

The Future of Uranium in Saskatchewan (May28/09, 11a.m.)

Mr. Dan Perrins

A Presentation on behalf of the Saskatoon Diocesan Sisters Association

Our history, with all four institutions-government, economics, education and religion have been shaped by an understanding of the world **before** the Hubble telescope. What have we learned from Einstein and Edwin Hubble's discovery?

We are the first generation now learning that the Universe began 13.7 billion years ago in a huge flaring forth that evoked billions of galaxies of stars, our sun and solar system of planets, with our jewel, Earth.

We are coming to know that the four forces at work in the Universe are: electromagnetic force, gravitational force, strong and weak nuclear force.

We are just coming to know that Earth evolved 4.5 billion years ago and that life began in the oceans with bacteria, cells, DNA and photosynthesis.

We are just discovering that humans emerged about 7 million years ago.

This new science is revealing an expanding Universe with radical sense of unfolding, and interconnectedness. As Christians, we believe all of this is the brilliant gift of the Creator God.

To put this 13.7 billion year story into perspective, Michael Dowd has put it into one year event.

So we have: the Flaring Forth in January,

February, the milky way self organized,

September, our solar system emerged from elemental stardust,

mid September, planetary oceans formed,

late September, Earth awakened into life.

Sex was invented in November,

Dinosaurs lived for a few days in early December,

Flowers burst forth in color in mid December,

And the Universe began reflecting consciously in and through the human

with free will and choice less than ten minutes before midnight on Dec.31.

We humans are ten minutes old!... late comers emerging from the planet, with the ability to explore, and create wonderful things. But we are young in "evolutionary wisdom" of the Universe. We are just learning that the Universe is a living system with its own rules or principles for staying vibrant, alive and in balance. All life is interrelated and interdependent.

Thomas Berry says we need to go the University of the Universe to study her wisdom and principles of balanced life.

Now our Industrialization has caused the living earth to lose her balance. The web of life: soil, water, air and food are toxic. We cannot have healthy humans and creatures on a sick planet. In fact we are told that every year 20 thousand species go extinct. Everything we do is derived from earth- the buildings we make, the clothes we wear, and the food we eat. We humans are highest on the food chain and therefore vulnerable to whatever happens to the air, soil, water and food.

We are invited to live in obedience to the way Earth reveals the mind of the Creator. Or as the Anglican, Evangelical Lutheran, Roman Catholic and Orthodox Catholic Bishops of Saskatchewan have stated: “the Christian churches affirm God created the earth and God continues to establish and preserve a just and ordered life for all creation. Human beings are part of a vast ecosystem of the planet. Choices made by human beings must respect God’s creation in careful interrelationship of earth, water, air and all living things. Exploiting the earth’s resources without regard for consequences is sinful and against God and God’s creation, according to Christian belief”.

When we look at water in the nuclear cycle, can we say that water will retain its pure, healthy quality? Maude Barlow was in town and spoke about the myth of ‘water abundance’. She spoke of climate change and that the melting glaciers and snow in the Rocky Mountains has and will continue to reduce our water flow. If a nuclear reactor is to be situated on the North Saskatchewan River, that will be a problem for the nuclear reactor requires a lot of water for cooling purposes. Will a nuclear reactor deprive communities and all creatures of water, or safe water? Will the water be contaminated with tritium from the nuclear reactor? Recycling water back into the river or lake has a potential to alter aquatic habitat and water distribution. Will warm water created by a reactor during our hot summers not destroy the delicate ecosystem of the river or lakes?

Will the nuclear reactor process protect the natural flora and fauna?

Mining and milling uranium leaves behind powdery uranium tailings containing 85% of the original radioactivity. This is carried by the wind and rain e.g. 20 years after Chernobyl accident in 1986, sheep farmers in Wales and England could not sell their herds because of radioactivity. Caribou ate lichen filled with it, and had to be destroyed for they were unfit for human

health. How safe will our prairie farmlands and cattle be with this radioactivity that can fly around in our windy province?

When we look at air quality we realize that nuclear plants emit a host of cancer causing radioactive isotopes absorbed by humans. Our body has no protection for inhaled particles because there is no exit from the lungs except through blood and lymph glands. This means inhaled particles of uranium are absorbed which are deadly. Other uranium elements like strontium 90 enters the body, and the body thinks it is calcium and sends it to bones, teeth and mother's milk. The US Academy of Science says the biological effect of Ionizing radiation is that there is no safe threshold of radiation.

Dr. Barbara Rose Johnston, a senior researcher at the Centre for Political Ecology in Santa Cruz, California was here in Saskatoon and spoke of the myth that nuclear energy is clean and green. Advocates, she said, are presenting only a small portion of the nuclear cycle, the actual generation of electricity. The whole picture from mining to cooling, to disposal of waste is far from green, and leaves a long term environmental damage and intergenerational health effects.

We, the Sisters of Saskatoon Diocese suggest we take action and utilize the free gifts of creation that do not harm water, air, soil, food, and that it sends us no bill! Wind and solar power are so fitting here on the prairie, and it will greatly reduce our greenhouse gases. It is also a renewable resource which uranium is not.

The cost to build a nuclear reactor is \$10 billion dollars, a debt carried by one million people in Saskatchewan means \$10 thousand dollars for every woman, man and child during 5- 10 years before it becomes operational. Latest facts suggest it will cost \$40 billion because of escalating costs. What about repairs and decommissioning? Will we and the next several generations be thrown into debt? Renewable energy sources like wind and solar will never come near that in cost.

The Bishops recognize the need for urgent action on climate change and the importance of reducing greenhouse gas emissions from coal burning power plants in Saskatchewan

We would encourage more time and opportunity for the people of Saskatchewan to be informed and express their ideas on this important decision facing all of us, and in a process that is fair and unbiased. Could

renewable resources be given the same time and educational coverage as the nuclear project so folks could make an informed choice?

Uranium was just discovered 200 years ago and not used until 70 years ago. Splitting the uranium atom is full of mystery and power as it undergoes many transformative changes in nuclear fission, and we humans are limited in our understanding of this volatile power. The bomb of Nagasaki and Hiroshima is one face of it. It was also one of the forces used in creation of our Universe. Are we ready to handle such power? Why the rush? (Remember, we are only 10 minutes old in the year long image, or 7 million years old, while Earth is 4.5 billion years) We have a great deal to learn about the systems of earth.

The convergence of study after study should guide us to apply the Precautionary Principle and not to expand nuclear power.

There is a paradigm shift unfolding as we learn about our intelligent, living planet and it is influencing our four institutions: economics, government, education, and religion. Earth is not simply a tool box for humans, or a lumber yard that we can simply take and take without deeper knowledge of earth's interconnections, principles or consequences. An image comes to mind of us humans handling uranium like children playing with matches not knowing the complexity, the power, and the mystery of its life, nor having the ability of predicting the consequences of its many transformations within the nuclear process. And the most devastating part is that we still have no safe solution for the long lasting waste product. Can we further risk damaging the life systems of the planet, as well the genetic evolutionary development of all beings because, it is business, it is simply, the way of business?

The great law of the Iroquois Confederacy states "In every deliberation we must consider the impact of our decisions on the next seven generations."

For us, it is more like 800 generations.

What will we choose? Will 'we' chose life?

Submitted by Sr. Judy Schachtel, SMS