

**From: Kathlyn Creek Watershed Group**

**Re.: Comments regarding Thompson Creek Metals' 2013 Draft Care and Maintenance Plan and Closure Update.**

**Attn.: Kathie Wagar, Regional Director, Ministry of Energy, Mines and Natural Gas**

June 09, 2013

Dear Kathie,

We like to thank you for giving us the opportunity to provide our input to the *2013 Draft Care and Maintenance Plan and Closure Update*.

Kathlyn Creek Watershed Group's primary focus is

1. **the preservation and maintenance of our watershed,**
2. **the availability of good, safe quality and sufficient quantity of water for all domestic and livestock needs,**
3. **effective and timely procedures that respond to any occurrence that could negatively impact our watershed.**
4. **It has been established that there is NO alternative to the supply of domestic water other than the existing watershed.**

Resulting from those 4 points our comments and questions on the *2013 Draft Care and Maintenance Plan and Closure Update* are as follows:

1. At this point we do not know how the *2013 Draft Care and Maintenance Plan and Closure Update* will be used - interim use leading to full closure, permanent use replacing the 2006 Closure Plan or as an after closure care and maintenance plan.
2. In this proposed *2013 Draft Care and Maintenance Plan and Closure Update* many issues have not been addressed with a permanent solution in mind. They will either remain or have to be monitored and maintained with great effort, cost and for an undetermined period of time.
3. Missing is a mention that the Davidson Project is located in the headwaters of the Kathlyn Creek (Community) Watershed, a watershed that supplies drinking water to many households.
4. Missing is that under the Health, Safety and Reclamation Code, sec. 9.4.1, Ministry of Mines has been able to declare our domestic watershed a Community Watershed for the duration of the exploration phase.
5. Missing is a water testing program for the Kathlyn Creek Watershed.
6. Missing are contingency plans, specifically , in the event of a measurable or complete loss of current domestic water quality and quantity with regards to the Davidson Property.

In summary the plan is inadequate for the short, mid, and long term protection of the Kathlyn Creek Watershed and the residents who rely on this water for domestic consumption. Our expectation is that this plan will be significantly revised.

Following our comments on the 2013 Draft Care and Maintenance Plan and Closure Update:

2.1.2.2. - 2012 C&M Update – Infrastructure Removal - Works Outstanding and Recommendations

.....'A contaminated site investigation should also be conducted to ensure that contaminated soils within the adit area are removed and treated.

- We agree that a contaminated site investigation needs to be conducted for the entire exploration area with focus on problem areas.
- Has all sludge been excavated from the sumps? Has it been removed from the site?

2.2.2.2. - 2012 C&M Update – Adit Closure – Works Outstanding and Recommendations

1) ..... 'It is not recommended that the adit bulkhead be considered at this time as exploration activities may happen on the property in the future; though none are planned at this time.'

- Do we understand this correctly? Is your reasoning for keeping the adit open leading to a solution in the near future, or is there no solution at all?

- Adit Closure - Works Outstanding and Recommendations

2) 'Water has been freely flowing from the adit since its development, before Thompson Creek took ownership of the property, and is flowing in a well established path that does not directly enter any community or personal drinking water intake.'

We do not think that because something has been done historically in a certain way, that this practice should continue as history is your liability.

- Or is this indeed the BEST solution possible?

We would caution the statement that mine water (residue) does not enter any community intake,

a) Kathlyn Lake is directly fed by Glacier Gulch Creek.

b) September 19, 2005 MOE (File 44500-30/Davidson Project) made the visual observation, 'that '75% of the mine water travels north to Glacier Gulch; 20 % of the flow travels east across the road into the Kathlyn watershed; and 5% of the flow disperses into seepage'. This happened due to a blockage of the drainage ditch.

How will we know if and when arsenic/mineral containing mine water enters the Kathlyn Creek watershed either through seepage, underground water courses or unknown stream connectivity?

Surface and underground flow of the creeks in our watershed have proven to be complex and difficult to assess. Salt testing (Rescan – for the Environmental Assessment) could never conclusively characterize the Kathlyn Creek watershed. (PLC minutes November 02/2006)

- We request that permanent water testing stations and a water testing program for the Kathlyn Creek watershed be incorporated into the Care and Maintenance Plan and/or Closure Plan – including Kath.trib.A3a and upstream of the Glacier Gulch Water Group's water intake.
- We ask that permanent, best technical and scientific studies and solutions be thought prevent all future risk of arsenic/mineral rich water entering our watershed.

2.3.2.1 - 2012 C&M Update: Works Completed, page 2-6

'Re-contouring, reclamation and seeding of the waste rock pile have not taken place, however, a diversion ditch has been constructed along the western of the landing.'

The waste rock dump has been relatively stable in the past. However, changes to the waste rock dump took place with the addition of 60000 tonnes of waste rock (from drilling in 2005/06). What effect does this addition have on

- the stability of the dump site and

- the potential for ML/ARD to occur and
- the composition of ML/ARD neutralizing agents in the rock pile
- the already existing arsenic and minerals in the rock dump?
- A study of these aspects should be conducted and reclamation should take place accordingly.
- What purpose does the ditch (along the western edge of the adit landing) serve?

