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Director, Environmental Assessment, Regional Integration,  
Alberta Environment and Water  
111 Twin Atria Bldg., 4999-98 Ave.  
Edmonton AB, T6B 2X3

Dear Director,

The Terms of Reference for the Coalspur Mines Ltd. Vista Coal Mine project are dated Nov 07, 2011 but I only became aware of the opportunity for public comment, through Trout Unlimited on Dec 30, 2011. I'm a member of the Yellowhead Chapter of Trout Unlimited and represent the Athabasca Bioregional Society (Hinton) on several coal mine related committees (Cardinal River land management plan and Tech Coal Selenium Workshop). With your Jan 06, 2012 deadline, I have insufficient time to coordinate a reply with either of these organizations so the following comments and concerns are mine however I have copied executive members of both organizations and several members of the public.

The Terms of Reference appear comprehensive and include many important requirements to protect renewable resources during and following the development of a coal mine however important details seem to be missing.

1. Hydrology (Sec. 3.3). Many of the mine facilities such as water control structures, stream diversions, road culverts, waste water & sediment settling ponds are designed based on estimates of flood events of varying intensity (1 in 20 or 1 in 50 year floods). The McLeod River has experienced numerous 1:100 year floods in the past 50 years (i.e. from memory, 1969, 1980, 1986, 1992, and 1998). With the current historic flow data it would seem more accurate to describe these events as approximately 1:20 year floods. Mine design criteria should be greatly increased to respect the actual frequency of severe flood events in these headwater streams. Otherwise the flow events frequently exceed the design standards for settling ponds etc. and result in 'unexpected' releases of harmful substances such as coal fines and sediment. The frequency and intensity of flood events should also include compensation for future activities such as forest canopy removal (for 40 years after clear cutting) or roadside ditches that increase the impacts of major precipitation events.

2. Aquatic Ecology (Sec 3.5.1) in the Terms of Reference requires: "Describe and map" criteria such as relative abundance of fish and critical habitat. Neither of these requirements suggests any standards for measurements or statistical accuracy. Is the company required to document and map the movements and abundance of migratory species such as mountain whitefish and bull trout or just resident fish? I have no doubt that the company can provide the number of resident native rainbow trout per kilometre or some similar measurement but studies at Tri Creeks 30 years ago showed that under natural undisturbed conditions the relative abundance of fish may vary drastically between years due to natural events.

Fish sampling should include population estimates with statistical Confidence Limits of at least one (better two) Standard Deviation completed over a reasonable time scale (almost a decade was required to show natural variation at Tri Creeks). The mine plan suggests it was approved in 1983 so

some preplanning and evaluating of biological background information should be a reasonable expectation. Reporting the occasional sample of 'relative abundance' is of little value in measuring the long term impacts of any human disturbance. Measurements with no statistical basis, result in monitoring that shows relevance only when a species is extirpated. Similarly criteria such as critical habitats (clean spawning gravel or deep over wintering pools) are not static and locations, frequency and quality change during natural flood events. Unless these criteria are measured using comprehensive fisheries science the reporting requirements are just cosmetic and useless for comparison of long term impacts.

3. Aquatic Ecology [Section 3.5.2 (D)]. " 'No Net Loss' (NNL) and harmful alteration, disruption or destruction (HADD) of fish habitat have been provisions of the Fisheries Act since about 1985 and should apply to the existing mines such as Gregg and Cardinal River Coals and the recently approved (1999?) Cheviot Mine. Proposed mitigation for habitat loss such as some mine pit lakes have proven unsuccessful because of elevated selenium concentrations and other concerns about stream bed hardening through calcification but past deficiencies don't seem to be mentioned or considered in the terms of reference. What agency is responsible for ensuring that "No Net Loss" is measured, monitored or enforced during the life of the mine? Reporting the past results of these provisions or goals for other mines in headwaters drainages and McLeod tributaries seems to be lacking or not readily available to the public.

4. Monitoring (Section 10). How have environmental criteria (water quality, flow regimes etc.) been monitored, reported to the public or enforced at existing mines and how can the public expect any improved standards for requirements of a new mine to ensure healthy aquatic ecosystems capable of sustaining native fish populations at pre-mining abundance? This section mentions "regional monitoring activities" but provided no suggestion about the scale of such plans. Does regional include: a) the mine lease area, b) McPherson Creek watershed, or c) portions of the McLeod River that are already subjected to numerous industrial activities including extensive mining in the headwaters, logging and petroleum activities? Will the government be responsible for measuring the cumulative impacts of other industrial activities besides mining?

5. Consultation, expert public review and transparency. Public consultation wasn't mentioned in the Terms of Reference however some details are provided in the Vista Coal Mine Project Description (Nov 3, 2011). Local consultation (Hinton) is commendable but this mine is on Public Lands and any concerned Albertan should have the opportunity to be advised of the mine plans and have an opportunity to express their issues, concerns or values regarding land management and protection of renewable resources. Public consultation organized and presented by mining experts and public relations staff will provide an industrial picture of mine benefits and may inadvertently minimize the relevance of environmental impacts. The public should not be expected to decipher technical jargon or research the potential cumulative impacts of this mine application and other industrial impacts on the McPherson creek watershed or the upper McLeod River.

6. In Section 6 the company does "not anticipate the need for any applications for Federal Authorization" however the mine plan seems to include a 200m deep pit paralleling a 7k reach of McPherson Creek within several 100 m, plus an overburden dump on the south side of the stream with a road/stream crossing. Won't the pit intercept and/or divert a significant flow of ground water that could be critical during low winter flows? Doesn't this require Federal Fisheries approval to ensure No Net Loss or prevent harmful alteration, disruption or destruction of fish habitat?

I have probably overlooked important details in the Terms of Reference which emphasizes my main concern about the lack of an independent expert review of the Mine Plan. The public should not be expected to provide a critical review to protect other important resources in the watershed. Government Departments of Sustainable Resource Development and Environment etc. include many competent professionals but without including direct public participation in the decision making

process the long term plans will not be fair or transparent. Vista's public consultation may sell the project on short term benefits but every effort should be made to minimize long term impacts and guarantee a reasonable return of the land base and aquatic resources to equivalent land capability for the future.

Sincerely,

Carl Hunt

cc. Norm Rodseth, President of Yellowhead Chapter TU (Edson)  
Amber Hayward, President, Athabasca bioregional Society (Hinton)  
Brian Meagher, Brian Meagher, Provincial Biologist, Trout Unlimited Canada  
Curtis Brinker, Manager Environment & Regulatory Affairs, Coalspur Mines

Bcc. Members of the Public and ENGOS