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September 21, 2006

Patrick Duxbury
Environmental Assessment Officer
Mackenzie Valley Environmental Impact Review Board
Box 938
YELLOWKNIFE, NT X1A 2N7

Dear Mr. Duxbury:

**Re: Tamerlane Ventures Inc., Pine Point Pilot Project (MVEIRB EA #0607-002)
Draft Terms of Reference and Work Plan**

Indian and Northern Affairs Canada (INAC) is pleased to submit the attached comments on the draft terms of reference and work plan for the above-mentioned development. As explained in the attached comments, we are concerned that the terms of reference as currently presented may dilute the focus of the environmental assessment.

If you have any questions or concerns about the attached, please contact Lionel Marcinkoski at 669-2591 or marcinkoski@inac-ainc.gc.ca.

Sincerely,

David Livingstone
Director
Renewable Resources and Environment

c.c. INAC EA Working Group

**INAC Comments on Draft Terms of Reference and Work Plan for the
Environmental Assessment of the Tamerlane Pine Point Pilot Project
(MVEIRB EA 0607-002)**

General Comments

On the whole, INAC believes that the scope of the terms of reference and level of detail required do not focus sufficiently on the potentially significant impacts of the proposed development on the environment. While it is apparent that the Review Board has included all the concerns raised at the scoping sessions and in technical comments, it is not apparent that the Board has examined those concerns in terms of their relative potential significance, the degree to which they are supported by fact or observation, and/or the level of public concern. When reviewing the comments and revising the terms of reference, INAC suggests that the Review Board clearly identify the most important elements of the assessment and provide rationale for the choice of those elements.

The draft terms of reference often appear repetitive. We have pointed out some examples of apparent duplication below; others could likely be identified.

Comments on Specific Sections

Part 2 - Scope of Development

INAC agrees that the proposed development is a mine. The Review Board should also be aware that in INAC's view, the development will require a Type A water licence. The use of water for milling and the depositing of waste for milling in an operation exceeding 100 tonnes of ore per day requires a Type A water licence. We also understand that Tamerlane will soon be applying for a mineral lease with respect to the relevant mineral claims, as required under the *Canada Mining Regulations*.

While the proposed development is a mine, in INAC's view the potential impacts of this development are not comparable to those of a long-term mine and the terms of reference should be adjusted accordingly.

Mining Process – scope should include reference to crushing process (p. 5)

Part 3 – Scope of Assessment

INAC agrees with the statements in Section G that the spatial and temporal boundaries should be appropriate to the nature of each valued component being assessed. These statements should be included in Part 3, as they are an essential part of the framework of the environmental assessment. This section would be clearer if it were combined with or more clearly linked to Part 4.2, Section G, Assessment Boundaries.

A map would be very useful in clarifying the exact boundaries of the minimum geographical scope, as described in the first sentence of the second paragraph (pp. 6-7).

Is the "EA Study Area" described in the first paragraph (pp6-7) intended to apply to the biophysical, social, economic, and cultural aspects of the EA, or only to the biophysical aspects? In INAC's view, it is unlikely that the PPPP will have significant impacts on all VCs in all the areas listed in the sentence beginning, "It will also consider..." Please

clarify if the Review Board intends that all VCs be assessed in all these areas, or if the assessment of impacts outside the minimum geographical scope is intended to be limited to those VCs for which an observable impact is predicted.

In the second sentence of the paragraph on temporal boundaries (p.7), INAC suggests replacing “significant” with “measurable or observable” or another more appropriate term. Because the Review Board requires that the developer use duration as one of the bases for its significance opinions (see p.16 and p.23), defining duration in terms of significance may lead to circular rationales.

Part 4 - Terms of Reference

Section 4.1- Expected Level of Effort (p.8)

INAC suggests that the Review Board strengthen this section to ensure that the assessment focusses on the issues of most concern. In INAC’s view the most important issues are the infiltration basin and the freezwall. These are two different but closely related critical components of the operation, which have to be thoroughly investigated in order to have the necessary confidence that they will perform as expected. The ability of the freeze wall to restrict infiltration of ground water to the ore body will determine the success or failure of the project. With respect to the infiltration basin, in INAC’s view the key issues are the quantity and quality of mine water and DMS circuit effluent discharged to the infiltration basin, and its underlying properties allowing this water to return completely and cleanly to the ground water aquifer.

