

June 2016 Comments on White Pass herbicide permit application

To whom it may concern:

Yukon Conservation Society (YCS) has reviewed the application from DeAngelo Brothers/ White Pass and Yukon Route (WP&YR) to apply herbicides along the right of way of the railway from the Alaska Border to Carcross, Yukon. YCS is pleased to provide the following comments and observations. Questions and recommendations are in **bold**.

- The municipality of Skagway has a list of proscribed herbicides. Accordingly, WP&YR is avoiding use of all three herbicides it proposes to use in Canada for the portion of track within the watershed of the Skagway River.
Please provide a rationale for why herbicides considered unsuitable in Alaska are considered suitable in Canada. Please note that the ban by the municipality of Skagway does not technically apply to the federally regulated railway right of way, yet WP&YR agreed to abide by the Skagway ban.

- Alternatives to herbicides:
 - In 2014 WP&YR proposed a similar herbicide program but shelved it in favour of mechanical weed removal after public concerns were raised.
Please describe how the situation in 2016 is materially different from 2014.

 - A rationale given in the application for not using mechanical removal is that it is too expensive. However few details of the expenses were given, neither was there any indication that the expense would be onerous to WP&YR. Please note that the annual net revenues of

WP&YR in 2015 were US\$21,318,000. WP&YR is owned by TWC Enterprises Limited. The 2015 net revenue of TWC was \$68,835,000.

Please provide a breakdown of the comparative costs and benefits of multi-chemical application, mono chemical application, manual removal, mechanical removal, steam removal and application of shade cloth. The breakdown should include annual costs covering at least 5 years.

- A rationale given in the application for the use of chemical control is that mechanical control will leave flammable debris.

Please explain how the dead vegetation left from herbicide application will be less flammable than that left from mechanical control.

- When the railway was originally proposed to pass through Carcross/Tagish First Nation traditional territory, Skookum Jim extracted a promise that its members would receive employment from the railway. The choice of the application of herbicides appears to reduce the amount of local employment compared to mechanical methods. **Please explain how the use of herbicides is a net benefit to local employment.**

- The distance from water bodies to be avoided are twice as far in Alaska compared to Yukon, despite the use of less toxic chemicals being used in Alaska.

Please explain why there exists what appears to be a double standard.

- **YCS recommends the avoidance zone, should herbicides be permitted, be 45 metres from the ordinary high water level.**

- The proponent indicates it is hosting a public meeting in Alaska on June 6th 2016 to discuss the project.

Please explain why no public meetings are planned in Canada.

YCS recommends that there be an opportunity for the public to discuss this proposal at public meetings in both Carcross and in Whitehorse.

- The vegetation that is proposed to be addressed through herbicides includes Equisetum (horsetail). Cody's flora of Yukon lists 8 species of equisetum. Each species has different characteristics and all plants have different responses to herbicides. Some equiseta are small, short and feathery, others are taller and robust. It is difficult to imagine that the smaller varieties are a problem. It is important to know which species are the target species.

Which equisetum species is the target in Yukon?

- When WP&YR withdrew its (similar) application in 2014, one concern that was raised was the lack of information about the response of the herbicides in cooler climates such as Yukon and Alaska, compared to the southern jurisdictions where these substances were developed and tested. Experimentation at the University of Alaska test farm shows unexpected persistence of herbicides in cool soils.

Please provide details on the persistence, toxicity and interactions of these chemicals that were unavailable in 2014. If this data has not been gathered, provide a rationale why it was not gathered.

- In 2009, De Angelo Brothers and DuPont were convicted for poor application of herbicides in Idaho and were fined \$17 million dollars.

Please describe what lessons have been learned from this disaster and

the measures that will be taken in Yukon to ensure a similar disaster will not take place here.

- The spill response protocol appears to be designed for the United States.
Please confirm this spill response complies with Canadian and Yukon standards.

- Attached to this document is an example of a spill response plan that is designed for Yukon and is considerably more thorough and varies considerably in its details.
Please explain why the higher standards listed in the attached spill response plan should not be adopted.

- Arsenal: One of the chemicals proposed is Arsenal. In the information sheet supplied by YG ENVR, page 7, it is recommended that “For control of annual and perennial grass and broadleaf weeds. A rate of 810 - 4320 g ae/ha is equivalent to 1.5 to 8 L/ha of **Roundup Transorb HC Liquid Herbicide** (540 g ae/L) or 1.69 to 9 L/ha of **Vantage Plus Max II Herbicide Solution** (480 g ae/L). Other **glyphosate** formulations may require a rate calculation adjustment according to active ingredient concentration.” We note that the vegetation to be controlled is annual and perennial grass and weeds.
Please confirm that glyphosate containing chemicals will not be used. If this is confirmed, please explain why the manufacturers recommendations are not being followed.

- Amphibians:
 - The Columbia Spotted Frog is known to occur at and near Lake Bennett in Yukon and in the B. C. It is at the extreme northerly

extent of its range in this location. It is of conservation interest in Yukon due to its local rarity.

- The Western Toad is found along the Yukon B.C. border; while it has not been scientifically verified in Yukon, its presence so close means it is likely in Yukon near Lake Bennett. The Western Toad is SARA listed as a species of special concern.
- Chitrid fungus has devastated amphibian populations around the world, including Canada and Alaska. In Alaska, the Western Toad has been severely impacted in the Chilcoot Trail area, such that the population that exists in B.C. is scientific and ecological importance as a healthy population that is thus far free of Chitrid.

