers. comm., Chris Powter, AENV, April 8, 2008), we find that, for terrestrial resources in general, and Traditional Resources in particular, at no point in the assessment and approval process are there concrete baseline data required by AENV, so as to test the success of reclamation against pre-disturbance conditions. This is a fundamental flaw in the process from any scientific point of view. More importantly, this is a flaw from a Crown Consultation point of view as pointed out by Passelac-Ross and Potes (2007, *Canadian Institute of Resource Law*, Occasional Paper, #19.), namely

that First Nations remain uninformed about the extent of effects on their Aboriginal and Treaty Rights and about the effectiveness of mitigating these effects.

2. AOSC has taken a typical, piece-meal approach in developing their lease holdings. The Mikisew Cree have yet to be consulted with in a meaningful way regarding AOSC's Mackay River Pilot Project, and application with several major short-comings, and yet AOSC has submitted a PToR for a major Project that depends upon approval of the Pilot. This is exemplified by the MacKay River Pilot Project (see PToR page 1, paragraph 3) and the dependent and interconnected MacKay River SAGD Project for which the PToR is supplied. It is not clear how the MacKay River Pilot project is separate from the current MacKay River project when the latter is dependent upon infrastructure of the former.
3. Although the Mikisew Cree were invited to contribute to the EIA ToR, the process of contribution needs to be clarified as AOSC has likely already initiated fieldwork for the EIA AENV's process requires public input (presumably in a transparent, meaningful way) on any PToR (AENV, 2008). It is apparent that the AENV process is flawed because precedence is apparently given to expediency of the application process over meaningful public input through issues scoping and review of the PToR. How then is the Mikisew Cree to have faith that any input into the EIA ToR will be considered in a meaningful way? Please explain how AENV's environmental assessment process (EA Guide 2008-1) is adhered to given that field data collection is likely well-underway, if not complete, and the EIA is likely near completion. Pending PToR approval, what are the timelines surrounding EIA report submission to AENV and the ERCB?

Monitoring and Follow-up

There are two main and overarching themes in the monitoring and follow-up programs to be developed by AOSC:

1. There is no indication that AOSC will use data from impact assessment field surveys to a) develop impact predictions and to set pre-disturbance conditions as measurable targets, and b) to use the learning of past monitoring results throughout the Alberta Oil Sands Region in designing the monitoring and follow-up programs of the proposed project. Throughout the PToR, AOSC claims that they will "measure the effectiveness of mitigation plans" via the implementation of monitoring programs. Given that major gaps exist with respect to the identification of benchmarks or targets to measure monitoring results against, it will remain difficult to actually do this to the satisfaction of the Mikisew Cree.
2. It is disturbing to find that the input of the Mikisew Cree over the years has not found its way into essentially any part of the process in developing monitoring programs. With

respect to monitoring and follow-up, the Mikisew Cree has repeatedly requested that concrete, not conceptual, plans be developed that could measure the effectiveness of mitigating the effects on Treaty Rights and Traditional Resource Use. This should be done by establishing targets and benchmarks. By measuring at any given time of monitoring, estimating how far the current conditions deviate from the targets could be achieved. AENV did not heed the input by the Mikisew Cree in the past. The result is that the effect of various oil sands projects on Treaty Rights and Traditional Resource Use remains unknown and, hence, the mitigation of these effects is never developed disregarded.

Specific Comments

The following are general comments on specific sections of AOSC's PToR. Numbers correspond to PToR sections.

2.6 Land Management

1. No consideration of Traditional Land Use is apparent. How will AOSC assess the changes of the cultural landscape?

2.10 Conservation and Reclamation

1. All conservation and reclamation planning is conceptual in nature and there are no apparent requirements for specific reclamation targets or benchmarks for quantifying reclamation success.
2. In conservation and reclamation planning, there is an apparent requirement for pre-development information. We will assume that this, at minimum, will include quantifiable, pre-disturbance information on the indicators of environmental health listed under 2.6(a) and 2.6 (e)(ii), including vegetation, wildlife, aquatic resources and traditional land use.
3. Throughout this section the phrase "self-sustaining vegetation communities" is used several times. The Mikisew Cree have serious concerns surrounding the ability of any oil sands development proponent to be able to reclaim disturbed areas to any satisfying degree, let alone be able to generate vegetation communities of a complexity that existed before the disturbance.

