Report on the Implementation of the National Programme for Handling of Spent Nuclear Fuel and Radioactive Waste in Slovak Republic for the Year 2016

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1 Introduction

The Directive of the Council 2011/70/Euratom of July 19, 2011 establishing Community framework for responsible and safe handling of spent nuclear fuel and radioactive wastes was implemented in the Collection of Laws of the Slovak Republic by the Act No. 143/2013 Coll. amending the Act No. 541/2001 Coll. on peaceful use of nuclear energy (the Atomic Act) and amending and supplementing certain acts as amended, amending the Act No. 238/2006 Coll. on the National Nuclear Fund for decommissioning of nuclear installations and for handling of spent nuclear fuel and radioactive wastes (Act on the Nuclear Fund) and amending and supplementing certain acts as amended. On the basis of the Directive of the Council 2011/70/Euratom responsible handling of radioactive wastes and spent nuclear fuel shall mean that every state producing radioactive wastes and/or spent fuel must have clear and realistic vision on handling them until the final disposal in appropriate type of repository i. e. must have its National Programme based on National Policy.

Proposal of the National Policy for handling of the spent nuclear fuel and radioactive wastes and Proposal of the National Programme for implementing of the National Policy was approved by the Government of the Slovak Republic by the Decision No. 387 of July 8, 2015.

Pursuant to § 3a section 7 of the Act No. 238/2006 Coll. on National Nuclear Fund Board of Governors of Nuclear Fund develops in cooperation with JAVYS, a. s. (legal entity pursuant to § 3 section 9 of the Atomic Act) and holder of consent or permission of ÚJD SR (§ 5 section 3 and § 8 section 3 of the Atomic Act) Report on implementing of the National Programme annually for preceding year and submits it to the Ministry of Economy of SR for approval supplemented by the Opinion of the Nuclear Regulatory Authority of SR.

2 To meet the objectives of the National Program for handling of the spent nuclear fuel and radioactive wastes

Milestones of the National Program for handling of spent nuclear fuel and radioactive wastes are grouped under six parts.

2.1 In area of infrastructure and legislation

To amend fundamentally the Act on the NNF and other related documents until the end of 2016

Proposal of new Act on the National Nuclear Fund was submitted of December 8, 2016 to Board meeting (PV) of Ministry of Economy of SR. Meeting was interrupted in this topic to assess adding adjustments of amendment to the Act No. 541/2004 Coll. on peaceful use of nuclear energy (the Atomic Act) and on amending and supplementing certain acts.

After incorporation any amendments the document will be resubmitted to the Board meeting of Ministry of Economy of SR. Subsequent procedure will be determined after approval at Board meeting of Ministry of Economy of SR.

The Act is included into Legislative programme of the Government of SR for the year 2017 with the date set for submission to meeting of the Government of SR until September 30, 2017.

