PO Box 7186 Missoula, MT 59807 (406) 543-0054

8 November 2013

Jeffery Herrick
EIS Project Coordinator
Montana DEQ
P.O. Box 200901
Helena, MT 59601

Re: Draft EIS for Butte Highlands Joint Venture Project

Dear Mr. Herrick:

Thank you for the opportunity to comment on the draft environmental impact statement (DEIS) for the proposed Butte Highlands Joint Venture Project. Montana Trout Unlimited (Montana TU) represents 3,600 conservation-minded anglers statewide, including many who live, recreate or work in the watersheds affected by this proposal.

We are by no means an anti-mining organization, and are best characterized as an advocate for clean water and healthy aquatic systems. Clean water and fisheries are significant to Montana's customs, culture and economy. Recreational angling, for instance, generates nearly $300 million a year to our state.

Our comments focus primarily on potentially affected water resources as well as fisheries. Montana TU and its chapters are acutely interested in the conservation of Basin Creek, Fish Creek and Moose Creek. Basin Creek, of course, is classified by DEQ as an A-1 stream and drinking water source for Butte. It also holds a small population of westslope cutthroat trout, a species of special concern in Montana. Further, Butte-Silver Bow local government, FWP, Montana TU and others have discussed Basin Creek Reservoir as a potential source of water for future enhancement of flows (and water quality improvement) in Silver Bow Creek and the Clark Fork River. For these reasons protecting water quality and dependable flows in Basin Creek is very important.

Fish Creek also hosts a population of westslope cutthroats. Further, Montana TU and local landowners have invested in habitat restoration in its lower reaches, benefitting the recreational fishery of the Jefferson River. Protecting water quality

and quantity is a priority in Fish Creek for both fishery values and for water users with senior water rights. Similarly, Moose Creek holds cutthroats in its upper reaches. In addition, it is an important tributary of the Big Hole River. The Big Hole River Foundation, with some funding from Montana TU and our local chapter, recently completed a riparian fencing project on its lower reaches in an attempt to improve conditions for coldwater fish. Moose Creek also supplies water for stock and irrigation on its lower reaches.

One general observation we offer is that the DEIS admits to significant amounts of uncertainty regarding potential effects on water resources and fisheries. And for the most part, this uncertainty is not addressed by identifying specific triggers and response actions. Basically, for anticipated or potential impacts to streamflows, water quality and aquatic life, the document does not disclose specific commitments that might avoid, minimize, rectify or reduce impacts (p. 156). We note that the two primary "mitigation" modifications DEQ offers, additional water resource monitoring and requiring water treatment outside the underground works, is not detailed anywhere in the document. We could not find, for instance, a description of the water quality monitoring plan.

This statement from the executive summary is repeated throughout the document in some fashion:

"The uncertainty related to how the creeks and aquatic ecology will adopt to the change in flows makes assessing potential impacts difficult."

However, this uncertainty is never really addressed. A primary purpose of a MEPA document is to disclose potential impacts to the public. Further, the document should be crystal clear in identifying the specific impacts that can't be easily determined, how they will be monitored in the future and how they will be avoided or mitigated. Though this document repeatedly refers to uncertainty – and relies at times on guesswork informed by some data – related to groundwater and surface water discharges, especially post-mining, it offers little in the way of specific commitments for dealing with unforeseen circumstances. DEQ does say it will require monitoring above that proposed by the company, but it is unclear what that monitoring will consist of and what measured conditions will trigger what responses. We support additional monitoring, but it is unclear as to the specific management commitments that will occur -- beyond a few vague references to potential actions -- should monitoring uncover unsatisfactory discharge or water quality conditions.

Ground and surface water discharge and quality

The document is confusing as to exactly how much mine water will be discharged to Basin Creek during mine operation. The executive summary says, "350 gpm." On p. 41 it says, "150 gpm to 350 gpm." Later in the alternatives discussion (p. 175) the document refers to "up to 350 gpm." Further confusing the

picture for all three drainages are references to "average" discharges, such as in Table 4.6.1., which refers to "proposed average input(s)." This begs the question: How much water will be discharged continuously to each stream, and will the discharge be shaped with the natural hydrograph? How will daily, weekly and monthly discharges be shaped? These are important questions for maintaining the health of the aquatic systems. It is also unclear from the DEIS what the natural hydrographs are, and what discharges the channels can accommodate. Table 4.6.1 refers to "existing average flows." But what is "average?" Basically, it is difficult to evaluate how the proposed discharges modify the existing hydrograph. The DEIS should minimally depict the range of existing flows for each primary tributary, including mean base and peak flows over several years. And then depict how the proposed discharges might modify this.

The EIS says that during closure, mine pumping could be reduced to 500 gpm (p. 174), but it doesn't say how this reduced discharge will be partitioned among the three tributaries, or what the effects will be. Nowhere in the document could we find a detailed calculation of expected stormwater discharge, its potential quality, how it will be collected, treated and discharged. (There is short mention of it early in the document, but nothing is quantified).

