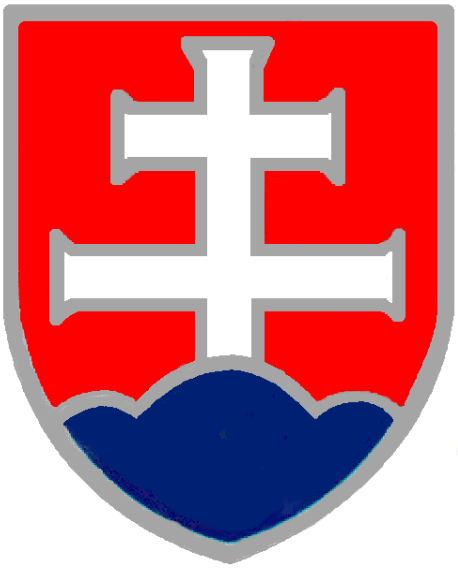
ANSWERS TO QUESTIONS

ON

NATIONAL REPORT OF

THE SLOVAK REPUBLIC



COMPILED ACCORDING TO THE TERMS OF THE JOINT CONVENTION ON THE SAFETY OF SPENT FUEL MANAGEMENT AND ON THE SAFETY OF RADIOACTIVE WASTE MANAGEMENT

BRATISLAVA
OCTOBER 2003

Answers to questions on National Report of the Slovak Republic

Slovakia is pleased to present to the State Parties of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management the Answers to questions received on the National Report of the Slovak Republic compiled according to the terms of the Joint Convention (April 2003). Slovakia is ready to provide additional explanations to these Answers during the 1st Review Meeting.

AUSTRIA

1)
Could Slovakia clarify the *implementatio*n of the policy for RAW management, which is described in the National Report?

The respective points of the RaW management concept are implemented in the form of working activity by RaW producers, under the state supervision. All of the points are elaborated, the degree of elaboration varies.

2)
Could Slovakia provide a list and a description of RAW storage facilities (e.g. buildings in and outside NPPs) as specified by Article 32(2) of the JC?

The list and description of storage facilities set up at MPB and other structures of NPP A-1 can be provided by SE VYZ. It is necessary to establish as to which storage facilities were specified in Article 32 (2) of JC.

The list of RAW management facilities has 8 pages and can be requested at kmosena_juraj@hq.seas.sk

3)
Which standards or limits are applied to authorise the releases into the environment of fragmented material generated in the decommissioning process of the A1 NPP?

The standards, limits are set out in Decree No. 12/2001 Coll., Article 37, and in Annex 8 thereto. The release levels and authorative values for pollution with the respective radionuclides are broken up into 5 radiotoxity classes.

4)
How and how often are safety reviews and (if necessary) improvements of SF management facilities in Slovakia, as required by Article 5 of the JC, performed?

The regular half-year routine safety reviews on SF management are carried out by the Nuclear Regulatory Authority inspectors. At the operator´s request, "OSART" missions are undertaken by IAEA specialists (e.g. 1996 / EBO-V2).
The facilities have also been visited by surrounding countries - e.g. Austria (1994,1998), Hungary (1999), Poland (2001), and Czech Republic (2002).

SF management improvements as required by regulatory authorities are made by implementing them into:
quality system,
quality documentation on SF management,
working documentation (regulations, programmes, procedures, etc.),
SF management facility project (modifications, project changes),
feedback system for handling SF management event.

5)
How are provisions of Article 6 of the JC concerning "information to members of the public"; " to consult Contracting Parties in the vicinity"; "to ensure that such facilities shall

not have unacceptable effects on other Contracting Parties…" being implemented in Slovakia?

In siting the proposed SF management facilities, assessment of the site and factors affecting safety and information to members of the public are implemented under the relevant provisions of Act No. 127/1994 Coll. on environmental impact assessment. The list of facilities subject to international negotiation in terms of their effects beyond state borders is set out in Annex 5 and the issues concerning the assessment of the proposed facilities´ effects transcending state borders are dealt with by Annex 6 thereto
(Information to neighbouring countries that have signed the Joint Convention falls under the comptencies of the state or UJD SR.)

6)
Have technical waste acceptance criteria (WAC) been defined for the storage of RAW and if so where have they been published and/or made available?
The solid RAW and liquid RAW storage criteria are set out in the operating regulations of the nuclear power plants:
- *Safety Analysis Report for NPP V-1, Chapter 11,*
- *Safety Analysis Report for NPP V-2, Chapter 11.*
- *Pre-operation Safety Analysis Report for NPP Mochovce in Chapters 11.2, 11.4 and 11.6.*

7)
Considering the importance of international cooperation in RAW management through bilateral and multilateral mechanisms, as stated in the Convention Preamble ix), which legislative restrictions, if any, govern the acceptance of foreign RAW for processing and/or storage?

The act No 130/1998 Coll. on the peaceful use of nuclear energy (Atomic act) sets up the provisions for import of radioactive waste as follows:
Import of radioactive waste into the territory of the Slovak Republic is prohibited, except for the return of radioactive waste which arose during reprocessing and conditioning of radioactive material exported for this purpose. The re-importation of this waste has received a permission in advance from the Nuclear Regulatory Authority.
The Nuclear Regulatory Authority is preparing the amendment of the Atomic act with the proposal that Nuclear Regulatory Authority may give the permission for import of radioactive waste also with the aim of its treatment and conditioning provided that the return of material with the identical activity is ensured and permitted.

8)
What are the planned activities to improve the safety of handling high level sources?

These are activities relating particularly to nuclear and radiation safety of RAW and IRAW processing technology operation and protection, personnel and environmental activities. These activities are induced by the requirements for processing and conditioning RAW and IRAW of higher specific activites than processed to date.
An "Integral Storage Facility" is under preparation for construction at the Jaslovské Bohunice A-1 for RAW non-disposable at the Mochovce National Radwaste Repository (for low- and medium-activity RAW) to store high-activity RAW (excluding SF) until a deep (definitive, geological) repository is built up to store them in.

9)
Is there any system of registration of disused sealed sources and what types of sources are registered? If there is no registration system available, what are the future plans?

All used sources (activity higher than exemption level - BSS) are registered in the national register (since January 2002). There is no special register of disused sources, but the status of registered sources is in register.
Sources declared as disused should be disposed.

BULGARIA

10)
"....4. Long-term storage of spent fuel (40 to 50 years after its removal from the reactor) is secured by separate storage facility at Bohunice...."
QUESTION: How the term for long-term storage of the SF in the Bohunice NPP SF storage facility is justified?

The storage term for SF of 40 to 50 years after it is removed from the reactor is justified by a decline in its activity and a reduction in heat production before it is put into the deep repository. For SF produced at the Bohunice NPP such storage is provided by the Bohunice ISFS. In case that the Bohunice ISFS service life cannot be extended and the interim storage facility operation is terminated (sometime beyond 2050), the storage of the SF produced in the last years of Bohunice NPP operation for a period of 40 to 50 years prior to its disposal at the deep repository will be dealt with through providing new storage capacities.

11)
Are there spent SIR used in the army (e.g. for technological purposes or calibration of dosimetry equipment) and, if any, are they subject to this convention?

The information on sources used in Slovak Army is not in the central register at present. But we suppose that spent sources are not used in the army. The treaty the Ministry of Defense and the Ministry of Health on obligatory registration of sealed sources used in army in the national register of sources is under preparation. Ministry of Defense of SR is responsible for radiation protection in army and for treatment of sealed sources.

12)
How the independence of Department “Nuclear and Radiation Safety ” as a part of the structure of the operator Slovenske elektrarne is ensured?

The Nuclear and Radiation Safety and Crisis Management Department within Slovenské elektrárne´s Headquarters structure placed directly at the General Director´s Section under the Executive Director for Nuclear Safety, Safety and Protection. The Executive Director is placed in the structure under the General Director. The department is independent of operation and maintenance, economics, investment, trading.

13)
How specifically the implementation of Art. 6, para.1, p. IV and Art. 6, para.2 is ensured?

Since Slovakia´s ratification of the Convention (22 September 1998), none new nuclear installation for spent fuel management has been commissioned in the country. A planned

installation - SF storage facility to be located at the Mochovce NPP is the at initial preparation stage, therefore a specific implementation cannot be stated.
In siting the proposed SF management facilities, assessment of the site and factors affecting safety and information to members of the public are implemented under the relevant provisions of Act No. 127/1994 Coll. on environmental impact assessment. The list of facilities subject to international negotiation in terms of their effects transcending state borders is set out in Annex 5 and the issues concerning the assessment of the proposed facilities´ effects transcending state borders are covered by Annex 6 thereto
(Information to neighbouring countries that have signed the Joint Convention falls under the comptencies of the state or UJD SR.)

14)
How the implementation of the obligations in Art. 27, par. 1., p. IV is ensured?

The limits of amount of nuclear materials, which cannot cause nuclear damage are described in Regulation No. 30/1999. In the case of transport of nuclear material with higher activity the transport must be secure according to Regulation No. 284/1999 on the Details of Transport of Radioactive Materials and Radioactive Waste § 3, with detailed requirements for scope and content of application including multilateral approval for transboundary movement.

CANADA

15)
How do the results achieved, as a consequence of applying the Slovak Republic's requirements and regulations, compare with international standards or recommendations, and with neighbouring countries' requirements (e.g. Hungary and the Czech Republic), particularly if a natural resource such as water is shared? Are the permissible release limits under both normal and abnormal conditions developed jointly? term effects?

Limits for discharges (usually in annual activities and/or activity concentration) are based on dose constraints set down for critical groups. Dose constraints used are in agreement with international standards and recommendations of EU (for example dose constraint for individual dose in critical group for discharges from NPPs is 250 mikroSv per year).
No critical group (or water source) is behind of national borders for any practice in Slovakia at present.
No limits have been developed jointly till now.

16)
Are there jointly-conducted emergency exercises with neighbouring countries?

Yes. E.g. in 2001 three international emergency exercises were organised: April – international emergency exercise RODOS; May – INEX-JINEX 1; October - Trilateral international exercise (SK+AT+HU) – DEKO 2001
In 2002 two international emergency exercises were organised: - February 2002 - 1st DSSNET RODOS; May 2002 – 2nd DSSNET RODOS;
In 2003 – May -DSSNET-RODOS international emergency exercise.

17)
Please explain the public consultation process prior to making decisions related to radioactive waste disposal, and the extent to which results are taken into consideration.

