

Briefing Note

Labrador and Aboriginal Affairs

Issue: Investigation of the Potential to Introduce Opal Gas in Aboriginal Communities in Labrador.

Background:

- In January 2006, the President and CEO of Genesis Group Inc. (the technology commercialization arm of Memorial University) was approached by British Petroleum (BP) officials with information on the use of Opal gas to combat gas sniffing, and the programs that BP and the Australian Government have implemented for this purpose. The relevance of this information to the communities in northern Labrador was very clear.
- An Opal Gas committee was formed by bringing together representatives of various groups directly and indirectly involved with the day to day effects of gas sniffing in Labrador; Innu Nation, Nunatsiavut Government, Genesis Group, MUN Faculty of Medicine, Memorial University.
- The Committee has three main purposes:
 1. To disseminate information on Opal Gas and the Australian Model.
 2. To bring together government, industry, and community representatives to move forward with a plan to introduce Opal gas in Labrador.
 3. To bring together aboriginal people from Labrador and Australia to discuss actions to reduce gas sniffing.

Gas Sniffing

1. Local Context

- Aboriginal communities across Canada have struggled with substance abuse issues for decades; among the most pernicious is gas sniffing. Gasoline is a cheap, easily accessible intoxicant with devastating effects.
- The health effects associated with gasoline sniffing are numerous; cancer, leukemia, heart attack, brain damage, death, and injury due to intoxication. The toxicity of gasoline is attributable to the presence of volatile hydrocarbons such as benzene, toluene, xylene, naphthalenes, paraffins, alkenes, as well as lead.
- In Canada the problem gathered attention most visibly during national media film coverage of gas sniffing children in Davis Inlet.

2. The Australian Experience

- Gas sniffing has been a part of life in Australia's aboriginal population since the second world war, but is being successfully combated by the creative and dedicated efforts of British Petroleum, the Australian Government(s), and local community leadership through implementation of the Comgas Scheme in 1992 (a program involving replacement of gasoline with avgas), and most recently the **Opal Gas** program.
- Under the Comgas Scheme, Australian aboriginal communities switched from regular gasoline to aviation gas (Avgas). This involved choice at the local level, and government subsidization to bring the price of the more expensive avgas on par with regular unleaded gasoline. There were concerns about the high lead content of avgas, its suitability for equipment, but the level of aromatic hydrocarbons in this fuel is low, and the nausea resulting from inhaling the vapour discourages sniffing.
- The effectiveness of the programs in reducing gas sniffing is dependent on the availability of regular gasoline within and outside the communities. The more remote the community, the more difficulty there is in obtaining regular gasoline.

3. Opal Gas

- Opal Gas is a specially refined unleaded formulation of Avgas developed by BP, where further extraction of the aromatic components and lead occurs, leaving an end product significantly diminished in the toxicological elements of regular hydrocarbons.
- BP undertook considerable research and development, and multi year testing to ensure Opal gas worked efficiently in various two and four stroke engines, including passenger vehicles, vans, lawn mowers, outboards, and chainsaws. It can also be blended with regular unleaded gasoline. Opal has been used in many remote Australian communities since January 2005.
- Opal gas production has increased from 1 million to 10 million litres in Australia, with a reduction in subsidy linked to the volume increase. The increased fuel demand serves as a validation of what is considered a success story for reducing gas sniffing in the participating communities.

Applicability to the Labrador Situation - Considerations

- Current fuel consumption patterns along the north coast of Labrador suggest an initial rollout of 2 million litres.

- Sheshatshiu is particularly hard hit by gas sniffing, and in order to achieve success in this community, it would be necessary for Goose Bay to use only Opal gas.
- Exploration companies, businesses (i.e. Voisey's Bay) developers and contractors working in or around these communities would also have to use Opal Gas. Adding the requirement for Opal gas use in Government, municipal, and business tender calls would be an additional support.
- BP has additional social supports affiliated with the Opal program.
- BP Australia and Calgary have committed their support with all aspects of the technical assistance needed to proceed with production of Opal gas in North America. BP has the patent on Opal gas, but is making the formulation freely available to interested refiners.
- Production, distribution, infrastructure and supply opportunities/challenges exist for Newfoundland and Labrador, and a refinery operator would have to be encouraged to participate.

Current Developments, Action Items, and Supports

- MUN engineering has been contacted with respect to testing Opal for cold climates. Funding will likely be required for this activity.
- The President of Genesis Group Inc. met with the Minister Responsible for Labrador Affairs, Deputy Ministers for Health and Community Services, and Labrador and Aboriginal Affairs, and other officials on May 1, 2007 to provide a status report.
- Genesis Group Inc. has organized a mission to Australia (May 20 – 26) to bring together health, Aboriginal, industry and government representatives from Labrador, Canada, and Australia.
- Although late, the Committee would welcome the presence of a provincial government representative on this mission, but advises there will be follow-up exchanges.
- From the initial mission the committee anticipates returning with an understanding of the processes to commence implementation of a plan that will see Opal gas used in communities where gas sniffing is a problem. A debriefing will be provided to Ministers and officials, and next steps will be identified.

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