**Uranium Mine Tailings**

*From Saskatchewan Mines and Mills – till end of 2008*

Gunnar Mine (closed) 4,400,000 tonnes

Laredo Mine (closed) 360,000 tonnes

Beaver Lodge (closed) 10,100,000 tonnes

Cluff Lake (decommissioned) 3,280,000 tonnes

Rabbit Lake – above ground—partially capped 6,500,000 tonnes

Rabbit Lake – in-pit management 7,130,466 tonnes

Key Lake – above ground 3,586,000 tonnes

Key Lake – Deilman Pit 6,945,000 tonnes

McLean Lake – JEB pit 1,322,214 tonnes

43,623,772 tonnes

*These tailings* include a variety of chemicals:

**Arsenic** -- does not disintegrate like radioactive substances

-- 1 tonne of tailings contain approx. 2.93 kilograms of arsenic

-- therefore total arsenic of 43,623,772 \( \times 2.93 = 127,877,652 \) kg

or 127,817 tonnes

**Radium -226** has a half-life of 76,000 years

-- approx. 1 tonne included in 3 million tonnes of uranium ore

-- total amount of ore extracted is not known

-- however, 20,715 tonnes of uranium would yield 7.046 kg of radium

-- radium is highly radioactive at 36.6 billion becquerels per gram

-- 7.046 kg of radium enough to overdose 70.46 billion humans

**Polonium-210** – half-life of 76,000 years, from disintegrating radium
References

Sam Gyepi-Garbrah, Project Officer, Uranium Mines and Mills Division, Canadian Nuclear Safety Commission, Ottawa, ON.

Dale Kristoff, Environmental Project Officer, Industrial, Uranium & Hard Rock Unit, Ministry of Environment, Saskatchewan Regina, SK.

Dr. Gordon Edwards, Director, Canadian Coalition for Nuclear Responsibility, Montreal, PQ.