RADIOACTIVE WASTE MANAGEMENT PROGRAMMES IN OECD/NEA MEMBER COUNTRIES

CZECH REPUBLIC

NATIONAL NUCLEAR ENERGY CONTEXT

Commercial utilization of nuclear power in the Czech Republic started in 1985 and by 2008 there are 6 nuclear power units connected to the electricity grid. In 2008 they generated 35 TWh of electricity, 32% of the total electricity generated.

In the Czech Republic there are operated more nuclear facilities. In the NPP Dukovany area, the site is operated by CEZ a.s. In addition to four reactors VVER 440/213, there are installed following nuclear facilities:

- MSVP Dukovany – intermediate storage operated since 1997,
- SVP Dukovany – storage in trial period operated since November 2006 and
- ÚRAO Dukovany – disposal site operated since 1995, owned by state since 2000.

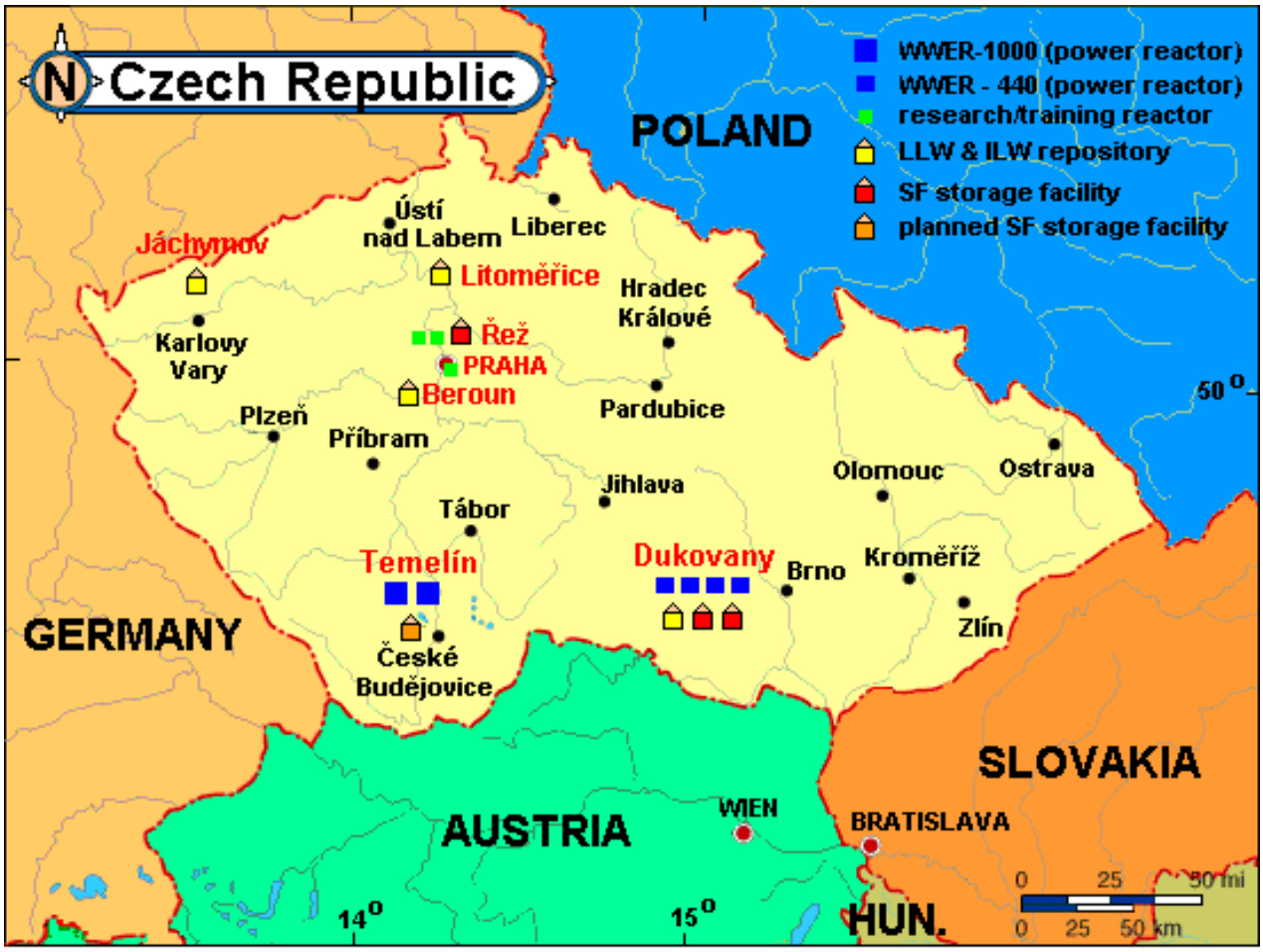
Besides this, in the site exist spent fuel storage ponds and transport containers shafts for manipulation activities. Similar installations can be found in NPP Temelín where there are installed two reactors VVER 1000/320. A dry storage facility is approved to be built in Temelín during several following years.

Spent fuel raised from research reactor LVR–15 in NRI Řež can be stored in HLW storage facility in Řež. Other research reactors in NRI Řež (LR–0) a Faculty of nuclear Engineering Praha (VR–1) have limited thermal power and produce no waste during the operational period.

Repository Dukovany is used in prevailing measure for disposal of energetic waste, and there are other following disposal systems:

- ÚRAO Hostim near Beroun (operated 1959-1964; cloused 1997),
- ÚRAO Richard Litoměřice (institutional waste; operated since 1964),
- ÚRAO Bratrství Jáchymov (institutional waste containing natural radionuclides; operated since 1974 – not licensed as a nuclear facility).