<u>The task is underway</u>

2.2 Decommissioning of nuclear installations

2.2.1 To complete the II. Stage of decommissioning of NPP A1 until the end of 2016

Activities of the II. Stage of decommissioning of NPP A1 started in 2009 and were completed to date September 30, 2016. All activities of this stage were performed in compliance with the National Programme for handling of spent nuclear fuel and radioactive wastes in SR, explained in more detail in the Plan of the II. Stage of decommissioning of NPP A1 approved by the decision of Nuclear Regulatory Authority of SR No. 178/2009, respectively its approved update of Nuclear Regulatory Authority of SR No. 243/2015. Within decommissioning activities of NPP A1 gasholders CO_2 in outside objects were completely taken out, decontaminated, fragmented and released into the environment. They were also removed all not used technological facilities in object 41, not used facilities included in the II. Stage of decommissioning of NPP A1 in object 44/10. Outside tanks 1, 2, 3/1, 3/2, 4/1, 4/2, 6/1, 6/2, 7/1 a 7/2 in object 41 as well as outside tanks N2/1, N2/2, and N3 in object 44/10 were completely disposed of. In object 839 Storage place of low level sludges and circular hall in object 44/20 were taken out and sorted contaminated materials, soil and removed construction parts of objects. In addition, construction and technology part in object 76B – Experimental incineration plant, in object 50 chimney of auxiliary boiler station, pipeline channels PK3, PK4, PK 6b, PK 7, PK 8, PK B-3, PK B4 and active pipeline channels APK 2, APK 3a, APK 5, APK B-1, APK B-2, APK B-3, APK RvR, APK 4 were disposed of. In main production unit of NPP A1 all sludges from one-barrier Long-term store for SNF from NPP A1 were moved into two-barrier tank NPN. All upper parts of casings for long-term storage of SNF were fragmented, refueling equipment I and II, station for isotopic cleaning D_2O, station for removal of organic impurities D_2O and all technological part of D_2O a CO_2 included to the II. Stage of decommissioning of NPP A1, oil management in the object 34 were disposed of, as well as other relating technological facilities included in the II. Stage of decommissioning of NPP A1. Within handling of soil from NPP A1 in nuclear installation National Repository for RAW there was constructed and commissioned repository for VLLW for VLLW from NPP A1. All activities of the II. Stage of decommissioning defined for this process were performed and implemented in a full scope.

The task is completed

2.2.2 To implement other stages of decommissioning of NPP A1 until the end of 2033

Within implementation of preparation for support of continuous process of decommissioning of NPP A1 licensing documentation for assessment by state authorities was developed. In process pursuant to the Act 24/2006 Coll. on environmental impact assessment as amended, public hearing of Report on assessment "Decommissioning of NPP A1 the III. and the IV. Stage" took place in 2015. Base on aforementioned matters Ministry of Environment issued Final Conclusion to proposed activity No. 2292/2015-3.4/hp. The Ministry recommends implementation of proposed activity "Decommissioning of NPP A1 the III. Stage and the IV. Stage". At the same time documentation was processed for decommissioning of NPP A1 the III. and the IV Stage and handling of RAW from decommissioning pursuant to Article 37 of Treaty on Euratom. Based on aforementioned matters European commission issued favorable opinion of European Commission C (2015) 7363 published in Official Journal of EC No. C 362/1. Based on JAVYS, a. s. application supplemented by documentation processed in 2016 in compliance with legislative requirements, permission of Public Health Authority No. OOZPŽ/3942/2016 was issued. The Authority approves practices resulting in exposure to ionized radiation "the III. and the IV. Stage of decommissioning of nuclear installation NPP A1" and Nuclear Regulatory Authority issued a Decision No. 369/2016 permitting the III. and the IV. Stage of decommissioning of nuclear installation NPP A1 from operation in a scope specified in the document "Plan of the III. and the IV. Stage of decommissioning of NPP A1" and for handling of radioactive wastes

in nuclear installation NPP A1 in a scope specified in the document "Plan for handling and transport of RAW and plan for handling of conventional waste from the III. and the IV. Stage of decommissioning of NPP A1". On the basis of abovementioned permissions and in compliance with the plan for the National Programme for handling of spent nuclear fuel and radioactive wastes in SR continuation of decommissioning process of NPP A1 after completing the II. Stage is secured and performed.

The task is underway

2.2.3 To implement the II. Stage of NPP V1 decommissioning until the end of 2025

Implementation of the II. Stage of NPP V1 decommissioning started in January 1, 2015 based on Decision of Nuclear Regulatory Authority of SR 900/2014 issued on December 23, 2014. Implementation of the II. Stage of NPP V1 decommissioning is undertaken in conformity with approved plan for the II. Stage and is planned up to December 31, 2025. Decommissioning of NPP V1 is implemented through partial projects including all activities necessary to achieve stated objectives – completing the II. Stage of NPP V1 decommissioning until the end of 2025.

Current status of NPP V1 decommissioning at the date of December 31, 2016 is in compliance with planned timetable of decommissioning and decommissioning progress is monitored continuously through decommissioning timetable of NPP V1 (IPBTS) including timetables of partial projects. Based on the current status of NPP V1 decommissioning as well as status of planned future activities it can be stated that main objective of NPP V1 decommissioning will be achieved until the end of 2025.