The siting, design and construction of the National Radwaste Repository Mochovce had taken place that the time that Act of the National Council of the Slovak Republic No. 127/1994 Coll. on environmental impact assessment was still ineffective. All of the new activities (repository expansion, deep repository, etc.) will be assessed in accordance with this Act.
Providing information to members of the public takes place in accordance with Act No. 127/1994 Coll. on environmental impact assessment, Act No. 171/1998 Coll. on access to environmental information, Act No. 211/2000 Coll. on free access to information, and SE, a.s., by-laws.

CROATIA

18)
After performing monitoring by a certified monitoring system, a certificate is issued and portion of the (fragmented) materials can be released into the environment. Could you specify the criteria for release of this material, with more details on procedure for the fragments which do not meet the criteria?

Criteria for release (unconditional clearance) of contaminated material are stated by the Regulation N_0 12/2001 of 13 December 2001 On requirements for securing radiation protection (Reg. N_0 12/01), the Ministry of Health for mass activity in Bq/kg and for surface contamination Bq/m^2, for example for Cs-137 0,3 kBq/kg and 3 kBq/m^2.
Fragments which do not meet the criteria are treated as radioactive waste.

CZECH REPUBLIC

19)
With how many linings are equipped the SF pools at SE-EMO (one or two) and how many linings are used by the construction of SF pools at SE-EBO?

EMO: The storage pool of each unit is covered with two-layer lining. The lower 10-mm-thick lining is made of 11 373 carbon steel. Its corossion protection is provided with a special Al layer. The upper lining is made of 5-mm-thick stainless sheet 17247.4.
The two linings were subjected to hydraulic tests on the basis of EGP Prague-developed softwares (order No. 23-7452-20-570).
The space between the respective walls is permanently monitored for tightness.
EBO: At SE-EBO the design of linings for NPP V1 and V2 unit pools differs, with NPP V2 applying a more advanced system:

- *At NPP V1, a simple stainless steel lining (sheets about 1 m wide and 3 mm thick, welded highwise directly to the brackets/anchors in the walls and on the bottom of the SF pools). A leak through the stainless steel lining is carried on to the organised leak system. Additionally, the leak amount measurement was made.*
- *at NPP V2, a double lining is implemented consisting of a welded ferritic steel vessel (10 mm thick), concrete-encased from the outside (using "lost shuttering" method"); the interior of the ferritic vessel is aluminium-sprayed. Inside the vessel there are welded "transitional material" strips 10 mm wide and 3 mm thick and a stainless steel lining*

made up of sheets 1 m or so wide and 5 mm thick is welded to these strips heightwise. From the space in between the NPP V2 pool linings organised leaks are carried over tubes (separately from each wall and the bottom) on to the leak indication, registration and drainage system, thereby allowing for direct quantitative measurement of leaks (amount, point).

20)

What is the storage capacity of ISFS Jaslovské Bohunice – 6696 fuel assemblies as stated in table at p. 16 or 14 112 fuel assemblies as stated in previous text at p. 15? It seems that the value of 6696 fuel assemblies represents the number of assemblies loaded in ISFS Jaslovské Bohunice at the end of 2002.

The overall maximum (target) capacity is 14,112 spent fuel assemblies. The storage capacity is progressively extended depending on the number of supplied new KZ-48 baskets having a capacity of 48 fuel asseemblies. The capacity of 6,696 fuel assemblies reflects this state of expanding the capacity.

21)

What are the quantitative values related to the criticality and heat removal requirements for wet and dry SF storage facilities in Slovak legislation documents?

Slovak legislation documents laying down the quantitative values related to criticality and heat removal include:

- *Act No. 130/1998*
- *Decree No. 190/2000, Article 15(2)(a), (b):*
  - *a) assurance of the criticality of no less than 5% under all operational states and events either by properly arranging SF or placing a solid neutrone absorber in the storage space; the efficiency of the use of the solid absorber will be demonstrated with a calculation or an experiment.*
  - b*) permanent removal of residual heat of produced SF in the SF storage space; the heat removal will be ensured with natural or forced coolant flow so that the SF cladding temperature does not exceed the limit in any part thereof.*

22)

How are financial and institutional provisions for future SF and RAW management activities covered by Slovak law?

The basic policy of SF and RAW management is established by the Resolutions No. 930/92, 190/94, and 05/2001 of the Slovak government. The Atomic Act No.130/98 Coll. , covers the requirement for SFM (art. 18) and for RWM (art. 17). The correspondent Regulations were issued by UJD SR.
A long-term goal within the concept of SF management is a construction of deep geological repository for SF and RW not acceptable for near surface repository within the area of the Slovak Republic.
Act No. 254/94 (as amended) – State Fund of decommissioning NPP assures the financial provisions of SF storage (during NPP decommissioning), decommissioning radioactive waste management and partially also the construction of related technologies.
Daughter company SE – VYZ was established in 1996 for above mentioned purposes.

23)
How are taken into account in the licensing process the biological, chemical and other hazards that may be associated with SF facilities?

The IAEA guides on design, construction and operation of SF facilities are accepted by the national regulatory authority - UJD - and implemented into Slovak national legislation on SF facilties. Act No. 130/1998 deals with the issues of biological, chemical and other hazards by meeting the requirements in Articles 14 and 15 and their documenting to UJD. The licensing process of UJD (and other Slovak regulatory authorities) check compliance with the requirements for minimising all the predictable hazards at the SF facility design, construction, commissioning and operation stages.

24)
Who issues the territorial decision for the siting of nuclear facility?

The territorial decision for the siting of nuclear facility is issued according to the act No 50/1976 as amended (construction act) by municipal construction office. The regional office may reserve the competence to be the construction office and to issue the licence for individual technically complicated structure (for example the nuclear facility).
Before the issuing of decision on siting of the nuclear facility the construction office is obliged to ask the permission of Nuclear Regulatory Authority. The Authority issues the decision on the basis of evaluation of safety documentation and may make the decision subject to the fulfilment of conditions relating to nuclear safety.

25)
What kind of seismic reinforcement measures were directly implemented on the construction of reactor pools in NPP V1 and V2 at Jaslovské Bohunice site and in NPP Mochovce?

The reactor pools at EBO V2 and EMO are implemented according to the original design.
At NPP V1, additional seismic reinforcement measures (MPB) - injections, building construction reinforcements - were implemented within the reconstruction.

26)
Have neighbouring Contracting Parties (Hungary, Austria,…) been consulted in the siting process of these facilities?

There are bilateral agreements concluded with all neighbouring countries. In the framework of these agreements regular (on annual basis) meetings are organised during which questions and issues of common interest are discussed. Also the act No. 127/1994 on environmental inpact assessment contains obligatory provisions regard international consulations. In addition Slovakia ratified the ESPO Convention.

27)
Does the safety reports for ISFS Jaslovské Bohunice contain the definition and evaluation of design basis and beyond design basis accidents? If yes, provide a short summary of these events.

The Pre-operational Safety Analysis Report (PoSAR) for the Bohunice ISFS defines and analyses events in accordance with the application of the methodology of the following documents:

- *ANSI/ANS 57.7-1988 "Design Criteria for Independent Spent Fuel Storage Installation (Water Pool Type)", and*
- *USNRC Regulatory Guide 3.44 "Standard Format and Content for the Safety Analysis Report for an Independent Spent Fuel Storage Installation (Water Basin Type)"*

PoSAR defines and analyses four categories of design events (Design Event I to IV). The most serious analysed analyses include:

- *water leak from the pools having an untight lining (Category III)*
- *cooling system piping break (Category III)*
- *SF transport-related accidents (Category IV)*
- *full power failure for a period of two days, without diesel aggregate standup (Category IV)*
- *external effects (aircraft crash, industrial activity in the surrounding area) (Category IV)*
- *accidents leading to the occurrence of criticality (Category IV)*

28)
When it is expected that the DGR will be in operation in Slovak Republic?

The expected DGR commissioning date in the Slovaki Republic is the year 2037.

29)
Has been performed periodical safety assessment of the NPP Mochovce regarding waste management?

Pursuant to 50 - SG - 011, UJD conducts annually periodical audits. Reports on the state of radioactive wastes are sent by the repository operator to UJD on a three-month basis. Similarly, it also makes UJD on a three-month basis reports on the state of meeting measures taken to minimise RAW.

30)
Has been performed operational safety assessment of the Mochovce repository?

The Mochovce National Radwaste Repository´s operation safety has been assessed, being part of the Pre-operational Safety Analysis Report of the repository.

31)
The ensuring that qualified staff (personnel) is available (Article 26) should be given not only in the decommissioning license, but also in the ongoing decommissioning plan prepared during a nuclear facility operation.

Atomic Act requires qualified staff for each life time period of NI (quality assurance documentation).

32)
Ongoing decommissioning plans are not mentioned. Only the initial and final stages of a nuclear facility are considered.

Atomic Act requires initial decommissioning plan (art. 14) and ongoing decommissioning plans (art.15, 16, 19). Decommissioning plans as well as Environmental Impact assessment

for decommissioning discus several decommissioning option. Final decommissioning plan is prepared for each phase of the chosen option.

33)
The need for actualisation of a decommissioning plan and the required time interval for its actualisation are not mentioned.

see question 77
intervals for actualization – before construction, before operation, before life time extension, before final shut-down and before start of decommissioning.

GERMANY

34)
In the Section B and C waste from research, industry, medicine as well as waste from military activities is not mentioned. Are there no wastes of this kind in the SR existing?

There are wastes in military activities, they are collected and temporary stored in military institutions. There is no information on actual status in civil departments at present. The treaty of Defense ministry and Health Ministry on obligatory registration of sealed sources used in army in the national register of sources is under preparation. The wastes from research, industry and medicine do exist and they are treated (stored) on site and afterward they are send for conditioning and final disposal.

35)
How are burdens on future generations avoided with respect to ISFS?

The Bohunice ISFS has been designed to store SF for a period of 40 to 50 years before it is disposed of at the deep repository. National legislation, the activity of regulatory authorities and operation of the Bohunice ISFS are implemented so as to avoid inappropriate burdens on future generations in the Slovak Republic.

36)
Who is responsible for the systematic safety assessment and for the environmental assessment prior to construction of a spent fuel / radioactive waste management facility? Who checks the licensing documents submitted?

Safety, nuclear safety is the responsibility of Slovenské elektrárne´s General Director who delegates the responsibility to the plant directors.
The safety environmental management is provided by Slovenské elektrárne´s Environmental Department.
The licensing documents are assessed by UJD (safety analysis reports), the Health Ministry (radiation protection), the Ministry of Labour, Social Affairs and Family, the National Labour Inspectorate (industrial safety), the Interior Ministry (fire prevention), the Ministry of Environment (environment), the Regional Office (issues a building permission), the public (public comment procedure).
The fundamental conditions essential to license in terms of nuclear safety is the preparation and submission of a safety analysis report and other prescribed safety documents and meeting the conditions of the preceding approval proceedings and decisions by the regulatory authority.