INAC recognizes that other parties may identify different issues as most important; what we would like to see from the Review Board is a clear differentiation between issues to be discussed in detail vs those to be considered more briefly or at a more general level, with rationale for the choice of more important issues.

Section 4.2 Specific Requirements

Section B - Developer

General – The Review Board may wish to provide specific criteria for assessing the developer’s past environmental performance. Examples include enhancement of products or processes, regulatory compliance, and methods of addressing environmental impacts. (p. 9)

c) INAC is unclear on the meaning of “project reclamation deposit commitment” in the second sentence. Is the Review Board asking Tamerlane to commit to providing an appropriate security deposit? INAC notes that security deposits are required in the regulatory process. Is the Review Board asking Tamerlane to commit to reclaiming the site? (p.9)

Section C - Description of the Existing Environment

7) – Ground composition under and around the infiltration basin should be included. (p. 10)

Section D - Development Description

6) – Change “addictives” to “additives.” (p. 12)

Section E – Alternatives

6) INAC notes that Tamerlane has previously described in its presentations, the Mineral Development Advisory Group meeting, and in the project description (section 2.5.1) why it is not planning to use open pit (groundwater infiltration problems, as demonstrated at the Pine Point Mine), underwater (prohibitively expensive) or decline (too expensive) mining methods. In INAC's view, requesting further data to support this reasoning is reasonable, but a detailed re-scoping of alternative mining methods is not required. (p. 14)

7) For alternative freezing system components, mention that the two systems being considered are brine and liquid nitrogen (p. 14).

Section G - Assessment Boundaries

See comments above under Part 3, Scope of Assessment. As noted above, the content of this section should be presented earlier in the document. (p. 15)

Section H – Human Environment

General - INAC recommends that the Review Board examine the requests and requirements in this section with respect to the scope and scale of Tamerlane's proposed PPPP development. Scoping must consider the size of the project, in this case a test mine, as well as the small scale and magnitude of the anticipated impacts. A number of parties including, but not limited to, the federal, territorial and local governments, Aboriginal groups and other stakeholders, have mandates and responsibilities in these areas and may be better placed to provide this information to the Review Board. For example, the Mine Training Society could provide the information sought in H-1 Direct and Indirect Employment (5) and Business Opportunities (3). INAC is concerned that the requirements of this section should not put the proponent in a position of collecting information which is redundant, indirectly related to the project, of limited use in determining impacts or too onerous to collect, relative to the value this information is likely to add to the Review Board's final recommendation.

Section H1- Economy, Direct and Indirect Employment

3) Does the Review Board intend that Tamerlane conduct a Canada-wide assessment of the available labour pool? (p. 17)

Section H1-Business Opportunitites

5) INAC notes that, given their involvement with the Pine Point mine, the potentially affected communities may already be in a "post-mining economy." This item implies that the PPPP itself may bring about a transition to a mining economy during construction and operation; in INAC's view this implication overestimates the likely economic impacts of the proposed development. (p. 18)

Section H1 - Distribution of Beneficial and Adverse Economic Impacts

2-8) – In INAC's view, this section overestimates the likely economic impact of the proposed development. These requirements would be more appropriate for a full scale operating mine. (pp.18-19)

Section H-2 - Society and Culture

5) Change "effect" to "affect" in "how the PPPP may effect valued social and cultural components." (p. 20)

Section H-5 - Protected and Withdrawn Areas

Add “publicly” before “identified in the NWT Protected Areas Strategy” and before “identified as land proposed to be withdrawn.” (p. 21)

Section H-6 - Visual Resources and Wilderness Values

2) “Visual” and “aesthetic” are not synonyms. The Review Board should clarify if it is asking for an assessment of all aesthetic impacts (visual, noise, etc) or only of visual resource impacts. (p.22) Also, given the limited footprint of the development, visual impacts are likely to be localized so the inclusion of areas like the shore of Great Slave Lake seems excessive.

Section I-1 - Water Resources

5) b), 7), and 9 b) As noted above under “Expected Level of Effort,” INAC considers the infiltration basin to be central to the assessment.