YCS recommends that prior to any herbicide spraying along the WP&YR right of way that qualified persons carry out a survey for Western Toads and Columbia Spotted Frogs.

Because SARA listed Western Toads are found in Lake Bennett, YCS recommends that no herbicide should be applied along the right of way beside the lake between the B.C. border and Carcross.

In conclusion, it must be realised that herbicides are by definition poisons and that experiences such as the effects of neo-nicotinoids on bees and Agent Orange- which was once applied to this railroad under the assumption it was safe- show that the consequences of spraying poisons into the environment are poorly understood and do not manifest until some time has passed.

Therefore YCS respectfully requests that this application be denied and that mechanical means of vegetation control be resumed.

Appendix: Sample Spill Response Plan



SPILL ACTION AND REMEDIATION PLAN

IMMEDIATE ACTIONS

- 1) Make sure the spill site is safe to enter and nobody is in immediate danger.
EXTINGUISH NEARBY FIRES, TURN OFF EQUIPMENT AND DO NOT SMOKE.
- 2) If a spill is discovered, do not approach the site until WHIMS trained personnel arrive.
- 3) If petroleum is still spilling take action to prevent further spillage; for example, if fuel is overflowing during pumping, stop pumping immediately or if a drum is leaking from a bung or is punctured, roll it or stand it up so that the bung or puncture is above the level of the fuel. If the leak is on a tank that cannot be re-orientated, plug the leak with sealant found in a spill kit and then drain the tank into a drum if possible.
- 4) Contain the spill. Use a shovel or mattock to build a berm or dig a ditch to pond it. Do everything possible to stop it from reaching water. If it reaches water, contain it by employing a boom or, if one is not available, improvise a boom by rolling absorbent fabric around a thick, poly rope.
- 5) Collect as much of the fuel as possible before it is absorbed into soil. Scoop or shovel fuel and/or fuel soaked soil into pails or a drum. Pour all-purpose absorbent onto fuel puddles or fuel saturated soil. If fuel is sitting on water, use absorbent fabric to skim it. If it is on ice, use all-purpose absorbent and absorbent fabric to collect it.
- 6) Once everything that can be done to contain and collect the fuel has been done, notify the project supervisor so he or she can notify the appropriate authorities and plan remediation. A list of emergency response numbers is attached.

NOTIFICATION

- 1) Report all spills to the Yukon Spill Report Centre (867-667-7244).
- 2) If someone comes in direct contact with or ingested petroleum or special waste, Poison Control (867-393-8700) should be called.
- 3) Contact other medical authorities if needed.
- 4) Notify senior supervisors with Archer Cathro.
- 5) Notify Client Services and Inspection at Land Use.

SPILL PREVENTION PLAN

This spill will be discussed at the safety orientation meetings, which all personnel on-site are required to participate in prior to starting work on the property.

- 1) Absorbent cloth must be spread beneath the work area whenever equipment is being serviced or refuelled to catch spills that might occur during these activities.
- 2) When drums are being transported by helicopter, the landing area must be free of sharp objects that could cause a puncture.
- 3) If a drum is transported by truck or all-terrain vehicle, the drop-off spot must be free of sharp objects. If the drum has to be dropped off the vehicle to ground, a tire must be placed on the ground to cushion its landing.
- 4) All drums must be stored on their sides and bungs must be checked for evidence of leakage. If there is any suggestion that leakage could occur, the gasket on the bung must immediately be changed. If changing the gasket does not correct the problem, the fuel must be transferred to another drum.
- 5) Before fuelling begins, the operator must make sure the drum is stable, the hose and pump are in proper working condition, and the nozzle is securely inserted into the tank being filled.
- 6) During fuel transfer, the operator must be able to monitor both the pump and the amount of capacity remaining in the tank being filled. If the operator cannot monitor both activities simultaneously, he must get assistance from a second party.
- 7) If an electric pump is being used for refuelling, the operator cannot under any circumstances leave the pump unattended.
- 8) Care must be taken to drain fuel from hoses, pumps and stand pipes after fuelling is completed so that it does not spill.
- 9) All personnel must be aware of:
 - a) spill prevention and treatment equipment stored on-site;
 - b) where it is stored; and
 - c) how it is to be used.
- 10) If any Special Waste is generated, special storage sites must be prepared which are lined with plastic and located so that the containers with the Special Waste are well protected.
- 11) All equipment must be checked frequently to ensure that seals and hoses are intact and they are not showing evidence of deterioration. If worn, they should be replaced before a spill occurs.



REMEDIATION

- 1) Follow the direction of Environmental Programs Branch (867-667-5683) and/or CANUTEC Info Line (613-992-4624).
- 2) Use materials and equipment on site to remediate the spill area and if need be order additional material or equipment to complete the task. The site cannot be abandoned until all remediation is complete.

SUBSEQUENT ACTIONS

- 1) Call a safety meeting to discuss how to prevent future spills and to review appropriateness of all actions taken in regard to the spill.
- 2) Reorder any materials that were used to contain or remediate the spill.
- 3) Record particulars related to the spill
 - a) Date and time.
 - b) Exact location.
 - c) Distance from water course.
 - d) Material spilled and amount.
 - e) Particulars of the spill (refuelling, storage etc.).
 - f) Soil type.
 - g) Initial response and personnel involvement.
 - h) Notifications (who, when and directions received).
 - i) Remediation.
 - j) Photos and maps.
 - k) Waste storage, transport and disposal.