The environmental departments of the regional offices issue decisions on siting, construction, operation and decommissioning of nuclear installations following approval by the Nuclear Regulatory Authority, Health Ministry bodies and other state administration authorities and organisations. As regards licences and permissions, the obligations of these authorities are established by Act No. 50/1976 Coll. (Building Act), Czechoslovak Atomic Energy Commission Decrees issued under numbers 2/1978 Coll. and 4/1979 Coll. and Slovak Environmental Commission Decrees No. 376/1992 Coll. and No. 378/1992 Coll.
The licensee is responsible for nuclear installation safety.

37)
Under what criteria is the systematic safety assessment of a spent fuel / radioactive waste management facility conducted?

Criteria:
Act No. 130/98 on peaceful uses of nuclear energy
IAEA regulations
safety analysis reports
quality assurance
operating experience
emergency preparedness
nuclear safety concept
nuclear safety review
quarterly, annual reports on nuclear safety
safety culture
nuclear safety indicators

Safety assessment of spent fuel/radwaste management facilities is performed according to Slovak regulations. The criteria set up in Slovak regulations and international criteria are used (IAEA documents, NUREGs). Also expertise of Slovak and international teams (WATRP) are used. Both operational and accidental scenarios were evaluated.

38)
How is it ensured that a spent fuel / radioactive waste management facility is realized in accordance with planning/licensing?

UJD is a statutory party to the building permit procedure in both permitting a nuclear installation construction and its occupancy approval procedure and commissioning. UJD checks the construction of a nuclear installation for compliance with the plan and license.

39)
When should the operation of the deep geological repository be started? Which geological formations are investigated for a deep geological repository?

The deep geological repository operation is planned to start in 2037.
To locate the repository, sites within two rock environments are investigated: crystalline (granitoides) and
sedimentary (clays).

40)
Past practices are not explicitly mentioned in Section H of this report. Which practices does the Slovak Republic define as "past practices"?

Past practices = practices under previous legal basis e.g. legal basis valid at the moment of licensing. Missing parts from the point of view of new requirements (documents/ activities) used to be fulfilled in different periods (written in new acts/,regulations). The Acts /Regulations related to SFM, RWM and Radiation protection were issued in Czechoslovakia in 72, 76, 77, 78, 79, 80, 81, 84, 87, 90, 92 and in Slovak Republic in 94, 96, 2000 (regulations 99-2003).

41)
A monitoring system was described which will pro-vide information about possible water penetration into disposal space. In this case maintenance measurements have to be started. Are also institutional controls planned for the deep geological repository?

Yes, these are planned for an essentially required period.

42)
How is the structure of the regulatory framework and the regulations beyond the act (hierarchy/contents/listing)?

The structure of the regulatory framework beyond the act are as follows:
Acts *– proposed by UJD*
Regulations *– proposed and approved by UJD*
Decisions *– approved by UJD*
Guides *– recommended by UJD*
List of selected national laws, regulations and guidelines are in Annex VI of the National Report of the Slovak Republic.
As for the regulations, they are issued by UJD in according to enabling clause in act No. 130/1998 Coll. More details about structure of Regulatory framework and relevant legislation contains section E.1.1, E.1.2.2, E.1.2.4, E.2 (pages 25 – 34) and Annex VI (pages 92 – 93) of National Report.

43)
A system for training of employees in nuclear power plants was developed. How are inspectors from the regulatory authority included in such a Quality Assurance System for human resources?

Regulatory body approved a system for training of employees in nuclear power plants as this is one of the legislative requirements. Inspectors of regulatory body approve also training programs for selected personnel.

44)
A State Fund of decommissioning nuclear power generating installations and treatment of spent nuclear fuel and radioactive waste was established. Is it also possible to use the Fund resources for (a) purchase of site for spent fuel and radioactive waste repositories, (b) research and development in the fields of the management of spent fuel and radioactive waste from decommissioning, (c) investigations of sites, geological survey,

design, construction, operation and closure of spent fuel and radioactive waste repositories?

Yes, see the attached English translation of the Act (§ 4).

45)
What are the radiation dose limits that must be complied with under national legislation for employees (incl. e.g. pregnant women and women of child-bearing age) within spent fuel / radioactive waste management facilities as well as for the wider public with regard to the operation of such facilities?

The data is set out in Slovak Health Ministry Decree No. 12/2001 Coll.
§ 5 - limits for the iradiation of the population
§ 7 - limits for exposure of pupils and students
§ 8 - limits for exposure of special groups

46)
If several nuclear facilities are located at one site, is this taken into consideration when determining the exposure of the wider public?

There is one radiologic limit for the site. Under this, there are further partial limits (e.g. discharges) determined for the respective sources. The Jaslovské Bohunice site (A-1, V-1, V-2).
The discharge limits are area and divided among the respective plants. Monitoring and assessment is centralised. If necessary, there is established a mechanism and measures to handle situations by special representatives of the plants.

47)
Is provision already made at the planning stage of spent fuel / radioactive waste management facilities for measures that limit releases in the event of an incident?

Each nuclear installation has a developed and UJD-approved emergency plan describing design accidents and measures that need to be carried out in the event of a breakdown of the instalments, including SF, RAW management facilities.
The emergency plan describes:
- *position responsibilities in the emergency response organisation*
- *list of related documents*
- *event qualification system*
- *procedures for assessment of radiation events and consequences thereof*
- *emergency response organisation structure*
- *notification and warning system*
- *emergency response equipment and means*
- *monitoring technological parameters and radiation situation*
- *protective measures and the method of introduction thereof*
- *NPP and emergency response organisation personnel training system*
- *links of Internal Emergency Plan to the Public Protection Plans*
- *principles for restoration and re-putting into operation*
- *the method of public education and information*
- *a summary of external bodies and organisations included in the emergency planning*
- *the plan for medical measures*

- *parallel operation and construction of nuclear installations*
- *the method of updating Internal Emergency Plan*

The emergency plan is developed based on the result of safety analyses. The safety analyses were conducted using the conservative approach.

48)

How high is the permissible exposure of the public arising from release of slightly radioactive materials directed to recovery or to disposal?

Annual individual dose in critical group 10 microSv and collective dose 1 manSv are the highest permissible exposures in general, but annual individual dose of the few tents of mikroSv could be accepted by the authority in special circumstances if optimization is demonstrated.

49)

Are there bilateral agreements and joint emergency exercises with the countries neighbouring Slovakia?

SR signed bilateral agreements in the field of early notification of nuclear accidents, exchange of information and cooperation with Austria, Hungary, Czech Republic, Poland and Ukraine; besides also with Germany, Slovenia, Rumania,
Exercises - See item Q/C No. 14

50)

In addition to the very comprehensive description on sealed sources, what is the detection equipment for sources at scrapyards, foundries etc. and at the borders?

Portal gamma rays monitors are installed on important border crossings and in foundries, in some scrap-yards portable gamma detectors are used.

51)

The waste which is not acceptable for the National Repository Mochovce shall be stored at the power plants. An integral storage shall be installed at Bohunice to allow storing of radioactive waste that is not acceptable for NRR. What do you intend to do with this radioactive waste in the future?

The integral storage facility planned to be constructed at the Bohunice site is intended for RAW non-disposable at the Mochovce National Repository. By operating this storage facility the smootness of decommissioning NPPs A-1 and V-1 will be ensured. The integral storage facility should store conditioned and packed RAW until the deep geological repository is erected, where they will subsequently be transported for permanent disposal.

52)

What are the criteria for clearance/release of radioactive material (dose criterion, clearance levels) referred to in Regulation 12/2001 Coll. of MoH SR?

Annual individual dose in critical group 10 microSv and collective dose 1 manSv are the basic or general dose criterions. Criteria in mass activity and for surface contamination for unconditional clearance of contaminated material are stated in the regulation for groups of radio-nuclides, for example for Cs-137 0,3 kBq/kg and 3 kBq/m^2.

53)
Section D.1 of the Slovakian National Report contains a very detailed description of the storage facilities for spent fuel, but no information on the actual inventory in terms of number of fuel assemblies or tonnes. Which amount of fuel assemblies or the tonnes of heavy metal are in storage at Bohunice and Mochovce at present?

Under the rules applicable in the Slovak Republic the answer does not indicate absolute weights for SF at SE´s storage facilities. As of the mid 2003 (30 June 2003):

- *the storage capacities at Mochovce (main production building - MPB pools) are exhausted up to 43.5%. The problem of further SF capacity will need to be resolved until 2007, either by commissioning a new storage facility at this site (planned start of the Mochovce SF storage facility is 2009) or by transporting some of SF from this site to another site - Interim Spent Fuel Storage Facility in Jaslovské Bohunice.*
- *the storage capacities of Jaslovské Bohunice reactor units (MPB pools) occupied up to 67%. Some of SF from the reactor units is periodically, on an annual basis, transported to the Interim Spent Fuel Storage Facility in Jaslovské Bohunice.*
- *the maximum storage capacity of the Jaslovské Bohunice Interim Spent Fuel Storage Facility (Away From Reactor Storage Facility) is exhausted up to 45%. The storage capacity of this interim storage facility will be, with some extra free capacity, sufficient for the entire SF production from operation of the Bohunice units during their service life.*

As of 30 June 2003, 7,933 fuel assemblies (952 tonnes of HM) were stored in the Slovak Republic.

54)
Do the data in Annex L.V include waste quantities from past practices?

Yes, Annexes L.V 1 - 4 set out all the RAW that were from the start of NPP operation in Slovakia and were stored in nuclear installation pools as of 31 December 2002. They do not indicate RAW conditioned into FRCs and stored at the Mochovce National Radwaste Repository.

55)
What are the estimated waste quantities from the decommissioning of NPP A1 at Bohunice?

During the decommissioning of NPP A-1, the following RAW quantities are expected to generate with the continual decommissioning option:

Liquid RAW	44,500 m^3
Solid RAW	5,350 m^3
Metal RAW	8,640 t
High-activity RAW - liquid	13 m^3
High-activity RAW - solid (metal)	1,840 t

56)
Inventory of stored radioactive waste – National Radwaste Repository: Is there also an inventory list from the radioactive waste repository available that enables an overview about the radioactive waste type, volumes and activities disposed of?

Every RAW (FRC) package system has its shipping note carrying data on RAW contained therein. This data is summarised, evaluated and filed. The repository data is transmitted on a quarterly basis in the "Report on the state of nuclear safety and reliability at the National Radwaste Repository" to UJD.

