



**Keepers of the  
Athabasca**

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Open Letter to:  
Environment and Sustainable Resource Development (Environment and Parks)  
Regulatory Approvals Centre  
Main Floor, 9820 – 106<sup>th</sup> Street  
Edmonton, Alberta T5K 2J6

June 8, 2015

Dear ESRD, E&P,

**RE: Application No. 012-1744**

Guided by both indigenous Elders' Traditional Knowledge and western science, the Keepers of the Athabasca (2009) are First Nations, Métis, Inuit, environmental groups, and watershed citizens working together for the protection of water, land, air, and all living things today and tomorrow in the Athabasca River watershed. Our mission is to unite the peoples of the Athabasca River and Lake Watershed to secure and protect water and watershed lands for ecological, social, cultural and community health and well being. In this letter, we state our concerns related to the reissuing of the Government of Alberta Approval for the Swan Hills Treatment Centre (SHTC) operated by SENA Waste Services Inc, which approval expires on November 15, 2015. First operational in 1987, SHTC treats hazardous waste in many ways, including hazardous waste incinerators and deep well injection. SHTC has released hazardous material into the environment both as 'allowable emissions' and un-planned releases.

**Concern: Human and environmental effects of 'unplanned' PCB releases**

In 1996, 1997, and 2009, serious explosions at SHTC released large amounts of PCB's into the environment. Following the 1996 incident, a public health notice advised against eating any wild game taken from the Swan Hills area. After the 1997 incident, this Alberta Health advisory was changed to 'suggest limiting' eating wild game taken from a 30 km radius of SHTC. In 2012, this range was again downgraded to 15 km radius from SHTC, even after the unplanned release of 2009, and considering that allowable emissions from SHTC continue to accumulate in the environment. The health advisory is still in place, while researchers have chronicled concerns from Swan River First Nation, Sucker Creek First Nation, and Driftpile Cree Nation, along with anonymous callers, reporting the finding of contaminated moose outside of the 30 km zone, and noting that a moose can travel up to 150 km on its regular route. Regionally, trace amounts of both arsenic and PCBs showed a marked increase between 1988 and 1990: more current research still needs to be performed. The Lesser Slave Lake Indian Regional Council has provided

evidence of PCB contamination in First Nations individuals, which is higher in those who consume traditional foods. The 2009 explosion incident, apparently caused by a loose bolt on the FDB incinerator intake conveyor belt, aside from widespread PCB pollution, caused the facility to be closed for 10 months and millions of dollars in repairs. What assurance do we have that the FDB incinerator, first operational in 1995, is able to function without further incident?

Concern: Deep well injection in combination with original fractured bedrock, and ‘fracking’ has the potential to cause groundwater contamination,

Although the SHTC website<sup>1</sup> reads “treated liquid effluent is injected 1,800 metres underground into a stable geological formation,” concerns have been expressed about fracturing in the bedrock underlying SHTC<sup>2</sup>. The bedrock in the Swans Hills area was established as being ‘fractured’ as early as the original 1985 hydrogeology study completed for Alberta Environment, and concerns about groundwater contamination are exacerbated today, with hydraulic ‘fracking’ for oil extraction taking place near SHTC. Back in 1995, within 50 km of SHTC, there were 85 oil batteries, 25 compressor stations, and nine gas processing plants for the purpose of natural resource extraction and processing; current numbers are not listed on the application. Now that research has shown that the industrial process of hydraulic ‘fracking’ can cause earthquakes<sup>3</sup>, this concern is compounded by the potential for even more fracturing of the Swan Hills bedrock by human caused activities. A comprehensive study detailing previously detected bedrock fractures, the location of hazardous waste deep injection wells, recent local hydraulic fracking processes, and recent earthquakes in the Swan Hills area is required in order to evaluate the risk of continuing to inject hazardous materials at the Swan Hills Treatment Facility, which current volume is estimated at 3,136,000 cubic metres per year in the application.

Concern: Are there better ways of managing today’s hazardous wastes?

The profile of varying types of hazardous wastes has changed over the past three decades. PCBs were in widespread use between 1929 and 1979, but the supply of historical PCB containing fluorescent light ballasts, and other PCB containing equipment must be getting pretty thin by now. As well, new options that are less dangerous than incineration and deep well injection are becoming more widely used. We are encouraged that the Government of Alberta, the owner of SHTC, put out a call for expressions of interest designed to “shape the future direction (of SHTC)” in November of 2013 in order to align hazardous waste treatment with future Canadian and global trends. We look forward to learning more about the results of that call, and hope that the current Approval detailing continued incineration and deep well injection is not renewed.

Thank you for your attention to these concerns,

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Doug Badger, Co-chair

Bruce Jackson, Co-chair

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<sup>1</sup> <http://www.shtc.ca/about.htm>

<sup>2</sup> Peter Bowal, Willa Ingelson, “The Alberta Swan Hills Special Waste Treatment Centre expansion: environmental concerns”, University of Calgary p. 260 International Journal for Environment and Pollution Vol. 5, Nos. 2/3, 1995

<sup>3</sup> <http://norj.ca/2014/11/study-links-fracking-to-earthquakes-in-alberta/>