Location of facilities and the summary of waste management methods:



Location of nuclear facilities in the Czech Republic

Type of Waste	Long Term Option	Financing	Present Activities / Nuclear Installation	Planned nuclear installations
Nuclear spent fuel	Direct disposal to geological repository, other options followed (reprocessing, regional repository)	Nuclear account	Long term storage / storage facilities Dukovany Dukovany (SF from NPP) Reprocessing in Russia and storage / Storage HLW (research)	Storage facility Temelín Geological repository
Operational waste	Disposal in operated repositories and in the planned geological repository	Nuclear account	Disposal in the operated repository (Dukovany) and storage in operational facilities (NPP)	Geological repository
Disposal in operated repositories and in the planned geological repository	Disposal in operated repositories and in the planned geological repository	Nuclear account	Storage and disposal in operated repositories (Richard, Bratrství, Dukovany), storage (NRI Řež plc.)	Geological repository
Decommissioning	Delayed decommissioning (NPP) and immediate decommissioning (research reactors and	Decommis-sioning funds	Update of decommissioning plans; at present, all nuclear facilities are operated (NPP, nuclear reactors, storage facilities, repositories)	Geological repository
Spent sealed sources	Disposal in operated repositories and in the planned geological repository ; reenter to the country of production	Waste producer; state budget if the producer is	Storage and disposal in operated repositories (Richard, Bratrství, Dukovany)	Geological repository
Uranium mining waste	Remediation of milling ponds	State budget (public company)	Remediation of site Stráž and exploitation of milling ponds in Rožná (Dolní Rožínka)	No planned facilities

SOURCES, TYPES AND QUANTITIES OF WASTE

Low- and intermediate-level waste – short-lived (LILW-SL)

This type of waste contains small or medium amounts of radionuclides with half-lives of under 30 years and arises in liquid or solid form during the operation and decommissioning of nuclear reactors, and during the use of radioactive sources in medical, research and industrial applications. Very low-level waste, and waste contaminated with naturally occurring radioactive material (NORM), form a specific sub - category. These wastes are created in the processing of certain metal ores or phosphate materials, during

the shipment and processing of crude oil and in the water-treatment industry. Their radionuclide concentrations are below or near the limit for permitting their release into the environment without further radiological control. The quantities of LILW-SL in the Czech Republic are summarized in the table below. This shows the quantities of operational and decommissioning waste arising from the Dukovany and Temelin nuclear power plants (NPP) over indicated time periods, together with average annual waste production rates. It also shows the quantities of waste arising from the activities of institutions outside the nuclear industry over indicated periods, also with average annual production rates.

Low- and intermediate-level waste – long-lived (LILW-LL)

This type waste contains mainly radionuclides with half-lives exceeding 30 years, together in some cases with medium amounts of shorter-lived radionuclides. About 90% of it arises from the operation and decommissioning of nuclear facilities with the remainder coming from the use of radioactive sources in the institutions outside the nuclear industry and from decommissioning of their equipment and facilities.

PRODUCTION OF processed LILW [m^3]			
Installation	**Operation**	**Decommissioning**	**Average production/year**
NPP Dukovany (1985-2025)	10250		256
NPP Dukovany (2025-2035)		3640	364
NPP Dukovany (2085-2094)		2389	239
NPP Temelín (2000-2042)	12000		285
NPP Temelín (2040-2047)		620	78
NPP Temelín (2090-2095)		4012	669
Total NPPs	**32907**		**1891**
Institutions (1958-2000)	2800		67
Institutions (2000-20950)	5700		60
Total institutions	**8500**		**127**

Spent nuclear fuel and high-level waste

According to the Atomic Act, spent nuclear fuel is not considered to be waste until it is declared as such by its owner or by the State Office for Nuclear Safety. The company that operates the nuclear power plants in the Czech Republic is CEZ, which has adopted the open nuclear fuel cycle concept. Under this concept spent fuel is not reprocessed for recovery of reusable material. For this reason, the management of repro- radioactive waste is not currently an issue of direct concern to CEZ.

High-level waste contains substantial amounts of radionuclides with short and medium half-lives, together with longer-lived radionuclides. It would arise mainly from the reprocessing of spent nuclear fuel but only if the CEZ policy was changed.

The quantities of LILW-LL and spent nuclear fuel in the Czech Republic are summarized in the table below. This shows the quantities of operational and decommissioning waste and spent nuclear fuel arising from the Dukovany and Temelin nuclear power plants over indicated time periods, together with analogous figures for the waste and spent fuel arising from the activities of institutions outside the nuclear industry.

The table excludes information about waste and spent fuel that may arise from any new nuclear facilities, as well as information about any high level waste that would be generated if any decision were made to reprocess spent nuclear fuel. Spent nuclear fuel from the reactor produced by Faculty of nuclear Engineering Praha in the decommissioning period is included in the form of vitrified high-level waste under the entries for „Institutions".

PRODUCTION OF processed HLW and SF			
Installation	**Operation [m^3]**	**Decommissioning [m^3]**	**Nuclear Spent Fuel [tHM]**
NPP Dukovany (1985-2025)	50		1937
NPP Dukovany (2085-2094)		2000	
NPP Temelín (2000-2042)	50		1787
NPP Temelín (2090-2095)		624	
Total NPPs	**2724**		**3724**
Institutions (1958-2000)	80	5	0.2
Institutions (2000-20950)	150	20	0.3
Total institutions	**285**		**0.5**

RADIOACTIVE WASTE MANAGEMENT POLICIES AND PROGRAMMES

Waste management policies

The collection, transportation and storage of radioactive waste and spent nuclear fuel, and the processing of radioactive waste, is carried out in the Czech Republic by licensed private bodies. The state - owned Radioactive Waste Repository Authority (RAWRA) is responsible for disposal of radioactive waste and for the future processing and disposal of spent nuclear fuel. If necessary, RAWRA can also provide extended services to the generators of these materials.

LILW-SL will be safely disposed of in the Czech Republic in existing near-surface repositories whose operations will be continually assessed and optimised and whose associated safety documentation will be kept up-to-date.

One possible method for the disposal of LILW-LL, and any high-level waste, would involve emplacement in a deep geological repository but, in the absence of such a facility, these materials will be stored by the waste generators on their own sites, or by RAWRA. Conditions will be stipulated for its treatment, and adequate storage capacity will be reserved or built.

The technical procedures for disposal of radioactive waste and for the preparation of a deep geological disposal facility in the Czech Republic will draw upon the results and experience of foreign research and technical developments. In addition, the options for reprocessing spent nuclear fuel, and for reducing its volume or toxicity, will also be pursued.

