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Re: Proposed Permits for Application of Herbicides by the Alaska Railroad Corporation
Alaska Railroad Corporation Clear-Fairbanks Pesticide Use Permit.
Alaska Railroad Corporation Gold Creek-Broad Pass Pesticide Use Permit.
Alaska Railroad Corporation Palmer-Wasilla Area Pesticide Use Permit.

Dear Ms. Colvin;

Please accept these comments regarding the above three Alaska Railroad Corporation (ARRC) permit applications to the Alaska Department of Environmental Conservation (DEC) on behalf of the Board of Directors and ~250 members of the Denali Citizens Council. The Council, founded in Cantwell in 1974, is composed of regional and statewide citizens who support careful and proactive management of public lands in and around Denali National Park. Our organization commented on the 2006 permit request by the Alaska Railroad to spray herbicides along their entire track and again in 2009. One of the three current proposed herbicide applications, Clear to Fairbanks, is within the Denali Borough where many of our members live, recreate and subsist. Another, Gold Creek-Broad Pass, contains lands very close to the Denali Borough's southern boundary and lands popular for berry picking and recreation, seasonally. We maintain the strong concerns expressed in our prior comments.

The Denali Citizens Council is strongly opposed to the use of herbicides and associated chemicals as a means of controlling vegetation along the Alaska Railroad's right-of-way. While we support the Railroad in its efforts to maintain safe operations, spraying under this permit has a strong risk of contaminating nearby waters, and cause substantial harm to wildlife, humans and the environment.

After reviewing the permit applications, the Denali citizens Council urges DEC to deny this request to spray herbicides on Alaska Railroad track. Just a few points below will provide our general concerns:

DCC Board

Nancy Bale
Barbara Brease
Nan Eagleson
Charlie Loeb

Hannah Ragland
JJ Neville
Erica Watson
Jared Zimmerman

Julia Potter, Community Organizer

1. **Alaskans are overwhelmingly opposed to the use of chemical herbicides as a means of controlling** vegetation along the Alaska Railroad Corporations' railroad right-of-way. In 1978, Alaska Republican Governor Jay Hammond ordered an **end to the use of herbicides** by the Alaska Railroad because of public concerns about the effects to salmon streams and human health. For over three decades, the railroad refrained from the use of toxic herbicides because of Alaska citizens' concern for the health of salmon, drinking water sources, berry picking areas and neighborhoods close to the tracks.

Glyphosate and its primary degradation product, aminomethylphosphonic acid (AMPA), were classified among the first contaminants in rivers.¹ Glyphosate, the active ingredient in Aquamaster (proposed for use in all the permit applications), is toxic to a variety of aquatic insects and tadpoles. Aquamaster's "inert" or "other" ingredients, solvents and surfactants can cause substantial biological and ecological harm to wildlife, humans and the environment. Agri-dex (surfactant listed in all the permit applications) can enhance the toxic effects, bio-accumulation and persistence of the herbicide in the environment.

Dr. Warren Porter, Professor of Environmental Toxicology at the University of Wisconsin, Madison, completed a review of the literature concerning the environmental health effects of low-dose chemical mixtures of pesticides.² He concluded:

- Pesticides have interactive effects and ultra-low-level effects that are below EPA allowable levels. These effects include adverse neurological, endocrine, immune, reproductive and developmental health outcomes.
- EPA assessments of biological risk can be off by a factor of 10,000 at ultra-low doses. Scientists call for a new type of risk assessment in the open literature because of the inadequacies of the current EPA pesticide registration system.
- Pesticides have broad biological effects that are unintended and often unpredictable because of physicochemical properties engineered into their molecules.
- Pesticides of different classes can have similar impacts on endocrine disruption and sexual development. Chemicals affect development at levels in the tenths of a part per billion range.

2. **DEC requires that the permittee identify water bodies adjacent to the track, and avoid spraying these areas, since Aquamaster is toxic to aquatic organisms. The permittee has failed to meet its burden of accurately identifying water bodies.**

The application permit package provided by ADEC requires that the applicant (ARRC) list water bodies and wells within 200 feet of the treatment area. However, ARRC only provides aerial photos to identify water bodies, wetlands, streams, rivers, private property, or private drinking water wells within 200 feet of the application area. These aerial photo maps also show application areas clearly over water bodies (ex. MP 279-280). The maps are also dated 2008, thus new homes, wells and ponds could be in existence now that were not in the 2008 maps. Proper identification of waterways and adherence to the permit specifications, including buffer zones, is critical to avoid contamination of water. Without this, the permit must be denied. In addition, one of the main reasons that the original permit, filed in 2006, was denied was the existence of numerous waterways along the track, making adherence to buffer stipulations difficult if not impossible.

