

Stó:lō Nation

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The Rt. Honorable Herb Gray, P.C., Q.C.
Chairman, Canadian Section
International Joint Commission
234 Laurier Avenue, West
22nd Floor
Ottawa, Ontario K1P 6K6

February 28th, 2003

Dear Mr. Gray:

Comments to the International Joint Commission on Air Quality

I had the opportunity to speak before the International Joint Commission in September of 2002 in Vancouver British Columbia on behalf of the Stó:lō Nation, where I am an Environmental Officer. I came before the respected Board to bring to your attention concerns from the First Nation prospective on environmental health. Since that time I was sent a copy of the Air Quality Agreement, asked to review it and give further comment. Let me mention at this time that I am on the Georgia Basin/Puget Sound International Airshed Strategy Committee, so I am familiar with the agendum.

After reviewing the 2002 Progress Report I have a statement to make followed by comments.

From time immemorial, the Stó:lō have occupied a large territory in what is now known as south-western British Columbia and north-western Washington State. Our traditional territory, which we call *S'olh Témèxw* covers 3,292,397 acres of land. A copy of a map indicating the boundaries of our territory, which we have submitted to the British Columbia Treaty Commission in 1995, is attached as Appendix "A". As Stó:lō people, we have been and remain connected to our lands and resources in *S'olh Témèxw*. Stó:lō is the Halq'eméylem word for "river" and also for the people who live along the lower Fraser River and it's adjoining watersheds. The traditional and cultural way of life revolves around the life forces of the Fraser River and it's sacred fish, the salmon. Archaeologists tell us that we have been here for at least 9,000 years. We say we have been here since time immemorial.

Through our stories and legends (*sxwōxwiyám*) that our Elders share with us, we are told that many of our ancestors, who were transformed into various things. For us, this means that our resources are more than things to be used, rather, they are our ancestors and they are apart of us. When we use a resource, we have to thank our ancestors, and we have to respect the use of these resources based on traditional laws and ways. We hold that all things-living beings, earth, water, air and fire-are tied to each other. We maintain everything because we are part of everything. In

the past, our forests were healthy, the air was clean and our water pristine. In today's world, as in the distant past, we believe that their *shxwelí* ("spirit" or "life force") inhabits the resources in our territory. Before we change or alter our environment, we must consider the way our actions will affect these resources—the living spirits of our ancestors. The way we use the landscape must be consistent with our beliefs, our relations and our general worldview. We must re-assert our responsibility as caretakers and protectors of the land for the benefit of our young people and future generations.

From our oral history, we understand that our relationship between our territory, resource use and traditional practices is interconnected, and based upon a complex belief system. In our Stó:lô culture, a special link exists between the past, present and future. We express this connection in many ways. In our Halq'eméylem language, for instance, we have the word *tómiyeqw* which translates into English as both great great great great grandparent and great great great great grandchild. The relationship expressed in this word connects people seven generations past with those seven generations in the future. The connection between the past and future rests with those of us living today, in the present. Further, it is this interconnectedness that ties us and our connection to our land and resources physically, spiritually, culturally, economically, and obligates us to act as guardians of, rather than masters over, the places we use and occupy. This is why we urge respect to the needs of all living things, which sustain life in our territory.

As Stó:lô people, we have a clear understanding of our Aboriginal rights and title, based upon countless generations of occupation, use and management of our resources, and self-government. The Stó:lô exercise and assert aboriginal rights and title to their territory. These rights are constitutionally protected by s. 35 of the *Constitution Act*, 1982, which reads:

35 (1) The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.

As Stó:lô people, we are gravely concerned over the environmental sensitivities and vulnerabilities that exist within our territory, and the increasing, unrelenting demands which appear to be placed on our territory and resources. A number of the natural resources and environment upon which we depend have faces detrimental impacts due to colonization and urbanization. Our ability to access resources within our territory has diminished at alarming rates. Many species that were once abundant in our territory are now extinct, threatened or at risk.