PROGRAMMES AND PROJECTS

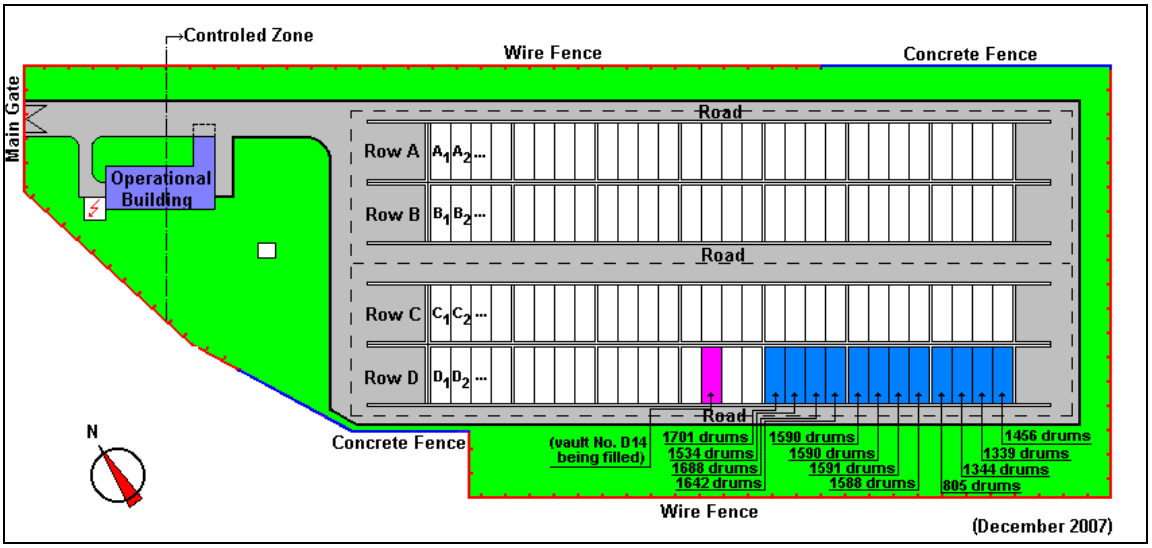
Low- and intermediate-level waste management

The largest volume of radioactive waste is comprised of LILW-SL. After two or three hundred years, the activity of this waste decays to a very low level and, hence, it can be deposited in near-surface repositories. The techniques for processing and treating such radioactive waste for disposal are well developed and are implemented in the Czech Republic. Some of these radioactive wastes contain radionuclides with very short half-lives and their activity decays to a very low level in a short time. Such transient waste is processed, treated and stored in the same way as other low-level wastes but, after its activity decreases to below a stipulated level; the waste is released for recycling or disposal at secure, non-radioactive waste sites.

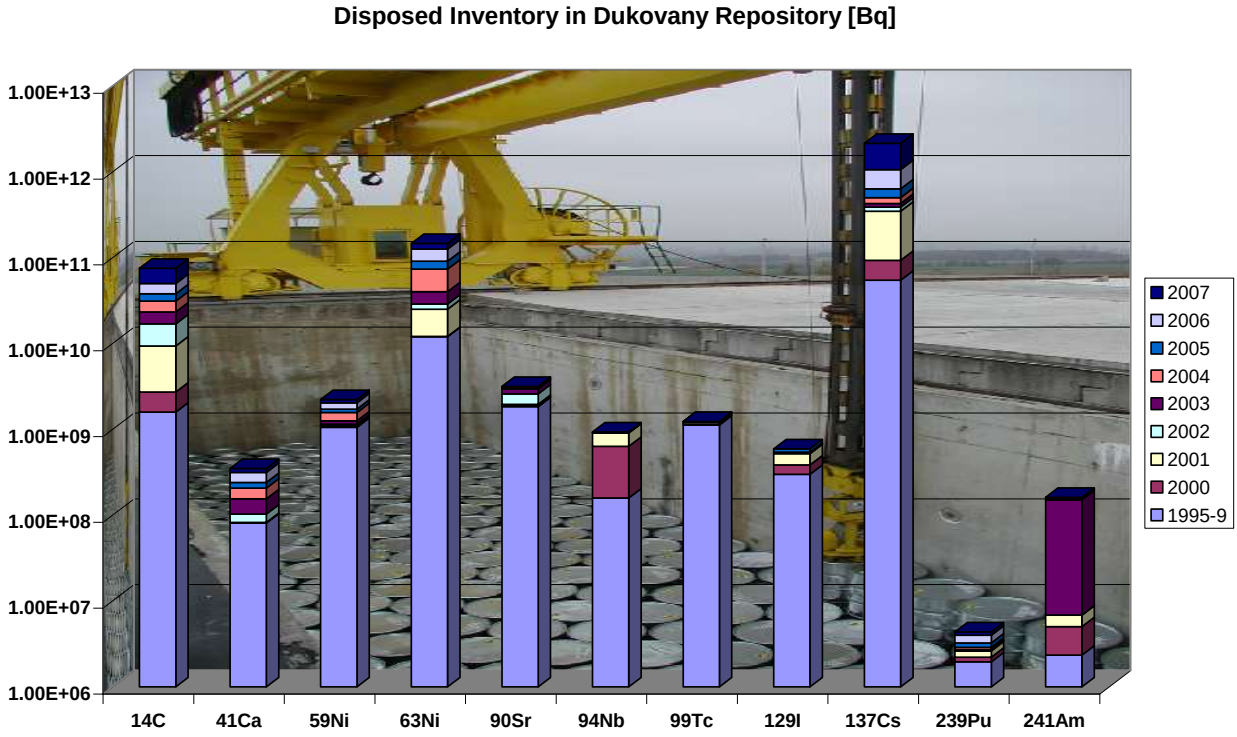
Production of very low-level waste, and waste contaminated with naturally occurring radioactive material (NORM), takes place at specific facilities and could potentially endanger the local area. Hence particular attention has also been paid to these materials. The collection, sorting and processing of such waste is currently carried out on an ad-hoc basis although a system for its collection and assessment has now been partially implemented. A legal framework for the management of such materials has not yet been established in the Czech Republic, but arrangements concerning the commercial management of waste contaminated with NORM, which arises from certain operations in the uranium industry, are currently being discussed.

