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Dear Mr. Groeneveld;

**Re: Nuclear Power in Alberta**

In light of the fact that Alberta is being courted by the nuclear industry to build a nuclear power plant in our province, the Government of Alberta has the responsibility to ensure that any new development in the province is in the best interest of Albertans.

Over the past 2.5 years the nuclear industry has been busy with a massive propaganda campaign which promotes the benefits of nuclear power while neglecting to include information which may not be in their best interest. Many Albertans have done extensive research regarding the implications of nuclear power in Alberta and have found that there are many questions left unanswered on this controversial issue.

Energy minister Mel Knight commissioned a Nuclear Energy Expert Panel which was to examine the pros and cons of nuclear power for energy production in Alberta. It was headed by Dr. Harvie Andre who released a report in February 2009 which has been heavily criticized as being supportive of nuclear power in Alberta due to the makeup of the

panel. Excluding health and environmental experts clearly points to a predetermined outcome.

## **Expert Panel Report & Agriculture**

We have thoroughly examined the Expert Panel Report and would like to inform you that there is no mention whatsoever of how a nuclear power plant would impact agriculture in Alberta. Agriculture is one of Alberta's cornerstone industries; therefore it is critical that a thorough discussion and analysis includes agriculture in the government of Alberta's deliberations over the impact that nuclear power would have in Alberta.

We have included below important references which were extrapolated from the 2005 Chernobyl Forum intergovernmental report which was referenced by the Expert Panel Report. Why was agriculture not included in the Expert Panel Report?

*The "Chernobyl Forum, was led by the International Atomic Energy Agency, the World Health Organization and involved many other agencies of the United Nations".*

Although the Chernobyl Forum was mentioned and referenced in the Nuclear Expert Panel report there was no mention of Agriculture impacts of the Chernobyl accident.

### **Quoted from page 24 Chernobyl Forum 2003-2005**

*"Radioisotopes of caesium (137Cs and 134Cs) were the nuclides which led to the largest problems and even after decay of 134Cs (half-life of 2.1 years) by the mid-1990s the levels of longer lived 137Cs in agricultural products from highly affected areas still may require environmental remediation".*

### **Chernobyl Forum page 25**

*"Thus, while the magnitude of human exposure through agricultural products has experienced a general decline, high levels of contamination of forest food products have continued and still exceed permissible levels in some countries. In some areas of Belarus, Russia and Ukraine, consumption of forest foods with 137Cs dominates internal exposure. This can be expected to continue for several decades".*

*"The high transfer of radiocaesium in the pathway lichen-to-reindeer meat-to-humans has been demonstrated again after the Chernobyl accident in the Arctic and sub-Arctic areas of Europe. The Chernobyl accident led to high levels of 137Cs of reindeer meat in Finland, Norway, Russia and Sweden and caused significant difficulties for the indigenous Sami people".*

### **Chernobyl Forum page 26**

*“Bioaccumulation of radiocaesium in the aquatic food chain led to significant activity concentrations in fish in the most affected areas, and in some lakes as far away as Scandinavia and Germany”.*

**Chernobyl Forum page 28**

*“Application of agricultural countermeasures in the affected CIS countries substantially decreased since the middle of 1990s (to less extent in Belarus) because of economic problems. In a short time, this resulted in an increase of radionuclide content in plant and animal agricultural products.*

*In Western Europe, because of the high and prolonged uptake of radiocaesium in the affected extensive systems, a range of countermeasures are still being used for animal products from uplands and forests.*

*The following forest-related restrictions widely applied in the USSR and later in CIS countries and in Scandinavia have reduced human exposure due to residence in radioactively contaminated forests and use of forest products:*

- Restrictions on public and forest worker access as a countermeasure against external exposure; Restricted harvesting of food products such as game, berries and mushrooms by the public that contributed to reduction of internal doses. In the CIS countries mushrooms are a staple of many diets and, therefore, this restriction has been particularly important;*
- Restricted collection of firewood by the public to prevent exposures in the home and garden when the wood is burned and the ash is disposed of or used as a fertilizer;*
- Alteration of hunting practices aiming to avoid consumption of meat with high seasonal levels of radiocaesium.*

**Chernobyl Forum page 33**

*“the magnitude of the impact is clear from a variety of government estimates from the 1990s, which put the cost of the accident, over two decades, at hundreds of billions of dollars”.*

*- “Indirect losses relating to the opportunity cost of removing agricultural land and forests from use and the closure of agricultural and industrial facilities;”*