3.1.1 Scenarios

Current requirements require AOSC to define and use three environmental assessment scenarios:

1. Baseline Case
2. Application Case
3. Planned Development Case

However, the Mikisew Cree feel that the Baseline Case only reflects current conditions and not pre-disturbance conditions (before exploration, seismic, drilling, etc). As such, we would expect

AENV to examine, through the EIA process, impacts to traditional land use - past (Pre-disturbance), present (Baseline) and future (Application and Planned Development). We suggest that a useful pre-disturbance scenario might be used from 1965 before oil sands development occurred.

3.1.2.2 Local and Regional Study Areas

Part of this section reads:

[E] Identify the traditional land use areas within the Study Area, as provided by aboriginal communities and groups.

If such areas are identified, they should include past and current traditional land uses. Pre-disturbance and post-project traditional land use areas should be identified to gauge the cumulative impacts to Mikisew Cree traditional land use to date in the region through oil sands exploration and development disturbance (direct and indirect). AOSC should demonstrate the past rate of change in traditional land use area and the likely future rate of change.

3.1.4 Information Requirements

In part, this section reads:

[B](b) provide a sufficient base for the prediction of positive and negative impacts...

It is not clear how an EIA report would be able to demonstrate the positive environmental impacts from any oil sands development.

3.2 Air Quality

Although air quality is briefly mentioned throughout the PToR, primarily in relation to public and environmental health, the Mikisew Cree require assurances that AOSC will take a meaningful approach to all air quality-related models and the assessment of potential changes brought about by the Project. As such, we present the items below for consideration and discussion in the final ToR and EIA report:

1. It is not clear from the PToR whether the impact assessment will consider air quality in such a way to ensure that both direct deposition to lakes and water courses is considered as well as collective deposition within a drainage basin.
2. All models should be validated, verified or calibrated using appropriate, available baseline data, addressing sources of error and relative accuracy of predictions for use in forecasting the impact statement and cumulative effects assessment.

3.3 Hydrogeology

1. How will regional groundwater monitoring be addressed by AOSC?

3.4 Hydrology

1. It is not apparent what AOSC's goals are for surface water regimes and flows in their lease holdings. It is suggested that returning disturbed areas to a self-sustaining drainage regime with flows and water levels approaching pre-disturbance variability be a goal in grained in the ToR.
2. The hydrologic regime of potentially affected watercourses and the water level regime of key water bodies needs to be addressed more specifically. This should include, at

minimum, Thickwood Fen, Round Lake, Spruce Lake, Halfway Lake Whiskey Jack Lake, MacKay River and all associated tributaries.

3.5 Surface Water Quality

1. The monitoring of reclamation performance and success should involve a suitable mechanistic model of how the ecology of the project area functions and how it may be affected.

3.6 Aquatic Ecology

1. The Mikisew Cree have observed development proponents advocating changes in habitat types (watercourses to waterbodies) to avoid No Net Loss of fish habitat. It is hoped that AOSC will avoid this type of habitat augmentation, if any is required.

3.7 Vegetation

1. The effects of the Project on the Thickwood Fen are not specifically addressed in the PToR.
2. When will any monitoring programs that may be proposed to assess revegetation success on reclaimed sites be described? How will environmental inspections assure that revegetation outcomes and targets will be met and what are the potential adaptive management options if targets are not met?

3.8 Wildlife

1. The AOSC Project falls within a designated Caribou Protection Zone. To date, AENV has not addressed the impacts such habitat losses and fragmentation has on a dwindling population of woodland caribou.
2. For wildlife, potential impacts to Traditional Resource Use and Treaty Rights are loosely addressed by the need for AOSC to “comment” upon the availability of species for traditional land use. In addition, it is not clear how the availability of species will be gauged or measured.
3. Cumulative effects are usually addressed qualitatively for wildlife. Given the lack of regional initiatives to develop specific benchmarks or targets for wildlife species in association with end land uses, a qualitative approach to cumulative effects assessment does not provide certainty to the Mikisew Cree in terms of wildlife management or future availability.

3.9 Biodiversity and Fragmentation

1. Why are standardized methods, procedures and metrics for measuring changes to biodiversity in Alberta, such as those used by the Alberta Biodiversity Monitoring Institute (ABMI) not required to be utilized by AOSC?

2. It is not required to compare baseline (current) levels of habitat fragmentation to pre-disturbance levels. As such, comparing baseline conditions to future conditions will grossly underestimate the extent of existing habitat fragmentation and impacts to Traditional Land Use.

