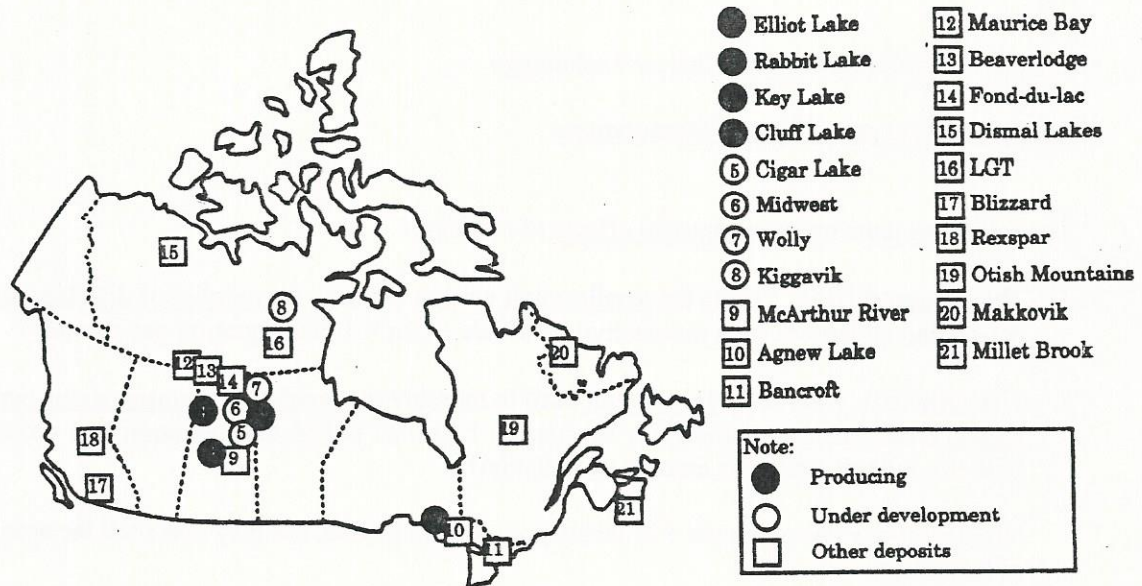


Uranium Deposits in Canada



Open-Pit Mines

- same basic dangers; perhaps not quite to same extent

Dangers to People Living Near a Uranium Mine

1. water pollution
2. contamination of air by radioactive dust particles
3. exposure to radon gas

Risks Related to the Everyday Operation of a Nuclear Power Plant

1. Thermal power stations use large amounts of water (as a cooler in the condenser unit). When disposed of, this water is warmer than normal water temperature. This is dangerous to fish and vegetation in the lake.
2. Disposed water contains radioactive contaminants (H-3, Ar-41, Xe-133, Xe-135, C-14, Cs-137, Cs-134, Co-60) in small quantities. Fish accumulate contaminants in their tissues. When humans eat the fish the contaminants are transferred to humans. (Human body cannot eliminate these harmful isotopes because the half-life of these is too long.)
3. Fission products (radioactive isotopes like C-14, Ar-41, Kr-85, I-131) can escape from power station via air filters, clothing of workers, instruments used, air filters, etc.
4. Tritium is produced in the reactor when neutrons released in fission of U process are absorbed by the deuterium in the heavy water. The tritium escapes the power station when heavy water is discharged outside the plant. Tritium is radioactive.

Leaving aside the problem of radioactive waste, why can it be said that nuclear E is a clean source of E?

1. No S or C released into air (therefore no greenhouse effect or acid rain)
2. No Hg released into water since reservoirs are not required.