Over the years, the non-aboriginal society has acted consistently in a manner that caused great sadness and hurt amongst the Stó:lô people. The substantial decline of our population and the clear and accelerating deterioration caused to the environment are due in large measure to the non-aboriginal society's failure to understand and respect the natural system upon which we rely. It has become increasingly difficult for us to access the rich resources of our territory to sustain us, and especially to ensure that these resources will sustain future Stó:lô generations. Our continued ability to use, rely upon and manage the lands and resources within our territory is our fundamental responsibility. It is a part of our identity and continuity as Stó:lô people. We believe that precautionary measures are required with respect to all activities occurring within our territory, especially as they affect the air, land, water, and other resources. From a Stó:lô perspective, when decisions are made regarding land and resource use, we urge an approach that errs on the side of caution, with a view of protecting, respecting and preserving the environment.

We believe that the *Fraser Valley air quality* is creating detrimental impacts upon the places and resources we rely upon for our food and livelihood, as well as our spiritual and cultural identity and well being. Specifically, we are concerned with dangers to air quality by ozone concentrations in excess of the *maximum acceptable level*. Smog, the term given to a haze in the

air, is a potential risk to health. The key smog pollutants are ground-level ozone (O₃) and fine airborne particulate matter (PM). These two smog pollutants major sources are fossil fuels in vehicles, factories, thermal power plants and home furnaces. Road dust, fires, soil and industrial and agricultural activities contribute to the fine particle mass. Unlike the stratospheric ozone that is high above the earth's surface that filters out harmful ultraviolet rays from the sun, ground-level ozone can be harmful to human health. Ground-level ozone occurs naturally, excessive levels are the result of human activity. This happens when nitrogen oxides (NO_x) from the combustion of fossil fuels and volatile organic compounds (VOCs) found in solvents, gasoline and oil-based paints, react in the presence of warm temperatures and sunlight. Airborne particulates are minute particles small enough to remain suspended in the air and together with other air pollutants give smog its colour. Recent research indicates that there is no "safe" or threshold level of human exposure to either ground-level ozone or particulate matter below which health effects do not occur (National Ambient Air Quality Objectives For Ground-Level Ozone and For Particulate Matter, Science Assessment Documents, 1999). Reductions in ambient levels of these smog pollutants are expected to have public health benefits. Reference levels are defined as the lowest ambient ozone and particulate matter concentrations at which statistically increases in human health effects have been detected. Federal-Provincial Working Group on Air Quality Objectives and Guidelines (1999) established Reference Levels for PM₁₀, PM_{2.5} and ozone. These Reference Levels are 20 ppb 1-hour daily maximum for ozone and 25 µg/m³ (PM₁₀) and 15 µg/m³ (PM_{2.5}) averaged over a 24 hour period for particulate (National Ambient Air Quality Objectives for Ground-Level Ozone, July 1999 and the National Ambient Air Quality Objectives for Particulate Matter, 1999). Comparison of air quality data in relation to these Reference Levels therefore provides a measure of potential health risk. Each time of year percentage that ground-level ozone and particulate matter data exceed Reference Levels is being tracked as an indicator of potential health risk. Analysis of the data in this manner is intended to provide the Fraser Valley residents with an informative and relevant indicator of the status and trends in our air quality.

Source: Data from Environment Canada, National Air Pollution Surveillance (NAPS) Network, Ottawa, Ontario and GVRD, Burnaby, BC 2002. The ozone and PM₁₀ data are from the Surrey, Langley and Chilliwack monitoring sites. Potential health risk trends are expressed as the percentage of time each year ozone and PM₁₀ exceed the Reference Levels at the three sites. (Reference Levels are: ozone 20 ppb on hour daily maximum, PM₁₀ 25 µg/m³ 24 hour daily average).

Smog is harmful to people when inhaled into the lungs. Each year the effects of smog cause people to die prematurely, suffer temporary or long term health effects or just be inconvenienced. New research has shown that it is not possible to define a "safe" smog level. Health effects start to occur at very low levels of both particulate matter and ground-level ozone and increase steadily as concentrations increase. The elderly, small children and people with respiratory or cardiovascular disease are more likely to feel the effects of smog. But, even healthy adults develop symptoms at high levels of exposure and *development of asthma* while other studies implicate other smog pollutants including particulate matter. Canadian and U.S researchers have also found *new evidence* that inhaling smog has a direct effect on the heart and blood vessels.