FINLAND

57)
The Power Policy of the Slovak Republic includes three options for spent fuel management, own deep geological repository, possibility to transport spent fuel into a foreign country for disposal or reprocessing without importing back to Slovakia and an international regional repository. Are all options considered parallel or has the Policy determined priorities?

All the spent fuel (SF) management options
- *deep geological repository on the Slovak Republic´s territory or an international regional repository*
- *SF transport to abroad, without importing back reprocessing products,*

are considered in parallel. Priority is long-term economic benefits.

58)
State Fund was established in 1995 for decommissioning and management of radioactive waste and spent fuel. How good the current liabilities are covered at present? Do the calculations of the liabilities consider all three options of spent fuel disposal listed in the Power Policy?

The calculations of the current liabilities consider all of the SF management options. The expected summary means in the State Fund established in 1995 usually do not cover the demands for decommissioning the nuclear units and disposal of nuclear products. It is only for a special case (relatively long period of operation of the already erected sources, deep disposal of all the products for an acceptable price) that the State Fund means are calculated to cover the costs.

59)
What are the applied dose constrains for different steps of spent fuel and radioactive waste management and decommissioning?

For the historically most exposed staff groups (in particular those of the transport-technological part - SF handling and activities), the authorised annual limits for effective doses are applied - 10 mSv, 15 mSv.

FRANCE

60)
Could Slovakia indicate the management strategies for radioactive waste generated or implemented in non-nuclear activities (medical, research, industry, etc.)?

Most IRAW can be expected to be disposable at the operated National RAW Repository (near surface type) under the related acceptance criteria for waste packages. IRAW non-acceptable

at the surface-type repository will be stored in an appropriate and safe manner until another alternative of ultimate disposal is chosen and implemented. Resulting the safety assessment needed prior intended IRAW disposal at the near surface-type repository: wastes from workplaces involving open sorces, save for few exceptions, will be disposable with respect to their activity, with non-radiological properties such as toxicity being possibly of greater importance as compared to RAW from nuclear installations.
dissused sealed sources with a half-life of up to 30 years (e.g. 137Cs) are disposable under the acceptance criteria derived from the intrusion scenarios of safety analyses; the activity of sources with a half-life up to units of years (e.g. 60Co) is only limited by the safety requirements for transport and handling of waste pasckages.
dissued sealed sources with long half-life (for instance transuranium or radium) are not disposable at the near surface-type repository.

61)
Could Slovakia illustrate the concrete activity of the regulators for both under operation facilities (number of inspection, environmental monitoring, emergency situations preparation drills, etc) and dismantling projects?

UJD SR Inspections – number of inspections differs consequently the situation and activities at NI. The number of site inspectors is higher for NI under operation, but number of planned regular inspections for both status (under operation/under decommissioning) are similar. Before each new cycle (at NI under operation) there is the team inspection. In minimum, for each NPP is annually inspected RWM. QA, staff preparation, emergency preparedness. For inspection of SF there is significant difference – during operation each handling with fuel needs inspection. During decommissioning – neither fuel, nor SF is placed in facility (under decommissioning).
Emergency drills – In average four times per year in both.
SFZU inpections – Radiation protection regulatory authority inspects each NI minimally once year including environmental monitoring inspection.

62)
Could Slovakia provide information on past practices, related remaining safety issues and remediation programs (schedules, entities involved, financing schemes, final status…).

During the construction of nuclear power plants (NPPs) in the Slovak Republic, the RAW management concept was targeted towards RAW storage, with RAW processing and conditioning set to be done as late as the decommissioning of NPPs. RAW were stored at the power plant premises. Liquid wastes in tanks and solid wastes in 200-litre barrels (some of them low-pressure compacted) that are stored at storage facilities. As recently as the 1980s was there launched the construction of the facilities for RAW processing and later also for conditioning. There are currently operated facilities for liquid RAW bitumenation, cementation, vitrification and solid RAW incineration, high-pressure compacting. Thus processed RAW are cemented into FRCs and put at the Mochovce repository. The activities were funded by the operator - SE, a.s.

63)
Did Slovakia recently perform a re-evaluation of the impact of the near-surface disposal site?

The repository was constructed in 1986-1992. The Pre-operational Safety Analysis Report with application for its approval was submitted to NRA SR on October 1993. As a support to the regulatory body position and also for better acceptance of repository concept by public the NRA SR requested on December 1993 the International Atomic Energy Agency (IAEA), Vienna to review the Mochovce Radioactive Waste Disposal Facility within the IAEA's Waste Management and Technical Review Programme (WATRP). The NRA SR position to the Preoperational Safety Analysis Report, which reflects the WATRP's experts' recommendations, and NRA's and other Slovak experts experience was sent the applicant on January 1995. On the base of this recommendations was on September 1996 started the second stage of construction of RR RAW Mochovce. It was finished on November 1998. Within the finishing of the Repository was prepared a documentation (including reevaluated Pre-operational Safety Analysis Report) for obtaining the license for commissioning of the RR RAW Mochovce.

On the base of submitted documentation, detailed reviews NRA SR and the results of the testing operation of the Repository NRA SR issued the approval with operation of repository on September 2001.
From 1999 has started the project "Decommissioning of Bohunice NPP A-1". This project covers also the reevaluation of safety assessment including the environmental impact of the repository. The environmental impact of the repository is controlled through the Monitoring program.

64)
Existence of guidelines for the evaluation of site-related factors and long-term impact evaluation could be indicated, if any.

The siting process for radioactive waste management facilities was running under the legislation of former Czechoslovak Atomic Energy Commission .The site for near surface disposal facility was chosen according to regulation No 4/1979 on criteria for siting the structures with nuclear facilities.
The evaluation of long term impact of repository is subject of preliminary safety analysis report and particularly pre-operational safety analysis report which was prepared in accordance with the Regulation of CSKAE No 67/1987 on radioactive waste management and upon the requirements of NUREG 1199 (Standard format and contents of licence application for low level radioactive waste disposal facility). The safety analysis report was prepared by Slovak and Czech experts in collaboration with Belgian experts (SCK-CEN Mol).
The report was also subject to IAEA WATRP review. The WATRP´s team recommendations were applied in the course of large improvement of repository design and safety analysis report.
At present the new regulation of UJD SR No 167/2003 on requirements for nuclear safety of nuclear facilities with requirements for siting, design, operation and decommissioning of nuclear facilities is in force.
IAEA guidelines were widely used for disposal facility

65)
Application of the multiple-barrier concept and the defense-in-depth principle could be clearly stated.

Near surface disposal concept in Slovakia applies the multiple barrier concept with aim to isolate the RAW from accessible environment during a period sufficiently long to allow substantial decay of the short lived radionuclides and, in the longer term, to limit the releases

of the remaining radionuclides. The barriers contributing for isolation of the radionuclides are:

- *The waste form (immobilization matrix),*
- *packaging (fibre reinforced concrete container),*
- *the concrete structure of the repository, backfilling, drenage system*
- *the clay layer surrounding the repository vaults and*
- *the geological formation of site itself*

Defence in depth is provided by using engineered design features in combination with favourable site conditions, controls on the form and content of the waste, operating procedures and institutional control.

66)

Could Slovakia provide more detailed information on the description of the licensing procedures applied to the mentioned installations.

The licensing process for radioactive waste management installations as for all nuclear installations includes following principal steps – siting, construction, operation including commissioning, individual steps of decommissioning and site release. The permission for these individual steps are issued by Regulatory Authorities for the resulting licence issued by regional/municipal construction office on the basis of the act No 50/1976 on territorial planning and construction rules as amended (Construction act). The safety documentation shall be prepared by applicant and it is subject of the regulatory bodies evaluation, for nuclear safety is responsible UJD SR, for radiation protection Ministry of Health, for fire protection and physical protection Ministry of Interior and for general safety Ministry of Labour, Social Policy and Family.

UJD SR issues the statement for radwaste management facilities siting and permission for their construction as well as for their commissioning and operation.

UJD SR issues the statement to environmental impact statement and environmental impact assessment before siting and decommissioning of all nuclear installations including radioactive waste management facilities. The statement is based on the assessment of documents issued in accordance with act No. 127/1994 on environmental impact assessment as amended.

67)

Could Slovakia provide more detailed information on the waste acceptance criteria applied to the existing facilities and the related procedures?

All safety aspects are summarised in Safety analyses preoperational report, which was submitted to the nuclear regulatory body of the Slovak Republic as a support for Permission of operation on the base of law 130/1998 - Atomic law.

Original safety assessment of Mochovce repository was performed in co-operation with Belgian company - Belgatom (1993)

In December 1993 NRA-SR asked the IAEA for assistance in evaluation of preparedness the Mochovce facility to operation. The mission was held on May 1994.

After studding design and safety documentation the mission issued its report. Some enhancements were recommended in the area of design, operation, monitoring and safety analyses of the repository.

On the base of IAEA WATRP mission NRA-SR in the SA required:

implement and document a systematic approach to the selection of radionuclides, scenarios and transfer pathways into external environment for safety analysis

evaluate the impact of this selection on the determination of acceptable activity inventory, maximum and average acceptable activities
for the radionuclides selected elaborate the safety analyses

The new assessment for the new version of the pre-operational safety report was prepared during 1998 by VUJE Trnava. The report, together with other documentation needed, was given to regulatory authority for approval of disposal facility operation. License for the testing operation was administered in 1999 and license for routine operation in September 2001 .

The basic dokument for calculation of the waste acceptance criteria was the Resolution of the Ministry of Health No 9619/98 - SOZO/ŠZÚ SR. This Resolution specifies that the following limits will be not exceed:

100 microSv/year for individual member of the public through water pathway (evolutionary scenario, probability is equal 1)
1000 microSv/year for individual member of the public for intruders scenarios (road or House construction, probability is lower then 1)
50 microSv/year for individual member of the public by the water effluents from repository during operation

Based on the regulation of the Nuclear regulatory authority No 121/2003 safety assessment have to be re-evaluated after each ten years of operation.

The waste acceptance criteria of Radwsate repository Mochovce are the reference parameters for the all waste treatment facilities.

68)
Does the national regulatory framework contain documents defining monitoring during the institutional control period and post-closure surveillance rules?

There is no regulatory document defining monitoring during the institutional control period and post-closure surveillance rules in current legal system. At present the amendment of Atomic act is in process where also documentation for closure and institutional control is specified. Detailed description of scope and content of individual items of this documentation will be given in respective regulation later. In the frame of above-mentioned documentation the monitoring program and plan of institutional control are included. Through the conditions of licence for closure and institutional control another additional requirements important from monitoring and post-closure surveillance rules point of view might be determined by UJD, if necessary.

