

May 7, 2015

Dr Ray Gosine

Chair, Hydraulic Fracturing Review Panel

c/o Office of Associate Vice President

Bruneau Centre for Research and Innovation

Memorial University of Newfoundland

St.Johns, NL

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Dr. Gosine and Panel Members;

I am writing to express my concern with Hydraulic Fracturing for the province of Newfoundland and Labrador, particularly the west coast, which is my native home land.

I am an Elder in the Newfoundland Mi'kmaw community and I have both traditional and first hand knowledge based on my experience working in the Oil and Gas Industry.

Here are my concerns, including online links for your review;

1. Increased Air & Water Pollution & related Endocrine Damage to Sustainable Life forms

Theo Colborn, Carol Kwiatkowski, Kim Schultz, & Mary Bachran ((2011) : Natural Gas Operations from a Public Health Perspective, Human and Ecological Risk Assessment: An

International Journal, 17:5, 1039-1056 Available online @ HYPERLINK

["http://cce.cornell.edu/EnergyClimateChange/NaturalGasDev/Documents/PDFs/fracking%20chemicals%20from%20a%20public%20health%20perspective.pdf"](http://cce.cornell.edu/EnergyClimateChange/NaturalGasDev/Documents/PDFs/fracking%20chemicals%20from%20a%20public%20health%20perspective.pdf)

<http://cce.cornell.edu/EnergyClimateChange/NaturalGasDev/Documents/PDFs/fracking%20chemicals%20from%20a%20public%20health%20perspective.pdf>

First Study of Its Kind Detects 44 Hazardous Air Pollutants at Gas Drilling Sites by Lisa Song

HYPERLINK "<http://insideclimatenews.org/news/20121203/natural-gas-drilling-air-pollution-fracking-colorado-methane-benzene-endocrine-health-NMHC-epa-toxic-chemicals>"

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Osborn, SG, A Vengosh, NR Warner, RB Jackson. 2011. HYPERLINK

["http://sites.biology.duke.edu/jackson/pnas2011.html"](http://sites.biology.duke.edu/jackson/pnas2011.html) Methane contamination of drinking water accompanying gas-well drilling and hydraulic fracturing. *Proceedings of the National Academy of Sciences, U.S.A.* 108:8172-8176, HYPERLINK

["http://dx.doi.org/10.1073/pnas.1100682108"](http://dx.doi.org/10.1073/pnas.1100682108) doi:10.1073/pnas.1100682108.

HYPERLINK "<http://sites.biology.duke.edu/jackson/pnas2011.pdf>"

More research from Duke University's Biology Department: HYPERLINK

["http://sites.biology.duke.edu/jackson/pubs.html"](http://sites.biology.duke.edu/jackson/pubs.html)

<http://sites.biology.duke.edu/jackson/pubs.html>

Research and assessment has not been completed on the West Coast of Newfoundland, although the type of rock here is much different than that in Pennsylvania and other areas where this process is occurring. Therefore, more chemicals may need to be added to detract flow into the well bore and at a higher pressure (wasting more water in the process). There are other radioactive chemicals, isotopes of (URANIUM RADIUM and RADON GAS) and other fracking chemicals (KNOWN and UNKNOWN), that have not to been shared with the public because of alarms regarding water pollution. The list goes on, BUT this list has been concealed from public information.

2. Potential and likely leaks from the fracking fields.

As has been demonstrated elsewhere time and time again.

3. Flaring, explosions and fire

Many wells are closed due to excess methane which then impacts safe drinking water for residents to DRINK.

The SHALE formation in Western Newfoundland the Geology has only a foot in the sand on their study (IF ANY), only what you see on governments MAPS, and are far from studies of sunlight that creates Ozone, which is toxic, X12-15 more Global Warming effect then C02.

4 Condensation Tanks and their contents

1. Flow back fluids (deliberately withdraw containing fracking chemicals).
2. Produced fluids (which come up with the OIL and GAS including -Cadmium
Lead, Arsenic Radioactive Isotopes, Uranium, Radium, and Radon: Many other lesser amounts.
3. High Salinity.