Elevated ozone concentrations are associated with increased incidence of respiratory disease in humans (National Research Council 1991). Short term exposure to ozone can irritate the eyes, nose and throat producing symptoms like coughing or difficult breathing. After a few days of repetitive exposure respiratory symptoms subside but the damage may continue to occur deep in the lungs. Asthmatics are more sensitive to air pollutants in general and asthma attacks increase substantially with higher ozone levels (National Ambient Air Quality Objectives for Ground-

Level Ozone-Science Assessment Document 1999). The evidence is strong for an association between hospitalizations for respiratory diseases and exposure to ozone at levels commonly encountered in Canada. Health Canada has determined from Canadian respiratory hospitalization data that every 10 ppb increase in the one-hour maximum ozone level equates to a 1% increase in respiratory hospital admissions and a 0.6% increase in mortality. A 1996 study of 58 Fraser Valley farm workers over two summer months revealed lung capacity declined about five per cent the day following exposure to even low ambient ground level ozone levels (Brauer et al. 1996). Population groups with high levels of exertion and who spend large amounts of time outdoors may be particularly susceptible to ozone effects. It has also been inferred that repeated inflammation from ozone exposure over a lifetime can produce sufficient respiratory tissue damage to reduce lung function in later life (Tepper et al. 1991).

Epidemiological evidence also strongly suggests a link between particulate matter and aggravated respiratory symptoms related to coughing and difficult breathing, chronic bronchitis, emphysema and decreased lung function. Even at low concentrations of PM, such as those experienced currently in the Fraser Valley, there are potential risks to human health. These health effects have focused on increasingly smaller particles (PM_{2.5}) which may remain in the air for days or even weeks and can easily reach the deepest recesses of the lungs.

Based on a more recent *study of the air quality of the lower mainland* (Brauer et al., July 2000), Medical Health Officers expressed the view that between 15 and 150 deaths per year in the Fraser Valley may be attributable to air pollution. This is even though the levels of air pollutants (including ozone and PM₁₀) in the Fraser Valley are generally lower than most of the Western U.S cities of similar or larger size.

The pollutants of smog produce adverse effects on more than the health of humans. The yield and quality of agricultural crops such as the Fraser Valley's high-value crops of strawberry, lettuce and broccoli are negatively impacted by ozone enrichment (Janzen et al., 1999). Increased exposure of strawberry plants to ozone reduces the number and weight of good fruit resulting in fruit losses as high as 15% in the Fraser Valley. Ozone causes leaf injury to broccoli and the severity of leaf damage was found to be directly related to ozone enrichment (Janzen et al., 1999). Crop damage in the Fraser Valley due to ozone is estimated to be in the millions of dollars.

The Stó:lô peoples traditional herbage's, botanicals and berries are being affected negatively here as well. The list of important plants is too numerous to list at this time, but there are well over one hundred and thirty species. The list reads Alumroot to Yew. Plants that were once used for traditional medicines or gathered for food stores are either becoming increasingly difficult to find, or as the Stó:lô people are discovering the potency of their medical herbs is diminishing. With the findings on the affects of ozone to strawberry, lettuce and other crops, it makes sense that the traditional/indigenous agriculture would at risk as well from particulate matter and ozone concerns.

The Stó:lô Nation Environmental Department is investigating water contamination, salmon and other aquatic deformities. Low levels of some *persistent organic pollutants* (POPs) which *may* have *endocrine disruptor chemicals* (EDCs) are being studied in fish and crayfish after they are exposed to agricultural runoff within Stó:lô territory. Much more study is needed before it can be deduced if ozone and particulate matter is intensifying or accelerating EDCs. Also, high levels of mercury, chromium³, ethylbenzene, lead, arsenic, benzene, cadmium, strontium, sulphur are being found in the soil and sediment samples. A large percent of these metals are found in ozone and PM₁₀. The law of gravity, what goes up must come down.

