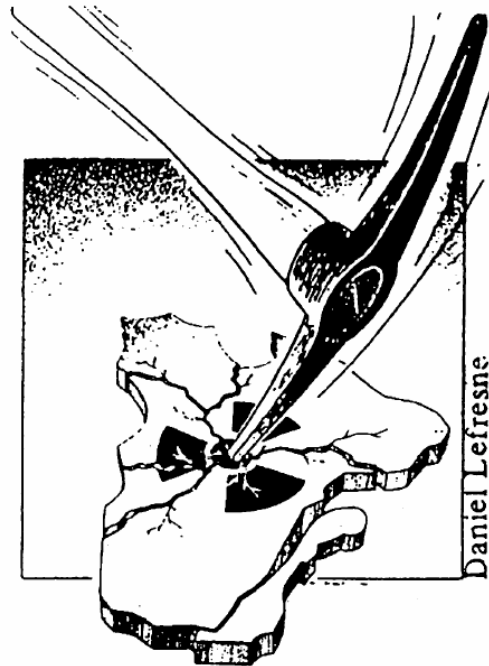




APEHL APEHL

Association pour la Protection de l'Environnement des Hautes-Laurentides
Association for the Protection of the Environment of the Upper Laurentians

www.apehl.ca/uranium.htm



REQUEST FOR A MORATORIUM

*« Uranium mining in Québec:
not in our backyard, nor our neighbour's! »*

March 5, 2007

Mont-Laurier

**Presentation of a request for a moratorium by the APEHL : « Uranium mining in Québec:
not in our backyard, nor our neighbour's! »**

The *Association for the Protection of the Environment of the Upper Laurentians* (APEHL), is presenting a request for a moratorium with the aim of completely stopping all uranium exploration and mining activities in the province of Québec, as long as thorough studies have not proven beyond a doubt that such activities will have no negative impacts whatsoever on the health of the population.

The mining exploration activities now taking place in the Upper Laurentians have raised many questions as to the possibility of setting up such an industry, not only in this region but throughout the province. Numerous studies show that the risks, *known* and *probable*, of uranium mining are real to the point where no one can ignore them. Although the problems related to the nuclear industry are often reported in the media, the activities linked to uranium mining are just as harmful to the environment. These activities are particularly polluting and represent important risks to the health of the citizens. It seems that the only realistic solution for now lies in stopping production at its source.

APEHL represents several regional and national associations and its mandate includes being the spokesperson for the numerous citizens who demand a halt to the exploration and mining of uranium. Moreover, the present demand is linked to an international movement which avoids the use of alarmist propaganda in favour of scientific proof demonstrating the necessity to act.

The **Declaration of Indigenous Peoples** adopted at the World Summit on Uranium, in December of 2006, is very eloquent to this effect: « Past, present and future generations of Indigenous Peoples have been disproportionately affected by the international nuclear weapons and power industry. The nuclear fuel chain poisons our people, land, air and waters and threatens our very existence and our future generations. Nuclear power is not a solution to global warming. Uranium mining, nuclear energy developments [...] violate our basic human rights and fundamental natural laws of Mother Earth, endangering our traditional cultures and spiritual well-being. »¹

The subjects of nuclear energy and uranium mining cannot be treated distinctly because they are intimately related. Although conscious of their close relationship, APEHL will only offer a brief reflexion on the theme of nuclear energy because the above-mentioned relationship is not the object of its demand.

¹ « *Declaration of Indigenous Peoples at the World Summit on Uranium* », Window Rock, Navajo Nation, December 2, 2006.

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URANIUM MINING OPERATIONS

The uranium mining industry has major repercussions for the environment. The process starts by the extraction of the uranium-containing ore found at different depths in the earth's crust. Since the concentration of uranium varies, great surfaces must be exploited and stripped. Ore extraction requires an immense hydrographical supply from local sources such as lakes, rivers and drinking water. An enormous quantity of waste, called « tailings », is left following the isolation process and the concentration of the uranium. Radioactivity will emanate from these wastes for thousands of years to come since its supply is assured by the continued presence of the disintegrating products (radium, thorium, polonium and radioactive lead).