A LILW-SL disposal facility is located on the site of the Dukovany NPP. It is intended for the disposal of operational waste produced by both the Dukovany NPP and the Temelín NPP. The disposal capacity of 55 000 m^3 is large enough for both plants, including their decommissioning.

Disposal facility plan and repository inventory are seen in following figures and table.

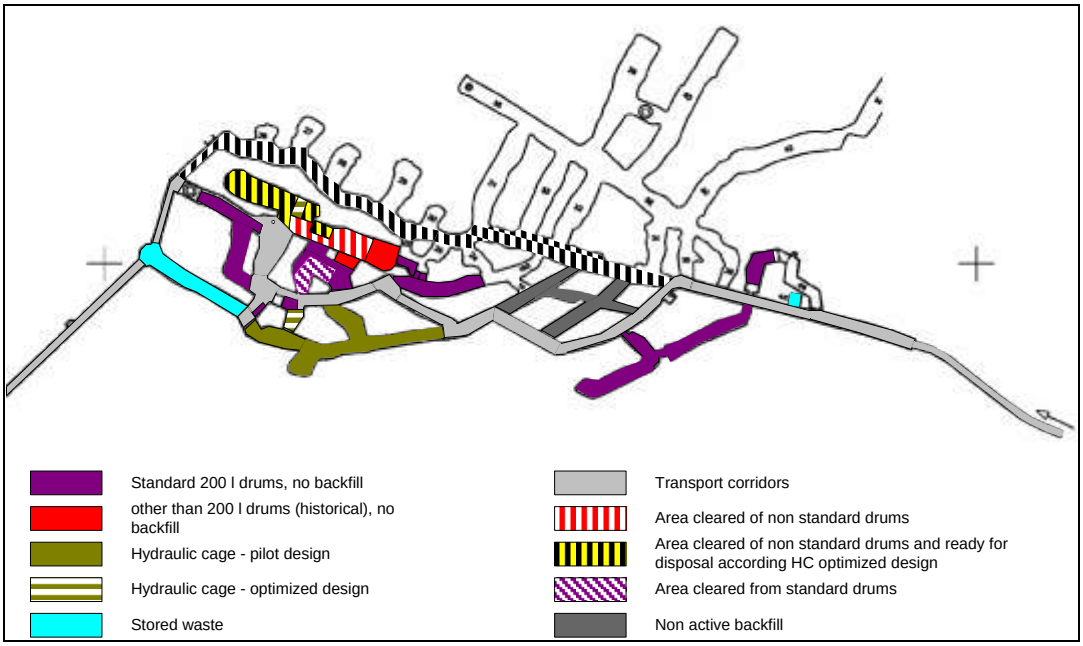


Radionuklid	Total activity [Bq]	Radionuklid	Total activity [Bq]
^{14}C	7,36.10^{10}	^{99}Tc	1,23.10^{9}
^{41}Ca	3,43.10^{8}	^{129}I	4,32.10^{8}
^{59}Ni	2,19.10^{9}	^{137}Cs	2,13.10^{12}
^{63}Ni	1,44.10^{11}	^{239}Pu	4,30.10^{6}
^{90}Sr	3,16.10^{9}	^{241}Am	1,58.10^{8}
^{94}Nb	1,23.10^{9}		



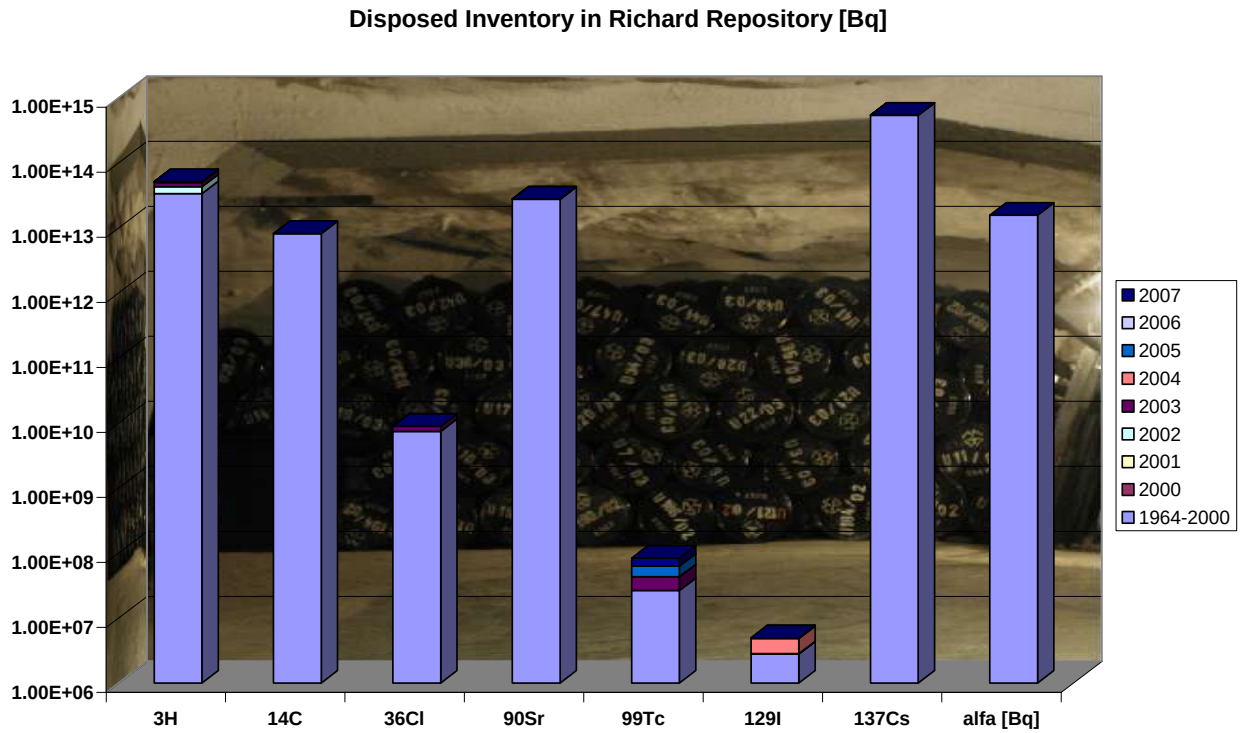
The Richard disposal facility, located near the town of Litomerice, is designated for disposal of institutional LILW-SL. It is constructed on the premises of a former mine and is designed for disposal of radioactive waste containing artificial radionuclides. Its disposal capacity is 8 500 m3, which is sufficient for disposal of all the institutional LILW-SL expected to be generated up to 2070.