3.11 Land Use

1. AOSC is not apparently required to investigate past Aboriginal land use, only current Aboriginal land use.

5 Traditional Ecological Knowledge and Land Use

AOSC is required to:

[B] Determine the impact of development on traditional uses and identify possible mitigation strategies.

The Mikisew Cree would request that more detailed information on how this will be achieved be provided to them from AOSC. Will pre-development scenarios be examined in any such assessment?

As this process moves forward the Mikisew GIR will continue to share details of our concerns with all appropriate parties.

Mikisew's input into the EIA process is valuable in assisting with the implementation of appropriate methods to make clear and verifiable impact predictions, as the accuracy of these predictions is of paramount importance to the Mikisew and other stakeholders.

In closing, I trust this meets with your satisfaction, should you have any questions please contact myself, Melody Lepine at 780-714-6500.

Respectfully,



Melody Lepine
Director, Mikisew Cree GIR

cc. Mikisew Cree Chief & Council
Cathleen O'Brien Mikisew GIR
Jerry Demchuk, Athabasca Oil Sands Corp.
Pat Marriott, AENV
Ken Schuldhuis, ERCB



April 6, 2009

Director, Environmental Assessment
Northern Region
Alberta Environment
111, Twin Atria Building,
4999 – 98 Avenue
Edmonton, Alberta
T6B 2X3



Dear Sirs/Madam:

**Re: Public Notice, Athabasca Oil Sands Corp., MacKay River SAGD Project,
Proposed Terms of Reference for Environmental Impact Assessment.**

We are responding to Athabasca Oil Sands Corp. public notice of Great Divide SAGD Expansion Project. Athabasca Oil Sands Corp. and Métis Local 1935 already have a good working relationship, but we do not always get noticed on projects, that we feel will directly and adversely impact our members land uses, access to wild life and transportation corridors, as well as affect upon the communities social and economic lifestyle.

Our Métis organization has a large membership base drawing from 5700 Métis in the Wood Buffalo Region and over 1200 card holding Métis Nation Members in Fort McMurray.

Additionally our members are:

- Highly mobile & continue to pursue traditionally harvesting activities
- Live and work in the affected area.
- Have traplines in the area.
- Recreate or camp in the area.
- Gather a variety of berries or did

We are writing a statement of concern so that Athabasca Oil Sands Corp. can explain to our members how they are going to mitigate these concerns, as well as the following concern that include environmental and socio-economic:

- Will it include clearing land; How much more?
- Will it pose a threat to our members Traditional Land Use like berry patches.
- Athabasca Oil Sands Corp. to provide sufficient base for the prediction of positive and negative impacts and the extent to which negative impacts may be mitigated.



MÉTIS LOCAL 1935
FORT MCMURRAY



- We would like Athabasca Oil Sands Corp. to share baseline research on the impacts of the wildlife with this existing line and what Athabasca Oil Sands Corp. is going to do differently to address these impacts.
Is there documentation of this research? Is it available? And who is monitoring of the activities?
- We are also concerned about the socio-economic issue with regards to this project and how Athabasca Oil Sands Corp. is planning on mitigating these issues.

We believe this project will cause land disturbance that infringes on our Métis rights as listed below:

- Constitutionally protected harvesting rights (Hunting, Gathering and Fishing) established by Powley case from Supreme Court of Canada.
- Water management and water quality concerns
- Habitat encroachment
- Trapline disruption
- Land use and Land access

Through our Mark of the Métis (Heritage Study Sector), we have been able to research Traditional Land Use in area; the information so far clearly indicates Metis used the area. We are basing our concerning on what our elders have told us. Métis Members of Local 1935 have a right of access to and protection of surface harvesting activities on unoccupied Crown lands in Alberta and more specifically in the Athabasca Oil Sands Corp. area.

Métis Local 1935 acknowledges that Athabasca Oil Sands Corp. has met with the Local, however, we still feel that Athabasca Oil Sands Corp. need to inform the Local on all initiatives concerning the MacKay River SAGD Project. We would also appreciate Athabasca Oil Sands Corp. to involve Métis Local 1935 in the monitoring plans to measure the success of the mitigation activities.

We respectfully submit these issues for your consideration. If you have any questions about what is contained herein please call Ms. Brenda Blake at Métis Local 1935. We look forward to your reply.

Sincerely,

Mr. James Dragon
President
Métis Local 1935

Cc: Jerry Demchuk, Manager Regulatory and Stakeholder Affairs
Athabasca Oil Sands Corp.