- 3. Because the proper application of the herbicide mixture is restricted to wind speeds between 2 - 10 mph, can the permittee show that ambient wind speeds within the Gold Creek-Broad Pass and Clear-Fairbanks areas can even meet this standard on most days of application?**

If spraying of herbicides is severely controlled and regulated to avoid risky exposures, it might be best to stay with already proved non-chemical methods of vegetation removal. Herbicide application may well become less cost effective and efficient than may have been originally thought.

- 4. Viable alternatives to the use of herbicides exist. The ARRC is vague regarding the range of strategies that have been attempted in these three permit areas.**

Over the years, the Alaska Railroad consistently maintained one of the best safety records in the industry – while using mechanical and other non-chemical methods of vegetation control.

These permit applications do not discuss the current weed control strategies **in the actual areas being identified for spraying**. In particular, how often have non-herbicide strategies other than hand pulling been employed? Have steam and infrared been widely used? What is their cost relative to the cost of spraying? These details are not discussed.

There are safe, non-chemical alternatives for weed control. A 2003 report commissioned by the Federal Transit Administration, *“Non-Chemical Methods of Vegetation Management on Railroad Rights-of-Way,”* concluded that “prototype weed control equipment was highly effective at killing treated vegetation, easy to operate, and adaptable to a variety of application platforms.” The steering committee for this project determined that wet infrared was the “single most appropriate technology.” The report states: “The wet infrared technology offers advantages not found with any other thermal weed control systems. It is highly effective, and efficient with respect to propane and water use.”³

- 5. Given the potential harm to water bodies and accidental wind-borne spread, the use of Aquamaster and Agri-Dex involves statistical risk. Is this risk adequately compensated by clear need and clear benefit?**

Over time, spills, improper application, weather interference and even operator error are statistically inevitable. These factors emphasize the risky step that the ARRC is taking by applying for widespread use of herbicides, along more than 120 miles of track. We question the wisdom of doing this without clear need. Have other venues truly been explored? Is the cost of other methods a consideration? These data are not presented.

Furthermore, has clear benefit from the use of these substances been shown? Do they adequately control vegetation? Little is said in the applications on this factor. In addition, will these chemicals be effective over the long haul, or will their use lead to eventually more toxic herbicides. Glyphosate has been known, with its agricultural application in the lower 48, to lead to the development of resistant weeds. Has the ARRC considered this problem and how it will be addressed? The original ARRC application in 2006 was rejected, at least in part, because of two other toxic herbicides then being proposed. We would rather not see the door opened to herbicide use at all, lest more toxic alternatives become “inevitable” as time goes along.

6. **Given the controversial nature of these herbicide permit applications, we urge DEC to deny these three permit applications, and instead establish a study group to come up with solutions. There are overall concerns and these concerns are better handled by a collaborative approach. We urge the State of Alaska to establish a railroad vegetation management task force to review the problem, the alternative solutions, the cost effectiveness, of various methods for controlling vegetation along the Alaska Railroad.**

These permit applications demonstrate that the railroad is having a few problems, but their extent is difficult to infer from the permit applications. In addition, the safety of herbicide spraying remains highly questionable, especially when so much of the involved track makes multiple crossings of water.

We acknowledge that there is a problem. However **we do not acknowledge** that the ARRC has adequately proved the solution they propose. Instead of granting any more permits, we urge DEC to form a task force of involved parties to study the problem in its entirety and suggest a full range of solutions. Involving stakeholders in this process will ensure the long-term sustainability of any vegetation-management program along the railroad. Such a group would help to develop more trust, would promote research, and would provide an overall picture of the relative success that the railroad has had so far in keeping operations safe. We urge that you develop such a group prior to approving any more herbicide application permits.

Thank you for the opportunity to submit comments on these important applications. The Denali Citizens Council remains staunchly opposed to introducing widespread chemical vegetation management on the Alaska Railroad track, and these permit applications have failed to prove to us that it is needed. Please reject these applications until their deficiencies have been corrected and consider establishing a task force to help develop a suite of vegetation control measures that ensure the safety of our lands, waters and people.

Sincerely,

Barbara Brease
Nancy Bale

DCC Board of Directors
907-277-3825

¹ Benachour, N. and G.E. Seralini. 2009. Glyphosate formulations induce apoptosis and necrosis in human umbilical, embryonic, and placental cells. *Chem. Res. Toxicol.* 22:97-105.

² Porter, Warren. *Literature review on biological effects of Roundup herbicide and evaluation of materials safety data sheet and use instructions for Aquamaster*. Dr. Warren is Prof. of Zoology and Environmental Toxicology, Department of Zoology, University of Wisconsin, Madison, May 19, 2010.

³ *Non-Chemical Methods of Vegetation Management on Railroad Rights-of-Way*, a review published by the U.S. Department Transportation, Federal Transit Administration, Dec 2003 http://ntl.bts.gov/lib/24000/24700/24729/Non-Chem_Veg_Mgmt_RR_ROW.pdf