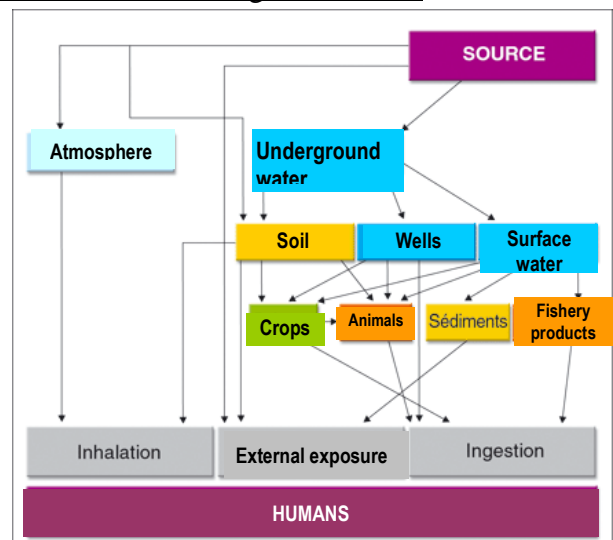
Uranium is a metal which when it is disintegrating, transforms itself into many other substances. It comes under a chain reaction that produces radioactive energy at different stages in the process. Tailings or mining residues include disintegration substances with no economic value, contaminated water and the toxic chemical products used during the process. At the end of these activities, these mining residues (tailings) are confined in the environment, held by dikes or dams. Since the disintegrated substances retain 85% of the original² radioactivity, to avoid accidents and spills, these installations will have to be watched and maintained for thousands of years.

APEHL firmly believes that the presence of these residues (tailings) in the environment, is a disturbing problem. At present, confusion prevails as to who should assume the management responsibilities for all these years. Should the expenses relative to the maintenance of the equipment be the responsibility of the mining companies involved or the taxpayers' fiscal burden? Moreover, the surface confinement increases the possibility of contact between living beings and the residues (tailings). The latter are influenced by many factors: the type of infrastructure used, the possibility of management negligence and the changing climate conditions (sun, wind, rain, snowmelts, frost, etc.). The greatest worry is linked to the fact that with existing technology, there is no guaranteed method of confinement for thousands of years. Despite good intentions and good will, errors are human. Thus, the dispersion of radioactive substances in the environment is inevitable. To learn more, see - **Other information - page 7.**

Here, in short, are the environmental risks linked to the exploitation and mining of uranium:

- Contamination of underground water and hydrographic networks (lakes, rivers, drinking water wells, etc.) by chemical pollutants and radioactive substances;
- Dispersion of radioactive dust in the environment affecting living beings.

Image : DRIRE Limousin- L'État de l'environnement et des risques en Limousin, Édition 2004
http://www.limousin.drire.gouv.fr/environnement/etatenv2004/mines_uranium.htm



² JEAN, Yves, « Introduction à la gestion des ressources naturelles », p. 375, édition Télé-université, 2004.

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URANIUM AND PUBLIC HEALTH

Radioactive particles can enter the human body through breathing, ingestion or contact with skin lesions³. Once inside, the toxicity of these substances is comparable to other heavy metals or like other radioactive substances³. The toxic effects of heavy metals show up in the vital organs, more specifically in the kidneys. The effects of this type of radiation would be strong enough to damage or even destroy living cells⁴. Moreover, they are the continuing subject of numerous debates - various cancers, respiratory problems, organ troubles, reproduction problems, etc⁵. The disintegration of uranium produces radon gas that can travel many kilometres and thus enter into contact with living beings.⁶ In the United States and in Europe, certain scientific research groups consider and recognise inhaled radon in the ambient air as being cancerous⁷. These days, most scientists consider that every exposure to atomic radiation constitutes a health risk⁸.

In such a context, APEHL demands that government act according to the principle of precaution as defined by Marie-Hélène Labbé, PhD in Political Science and specialist in matters relating to nuclear proliferation in France. She defines the principle of precaution as being « *the attitude which must be kept by all people who make a decision concerning an activity which one can reasonably suppose constitutes a serious danger for the health and security of present and future generations, or for the environment* ».

In light of these facts, APEHL notes that the uranium mining industry can have a negative impact on the health of the population, thereby pushing up costs for the health network.

URANIUM AND THE ECONOMY

For a region, the coming of new economic activities is often seen as beneficial. Nevertheless, certain points must be put in perspective as we face the possibility of such an industry in the rural regions of Québec:

- The span, in terms of time, and the financial spin-offs of this industry, are limited;
- Once the resource is exhausted, the foreign companies disappear, taking with them most of the profits;
- The responsibility for the costs related to the managing of the mining wastes (tailings) is not clearly defined;
- The jobs created represent a risk for the health of the miners since they are in direct contact with the radioactive dusts;
- Health costs may increase for the taxpayers;
- The other economic sectors, such as recreational tourism, risk being affected;
- There will be a probable decrease in the value of real estate because of the fear of dealing with this industry.

³ MAKHIJANI, Arjun & SMITH, Brice, « *A new panorama of the sanitary risks of uranium* », English version *Science for Democratic Action*, v.13, no. 2, June 2005

⁴ GREENPEACE, « *The hidden face of uranium* », Factsheet, April 2005.

⁵ GREENPEACE, « *The hidden face of uranium* », Factsheet, April 2005.