Disposal facility plan and repository inventory are seen in following figures and table.



Radionuclide	Total Disposed Activity [Bq] 31.12.2007
^{3}H	4,54.10^{13}
^{14}C	8,20.10^{12}
^{36}Cl	8,90.10^{9}
^{90}Sr	2,58.10^{13}
^{99}Tc	8,35.10^{7}
^{129}I	4,94.10^{6}
^{137}Cs	5,05.10^{14}
total activity of long lived α	**1,52.10^{13}**

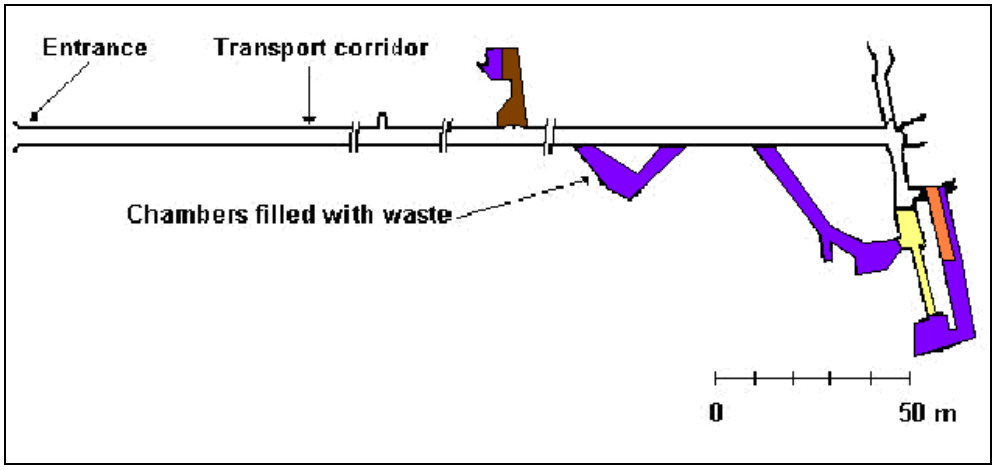
Radionuclide	Total Stored Activity [Bq] 31.12.2007
^{137}Cs	2,84.10^{14}
^{60}Co	4,60.10^{14}
^{241}Am	6,36.10^{12}
^{239}Pu	3,41.10^{12}
^{238}Pu	1,14.10^{11}
^{238}U	1,40.10^{10}
^{226}Ra	3,65.10^{08}
^{235}U	4,00.10^{05}
total activity of long lived α	**9,90.10^{12}**



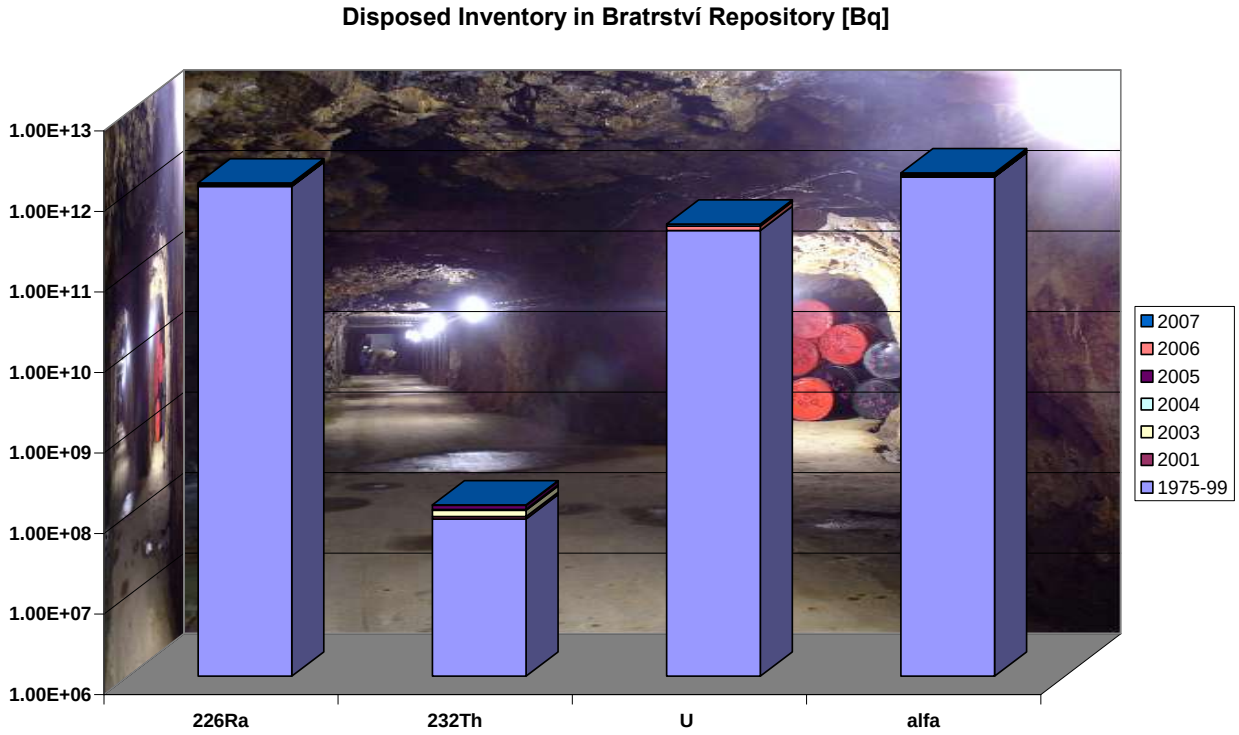
The quantities of LILW-LL are relatively small, but it is not suitable for disposal in the existing near-surface repositories. The requirements for processing, storage and subsequent deep geological disposal of this waste will be stipulated in due course. These requirements are well-established elsewhere, and the associated techniques are already used commercially, so implementation is more a matter of time and finance than a technical issue. For the time being, most of this kind of waste is stored without processing, where it arises and by its generators. A small amount is stored by RAWRA.