HUNGARIA

69)
Is there any priority among the options considered in the back-end policy? Is domestic deep geological disposal, waste export, regional/international repository and new technologies considered on equal basis?

Slovakia is preparing deep geological disposal facility, however there are ongoing talks with other State on alternative solutions. Slovakia also actively follows the developmens towards regional arrangements within the European cotext.

70)
What is meant by to “follow the new technologies” in the area of SF management? Considering P/T?

New technologies in the area of spent fuel management are meant „partitioning and transmutation technologies“, (P/T), as the best representatives. These technologies are studied and being developed in many contries.

71)
Has Slovak Republic specified the conditions under which export of SF to foreign countries without importing residues can be expected (e.g. necessary infrastructure and safety regulations of the host country)?

Nowadays the Slovak Republic does not expect/plan export of spent nuclear fuel.

72)
Only SF is mentioned as subject to export. Are vitrified waste from A1 and other long-lived waste form decommissioning planned for domestic geological repository?

Yes, we expect all the RAW non-disposable at the Mochovce Radwaste Repository to be disposed of at the deep geological repository whose development is under preparation on the Slovak Republic´s territory.

73)
What is the mechanism for preparing the policy (debates, role of the stakeholders, NGOs).

The basic policy of spent fuel and radioactive waste management is established by the Resolutions No. 930/1992, No. 190/1994 and No. 5/2001 of the Slovak Government.
In 1997 the Slovak government accepted the Updated Power Policy of SE, a. s. till year 2005. The related government Resolution No. 684/97 includes the provisions on the spent fuel management.
In 2000 the Slovak government adopted the Power Policy of the Slovak Republic that also relates to the concept of fuel cycle back-end.
According to the Rules of Procedure of the Government, documents which could have financial, environmental or socio-economic impact have to be agreed with the responsible authorities including stakeholders. In practice this means that the relevant documents subject to approval by the government are put on the internet for comments. These preparation of the relevant document to be sent to the government for approval.

74)
When classifying waste, concentration of alpha nuclides is averaged for package or for the entire repository volume?

In the system of radwaste classification due to its activity the average concentration of alpha-bearing radionuclides (lower than 400 Bq/g) for entire repository volume as well as for waste package (FRC) is considered. According to international recommendations the possibility of existence of “hot spots” – the local activity concentration of alpha radionuclides up to 4 000 Bq/g is under consideration (in accordance with safety analyses).

75)
Reprocessing of SF is not included into the concept of SF management". Probably only domestic reprocessing is excluded, otherwise there is a conflict with other options mentioned in B1.

In the concept of spent fuel management in the Slovak Republic there is left a room for possibility to transport spent fuel into foreign country/ries for final disposal or reprocessing of SF without returning the products of reprocessing (high-level ra-waste, plutonium, uranium) back to Slovakia. At present concept, domestic reprocessing or reprocessing abroad with returning the products of reprocessing back to Slovakia, are excluded.

76)
Could you summarise the results of the decommissioning process of NPP A1 Bohunice (collective and average individual doses, volume of radioactive wastes, ratio of the clearanced/released materials, etc.).

SE-VYZ staff and suppliers

	1996	**1997**	**19998**	**1999**	**2000**	**2001**	**2002**	**Note**
Staff and suppliers (number of monitor.)	847	631	584	639	1,089	1,036	1,060	In 1996-1999 the dominant process was fuel preparation and transport out of SR
A-AED (mSv/ex. staff)	1.258	2.375	2.307	1.565	0.529	0.696	0.747	
AT-CED (manSv)	1.065	1.499	1.347	1.000	0.576	0.721	0.791	

Note: A-AED average effective dose
AT-CED overall collective effective dose

The amount of metallic material released (carbon and stainless steel) from NPPA-1 - 22 tonnes

77)
What is the main mechanism for the public involvement?

Keeping the public informed takes place in accordance with Act No. 127/1994 Coll. on environmental impact assessment, Act No. 171/1998 Coll. on access to environmental information, Act No. 211/2000 Coll. on free access to information, and with SE, a.s., by-laws.

78)
How can the toxic wastes be separated and treated? How do you comply with the requirements, included in the Technical Specifications?

The Declaration on content of toxicants in RAW processed on technological lines is implemented:

a) by indirect method, i.e. checking for the presence of toxicants with the RAW producer in RAW generating workplaces,
b) chemical-physical analyses of RAW before they are processed,

c) *secondary RAW (gaseous discharges) analyses are carried out with high-temperature RAW processing processes (incineration, vitriification) for the presence of toxicants (dioxines).*

None toxicants has been detected with the RAW taken over and processed to date, and therefore there has been no need for handling the issue of their separation.

79)

What is the maximum time period after closure of the repository for which you can declare that the probability of an intruder scenario is considerably less than one?

The time period after closure of the repository for which it can be certainly declared that the probability of an intruder scenario is considerably less than one is the period of institutional control that is assumed to be 300 years. The design of cover and FRCs significantly reduce the access of intruder e.g. the probability of intruder scenarios for next 200 years. Therefore the assessment for licence was based on deterministic calculations of intruder scenarios after 500 years. At present, the sensitivity of results to intruder access time variation is evaluated.

80)

How can it be justified that the system of final repository cover will be able to prevent the access to the disposed waste for a period of 500 years.

All engineer barriers are designed to prevent access to the disposed waste for long term. The evidence of life time/resistance of concrete barriers longer than 500 years is the part of safety report. More over the calculations of long term safety with the use of results provided by French producer of FRC containers has led to the minimum time period of 870 years of mechanical resistance against the inadvertent intrusion.
At present, more detailed experiments and calculations are provided to demonstrate the real durability of individual engineer barriers.

81)

What criteria are applied for disposal of spent radiation sources at Mochovce repository?

The possibility to dispose of disused radioactive sources in National repository is so far under evaluation.

82)

What are the main obstacles to implement a system for management of institutional wastes including SSRS which was set in a resolution 10 years ago?

The problem is only with high activity sources for gamma therapy and some radium sources, which do not meet acceptance criteria for repository at Mochovce. The appropriate technology and hot chamber is not available at present.

83)

If some Ra sources pose radiological hazard, why are they not conditioned for safe interim storage?

The hot chamber and appropriate technology is not available at present.

LATVIA

84)
Could you specify if there is a limit set in Slovak Republic, e.g., on activity concentration of a radioactive waste containing natural radioactive nuclides? If this is the case, could you provide information with respect to such limits? Could you indicate the comparative amount of waste (by its mass and activity) which is not included in the present inventory?

Could you specify if there is a limit set in Slovak Republic, e.g., on activity concentration of a radioactive waste containing natural radioactive nuclides? If this is the case, could you provide information with respect to such limits? Could you indicate the comparative amount of waste (by its mass and activity) which is not included in the present inventory?

85)
Could you provide some additional information with respect to the conditions applied in Slovak Republic for such "free-storage"?

"Free" storages are the special rooms devoted for temporary storage of radioactive waste. There are temporary stored mainly large pieces of technological devices because of decay of radionuclides before complete disassembling, fragmentation or decontamination. There are no special conditions except: the rooms are shielded and closed, the entrance into these rooms is controlled, the ventilation and radiation monitoring must be ensured in the room. The surfaces in the storage room should allow effective and simple decontamination. The stored pieces are mostly packed into PE foil.

86)
Could you specify whether the extension planned will invoke an additional assessment of impact on the environment?

Extension of disposal site in the future will invoke change of safety analysis. Any change of technology in the future will require new license for the operator.

87)
Could you clarify whether the Atomic Act covers all the radioactive waste or only the waste that originates from nuclear reactors?

- under Art. 17(2) of Act No. 130/1998 Coll. radioactive waste management means::
"collection, sorting, storage, treatment, conditioning, handling, transport and disposal of radioactive wastes from nuclear installations and conditioning, transport and disposal of institutional radioactive wastes", Atomic Act covers such steps of RW management

POLAND

88)
The releases of Iodine-131 for NPP V1 (560 MBq) and V2 (2 MBq) are very different, what is the reason?

Higher iodine releases at V1 were due to leaks on three fuel assemblies, which caused a high iodine concentration in the primary circuit coolant. Following the start of the general overhaul on Unit 2, de-sealing of the primary circuit in September 2001, 479.58 MBq got in the ventilation discharges, as did 52.12 MBq of iodine 131 in October.

At NPP V2, none fuel assembly cladding leak was indicated and therefore the iodine discharges stood at very low levels.

ROMANIA

89)
In the report is mentioned that the State Fund of decommissioning nuclear power generating installations and treatment of spent nuclear fuel and radioactive waste was established by the act 254/1994 Coll., amended by Act 78/2000 Coll. and Act 560/2001 Coll. Could you make an extended presentation of these laws? We would appreciate if you could provide an English version of these laws. The report mentions that the operator of nuclear facility is obliged to contribute yearly to the fund the sum of 350000 SK for each megawatt of installed electric power of the nuclear power of the nuclear facility and 6,8% from sales price of electric power generated yearly in nuclear field.

See answers to questions No. 97 and 98. An English version of the Act 254/1994 as amended will be provided at Review Meeting including the presentation on that act.

90)
Could you precise how these valueds were derived and what is the expected percentage of the total cost of the decommissioning of nuclear power generating installations and of treatment and disposal of spent nuclear fuel and radioactive waste that will be covered by these contributions.

See previous answer.

SLOVENIA

91)
Could you please give us some more information about the design and handling of the fibre-reinforced containers?

Fibre-reinforced containers (FRCs) are used at SE, a.s., as package systems for transport and permanent disposal of conditioned RAW and IRAW. A variety of types of packaged form are approved by UJD for RAW disposal, depending on the FRC internal content. Once filled up with RAW, the FRC is sealed and constitute one of the Mochovce National Repository multiple barriers preventing radioactive leaks into the environment. FRCs are manufactured at the plant of VYZKONT, s.r.o., Trnava (SLOVAKIA) under the French firm SOGEFIEBRE´s license.

92)
How are defective spent fuel assemblies managed? Are they transported out of the spent fuel pool?

Also part of the design equipment of the NPPs V1, V2/SE-EBO and SE-EMO for SF management are special sealed capsules/canisters to store untight SF in the unit pools by the reactor. The sealed capsules are designed for dual-purpose applications: for both storage and transport of untight SF assemblies. At SE-EBO, untight SF is transported in the C-30

transport container from the unit pools to the Bohunice Interim Spent Fuel Storage facility (ISFS). At the Bohunice ISFS, untight SF is placed in T-13 baskets and stored in the pools. At SE-EMO, untight SF management/transport will depend on a particular solution and the type of technology for the new ISFS at SE-EMO.