For your consideration: if, at one point, a bulkhead is installed and no more mine water will run through the waste rock dump, the arsenic would still remain in the rock dump and run off-from rain and snow would still occur. Where will this water go?

- We ask that no run-off from the waste rock dump enter the Kathlyn Creek Watershed (surface, underground or seepage).
- What would be the criteria for TCM and MOM to remove the arsenic rich material in the rock pile permanently?

#### 2.5.2.2 - 2012 C&M Update: Organic Stockpiles – Works Completed, page 2-9

The area around the Davidson Project exploration site is classified as an ecologically sensitive area, an area that cannot be found anywhere else in the Bulkley Valley. Introducing a seed mixture of fast growing foreign species may upset the natural balance (wildlife and vegetation) and could do permanently harm to the area.

- We would like to see indigenous seed use in all circumstances. The use of nitrogen rich fertilizer would not be acceptable in a domestic watershed.

### 3. C&M Monitoring: Care and Maintenance Monitoring – page 3-1

#### 3.1 Proposed Care and Maintenance Monitoring Plan

*'The primary focus of this care and maintenance plan is the land area in the immediate vicinity of the exploration adit and water quality issues related to discharge from the adit and the adit access road.'*

- We request that other areas of importance will not be excluded, such as monitoring at the 700m adit, and possible other sites, that, during the testing for Environmental Assessment, may have shown reason for concern or future monitoring.

Kath. Trib A3a (Armstrong Creek) originates below the waste rock dump. Water sampling in the past (for the EA) led to reason for concern. Kath. Trib.A3a is a tributary to the Kathlyn Creek Watershed. This watershed supplies many downstream water license holders and user with their domestic water supply.

- We ask that this location become part of a water sampling program for the Kathlyn Creek Community watershed.

Chelton van Geloven, R.P.F., Source Water Hydrologist, Northern Region, Ministry of Environment states in his Kathlyn Creek Community Watershed Draft Technical Report of Nov. 2009 (for the purpose of the CW designation application): 'The need for additional special management of this watershed is required due to the complex nature of the water origin. Several ground water sources emerge throughout the watershed and contribute the the main-stems in which people draw their water from. Although FRPA and the Health, Safety and Reclamation Code under the Mines Act does make provisions for the protection of aquatic resources, it would be easy for an operator to underestimate the care required to operate in this watershed and adequately protect water quality.'

### 3.1.1.1 Care and Maintenance Monitoring: Access to the Site

*'Access to the Davidson Property is controlled with concrete blocks and a locked gate.'*

No amount of road barriers and warning signs have managed to keep people from entering the project site and committing acts of vandalism and garbage disposal. Although the TCM appointed monitor will deal with any concerns that arise, it is mostly the neighbourhood residents that reports acts of vandalism and trespassing to TCM. Over the years our neighbourhood has dealt with: Illegal logging close to Kathlyn Creek; a car battery in a creek bed; countless, ongoing disposal of garden and household garbage, many carcasses of fish, deer, moose, dog and other domestic and wild animals.

Mud bogging, ATV and motorbike riding (often in, through and around creeks) are favourite activities on the Silvern Lakes trail and the damage to creek beds is visible (in spite of warning signs with hefty fines attached to them). Given the opportunity (see constant circumvention of concrete blocks at the Davidson Project) we could be dealing with more of the same in our watershed.

Community Watershed's are not intended to limit or exclude public and recreational access to their water supply area, rather to manage access. We are, however, faced with the fact that our watershed is on TCM property. Therefore we have to rely on TCM and the regulators to make appropriate, inclusive and respectful decisions regarding the future health and safety of our domestic water supply.

- A permanent solution to the problem would be to reclaim the road to the standard outlined in the 2006 Closure Plan and make it inaccessible to motorized vehicles.

### 3.1.1.2 Care and Maintenance Monitoring: Monthly Site Visits

The proposed monthly site visits are lacking detail with regards to

- monitoring activities, requirements and parameters,
- reporting requirements, procedures and time lines,
- maintenance of infrastructure, repair and or upgrades to infrastructure and other areas,
- liability issues, contingencies
- permanent monitoring of the Kathlyn and Glacier Gulch watersheds.

Please consider, that any deterioration in water quality and/or quantity due to erosion, siltation, changes to run-off patterns, road, ditch and/or culvert failure, washouts, contamination, etc. will impact many downstream water license holders and users.

- Are the silt prevention strategies in our creeks (hay bales and silt fences) still functional?

TCM states that *'exploration activities may happen on the property in the future; though none are planned at this time'*.

Under those circumstances it is unrealistic for the ministry's, the PLC and the area's residents

- to depend and rely on monitoring activities for an undetermined length of time and
  - to depend and rely on the upkeep of a dormant site to required standards.
- Permanent strategies should be sought to return the Davidson property to a state that is safe, does not require permanent maintenance and limits the monitoring requirements.

*Appendix 1. Davidson PLC Contact List*

- Please add the Kathlyn Creek Watershed Group, contact: Claudia Schwuchow, 250-847-3086., [hillock@uniserve.com](mailto:hillock@uniserve.com)

This group was accepted into the PLC by Ministry of Mines early 2012.

With regards,

Claudia Schwuchow  
Kathlyn Creek Watershed Group