

Editorial

Disposal of Nuclear Waste: A Remote Possibility: German Experience

After the political consensus for the peaceful use of nuclear energy, regulation for the search and choice for the final disposal of heat generating radioactive wastes was agreed upon in the year 2013 in Germany. The Federal State Commission should translate it into action. But the question is when the final disposal site will really be ready for use. The assignments of the Commission are

- To evaluate the choice of location, regulations and to debate on, social policy as also scientific technological questionnaire for the choice of location – says Andreas Havenith, the Executive Director of Aachen Institute for Nuclear Training (AINT).

So the report of nuclear waste deposit symposium of the AINT at the end of June 2014 in Düsseldorf made the subject matter 'the consequences for the choice of location, duration and social acceptance of the method'. The objective of the method for the choice of location is to find out the final storage place for high radioactive wastes - Especially radioactive fuels from the nuclear power plants. This should guarantee the best possible safety for a period of 1 million years.

With that a series of priorities are valid. So the final dumping in deep geological formations should succeed. The closing of radionuclide of the biosphere should be made safe in the long run. To that the priority is for previous final dumping before a long-term intermediate storage. Also the responsibility for the radioactive wastes should not be vested with the future generations. Finally it is valid that the wastes can be brought back. Background for this: the technical progress could generate better methods in future which no one would want to seal up. Regarding positioning of a deep geological formation the commission also examines the alternative possibility for a regulated disposal. So that the commission member, Bruno Thomauske counts to bring forth in the outer space, in deep sea sediments as also long-term intermediate storage over 100 to 400 years. To this there occurs the transmutation, the metamorphosis of longlived radionuclides to short-lived one.

The EU criterion 2011/70/Euratom demands national programmes for setting up of terminal deposition in

each member state. With that it will be guaranteed that the competent regulatory authority must be isolated functionally from all other authorities and/or organizations which are associated with the disposal of burnt fuel rods as well as radioactive wastes in order to make safe the real independence of the unsuitable influence in their regulating functions.

Therefore it will give a shape of a new independent Federal authority office for the nuclear technological disposal which should be formed in the area of business of the Federal Environment Ministry. It takes over the assignments of the atomic criteria permitting authority for the final storage with the citizens associations for the preparations of the operations, progress and support of the public.

The underground exploration which demands the leader of the Institute for Nuclear Disposal and Technology Transfer of RWTH, Aachen, the exploration should be from the day with the help of 3-D seismic and microinvasive exploration strengthened. Through diverted boring the underground gets in big area investigated. With the results the stations and the regions could be compared.

With the present choice of location regulations the formulated concepts an available terminal storage not to be expected before 2080. Thomauske summarizes 'on the basis of this, the optimization-standards are to be tested'. That the underground exploration for the location fixing is scientifically dispensable. If the underground exploration for the fixing of location be scientifically avoidable, in this framework this should be avoided. Countries like Switzerland had shown that it could reduce the choosing process from 15 to 20 years. The costs get then reduced to 1 milliard Euro. For Thomauske 'the only possibility for solution of final disposal question is probably belongs to a generation'. Only by 2065 a terminal depot can be commissioned as opined by experts.

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