93)
What is the capacity of the stand-by pool and for which purposes is it used?

The storage capacity of each of the four pools of the Bohunice Interim Spent Fuel Storage facility is identical, i.e. 56 T-12 baskets or 98 KZ-48 baskets. The stand-by pool serves to contingently transport SF out of the operated pool.

94)
Could you elaborate more on monitoring of corrosion of the pool linings system?

The programme for monitoring corrosion of selected elements of the ISFS construction, machinery and transport technology is based on the check-up samples system and on the application of the acoustic emission method.
For the check-up samples system, the following five types of the basic samples from different materials to be located in the respective storage pools and where the water level varies are essential:

- *samples to establish mass losses,*
- *CBB (Crevice Bent Bean) samples,*
- *"circular weld deposit" samples,*
- *"U-bend" samples,*
- *metallographic assessment samples.*

Monitoring the corrosive process using the acousting emission is done by means of a network of five sensors permanently installed within each of the storage pools.

SPAIN

95)
According to section C.2., the national report only deals only with radioactive waste from nuclear fuel cycle related activities. Although in some parts of the report reference is made to other type of radioactive wastes (i.e. health, industrial, etc.), could it be further elaborated the current waste management policy and arrangement for these wastes, either from institutional or private sources?

- *Most IRAW can be expected to be disposable at the operated National RAW Repository (near surface type) under the related acceptance criteria for waste packages. IRAW non-acceptable at the surface-type repository will be stored in an appropriate and safe manner until another alternative of ultimate disposal is chosen and implemented. Resulting the safety assessment needed prior intended IRAW disposal at the near surface-type repository: wastes from workplaces involving open sorces, save for few exceptions, will be disposable with respect to their activity, with non-radiological properties such as toxicity being possibly of greater importance as compared to RAW from nuclear installations.*
- *Dissused sealed sources with a half-life of up to 30 years (e.g. 137Cs) are disposable under the acceptance criteria derived from the intrusion scenarios of safety analyses; the activity of sources with a half-life up to units of years (e.g. 60Co) is only limited by the safety requirements for transport and handling of waste pasckages.*

- *Dissued sealed sources with long half-life (for instance transuranium or radium) are not disposable at the near surface-type repository.*

96)
SE-VYZ is authorised to perform activities related to management of IRAW and orphan sources. How are those services arranged and who pays for them? Is the ownership of the radwastes transmitted to SE-VYZ?

SE-VYZ holds a licence to manage IRAW (open, sealed emitters) in areas of collection, transport, storage. SE-VYZ is granted the licence for IRAW processing, conditioning and disposal depending on the type of IRAW following demonstration SE-VYZ´s capability to ensure this activity in accordance with the laws concerning RAW and IRAW handling.
VYZ is responsible for IRAW management, the owner is the "known owner" or the "state".

97)
Could you explain the bases for calculating contributions to the national fund for decommissioning NPPs and treatment of spent fuel and radwastes? Are these contributions revised periodically?

Under Act No. 254/1994 Coll., the full text, the operator of a nuclear installation is obliged to pay a contribution to the State Fund for Decommissioning (SFD) amounting to SKK350,000 annually for each Megawatt of installed electric capacity of a nuclear installation and 6.8% of the selling price for electricity generated at the nuclear installation annually.
The operator´s SFD contribution amount is revised on a biennial basis following the assessment of formation of and drawing on SFD funds.

98)
Does Slovak Rep. regulations require purchasers of sealed sources either to ensure that sources will be returned to the seller when disused or to place financial sureties to cover expenses of its management as radwaste by an authorised organisation?

In regulation there is not a duty to return the spent sealed source to the supplier, but it is recommended to have in purchase contract an agreement on return of spent source. There are no financial sureties to cover expenses at present, but there is an obligation of the licensee to cover all expenses related with the treatment, conditioning and disposal of radioactive waste produced including spent sources.

99)
How costs for institutional waste management are financed?

The producer of radioactive waste is obliged Act N_0 470/2000 of 5 December 2000 amending and supplementing the Act of the National Council of the Slovak Republic N_0 272/1994 On protection of human health in the wording of later Acts, Act of the National Council Slovak Republic N_0 152/1995 On foodstuff in the wording of later Acts and amending Act N_0 130/1998 On peaceful use of nuclear energy and on amending and supplementing Act N_0 174/1968 Coll., On professional state supervision concerning the security at the workplace in the wording of the Act N_0 256/1994 (Act N_0 470/2000) to cover all expenses related with the treatment, conditioning and disposal of institutional radioactive waste produced.

100)
What type of containers (characteristics) are used to store spent fuel into the pools? Is there any specific reason for using containers instead of normal storage racks? What is

the "design basis seism" used in ISFS-VYZ? How does it compare with the "design basis seism" used for the NPP?

T-12 baskets having a capacity of 30 spent assemblies and KZ-48 baskets having a capacity of 48 spent fuel assemblies are used to store spent fuel within the ISFS Bohunice pools. T-13 baskets are used for untight spent fuel assemblies. These are stored in sealed capsules/canisters and placed in T-13 baskets.
The use of the baskets is determined by the original project (origin Soviet Union/Russian Federation). The aforesaid baskets are also currently used to transport spent fuel in the C-30 transport container, which subsequently makes SF handling easier at the ISFS, as the entire SF-laden basket is transported from the C-30 container to the ISFS storage pool. The process to license KZ-48 for SF transport using the C30 container has been launched.
The baskets are stored in the pools. The storage of the baskets in the pools is analysed for floor spectra of response according to 8º of MSK 64. The background documents in terms of ISFS "design basis seism" are identical to those for the backfitted Bohunice NPP/V1.

101)
How waste acceptance requirements are defined and implemented before the waste is accepted at Mochovce repository? What is the role of UJD in the acceptance process between the producer and the repository operator?

The acceptance criteria are developed based on safety analyses and approved by UJD.
The acceptance criteria for the repository are the basic background document in developing the criteria for the respective RAW processing facilities.

102)
Are the waste acceptance criteria defined at the level of the waste package or overpack?

The acceptance criteria are developed per m3 of RAW (concentration limits), container (container properties) and also for the repository (limit for RAW inventory at the site).

103)
What are the main reasons for the 500-year period for the design of the final cover?

UJD´s opinion on the institutional control period, in which the given institutional control period for the calculation of analyses is 300 years. Merely the violator scenarios are based on the assumption that the barriers will be effective against the violator´s penetration for a period of 500 years.

UKRAINE

104)
Are there dose limit quotas established for NPP releases and discharges?

The dose limit quotas are established under Slovak Health Ministry Decree No. 12/2001 Coll. In discharging gaseous and liquid radioactive substances from nuclear installations into the environment, the effective dose of 0.25 mSv in the calendar year shall not be exceeded with any individual from the critical public group.

Area-wide annual limits for		*SE-EBO + SE-VYZ*	*SE-EMO*
gaseous discharges:	*inert gases:*	*4.0 . 10^{15} Bq*	*4.1 . 10^{15} Bq*
	corrosion and fission products:	*3.8 . 10^{9} Bq*	*1.1 . 10^{9} Bq*
liquid discharges:			
	aerosols:	*1.6 . 10^{11} Bq*	*1.7 . 10^{11} Bq*
	tritium:	*43.7 . 10^{13} Bq*	*1.2 . 10^{13} Bq*
	iodine 131:	*13.0 . 10^{10} Bq*	*6.7 . 10^{10} Bq*

105)
What exposure limits are established for NPP personnel?

The exposure limits for NPP personnel are established in Slovak legislation (Slovak Health Ministry Decree No. 12/2001 Coll., Art. 5). This Decree is based on ICRP Recommendations No. 60 and IAEA Safety Serie No. 115 - International Basic Safety Standards for Protection Against Ionising Radiation and for the Safety of Radiation Sources.

1. The exposure limits for personnel with ionising radiation sources are:
- *a) an effective dose of 100 mSv during five consecutive calendar years, with the effective dose in any calendar year not being allowed to exceed 50 mSv*
- *b) an equivalent dose of 150 mSv in eye lens in the calendar year*
- *c) an equivalent dose of 500 mSv in the skin in the calendar year that is established as the average dose per skin area exposed*
- *d) an equivalent dose of 500 mSv in the hand from the fingers up to the forearm and in the leg from the sole up to the ankle in the calendar year.*

2. The exposure limit for pregnant women working in workplaces involving ionising radiation sources is established so that from the point the pregnant woman notifies her employer of her pregnancy to the end thereof the sum of effective doses from external exposure and the sum of effective doses from fetus internal exposure do not exceed 1 mSv.

3. The exposure limits under paragraphs 1 and 2 apply to the sum of doses from all exposure paths and in all job activities that the worker with ionising radiation sources carries out with one or simultaneously with a number of the holders of a licence for activities leading to exposure or that he carries out for himself as the licensee.

106)
What exposure limits are established for the public?

The public exposure limits are established under Slovak legislation (Slovak Health Ministry Decree No. 12/2001 Coll.). This Decree is based on ICRP Recommendations No. 60 and IAEA Safety Seria No. 115 - International Basic Safety Standards for Protection against Ionising Radiation and for the Safety of Radiation Sources and they are also transposed into the Pre-operation Safety Analysis Report.

1. *The public exposure limits are:*
- *a) an effective dose of 1 mSv in the calendar year*
- *b) an equivalent dose of 15 mSv in eye lens in the calendar year*

c) *an equivalent dose of 50 mSv in the skin in the calendar year, established as the average dose per 1 cm^2 of the most exposed skin irrespective of the size of the skin area exposed.*

2. *The exposure limits under paragraph 1 for the public surrounding the workplace involvingionising radiation sources apply to the average exposure of the critical public group calculated for all exposure paths from all ionising radiation sources and for all contingent activities leading to exposure.*

107)
Does the mentioned document of regulatory authority UJD SR No 190/2000, which contains "aspects of spent fuel management safety", incorporate requirements to comply with Joint Convention Article 4 (iii) – vi))?

Yes, general safety requirements written in Joint Convention Article 4 (iii)-(vi) are incorporated in Regulation No. 190/2000. More over Joint Convention is the part of Slovak legal basis as it is.

108)
Have a safety analysis report on the spent fuel storage facility of Jaslovske Bohunice NPP been developed and assessed?