Jurisdiction over air quality in the Fraser Valley is a shared responsibility of Municipal, Regional, Provincial and Federal agencies. With the implementation of a pilot project under the *Georgia Basin Ecosystem Initiative (GBEI)* in conjunction with the *Coast Salish Sea Initiative* and *Stó:lō Nation*, First Nations on both sides of the Canada/U.S western boarder are now actively involved in the strategy process. I did not read in your 2002-report mention of First Nation participation other than the Georgia Basin/Puget Sound International Airshed Strategy. Was there other participation by First Nations involved with the International Joint Commission Air Quality Agreement?

I was perplexed to discover how little mention of participation there was by First Nation communities in this report. May I respectfully remind the Board that under Canadian Law; any activity occurring within an aboriginal territory that may potentially infringe aboriginal rights and title (i.e. rights that are protected by section 35(1) of the *Constitution Act*, 1982), both Canada and the provinces are under legal duty to consult with aboriginal peoples.

In *Delgamuukw*, (1998) 3 S.C.R. 1010, at paragraph 168, the Supreme Court of Canada described the following with respect to the Crown's duty to consult:

There is always a duty of consultation. Whether the aboriginal group has been consulted is relevant to determining whether the infringement of aboriginal title was justified... The nature and scope of the duty of consultation will vary with the circumstances. In occasional cases, when the breach is less serious or relatively minor, it will be no more than a duty to discuss important decisions that will be taken with respect to lands held pursuant to aboriginal title. Of course, even in these rare cases, when the minimum acceptable standard in consultation, this consultation must be in good faith, and with the intention of substantially addressing the concerns of the aboriginal peoples whose lands are at require the full consent of an aboriginal nation, particularly when provinces enact hunting and fishing regulations in relation to aboriginal lands.

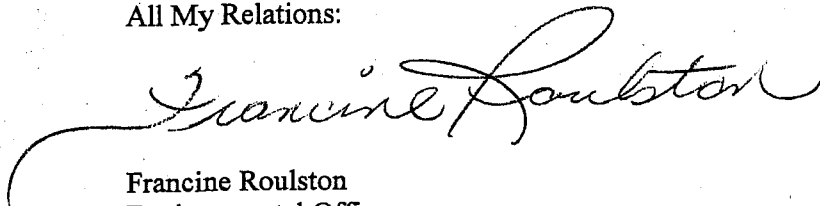
An example I respectfully bring to the Boards attention is the *acid rain* situation in the eastern parts of the United States and Canada. The *acid rain* has decimated the maple trees and the maple syrup production, which played an important role in the lives of the First Nations people in the areas. Do the First Nation communities there have similar concerns and issues that we could information share with?

Also, with all the concern over fossil fuel burning power plants there was little comment made the proposed Sumas Energy 2 in Washington State. The controversy over this proposed power plant alone is going to be setting president for future power facilities of it's kind in and around the Canada-U.S Georgia Basin/Puget Sound areas. This issue is one of great reverence to those of us who live in this region. There are serious and significant implications to the deterioration of the airshed within the Fraser Valley if this power plant is allowed to be built. Affects that will impact air quality on both sides of the border. It is stated on page 44 of the report under New Transboundary Air Issues last paragraph: *The Air Quality Committee may be interested in mercury-related analyses as it relates to emissions from power plant generation and multi-pollutant efforts in both countries to address emissions from this sector.* The start-up emissions from this plant will contain mercury, shouldn't this proposed plant come under scrutiny now?

Parts of this response contain excerpts from Environment Canada and their response to the National Energy Board on their position concerning the air quality and the proposed Sumas Energy 2 project.

I would like to thank the respected board for this opportunity to speak on behalf of the Stó:lô people. We would appreciate being informed to the upcoming conferences, workshops and any other types of information sharing opportunities. This is an excellent way to have our voices heard after so many years of silence. Through working together Grandmother Earth can continue to support us for the generations to come.

All My Relations:

A handwritten signature in cursive script that reads "Francine Roulston". The signature is written in black ink and has a long, sweeping underline that extends to the left.

Francine Roulston
Environmental Officer