4) As noted above under “Expected Level of Effort,” INAC considers this item to be central to the assessment, as the ability of the freeze wall to restrict infiltration of ground water to the ore body will determine the success or failure of the project. (p. 24)

5) e) Add “Provide a conceptual discussion of treatment and contingency options for effluent concentrations exceeding standard water licence terms and conditions.” This discussion will be less detailed than the requirements of the regulatory phase. (p. 24)

5(h) and 13(b) appear to overlap. For clarity, they should be combined. INAC notes that the Mackenzie Valley Land and Water Board will identify water licence Surveillance Network Program (SNP) sampling stations during the regulatory process. (p. 24, 25)

7) Add “and the potential impacts of sedimentation on the ability of the basin to absorb effluents.” The developer should also discuss contingency plans to address any such sedimentation. (p. 25)

10) In the experience of INAC inspectors in the area, standard water licence terms and conditions should be sufficient to prevent significant impacts from the PPPP to the water bodies of Twin Creek, Buffalo River, and Great Slave Lake. (p. 25)

Section I-4 Wildlife and Wildlife Habitat

The response to 2 c) likely would include the answer to 2 h) – suggest rewording to clarify the distinction, and possibly removing one of these items. (p. 28)

Section I-5 Terrain

I-5(2) It is INAC’s understanding that the project will only lower the water table within the freeze curtain. The water levels outside the curtain are expected to remain the same. After the freeze curtain is allowed to degrade after mine closure, the refilling of the freeze curtain area should not produce any sort of permanent draw down. (p. 29)

I-5(5) To the best of INAC’s knowledge, the area is one of active groundwater flow and does not have any permafrost. (p. 29)

I-5(7) INAC assumes that “geotechnical monitoring plan” refers to geotechnical drilling designed to gauge the degree of porosity and fracturing in the rock at the project site

with a view to monitoring groundwater flow rates. If this is the case “geotechnical monitoring plan” should be changed to “groundwater monitoring plan.” (p. 29)

Section J – Closure and Reclamation

In INAC's view, parts 1-6 and 8 of this section are consistent with the *Mine Site Reclamation Guidelines for the Northwest Territories, January 2006 Version*. INAC notes that the Guidelines do not address reclamation in relation to social and economic effects.

- 2) a) INAC notes that given the compact nature and short operating life of the development, opportunities for progressive reclamation may be limited. (p. 31)
- 3) The development of future ore bodies should be considered under closure and reclamation only to the extent that such development will affect reclamation of the PPPP. As noted in the Mine Site Reclamation Guidelines, only a conceptual discussion is recommended at this stage. For greater certainty, reclamation planning for future development would be addressed in future environmental assessment and/or regulatory processes. (p. 31)
- 7) - This section appears to repeat the requirements of Section H-1. (p. 31, pp. 15 ff.)

Section K-Cumulative Effects

The Review Board states in Part 3 – Scope of Assessment (second paragraph, p. 7) that “cumulative impacts will be assessed at a geographical and temporal scale appropriate to the particular environmental component under consideration.” This statement should be repeated here, as it is essential to the design of the cumulative effects assessment, and should be incorporated in each of the subsections as required.

- 1) The analysis of the VCs included in the CEA should include a rationale for including or not including the VCs examined during the EA. (p. 33)
- 2) Rather than a single “Cumulative Study Area,” the cumulative effects assessment spatial boundaries should be appropriate to the nature of each valued component being assessed. (p. 33)

Section 3) a) suggests that the developer may consider developments for inclusion in the CEA and choose not to include them, with a rationale, but Section 4) e) could be understood to mean that “any other identified local industrial developments” *must* be included in the CEA. (pp. 32-33). Please clarify the extent to which the developer may determine the boundaries of the CEA.

4) The CEA should be scoped on a VC by VC basis. The decision to include developments in the CEA for a given VC should be based on the likelihood of those developments, in combination with the PPPP, having identifiable impacts on that VC. In INAC's view it is unlikely that all of these developments will have cumulative impacts on VC's affected by the PPPP.

8) Add “the PPPP's contribution to” after “monitoring of.” Add “including suggested mitigation and alternatives” after “adaptive management.”

Section L – Accidents and Malfunctions

Some of the requirements in this section appear to duplicate earlier requirements. For example, L-1-4 appears to include the requirements of L-3-d in relation to possible freezeway failure. (p. 34, p. 24)

2) and 6) - As noted above under “Expected Level of Effort,” INAC considers the infiltration basin to be central to the assessment.

Part 5 Assessment Process and Work Plan – Roundtable Technical Meetings

INAC strongly supports the use of face-to-face technical meetings in lieu of, or in addition to, a written Information Request process. (p. 40)