The safety analyses are set out in the Safety Analysis Report which is part of safety documents. The following reports have been prepared and considered for the Jaslovské Bohunice ISFS:
Terms of reference SR
Preliminary SR
Pre-operation SR
Pre-operation SR for reconstruction
Pre-operation SR following actually made changes in reconstruction
Prior to the implementation of the ISFS reconstruction, the previous operation was assessed for reliability of the equipment and systems. The obligation to carry out the safety, reliability assessment as the current set of safety indicators is imposed by Decree No. 318/2002 Coll.

109)
What are financial provisions (guarantee) to ensure safe management and secure protection (including disposal) of disused sources?

Financial mechanisms are not covered by Ministry of Health. Financing is a matter between the owner of the disused source and the organization dealing with conditioning and disposal of disused sources. Financing of orphan sources is covered by he State fund for decommissioning. There is an obligation of the licensee (producer) to cover all expenses related with treatment, conditioning and disposal of radioactive waste produced including spent sources.

USA

110)
Article 9 (vii). Operation of Facilities, of the Joint Convention requires the Contracting Party to take appropriate steps to ensure that decommissioning plans for spent fuel

management facility are prepared and updated, as necessary, using information obtained during the operating lifetime of that facility, and are reviewed by the regulatory body. Please provide more information on the implementation steps taken to meet this requirement?

A document titled "ISFS Decommissioning Conceptual Plan" has been developed for the decommissioning of the nuclear facility (Bohunice IFSF). Operation of the facility is assessed on a half-year basis. A complex review by the nuclear regulatory authority is carried out on a quarterly basis. In addition, there are also extraordinary reviews for SF transport. The ISFS decommissioning conceptual plan is updated following major changes in the nuclear facility. The Mochovce ISFS will be part of the project for its construction.

111)
The effect of radioactive waste at NPPs with respect to individuals, society and environment was evaluated by an EIA. Please provide information on how this was done.

RAW effects are described in detail in Chapter 11 of the Operation Safety Analysis Report detailing source elements, their modelling, fission products, corrosion and coolant activation products, secondary system effects, tritium formation. Furthermore, there are stated:

- *discharges and their management. Discharge radiological consequences are described in more detail in section 11.3.3 together with meteorological and geographic data, environmental and public data and consumption of agricultural products for six public age brackets, environment zoning, and the effects of long-term factors for cloud doses and volume activity dilution factors, dry sedimentation and precipitation impurity washout long-term factors.*
- *contributions by the respective exposure paths to the individual and collective dose from the atmosphere in the respective environment zones for the age brackets*
- *concentration and dose factors on soil, water, plants and their transfer into the food chain*

Section 11.5 describes the RAW management process monitoring system together with discharge monitoring and the sampling monitoring system.

112)
The planning for the spent fuel disposal facility does not mention the institutional post-closure measures and controls that may be needed. Are the institutional measures for radioactive waste disposal discussed in Section H.7 also applicable to the proposed spent fuel repository? If no, what are they?

The deep geological disposal programme in the Slovak Republic is so far in the early stage of development. The regulations concerning the disposal of spent fuel are very general usually as expressions that the provisions set up for disposal of radioactive waste are reasonable applicable for disposal of spent fuel. The more detailed provisions for spent fuel disposal concerning the institutional post-closure measures shall be developed in the future.

113)
Section E provides a description of the regulatory framework in the Slovak Republic. There are separate organizations regulating nuclear safety (UJD-SR) and radiation protection (Ministry of Health). On page 32, in section E.2.2.3 it states both organizations "..entered into the an agreement on co-ordination of regulatory activities and providing for their common complementary regulation." How does this agreement

work? Please clarify who has final authority on permitting and licensing and summarize their roles and responsibilities.

The legal framework that regulates the activities during the lifetime of nuclear facilities sets up that for licensing of nuclear facility the permission of both regulatory bodies is needed, from the point of view of radiation protection the Ministry of Health is responsible and from the point of view of nuclear safety the Nuclear Regulatory Authority is responsible.
The mentioned agreement between these two regulatory bodies is focused on improving the co-operation especially in the area of legal document preparation, information on inspection activities, information on activities of common interest, emergency exercises preparation, training of regulatory staff, preparation of documents for international organisations and so on.
Final authority during licensing steps is respective construction office

114)
Referring to Section F.2.2, are the resources put into the State Fund for decommissioning kept in separate sub-accounts allocated to each of the uses the Fund is authorized to support?

There is only one bank account for the financing of all activities referred to in F.2.2.

115)
The Slovak Republic has established the State Fund for the Decommissioning of Nuclear Power Generating Installations and Treatment of Spent Nuclear Fuel and Radioactive Wastes. Please elaborate on the measures taken to ensure that adequate resources will be available when needed.

The Fund is created mainly from:
the saled elektricity generated in NPP (6,8 %of the amount per year)
350 thousand SKK per MW installed in the NPP/year. It is ruffly 2,5 billion SKK/year. This amount is sufficient for covering short and medium term activities.
For the long term the authorities will revalue these amounts (March 2004).

116)
Please elaborate on the steps taken to ensure QA programs for the safety of spent fuel management and radioactive waste management are established and implemented.

The respective RAW safe management steps are established in the Quality Assurance System which is described in the guidelines and operational regulations of a nuclear power plant.
An internal audit on RAW management is conducted annually whereby the auditors check compliance of the process performance with the above legislation. Audited are both personnel across management levels and premises and equipment. The audit results are submitted to the company management.

117)
When decommissioning criteria are not met, the operator must provide for limitations on land use and ensure future control. What type of analysis/rationale is the operator required to perform to obtain regulatory approval for not completing remediation to originally planned specifications? Does the site revert to government ownership? If not, what precautions are taken to assure the site will not be used in an unsafe manner in the future? Who is ultimately responsible in the long term?

There is no practical experience with the site release till now. Only two nuclear sites exist in SR at present. It is expected that the first complete site release will occur approximately after 2100.
The actual legal basis:
- Act 130/98 Coll. and regulation No.246/99 Coll. require before NI license termination to issue (by operator) the final radiation survey with the evidence, that site release criteria are met. This monitoring has to be confirmed by independent organization. Act 272/94 Coll. as amended in 2000 requires a licence (permission) for the clearance of the site issued by the Radiation protection authority.
The operator is responsible for decommissioning generally (including remediation).

In the case, that site release criteria are not met, The Radiation protection authority evaluates and approves (the licensing process) the remediation project (requirement for impact minimization/ optimization) including monitoring program. The authority has to assess the actual situation after all radioactive sources and wastes are removed.

118)
Following the regulator's approval of the decommissioning plan, please explain what role the regulator has during site remediation (e.g., are any other submittals/approvals required during the process? Who does the confirmatory survey?).

see question 100

119)
The Slovak Republic does not produce sealed sources and their policy is to return sources to manufacturers in states of origin. To what extent are the sources currently in long-term storage the result of challenges to return by states of origin?

This is only minor problem now because recently we have less than 20 sealed sources in long term storage which resulted from challenges with their return to the state of origin.

120)
Section J describes unreconciled challenges with high-level gamma sources, and many Ra-226 sources not meeting long-term storage criteria. What plans does Slovakia have for dealing with these sources?

Collection, temporary storage and after conditioning in hot chamber (additional sealing) storage in so called integral storage for radioactive waste (at present in design) are planned. Disposal in geological repository is planned later (in 30-50 years).

121)
The Slovak Republic anticipates possible construction of a deep geologic repository for SNF and HRAW after 40 to 50 years of intermediate storage (Section B.1). What planning activities are underway (e.g., preliminary site screening, site-specific investigations underway)? Please describe any international cooperative efforts on deep geologic disposal.

There are currently six picked-up study sites on which geological, structural and tectonic conditions, hydrogeological conditions, engineering-geological conditions, geochemical

characteristics of the rock environment, deposit conditions, and characteristics of conflicts of interest in these areas have been assessed.
The next aim of the follow-up research phase will be to ascertain lithological, structural, tectonic and hydrogeological parameters of deeper parts of the sites at the depths envisaged to set up a deep repository (approx. 500-700 m in crystalline areas and approx. 300-400 m in sedimentary areas.)
The international co-operative efforts with Belgium on deep disposal - hydrogeology, hydrogeochemistry, geomechanics, repository siting criteria, repository safety - have already successfully been underway for a number of years now - BELGATOM, SCK• CEN. Traditionally, the Slovak Republic have maintained close co-operation on all of the DR development disciplines since the launch of handling these issues with the Czech Republic.

122)
The strategy for managing SNF includes international or regional solutions (Section B.1). What formal agreements has the Slovak Republic entered into with other countries on such a strategy? Is the Slovak Republic monitoring geologic repository development activities in other countries to assist in its own strategic planning? Please describe such activities.

The Slovak Republic has currently not entered into any agreement with any other state(s) relating to the preparation or work on the common strategy for the implementation of an international or regional deep geological repository. The Slovak Republic´s activities are aimed at developing a national deep geological repository, keeping track within the co-operation with other states (Czech republic, Belgium, Hungary) and also within the regular meetings of experts from other states (Slovenia, Switzerland, Finland) of the activities by these states concerning the development of their national geological repositories.

123)
The discussion on Policies and Practices states disused sealed sources shall be "conditioned" into a form suitable for centralized long-term disposal. Please describe what types of conditioning are planned for various types of sealed sources.

Low-activity sealed sources (standards to calibrate instruments, sources from fire alarms, etc.) are incorporated into the bitumen matrix together with RAW from V-1, V-2 operation (ra-concentrates). The bitumen product with sealed sources is put in the FRC and incorporated into an active cement mixture. Upon dealing of FRCs, thus packed sources are disposed of at the Mochovce National Repository. Higher activity sources (in excess of the limit conditions for disposal at the Mochovce National Repositor) are temporarily stored at special NPP A-1 storage facilities.

124)
Section D.1.2 and Annex IV present the SNF storage capacity; Annex IV indicates 60% of storage capacity is currently used. Please clarify the total current SNF inventory.

Under the rules applicable in the Slovak Republic there are not indicated absolute weights for SF at SE´s storage facilities. As of the mid 2003 (30 June 2003):

the storage capacities at Mochovce (MPB pools) are exhausted up to 43.5%. The problem of further SF capacity will need to be resolved until 2007, either by commissioning a new storage facility at this site (planned start of the Mochovce SF storage facility is 2009) or by

transporting some of SF from this site to another site - Interim Spent Fuel Storage Facility in Jaslovské Bohunice.
the storage capacities of Jaslovské Bohunice reactor units (MPB pools) occupied up to 67%. Some of SF from the reactor units is periodically, on an annual basis, transported to the Interim Spent Fuel Storage Facility in Jaslovské Bohunice.
the maximum storage capacity of the Jaslovské Bohunice Interim Spent Fuel Storage Facility (Away From Reactor Storage Facility) is exhausted up to 45%. The storage capacity of this interim storage facility will be, including its stand-by capacity, sufficient for the entire SF production from operation of the Bohunice units during their service life.
***As of 30 June 2003, 7, 933 fuel assemblies (952 tonnes of HM) were stored in the Slovak Republic**.*

125)
There is a discussion of a facility that collects, interim stores, and ships disused sealed sources. References are made to a "hot chamber at the Huma-Lab Apeko, s.r.o, facility in Kosice". Please provide more information on the Huma-Lab Apeko, s.r.o, Kosice facility which is managing sealed sources (e.g., activities, types of equipment).