⁶ MAKHIJANI, Arjun & SMITH, Brice, « *A new panorama of the sanitary risks of uranium* », English version *Science for Democratic Action*, v.13, no. 2, June 2005

⁷ INSPQ, *Radon in Québec*, pp. 1-191, December 2004.

⁸ GREENPEACE, « *The hidden face of uranium* », Factsheet, avril 2005.

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According to APEHL, the question raised is « For whom is this industry the most profitable? ».

The use of uranium serves three main markets: medical, the production of energy from power plants and armaments. The needs in the medical market are not sufficiently large to justify the demand in uranium. Furthermore, the medical milieu can use other substances to fulfill their needs⁹.

The production of energy by nuclear power plants is a subject that raises controversy. For some, this avenue is considered an alternative to greenhouse gases. In this regard, the supporters of the nuclear industry and some stock exchange speculators maintain that, according to them, the eventual demand for uranium will be greater than the supply. Upon first consideration, these things taken together justify real future needs. However, the *Factor 4* report, delivered to the French government last October, mentions that « nuclear energy represents 2% of the final energy in the world ».¹⁰ In reality, these are attempts to raise the price of uranium on the Stock Exchange.

As the Pembina Institute mentions in its report published in December of 2006 « *Nuclear Energy Is Not a Solution to Climate Changes* », the activities in the production of nuclear energy create as many « problems » upstream as downstream. Downstream, there is the uranium mining and the problem with mining residues (tailings) but also all the transportation involved, which contributes to greenhouse gases. Upstream, there is another problem of the same scale as the greenhouse gases: the production of nuclear wastes. A pile of nuclear wastes that we bequeath to future generations without knowing how they will go about neutralizing them.¹¹

According to Hubert Reeves, an internationally recognized astrophysicist, « *No one masters the problem of wastes nor the consequences of a major accident. [...] uranium is a resource that only the angels can manipulate* »¹². In other words, just as with mining residues (tailings), once they are produced, the nuclear wastes must be managed for thousands of years. Since such management depends on human intervention and is subject to the confinements of limited efficiency, it implies the risk of irreversible catastrophic accidents.

Finally, as regards the armament concern, it is important to consider the ethical questions as to the durable impacts of such exploitation and the use of this resource across the planet. Indeed, considering the situation that exists in certain countries like Iran and North Korea, and knowing that at this time 85% of Canadian uranium is exported outside of the country without any law guaranteeing its use once the borders are crossed¹³; don't the citizens here have a responsibility in the course of these events?

⁹ EDWARDS, Gordon & al. « *Uranium: Guide for discussion. Questions & answers* ». National Film Board of Canada. Accompanying the film « *Uranium* » director, Magnus Isacsson, 2006.

¹⁰ « Nuclear, a bad year in perspective in 2007? » Pierre Melquiot, January 4, 2007.

¹¹ PEMBINA INSTITUTE, « *Nuclear Power No Solution to Climate Change* », December 15, 2006.

¹² REEVES, Hubert, « *Scourge of the Earth* », Publisher: Éditions du Seuil, March 2003 & March 2005, p 80 to 108.

¹³ EDWARDS, Gordon & al. « *Uranium: Guide for discussion. Questions & answers* ». National Film Board of Canada. Accompanying the film « *Uranium* » Director, Magnus Isacsson, 2006.

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CONCLUSION

In conclusion, uranium mining poisons the air, water and earth and threatens the existence of present and future generations. It does not correspond to a safe economic sector of activity for all of the inhabitants of the planet. The use of uranium for the production of energy as an alternative to global warming raises enormous contradictions. In light of these facts, it is advisable to leave the ore where it is, i.e. in the earth's crust, as long as the question of its safe use is not guaranteed and the harmlessness of its residues (tailings) is not proven.

In light of all these considerations and out of respect for the principle of care for the health of living beings, it is in the name of all the individuals and associations which support this project that the APEHL asks you for a moratorium of five years against all exploration and mining activities over the whole territory of Québec. APEHL demands as well, that at the end of this delay, a legislative decree be adopted by the National Assembly of Québec to establish the everlastingness of this policy that represents the choice of a morally responsible society. We, citizens of Québec, want our government to take a position on this matter, for the health and security of all.

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« *Émission Découverte* » Radio Canada (« *Discovery Program* »), February 11, 2007, by Mario Masson and Jeannita.

<p>www.apehl.ca/uranium.htm: A more exhaustive bibliography, including consulted documents but not cited and other Internet links are also available on the APEHL web site.</p>
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OTHER INFORMATION

Page 3: In the course of the last decades, examples of negligence have taken place in the town of Oka, Québec and in St-John's, Newfoundland. Mining residues (tailing), containing radium, have been used in the manufacture of materials used in the construction of homes. It was only much later that the dangerous acknowledgement was made: homes thus constructed represented an unacceptable amount of exposure to radon for the health of the population.