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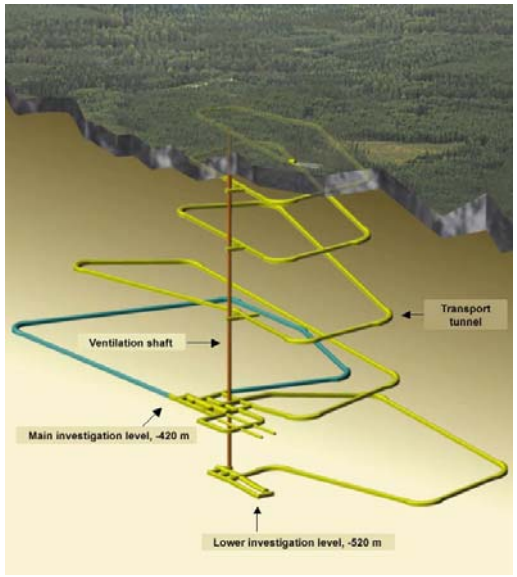
The Environmental and Ethical Basis of Geological Disposal of Long-Lived Radioactive Wastes

A Collective Opinion of the Radioactive Waste Management Committee of the OECD Nuclear Energy Agency



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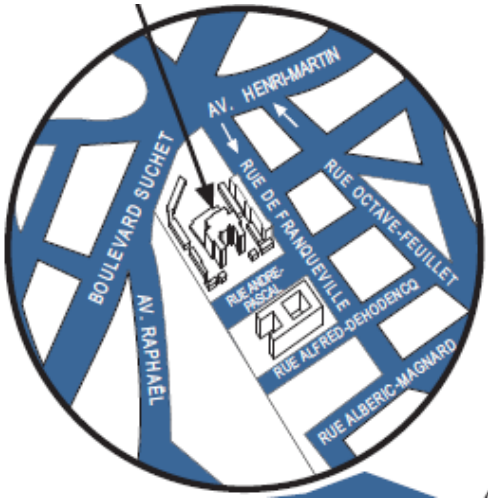

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In particular, the RWMC focused its attention on fairness and equity considerations:

- between generations (intergenerational equity), concerning the responsibilities of current generations who might be leaving potential risks and burdens to future generations; and

- within contemporary generations (intragenerational equity), concerning the balance of resource allocation and the involvement of various sections of contemporary society in a fair and open decision-making process related to the waste management solutions to be implemented.

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After a careful review of the environmental and ethical issues, as presented later and discussed in detail in the proceedings of the NEA Workshop, the members of the NEA Radioactive Waste Management Committee:

- consider that the ethical principles of intergenerational and intragenerational equity must be taken into account in assessing the acceptability of strategies for the long-term management of radioactive wastes;
- consider that from an ethical standpoint, including long-term safety considerations, our responsibilities to future generations are better discharged by a strategy of final disposal than by reliance on stores which require surveillance, bequeath long-term responsibilities of care, and may in due course be neglected by future societies whose structural stability should not be presumed;
- note that, after consideration of the options for achieving the required degree of isolation of such wastes from the biosphere, geological disposal is currently the most favoured strategy;

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- believe that the strategy of geological disposal of long-lived radioactive wastes:
    - takes intergenerational equity issues into account, notably by applying the same standards of risk in the far future as it does to the present, and by limiting the liabilities bequeathed to future generations; and
    - takes intragenerational equity issues into account, notably by proposing implementation through an incremental process over several decades, considering the results of scientific progress; this process will allow consultation with interested parties, including the public, at all stages;
- note that the geological disposal concept does not require deliberate provision for retrieval of wastes from the repository, but that even after closure it would not be impossible to retrieve the wastes, albeit at a cost;
- caution that, in pursuing the reduction of risk from a geological disposal strategy for radioactive wastes, current generations should keep in perspective the resource deployment in other areas where there is potential for greater reduction of risks to humans or the environment, and consider whether resources may be used more effectively elsewhere;

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Keeping these considerations in mind, the Committee members:

- confirm that the geological disposal strategy can be designed and implemented in a manner that is sensitive and responsive to fundamental ethical and environmental considerations;

- conclude that it is justified, both environmentally and ethically, to continue development of geological repositories for those long-lived radioactive wastes which should be isolated from the biosphere for more than a few hundred years; and

- conclude that stepwise implementation of plans for geological disposal leaves open the possibility of adaptation, in the light of scientific progress and social acceptability, over several decades, and does not exclude the possibility that other options could be developed at a later stage.