5. STRESS: stress ,stress

1. NOISE /24 HRS. a day on and near drilling and fracking sites
2. Lights /24 HRS a day.
3. Smell, and pollutants.
4. Insomnia.
5. Worry and Anxiety.

6. Long term Impact on Community.

We must consider the long term impact not only for our grand children but for all of us who remain to live a healthy and well being in our communities.

Without adequate listening, cautionary practices, understanding and transparency by government, faith in government by community members will continue to deteriorate and threaten our democracy.

While we know that some procedures can be done safe in the Oil and Gas industry, as of today 50% of wells fail. If we take this course of action, in 50 years the animals will die, the trees will disappear and our home land will be destroyed...don't any one take this lightly. Ke-Please.

Sincerely,

V. Muise.

My Briefing is what i read in the Western Star:

#1

Misleading information regarding the Shoal Point Oil Leak:

Mark Jarvis, Chief Executive Officer of Shoal Point Energy, is incorrect in his recent statements to news media related to "oil seepage" coming from or around a "rusty 100 year old pipe" that "opponents are linking to an abandoned well' at Shoal Point. Jarvis claims that "oil is coming from the spot (at Shoal Point) but it is also coming from many, many other spots around the bay."

The story Mr. Jarvis portrays of tons of oil naturally seeping in the bay is not valid. People living in the area are not seeing and reporting sightings of natural oil seepages. However, thousands of people locally and globally are seeing either directly or through mainstream and social media the continuing, unnatural oil leak coming from a human created abandoned drilling site at Shoal Point.

The Amoco Consultant Report commissioned by the Department of Environment indicates that the origin of the leaking pipe is unknown and only speculates that it could have been related to drilling occurring in the late nineteenth or early twentieth century. The Consultant Report (executive summary) also comments on the rate and consistency of the leak: "It is not known if the rate of seepage is constant over time or how the tide and groundwater fluctuations may affect the rate. Further monitoring would be required to appropriately evaluate potential variability in the seepage rate."

Mr Jarvis suggests you should "check with Larry Hicks," the Provincial Government Geologist who mapped and documented seeps around the area. Jarvis says "there is tons of it. It is all over the place" and "there is no way to stop these natural seeps"

A member of the Port au Port Bay Fishery Committee has contacted Larry Hicks who agrees with the statement that there are numerous oil seeps/shows around Port au Port Bay. However Hicks also clarifies this :

"In my usage of the terms, a seep can be categorized as a "live" hydrocarbon show, either liquid (oil) or gaseous (gas) observed at surface, whereas a show can apply to both "live" or "dead" hydrocarbons observed in rock exposures at surface or from the subsurface (drill core, cutting or drilling fluid). Most all the shows observed at surface around Port au Port Bay are minor in nature."

Questioned as to if these shows/ seepages were of the same nature and extent as the leak from the abandoned drilling site, the geologist indicated that they were not and that the flow from the abandoned pipe did not appear to be a natural occurring seepage.

The Minister of Environment, Dan Crummell acknowledges that there is a jurisdictional dispute involving federal and provincial government regulatory agencies over which agency is responsible for containing the leaking oil and remediating the site at Shoal Point. The Provincial Department of Environment has also known about the leak since 2013 yet the oil is still leaking from the site and no actual work to contain it has begun although work according to the Minister was to begin in August.

Minister Crummell in a government news release dated August 18, 2015 states

" I have also been very clear that if it was determined that there was anything adding to the natural seepage, that this government would take action to deal with it. I am pleased to advise that this is exactly what we are doing and that this next phase of work, which will involve excavation to isolate the specific source of the leak in order to contain it, will now begin."

Regarding the Department of Environment hiring a consulting firm and taking action to control the leak, Shoal Point Energy CEO, Mark Jarvis has said "You may plug the pipe but that is not going to change anything in a material way." Given the experts opinion that the natural shows are minor in nature and the abandoned pipe leak is not naturally occurring, we disagree. Further, it is important that we hold ourselves accountable. This is a leak caused by human hands, it cannot be allowed to continue.

