

NATIONAL AND REGULATORY FRAMEWORK (MARCH 2005)

1.1 National framework

1.1.1 National policy

It is necessary to obtain licence from the government to build, own and operate a nuclear facility, including facilities for treatment and disposal of radioactive waste. The Norwegian Radiation Protection Authority (NRPA) handles the applications and gives advice to the Ministry of Health/government regarding applications for licence. A combined disposal and storage facility for LLW and ILW is in operation and most of the LILW from research reactors and from research, industry and medical applications will be disposed of at this site.

No decision has yet been taken regarding the spent nuclear fuel from the research reactors or the LILW long-lived waste and some other waste that will not be disposed of in the Himdalen facility, but an expert committee has recommended that it be stored for at least 50 years at an intermediate storage facility before final disposal.

Norway has signed and ratified the Joint Convention on the safety of spent fuel management and on safety of radioactive waste management. The first national report has been prepared and delivered to IAEA.

1.1.2 Institutional framework

The Institute for Energy Technology (IFE) is responsible for handling, treating and storing of all Norwegian radioactive waste. They have a conditioning plant at the Kjeller facility. They are also responsible for the operation of the combined disposal and storage facility for LILW in Himdalen, Aurskog – Høland municipality. This facility started operation in March-99.

The Directorate of public Construction and property (Statsbygg) is the builder and owner of the Himdalen facility.

The Norwegian Radiation Protection Authority, NRPA, is the national authority for radiation protection and nuclear safety and reports to the Ministry of Health.

The general public and other stakeholders participate during the licensing process with questions and comments and in the impact assessment through formal hearing procedures.

1.2 Regulatory framework

1.2.1 Regulatory function

The Norwegian Radiation Protection Authority (NRPA) is the regulatory body in Norway for radiation protection, nuclear safety, security and nuclear emergency preparedness. NRPA is reporting to the Minister of Health (MH). MH is the licensing organisation for construction and operation of nuclear facilities in Norway (the waste repository at Himdalen, research reactors at IFE etc.). NRPA handles any licensing applications and gives recommendations to the MH.

1.2.2 Organisation and resources

NRPA has 105 employees. NRPA is funded by the national budget mainly from MH, but also from other ministries.

2. LEGISLATION AND REGULATION

2.1 Legislation

- The Act of 12 May 1972 No. 28 on Nuclear Energy Activities regulates basic principles and objectives for safety of nuclear installations, including licensing procedures for construction and operation of nuclear facilities.
- The Act No. 36 of 12. May 2000 on Radiation Protection and Utilisation of Radiation regulates the safety of radiation sources and their use, the protection of workers, the environment and the general population. Radiation protection at nuclear facilities is regulated by this law.
- Act No. 77 of 14. June 1985 on planning and building with its specific regulations on impact assessment of 21 May 1999, regulates the (environmental) impact assessment needed to be performed before construction of a nuclear facility, including public participation such as information meetings and formal hearings.

2.2 General regulations

- The Atomic Energy Act and the Act on Radiation Protection and Utilisation of Radiation are the two relevant laws.
- The Regulation on Radiation Protection and Utilisation of Radiation (entered into force 1.1.2004) gives specific requirements for implementation of the act
- The licensing procedure for nuclear facilities is regulated in the Atomic Energy Act, and the IA is regulated through the Planning and Building act.

2.3 Specific regulations

- The repository for LILW at Himdalen: Construction license was granted to Statsbygg by Royal Decree.
- Licence was granted by Royal Decree to IFE for operation of the Himdalen facility for a ten year period.
- License was granted by Royal Decree for the period 2000 through 2008 to IFE for operation of their nuclear facilities including the waste conditioning plant and waste and spent nuclear fuel storages at the IFE sites.
- Safety reports are required for each nuclear facility. It is required that they are updated and submitted to the authority (NRPA) for approval each third year.

2.4 Guidance

- NRPA has established specific guidelines and requirement for the facilities. An IAEA WATRP-review was used during the licensing process for the Himdalen facility. International guidelines are used as references.
- The operator is obliged to have internal guidelines for operation, radiation protection, QA etc.
- NRPA establishes guidelines for the implementation and use of the Regulation on Radiation Protection and Utilisation of Radiation

3. CURRENT STATUS

3.1 National status and issues

3.1.1 Waste classification and sources

Waste sources: The research reactors at IFE, industry, medicine, isotope production, smoke detectors and other consumer's products.

Classification of waste: Norwegian legislation does not specify any criteria for the classification of radioactive waste. However, the classification in IAEA safety series No. 111-G1.1 "Classification of radioactive waste" is applied as far as is reasonably practicable. Given the long history of radwaste management in Norway, the IAEA criteria cannot be followed exactly for most of the historical waste.

At this time, a transition period is taking place. Archives are being converted into electronic databases, a more formal classification system is being put in place, and there are ongoing effort to achieve a more detailed overview of legacy waste as well as better predictions of upcoming waste: (i) LLW – short-lived and long-lived; (ii) ILW – short-lived and long-lived; (iii) spent nuclear fuel, and (iv) waste containing only naturally occurring radioactivity is separately treated, stored and disposed of.

3.1.2 Waste management strategy

All Norwegian LILW is handled, treated, conditioned and stored at the IFE, Kjeller site.

The most of the waste packages (mainly 210-L drums) will be disposed of in the Himdalen facility (in operation since March 99 until 2030), except long-lived waste, some sealed radiation sources. The capacity at Himdalen is an equivalent of 10 000 drums. Approximately 100-120 drums are generated each year. 166 drums of LILW waste (historical waste) is now being stored in the storage section of the Himdalen facility, waiting for a final decision, either to relocate it or to encasing it in concrete for final disposal. The decision will be taken at closure of the facility, year 2030. At the moment an updating of the total waste inventory is ongoing in Norway to be able to do better predictions and define what will be the final disposal. In Himdalen or in another facility.

No decision has yet been taken regarding the spent fuel from the research reactors, long-lived waste and other waste sources, packages that can not be disposed of in Himdalen. An expert committee has recommended that it be stored for at least 50 years at an intermediate storage

facility before final disposal. The committee recommended to investigate the possibility for disposal in deep boreholes in Norway as one possibility.

3.2 Regulatory issues

3.2.1 *Current issues/problems*

- The final strategy for handling of the spent fuel from the research reactors is under discussion.
- The report by the committee has been through a public hearing. The Ministry of Trade and Industry has decided to follow up the suggestion by the committee for the establishment of a longterm storage.
- A small group (committee) was established to evaluate and suggest possible technical solution for the construction of a (new) storage facility for the spent nuclear fuel and the longlived waste. A report was delivered to the Ministry of Trade and Industry in July 2004 (phase one).
- It is expected that the Ministry will initiate the work for further technical specifications, solution of option (kind of facility) and the site selection process (phase 2) later this year.