**Chernobyl Forum page 34**

*“The agricultural sector was the area of the economy worst hit by the effects of the accident. A total of 784 320 hectares of agricultural land was removed from service in the three countries, and timber production was halted for a total of 694 200 hectares of forest. Restrictions on agricultural production crippled the market for foodstuffs and other products from the affected areas. “Clean food” production has remained possible in many areas thanks to remediation efforts, but this has entailed higher costs in the form of fertilizers, additives and special cultivation processes.”*

*“Even where remediation measures have made farming safe, the stigma of Chernobyl has caused some consumers to reject products from affected areas. Food processing, which had been the mainstay of industry in much of the region, has been particularly hard-hit by this “branding” issue. Revenues from agricultural activities have fallen,*

*certain types of production have declined, and some facilities have closed altogether. In Belarus, where some of the best arable land was removed from production, the impact on agriculture has affected the whole economy.*

**(The Guardian May 2009) Britain's farmers still restricted by Chernobyl nuclear fallout;** *“Nearly 370 farms in Britain are still restricted in the way they use land and rear sheep because of radioactive fallout from the Chernobyl nuclear power station accident 23 years ago, the government has admitted”.*

As you can see below some Agricultural Stakeholders, such as the National Farmers Union, have already taken an in depth look at nuclear power issues and have made some informed decisions on this issue.

### **National Farmers Union 2008 resolutions**

#### **Nuclear Energy**

BE IT RESOLVED the NFU reject any new nuclear facilities due to their negative social and environmental impacts on this and all future generations due to the radioactive waste produced.

BE IT FURTHER RESOLVED the NFU lobby the provincial government and the federal government to promote conservation and alternative renewable electrical power generation options such as solar wind, bio-mass, tidal, co-generation, geo-thermal, low impact run of rivers and potentially clean coal.

BE IT FURTHER RESOLVED the NFU demand full disclosure of costs associated with nuclear waste disposal, decommissioning of existing nuclear plants and that such costs are identified as operating costs.

BE IT FURTHER RESOLVED the NFU rejects privatization of energy development and reaffirm support for public ownership of renewable sustainable energy options.

#### **Conclusions and Recommendations;**

Mr. Groeneveld, the potential implications of nuclear power on agriculture in Alberta should not be ignored. As you can see by the information which we have provided, there are dire consequences resulting from a major disaster associated with nuclear facilities. There are also implications to “routine operations” of nuclear facilities which have been documented in several countries which are affecting health, agriculture, and economies. These are just some of the sources of information which highlight the effects or potential effects of the nuclear power chain on agriculture.

#### **Request for Moratorium;**

The fact that Energy Minister Mel Knight’s Expert Panel Report has excluded the implications of nuclear power on Alberta Agriculture is a clear indication that this Expert Panel Report is not an

accurate reflection of the merits of this technology. We believe that your department in serving the interests of Alberta Producers must recommend to the Government of Alberta that a moratorium on nuclear power be immediately declared. That moratorium should remain in place until such time that your department has allocated resources and completed a full analysis of the potential implications of the nuclear industry on Alberta's agriculture industry.

- What information has your department examined in order to be able to make an informed decision on behalf of Alberta Farmers?
- What are the potential risks to Alberta farmers and Alberta's economy as it relates to agriculture?
- What else is missing from this Expert Panel Report?

### **Recommendations:**

We are recommending that Alberta Agriculture & Rural Development (AARD):

- Examine the impacts of nuclear power on Alberta Agriculture, which would include a broad spectrum of stakeholders and share this information with agricultural producers.
- Conduct a thorough socio-economic analysis of renewable energy options in Alberta and how renewable energy could contribute to Rural Alberta's economic growth.
- Encourage the government of Alberta to implement a **Renewable Energy Task Force** so that all energy options are on the discussion table.
- Encourage the government of Alberta to implement **Feed-In Tariffs** to encourage the implementation of renewable energy resources in Alberta.

We look forward to your timely response on this matter;

We would like an opportunity to discuss these important issues with you in the near future;

Sincerely;

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The dangers of nuclear power are eloquently summed up by Hannes Alfvén, Nobel Laureate in Physics, in these terms:

“Fission energy is safe only if a number of critical devices work as they should, if a number of people in key positions follow all their instructions, if there is no sabotage, no hijacking of transports, if no reactor fuel processing plant or repository anywhere in the world is situated in a region of riots or guerrilla activity, and no revolution or war – even a “conventional” one – takes place in these regions. The enormous quantities of dangerous material must not get into the hands of ignorant people or desperados. No acts of God may be permitted.”