There have been fly over surveillance flights of Port au Port Bay by the Canadian Coastguard during recent months and they have not reported any evidence of oil leaking into the bay from natural seepage sites. However Coastguard has spotted, reported and documented the sheen/slick on Port au Port Bay coming from the abandoned drilling site at Shoal Point.

The Port au Port Bay Fishery Committee is advocating for a sustainable economy, environment and communities. Our Committee members and many, many other citizens see through the strategies of stirring up division by personal attacks and the false jobs versus the environment argument being used in an effort to advance personal and corporate financial gain. We are not contesting the existence of natural shows, we want accountability for the man-made leak that threatens our environment and our way of life.

#2

Is the panel going to recommend to the Government of Newfoundland to do a base Line study of the water wells, (aquifers),that people are drinking if fracking or any more drilling in Port Au Port area. Water has been tested locally but only for certain chemicals not for the following????:

(People should get their Government to (DO) tap water tested for :: Fluoride//Heavy Metals: LEAD, MERCURY, ARSENIC:: Heravelent :CHROMIUM 6---BENZENE ,B.P.A.--M.T.B.e and VOC's)

Then the Government would have a base line study in advance.

I have allot of concerns regarding this not once has the government done a real study of the water. Knowing the companies drill test well to see how far the water table in down and can then cement the 2inch around the casing of the well.

Proceeding an oil showing on Shoal Point i have taking samples in different area ,at the showing and in hundred feet intervals,sent them in to be tested and the assay company phoned me and they cannot test for such chemicals which i think is important and i did two well in West Bay where the water table is not far from sea level.

An aquifer is an underground layer of water-bearing rock. Water-bearing rocks are permeable, meaning that they have openings that liquids and gases can pass through.Sedimentary rock such as sandstone, as well as sand and gravel, are examples of water-bearing rock. The top of the water level in an aquifer is called the water table.

An aquifer fills with water from rain or melted snow that drains into the ground. In some areas, the water passes through the soil on top of the aquifer; in others, it enters through joints and cracks in rocks. The water moves downward until it meets less permeable rock.

Aquifers act as reservoirs for groundwater. Water from aquifers sometimes flows out in springs. Wells drilled into aquifers provide water for drinking, agriculture, and industrial uses. Aquifers can dry up when people drain them faster than nature can refill them. Because aquifers fill with water that drains from the surface of the Earth, they can be contaminated by any chemical or toxic substance found on the surface.

There are two types of aquifers. An unconfined aquifer is covered by permeable rock and can receive water from the surface. The water table of an unconfined aquifer rises or falls depending on the amount of water entering and leaving the aquifer. It is only partly filled with water.

In contrast, a confined aquifer lies between two layers of less permeable rocks and is filled with water. Water trickles down through cracks in the upper layer of less permeable rock, a nearby water source, such as an underground river or lake, or a nearby unconfined aquifer.

An artesian well is a type of confined aquifer that flows upward to the Earth's surface without the need for pumping. The artesian well sits below the water table at the bottom of U-shaped aquifers. Pressure from water in the long sides of the aquifer pushes the water up the well shaft.

My name in Pikto'l Sa'ke'j Miu's / Victor James Muise in English.

I have been prospecting for the past 26 years and sampling for 29 years but now retired, and have been supervising drill sites across Canada and the US. I'm aboriginal adviser for two companies here in Newfoundland and bonified prospector with the Provincial Mines and energy.

I'm a treaty Mi'kmaw Indian under the: Treaty for Peace and Friendship 1760-61 signed by the Queen of England and the (Saqmaw)-Chief of the Mi'maw Nation which takes in the Southwestern part of Newfoundland. As former Chief of St. George's band and Cultural leader for my people i respect the treaty still yet today.

Clauses under the treaty bring me to stand what is right for the people and protect the environment for both Mi'kmaw and people that we allowed into our land. To work together having a safe place for all to live. Which bring me back to my question is the panel gong to recommend to our Government to do this study before any further drilling occurs.

Best regard:

Wela'lin- Thank you in advance for your time.