

A STRATEGY FOR DEVELOPING A NATIONAL REPOSITORY FOR SPENT FUEL

**Mr. Peter Nygårds
President**

Swedish Nuclear Fuel and Waste Management Company (SKB)

Since the end of the 1970s, extensive research and development work has been done in Sweden on a complete nuclear waste management programme. The fundamental guidelines and the division of roles between industry and authorities were established more than 20 years ago.

SKB has developed a system that ensures the safe handling of all kinds of radioactive waste from the Swedish nuclear power plants for a long time ahead. The main facilities, which began operation in the 1980s, are a central interim storage facility for spent nuclear fuel, a final repository for low and intermediate level waste and a transport system. The remaining components of the system, now being planned, are a factory for waste canister production, an encapsulation facility and a deep geological repository for disposal of spent nuclear fuel. A broad basis of knowledge has been established over the years through laboratory studies, underground research experiments and performance assessment model development.

Site selection for the deep repository is perhaps the most difficult and sensitive issue within the whole programme. The repository will be sited at a suitable location in Sweden where both rigorous safety requirements can be fulfilled and the necessary activities can be carried out with the consent of the concerned municipality and population.

Some principles are fundamental for the Swedish programme. One is that nuclear waste produced in Sweden must also be disposed of within the country. Another principle is that our generation must take full responsibility for the radioactive waste, and not leave an undue burden to coming generations. Still another basic principle is that coming generations should be given the freedom to make their own decisions, for instance with regard to long term protection and utilization of resources. Finally, the development of the repository must proceed in an open democratic process with a high degree of flexibility.

Siting work for the deep repository began in 1992. General siting studies covering the entire country have been performed, along with feasibility studies in individual municipalities. The siting work is carried out in an open dialogue with the concerned citizens and with a flexible solution as the goal. A step-wise implementation approach is a sensible and efficient way to deal with the large number of technological and democratic questions that are inherent in such a major and complex project.