Huma-lab Apeco identifies the sealed sources (identification of the number of sealed source, radionuclide identification and assessment of the activity), performs the test of tightness by the smear and by leaching in water and stores temporary the spent sources and orphan sources. If possible Huma-lab Apeko sells the spent sealed sources to producer of radiation sources. Huma-lab Apeko has a hot chamber, special containers for temporary storage of collected sources, laboratory equipment for identification of radionuclides and for assessment of the activity, portable monitors for in-situ identification of sources and special manipulators (with telescope) for treatment of sources.

126)
Annex V shows a total quantity disposed of 1041 cubic meters, while the latest IAEA Waste Profile Report for 2000 shows a total of 217 cubic meters disposed. Please explain the difference. (Note also that the second table in V.3 and some of the tables in V.4 appear to have different units reported under a "cubic meter" heading.)

In the respective years the following FRCs were disposed of:

2000	*7 FRCs (1 FRC = 3.1 m^3 of RAW)*
2001	*115 FRCs*
2002	*214 FRCs*

As of 31 December 2002, a total of 336 FRCs were disposed of, on aggregate 1,041.6 m^3 of conditioned RAW.

<u>Table V3</u> clearly shows the formation and storage of RAW produced from the start of operation of NPP Mochovce Units 1 and 2. The above records suggest increases in formed and stored RAW in the respective quarters of the years 1998 to 2002.
<u>Table V4</u> gives an overview of stored liquid RAW and ra-sludges at A-1 and its particular structures as of the date of the report.

Annex

254/1994 Coll.LL.
ACT
OF THE NATIONAL COUNCIL OF THE SLOVAK REPUBLIC
of 25 August 1994
on State Fund of Decommissioning of Nuclear Installations and Handling of Spent Nuclear Fuels and Nuclear Wastes

Amendment: 78/2000 ColI.LL.
Amendment: 560/2001 Coll.LL.
Amendment: 291/2002 Coll.LL.

The National Council of the Slovak Republic has ruled as follows:

§ 1
Principal provisions

(1) State Fund of Decommissioning of Nuclear Installations and Handling of Spent Nuclear Fuels and Nuclear Wastes is being established (hereinafter referred to as the "Fund") as a special-purpose fund which concentrates financial resources intended for decommissioning of nuclear installations and for handling of spent nuclear fuels and radioactive wastes.
(2) The resources of the Fund may only be used for the purposes mentioned in §4.
(3) The Fund shall be a legal entity with the principal offices in Bratislava.

§2
Fund administration and bodies

(1) The Fund shall be administered by Ministry of Economy of the Slovak Republic (hereinafter the "Ministry").[2]
(2) The Fund shall be headed by Director to be appointed and recalled by Minister of Economy of the Slovak Republic (hereinafter the "Minister").
(3) The Minister shall appoint Fund Council (hereinafter the "Council") as his advisory body for generation and utilisation of Fund resources.
(4) Council members shall be appoinetd and recalled by the Minister, in particular from among experts in the fields of nuclear energy, health, environmental protection, economy and local government.
(5) The Council shall comprise seven members.
(6) Details concerning the organisation and activities of the Fund and its bodies shall be regulated by Fund Charter to be approved by the Government of the Slovak Republic.

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[1]Act of the National Council of the Slovak Republic No. 303/1995 Coll. LL. on Budgetary Rules, as amended by Act of the National Council of the Slovak Republic No. 386/1996 CoIl.LL.
[2]§24 of Act of the National Council of the Slovak Republic No. 303/1995 Coll. LL., as amended by Act of the National Council of the Slovak Republic No. 386/1996 Coll.LL.

§3
Generation of the Fund

(1) The following shall be the sources the Fund shall be generated from:
   a) contributions by nuclear installation operators,
   b) penalties imposed by Nuclear Regulatory Authority of the Slovak Republic upon natural persons and legal entities pursuant to separate regulation[3],
   c) bank credits,
   d) interest on Fund deposits in banks,
   e) grants from State Budget[4],
   f) other sources as provided by special regulation.

(2) Nuclear installation operators shall be liable to pay annual contributions to the Fund at Sk 350,000 per megawatt installed electric output of the nuclear installation, and 6.8% of the sale price of electricity generated in the nuclear installation annually. Details concerning the calculation of the contributions to the Fund shall be laid down by a generally binding legal regulation to be issued by the Ministry.

§4
Utilisation of Fund resources

Fund resources may be used for the following purposes:
a) decommissioning of nuclear installations,
b) handling of spent nuclear fuels[5] and radioactive wastes[6] after the termination of nuclear installation operation,
c) handling of radioactive wastes whose originator is not known, including occasionally seized radioactive wastes and radioactive materials stemming from criminal activities whose originator is not known, as confirmed by Police Corps investigator or Ministry of Health of the Slovak Republic[7],
d) purchase of land for the establishment of nuclear fuel and nuclear waste repositories,
e) research and development in the areas of decommissioning of nuclear installations and handling of nuclear fuels and radioactive wastes after the termination of the operation of nuclear installations,
f) selection of localities, geological survey, preparation, design, construction, commissioning, operation and closure of repositories of spent nuclear fuels and radioactive wastes, including post-closure monitoring of such repositories,
g) expenditures connected with Fund activities up to a maximum of 0.3% of annual Fund revenues,
h) contributions towards health and life protection of the population within zones at risk posed by nuclear installations.

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[3]§36 par.10 of Act No.130/1998 Coll.LL. on Peaceful Uses of Nuclear Energy and on Amendment and Supplement to Act No.174/1968 Coll. on State Professional Surveillance of Safety at Work, as amended by Act of the National Council of the Slovak Republic No. 256/1994 Coll.LL.
[4]§6 par.2 letter a), and par.3 and §24 of Act of the National Council of the Slovak Republic No.303/1995 Coll.LL., as amended by Act of the National Council of the Slovak Republic No. 386/1996 Coll.LL.
[5]§ 18 par.2 of Act No.130/1998 Coll. LL.
[6]§ 17 par.2 of Act No.130/1998 Coll. LL.
[7]§ 17f par. 2 letter p, and § 17r par.10 of Act of the National Council of the Slovak Republic No. 272/1994 Coll. LL. on Human Health Protection, as amended by Act No. 470/2000 Coll.LL.
§ 17 par. 9 and 10 of Act No.130/1998 Coll.LL.

§5
Fund management

(1) Granting of resources from the Fund shall be discretionary.

(2) Fund resources may be granted to operators of nuclear installations or to operators of repositories of spent nuclear fuels and radioactive wastes, as special-purpose grants specifically earmarked for handling of radioactive wastes whose originator is known (hereinafter "Applicant") based on written applications with project and technical and economic rationale attached.

(3) Granting of resources from the Fund shall be decided upon by the Minister at Council's suggestion.

(4) General regulations on administrative proceedings[8] shall not apply to the decision-making procedure mentioned in paragraph 3.

(5) Grants from the Fund may only be used for purposes for which they were granted. Applicant shall be liable to return any unused funds to the Fund.

(6) Any unauthorised funds used by Applicant or any Fund resources withold by Applicant in contradiction with the set or agreed conditions shall be mandatorily returned to the Fund, along with penalty pursuant to a separate regulation[9].

(7) Fund resources shall be kept on a separate account with State Treasury. Records, generation and utilisation planning for Fund resources shall be kept for every nuclear installation separately.

(8) Balance of funds remaining on the Fund account after financial settlement of relations to State Budget shall be transferred to subsequent year's budget.

(9) Responsibility for management of Fund resources shall be with the Minister, pursuant to a separate regulation[10]. At least once a year, the Minister shall publish a Fund Management Report in Bulletin of Ministry of Economy of the Slovak Republic.

(10) The Ministry shall present to the Ministry of Finances of the Slovak Republic draft budgets, overviews of payables and receivables, as well as draft final Fund accounts for every fiscal year. [11]

(11) Audits of Fund management shall be the responsibility of Ministry of Finances of the Slovak Republic.

Common and final provisions

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[8]Act No. 71/1967 Coll. on Administrative Proceedings (Rules of Administrative Procedures).

[9]§47 of Act of the National Council of the Slovak Republic No. 303/1995 Coll. LL., as amended by Act of the National Council of the Slovak Republic No. 386/1996 Coll.LL.

[10]Act of the National Council of the Slovak Republic No. 303/1995 Coll.LL. on Budgetary Rules, as amended by Act of the National Council of the Slovak Republic No. 386/1996 Coll.LL.

[11]§24 of Act of the National Council of the Slovak Republic No. 303/1995 Coll. LL., as amended by Act of the National Council of the Slovak Republic No. 386/1996 Coll.LL.

§6
Authorisation provision

The Ministry shall issue a generally binding legal regulation to regulate details concerning generation, provision and utilisation of Fund resources.

§7
Repealing provisions

§ 18 par. 2 of Act No. 28/1984 Coll. on State Surveillance of Nuclear Safety of Nuclear Installations shall be repealed.

§8
Effectivity

This Act shall become effective on 1 January 1995.

Act No. 78/2000 Coll.LL. took effect on 1 April 2000.

Act No. 560/2001 CoIl.LL. took effect on 1 January 2002.

Act No. 291/2002 Coll.LL. took effect on 1 July 2002, except the provisions of art.I §8 par. 2 and 6; §9 par. 2 and 6 which shall take effect on 1 December 2002; art. I § 6, § 7, 8 par. l, 2, 3, 4,5, 7 through 15, § 9 par.1, 3, 4, 5, 7 through 10, §§ 10,11,12, § 18 par.1 lett. b) and c), § 18 par. 2, § 19, § 20 lett. a), § 21; art. II points 1 through 4; art. II points 6 through 10; art. II points 11,121,14,16,17, 20, 21, 23, 28, 29, 30, 31; art. II points 32, 33, 34, 35 and 37; art. III points l, 7, 8, 9; art. IV through art. XII which shall take effect on 1 January 2003; art. I § 18 par.1 lett. a); art. III points 2, 3, 4, 5, 6 which shall take effect on 1 January 2004.

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