It is planned that the LILW-LL from NPP operations will continue to be stored at the NPP until its decommissioning, when the waste will then be disposed of into a deep geological repository (DGR). As regards institutional LILW-LL, the Bratrství repository, located in a former uranium mine near the town of Jáchymov, is designed for disposal of waste containing naturally occurring long-lived nuclides such as ^{226}Ra and uranium. Its capacity is 1 200 m^3, which is expected to be sufficient for disposal of all waste of this type. The institutional LILW-LL containing artificial long-lived nuclides such as ^{241}Am and ^{239}Pu will be stored at the Richard repository until the DGR is in operation.

Disposal facility plan and repository inventory are seen in following figures and table.



Radionuclide	Total activity [Bq]
^{226}Ra	$1{,}33.10^{12}$
U	$4{,}11.10^{11}$
^{232}Th	$1{,}34.10^{8}$
alpha	$1{,}78.10^{12}$



It is planned to support the systematic management of low- and intermediate-level waste by establishing a central collection and processing facility. Procedures will be also be established for making decisions about the release of very low-level wastes into the environment without further regulatory

control under the Atomic Act, and waste disposal sites, at which such waste can be accepted, will be identified.

The overview of waste management capacities and present state of their exploitation follow in two next tables.

Operator	Installation	Storage/Disposal Capacity
NPP Dukovany	**Storage of liquid waste**	
	– radioactive concentrate	4500 m^3
	– active ion-exchangers	460 m^3
	Conservation, storage and treatment	
	– treatment facility and storage of solid waste	1000 t
NPP Temelín	**Storage and treatment of liquid waste (BPP)**	
	– radioactive concentrate	520 m^3
	– active ion-exchangers	200 m^3
	Conservation, storage and treatment of solid waste	
	treatment facility and storage of solid waste	500 t
RAWRA	**Richard Repository**	8 300 m^3
	Bratrství Repository	1 200 m^3
	Dukovany Repository	55 000 m^3
	Hostím Repository	1 690 m^3
NRI Řež	**Waste treatment facility (Velké zbytky)**	
	– storage of liquid waste	163 m^3
	– storage of solid waste	49 m^3
	HLW Storage	300 m^3
	Storage Area Červená skála	198 m^3
	Temporary Storage	1400 m^3

Operator	Installation	Exploited capacity
NPP Dukovany	– radioactive concentrate	1 793 m^3
	– active ion-exchangers	318 m^3
	– treatment facility and storage of solid waste	507 t
	– radioactive concentrate	309 m^3
	– treatment facility and storage of solid waste	119 t
NPP Temelín	**Richard Repository**	7 300 m^3
	Bratrství Repository	993 m^3
	Dukovany Repository	5 930 m^3
	Hostím Repository	330 m^3
	Waste treatment facility (Velké zbytky)	49 m^3
	HLW Storage	198 m^3
	Storage Area Červená skála	5,2 m^3
	Temporary Storage	590 m^3

MANAGEMENT OF HIGH-LEVEL WASTE AND SPENT NUCLEAR FUEL

High-level waste, and spent nuclear fuel if it is declared as waste, constitutes the most hazardous category of radioactive waste. The volume of this waste is low, and is less than a tenth of the volume of all radioactive waste generated in the Czech Republic. Because the levels of activity and concentrations of long-lived radionuclides are high, this kind of waste is currently destined for disposal in a deep geological repository. Techniques for the processing of such waste are available and are already used industrially in spent nuclear fuel reprocessing plants elsewhere. In fact the vitrification process was developed in the Czech Republic. Containers are currently being designed for the direct disposal of spent nuclear fuel or processed high-level waste, and suitable structures and insulation materials are being analyzed. The techniques for spent nuclear fuel and high-level waste processing, and for production of repository containers and insulation materials, will be further developed and final selection made when the geological and hydrogeological conditions at the site selected for the deep repository are known.

Currently, spent nuclear fuel from the Dukovany NPP is stored on the premises of the plant itself, and CEZ has adopted a concept of dry storage in dual-purpose, transport/storage containers. Spent fuel from research reactors is stored at the Nuclear Research Institute at Rez. Spent nuclear fuel from the Temelín NPP will be later stored at a storage facility that is planned to be built after 2009.

The final decision about management of high-level waste and spent nuclear fuel depends on the outcome of current research and development for a deep geological repository in the Czech Republic, as described below. At the present time, the option of high-level waste and spent nuclear fuel disposal in an international regional repository has not been excluded. For the time being, however, it seems unrealistic but the knowledge acquired in development of a deep geological repository in the Czech Republic would be invaluable in the construction of a regional repository, if such a project became feasible in future.

Also in connection with management of high-level waste and spent nuclear fuel, certain advanced studies will be financially and scientifically supported. These include studies of methods for separating the small quantities of long-lived radionuclides from spent nuclear fuel for their separate treatment and disposal or for their transmutation into short-lived species. These studies have the potential to reduce the toxicity of the residual waste for disposal and, in the case of transmutation, to realize the energy potential of the material remaining in spent nuclear fuel.

The overview of spent fuel management capacities:

Operator	**Installation**	**Storage capacity** [fuel assemblies]	**Storage capacity** [tonnes of metal]
NPP Dukovany	Reactor 1	699	83
	Reactor 2	699	83
	Reactor 3	699	83
	Reactor 4	699	83
	Intermediate storage	5 040	600
	Storage	11 172	1340
NPP Temelín	Reactor 1	703	396
	Reactor 2	703	396
NRI Řež	HLW storage pond	465	
	storage pond	60	
	temporary storage	80	

Present state of the exploitation of storage capacity:

Operator	Installation	Exploited capacity [fuel assemblies]	Exploited capacity [tonnes of metal]
NPP Dukovany	Reactor 1	536	64
	Reactor 2	643	77
	Reactor 3	586	70
	Reactor 4	607	73
	Containers CASTOR-440/84M na servisním místě HVB 1	84	10
	Intermediate storage	5 040	600
	Storage	252	19
Temelín	Reactor 1	255	123
	Reactor 2	168	81
Řež	HLW storage pond	0*	
	storage pond	32*	
	temporary storage	0*	

***** In the frame of international project of RRRFR – Russian Research Reactor Fuel Return was all the spent fuel produced since 1957 till 2005 at research reactor transported back to Russia during one international combined road and rail transport in December 2007 with the use of 16 transport packages ŠKODA VPVR.