The document handles the issue of water rights incompletely. The evaluation for the DEIS looked only at water rights within a 2-mile radius of the mining property (p. 99). However, each of these the three main tributaries have significant senior water rights further downstream on private lands. The DEIS should provide analysis on how the admitted modification of ground and surface water flows ("the streamflow rates will be altered from current conditions") will or will not affect water users with senior rights downstream. It is possible, though not certain, the proposed mining operation could affect both timing and yield for existing users with senior water rights.

Discussion and disclosure related to post-closure conditions is a bit hazy. The DEIS admits too much uncertainty. It is possible (if not probable), for instance, that once the adit is plugged and groundwater returns to pre-mining elevations that springs and seeps will develop in the region, and that there is potential for them to exceed water quality criteria (p. 177). The proposed response to this, however, is very vague. Offering two mines outside the region (Glengarry and World's Fair) as analogues demonstrating that completely plugging the adit can be a successful technique is not very meaningful. No detail is offered demonstrating that the settings, geology, geochemistry and mining operations at these two sites are similar to that in the Highlands.

The company says if seeps and springs occur with discharges that exceed water quality criteria it will drill into the old workings, direct water to some sort of undetermined underground LAD site and possibly treat and discharge to one of the basins. But, a detailed plan is not disclosed. We recommend DEQ require the company to develop and disclose to the public a pragmatic, workable response plan

for this sort of situation, and that the company be required to monitor groundwater, surface flows and potential seeps and springs for longer than one-year after the mine fills. We recommend that some portion the reclamation bond be held until that time – perhaps at least five years after the groundwater has reached its baseline elevation -- when it is definitively determined that backfilling the mine and plugging the adit have not left any ongoing adverse impacts to streamflows, water quality or aquatic life. P. 45 includes a curious and unexplained reference to the operation needing to "…meet DEQ MPDES water quality closure guidelines within 0 to 70 years." Does this mean the permittee has up to 70 years to meet water quality criteria? If so, the public shouldn't be asked to accept that.

The DEIS should provide more detail on the conditions that trigger specific water quality treatment technologies. Right now the document leaves it as an either/or/or situation, where DEQ could require no treatment, or ion exchange, or reverse osmosis. The document should also disclose exactly where treatment wastes, such as the projected 1,500 gallons a day of brine produced by ion exchange, would be disposed. The brine is a potential pollutant and therefore could generate adverse impacts. The document is unclear as to the role of the LAD cells, except, we infer, they are to be used as backup systems of some sort to deal with unanticipated discharge volumes from mine pumping. The DEIS needs to clarify this.

The document must disclose the full compliment of impacts that might be anticipated from the discharge of mine water to surface water. For instance, the document does not include any evaluation of how the discharge might affect water temperature in the receiving streams. It should.

DEQ did a good job in its analysis of acid-generation potential. The only uncertainty we believe needs to be addressed is how will the potential acid-generating waste from the Wolsey Formation – estimated to be 20.7 percent of the total waste rock volume, which is significant – be handled. Will it be handled separately, or mixed with material that exhibits pH-buffering characteristics? The DEIS should describe the methods that will be employed to avoid, minimize, rectify or reduce potential acid-generation from waste rock.

Fisheries

The fisheries information in the DEIS is disappointing. First, the applicant should have provided contemporary data beyond simple presence/absence. Data depicting abundance and size-class distribution in the 7 streams potentially affected would provide a more robust baseline for determination of future change. Further, the applicant should have done surveys, besides ocular observations, in Fly Creek and Curley Gulch. A single-pass electrofish survey – or even snorkel survey -- would be adequate for determining presence/absence. If fish were deemed present, then a multiple-pass depletion or mark/recapture survey could have been deployed. These are acceptable methods and not difficult to employ. It is quite possible both streams

host populations of genetically unaltered westslope cutthroats, or, another native non-sport species.

Table 3.18.1 is incomplete relative to presence/absence. Brown trout are present, at least seasonally in lower Fish and Moose Creeks.

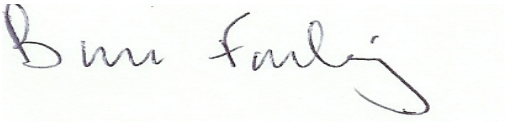
Reclamation Bond and non-disclosed impacts

The DEIS should include an evaluation and recommendation for a reclamation bond. Because the document includes so much uncertainty, and response to future impacts still unclear, it is essential that DEQ disclose to the public that the reclamation bond will be ample to fund the full range of potential mitigation and correction measures that could be needed. This should be standard DEQ practice for all mining-related MEPA documents.

Finally, the document largely skirts the issue of where the ore will be processed, though it appears it is headed to the Golden Sunlight Mine. The DEIS should disclose how this additional input to that facility might affect the natural environment there. Obviously it requires s additional vat-leaching and tailings disposal capacity beyond that analyzed in previous MEPA assessments for that facility.

Again, thanks for the opportunity to comment. We look forward to our recommendations being reflected in the final EIS.

Sincerely,



Bruce Farling
Executive Director