RESEARCH AND DEVELOPMENT

Geological repository development

The generic, conceptual design for a deep geological repository in a non-specific site has been completed, including Environmental Impact Assessment and a time schedule and budget for its implementation. Current work involves selection and confirmation of the suitability of a repository location.

Waste management and repository re-licensing

Dukovany repository

RAWRA was coordinating a study of methods for retrieving spent ion exchange resins from the storage tanks at the Dukovany NPP, and of methods for their treatment. In 2007, in NPP Temelín was successfully tested SIAL® technology and it was later approved for solidification of ion-exchangers and sludges.

In 2007, the repository was re-licensed by State Office for Nuclear Safety, considering the effect of all possible waste matrixes (cement, bitumen, SIAL®). The possibility of disposal of limited volumes of institutional waste and/or non-solidified waste was studied in the safety case. A safety assessment assumes duration of the institutional control 300 yrs. and considers normal evolution and alternative scenarios, non advertent intrusion and bathtub effect. Newly issued waste acceptance conditions consider all mentioned possibilities. Operational safety and evaluation of consequences of possible accidents were re-evaluated.

Richard repository

A conceptual system design has been completed for management of spent sealed radioactive sources that are unacceptable for disposal in the existing repositories. These sources mainly contain the long-lived radionuclides Am, Pu, Am/Be and Pu/Be. The conceptual design involves conditioning them for interim storage at the Richard repository until a geological repository is completed. RAWRA will be developing and implementing the necessary equipment and procedures on the basis of this work.

The capacity of repository had to be verified in the last three years. Historical waste including short lived spent sealed sources were disposed using the “hydraulic cage” concept, that changes water transport conditions in the near field so that radionuclide transport is controlled by diffusion. Source term amplitude is then by tenths of percent lower than by a usual method of closure, considering actually disposed inventories. The set of scenarios is constructed on options of near field performance, i.e. geochemistry evaluation, and various types of near field degradation and initiation events as intrusion. As a part of safety case submitted in the re-licensing procedure in 2008, operational safety and evaluation of consequences of possible accidents were evaluated.

Bratrství repository

In the period 2003-2008, it was proposed a new concept of repository closure, built on filling the chambers with materials based on cement and clays. Some newly estimated scenarios were developed to evaluate the consequences of possible release of mine water, effect of presence of point sources as ^{226}Ra needles and/or presence of heterogeneities in the repository, including possible effect of radon in operational and post-closure scenarios. The re-licensing process will be finished till the end of 2008.

Hostim repository

There are no additional activities planned in the site. Safety assessment of potential pos-closure effects was started now and will be finished till the end of 2008.

DECOMMISSIONING AND DISMANTLING POLICIES AND PROJECTS

Concept for decommissioning of Dukovany NPP and Temelin NPP

The option adopted for decommissioning of the Dukovany and Temelin nuclear power plants, operated by CEZ, may be described as gradual decommissioning with deferred site clearance. In this option, all spent nuclear fuel will be removed from the reactors soon after final shutdown. After removal of peripheral equipment, the reactor structures will then be left in place under protective closure for a period of about 50 years. By this time the radiation levels within them will have fallen naturally to levels at which operators may enter the reactors safely in order to carry out the main activities of decontamination, dismantling and site clearance and then to process the resulting radioactive wastes.

These decommissioning wastes will be processed using the same techniques as currently applied to operational wastes from the nuclear power plants, i.e. bituminization and cementation. The estimated volumes of processed LILW-SL and LILW-LL arising from these decommissioning projects are shown in the tables above.

TRANSPORT

The Czech Republic has implemented all the international treaties and conventions on transport of hazardous goods by road, rail and air, by which it is bound. It has also transposed into its own law the EC regulations concerning transportation of radioactive material. These in turn are based on the Regulations for the Safe Transport of Radioactive Substances published by the International Atomic Energy Agency. These regulations apply to radioactive material in general and are not specific to radioactive waste. Nevertheless some licensees under the Atomic Act have their own systems for internal approval of radioactive waste transportation arrangements specifically and some companies specialize in such transportation.

COMPETENT AUTHORITIES

The Czech Republic has developed a "Concept of Radioactive Waste and Spent Nuclear Fuel Management". This is a fundamental document that records the strategy of Government and State Authorities in regard to the organizations concerned with generation and management of radioactive waste and spent nuclear fuel. It covers the period up to 2025, approximately, but is likely to affect policy up to the end of the 21st century. The Concept recognizes the roles of various organizations and interest groups and provides information relative to their specific responsibilities or interests, as follows:

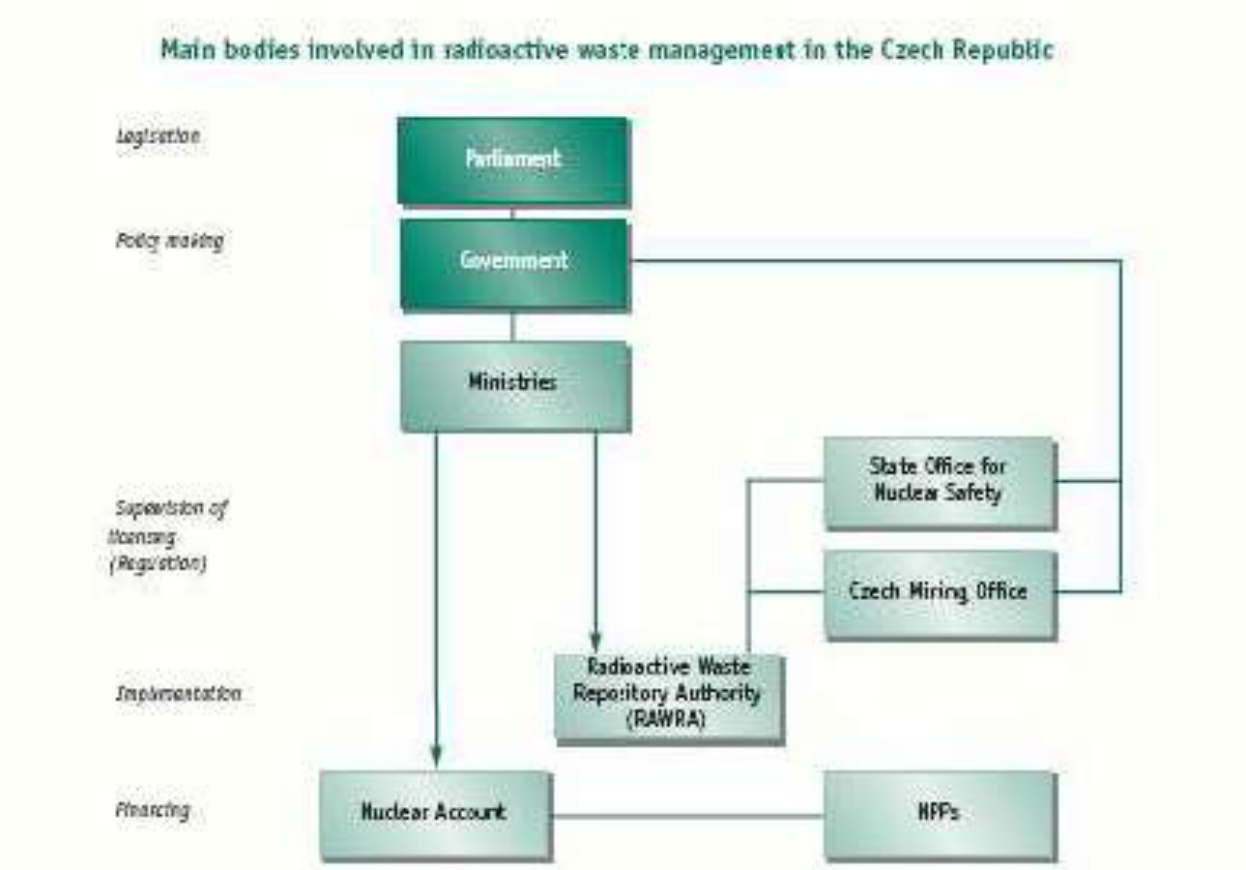
The Czech Government and State Authorities in general: By adopting the Concept the government declares the principles, objectives and priorities for achieving optimum radioactive waste and spent nuclear fuel management, to be implemented by individual ministries, including the ministries of Industry and Trade, the Environment and Finance.

The State Office for Nuclear Safety: Under the Atomic Act this is the body responsible for nuclear safety and radiation protection supervision. The Concept sets out the specific content of those activities subject to legal regulation, thereby providing support for the state supervision of radioactive waste and spent nuclear fuel management.

The Radioactive Waste Repository Authority and its Supervisory Board (RAWRA): The Concept is a fundamental, strategic document, which will be used as a basis for the preparation of annual, three-yearly and long-term action plans to be presented on an annual basis, together with RAWRA's budget, to the government for approval. These plans will allow RAWRA's Board to evaluate the performance of RAWRA and the fulfillment of targets, and ensure the efficient use of funds from the nuclear account.

Generators of Radioactive Waste and Spent Nuclear Fuel: The Concept provides a decision-making framework for generators of radioactive waste and spent nuclear fuel concerning their business or production strategies. Institutions Involved in the Development of Methods for the Disposal of Radioactive Waste and Spent Nuclear Fuel: Using the Concept, research and scientific institutions, universities and other organizations can allocate capacity and systematically prepare for the fulfillment of any requirements arising from the implementation of the concept.

The General Public: The Concept contains basic information about future intentions and priorities concerning radioactive waste and spent nuclear fuel management in the Czech Republic



FINANCING

In compliance with internationally acknowledged principles, the Atomic Act requires that the radioactive waste generator bear all the costs of radioactive waste management from production to disposal of such waste, including the cost of monitoring repositories after their closure and the cost of the associated research and development. The processing of radioactive waste for disposal is paid for by the generator in the form of direct payments to specialist organizations that carry out such activities on the generator's behalf. Radioactive waste disposal and spent nuclear fuel processing and disposal are the responsibility of RAWRA. The generator pays for these services in the form of payments to a nuclear account.

Nuclear account

The nuclear account is controlled by the government and nuclear account funds may only be used through RAWRA for tasks specified in the Atomic Act. Nuclear account funds come from several different sources. The distribution of nuclear account funds and amounts and methods of payment are stipulated by certain government decrees. RAWRA administers payments to the nuclear account and prepares documentation on the level of payments.

Cost of waste disposal in near-surface repositories

The costs of operation and closure of existing repositories will be covered by nuclear account funds. Individual generators of radioactive waste deposited will pay into the nuclear account depending on the character and amount of waste being deposited. The level of payments required to cover these costs will be determined according to relevant methodology and made in compliance with current government decree either in the form of one-off payments or regular installments.

Cost of high-level waste and spent nuclear fuel disposal

The costs of design, construction, operation and closure of a deep geological repository as well as the cost of spent nuclear fuel processing into a form suitable for disposal, and that of high-level waste or spent nuclear fuel disposal itself, will be settled by direct one-off payments or in regular installments from high-level waste or spent nuclear fuel generators.

Provisions for decommissioning

Under the provisions of the Atomic Act, licensees are obliged to make financial provision for decommissioning nuclear facilities or workplaces with significant or very significant sources of ionizing radiation. Funds should be available for both the preparation for decommissioning and decommissioning itself at the required time, and in an amount commensurate with the proposed method of decommissioning as approved by the State Office for Nuclear Safety. Such financial provisions are tax-deductible and are maintained by respective licensees. The estimated cost of decommissioning is verified by RAWRA and licensees are obliged to update their estimates every five years.

PUBLIC INFORMATION

For more information, the websites of relevant organizations are listed below:

Government	State Office for nuclear Safety – SUJB, Prague, http://www.sujb.cz
	Radioactive Waste Repository Authority – RAWRA, Prague, http://www.surao.cz
Industry	CEZ (the joint stock, nuclear operating company), http://www.cez.cz