The task is underway

2.2.4 Maximum use of BIDSF funding for NPP V1 decommissioning projects

NPP V1 decommissioning is funded through two resources – EU resources and national resources of SR. For implementation of decommissioning projects financial resources of EU are used as a matter of priority.

Priority use of EU funds can be evidenced by current status at December 31, 2016 where out of total number 75 NPP V1 decommissioning projects, 68 was funded mostly from EU resources. National resources of SR are used for activities connected with incurred support costs related to project implementation, consideration of project and ensuring radiation safety of NPP V1.

Withdrawal of EU resources (through BIDSF fund) is in compliance with plan for implementation of NPP V1 individual decommissioning projects and also with plan for withdrawal of financial resources for activities of NPP V1 decommissioning referred to in the National Programme for handling of SNF and RAW in SR.

The task is underway

2.2.5 Preparation for decommissioning of other Nuclear installations

Procedures, timetables and decommissioning costs for other nuclear installations are specified in conceptual decommissioning plans from operation of relevant nuclear installations developed as required in the Act No. 541/2004 Coll. on peaceful use of nuclear energy and amending and supplementing certain acts and Resolution of Nuclear Regulatory Authority of SR No. 58/2006 Coll. establishing details for scope, content and manner of developing documents concerning nuclear installations necessary to individual decisions amended and supplemented to Resolution No. 31/2012 and No. 102/2016 approved subsequently by regulatory authority. The Resolution 102/2016

establishes: “Authorization holder pursuant to § 5 section 3 b) and c) of the Act updates conceptual plan for decommissioning of nuclear installation from operation related to changes to nuclear installation or locality, progress in technology, amendments of generally binding legislative provisions, events, changes in funding scheme and current radiological conditions. Conceptual decommissioning plan if applicable is updated also in intervals within update of the National Programme for implementation of the National Policy for handling of spent nuclear fuel and radioactive wastes.”

Current milestone until the end of 2017 related to update of conceptual decommissioning plans of NPP EBO V2 and NPP EMO 1,2 is implemented.

The task is underway

2.3 Handling of radioactive wastes and spent nuclear fuel in general

2.3.1 To construct and commission Integral Storage Facility for RAW in Jaslovské Bohunice until the end of 2018

Construction of Integral Storage Facility for RAW in Jaslovské Bohunice for long-term or interim storage of radioactive wastes generated from decommissioning of nuclear installation is ensured within BIDSF project C8 “Integral Storage Facility for radioactive wastes”. Implementation started after obtaining the Concluding Opinion of Ministry of Environment of SR concerning proposed activity No. 2069/2012-3.4/hp in 09/2012 and subsequent legally binding construction permit in 07/2015. In 2016 the I Stage of storage construction was completed and works on installation of electrical wiring, air-conditioning, special sewerage system and railway and road sidings were performed. Integral Storage Facility for radioactive wastes will form separately located hall type construction object of modular arrangement with possibility of further extending the object.

Completion of construction and commissioning of IS RAW is planned for 08/2017

2.3.2 To construct new storage capacities of SNF until the end of 2020

Construction of new storage capacities of SNF as necessary condition for safe operation of nuclear units in SR was examined within process pursuant to the Act No. 24/2006 Coll. on environmental impact assessment as amended, based on which Concluding Opinion to proposed activity No. 1064/2016-3.4/hp was issued by Ministry of Environment of SR in 02/2016, recommending implementation of proposed activity “Completion of storage capacity of SNF in locality Jaslovské Bohunice”. Process of selection of the contractor and submit of project documentation and implementation of construction of new storage capacities of SNF in locality Jaslovské Bohunice will start in 01/2017 in order to complete investment project with adequate time reserve in line with current requests for storage capacity of SNF from operation of nuclear units in SR.

The task is not yet due

2.3.3 To establish database of all radioactive wastes from nuclear installations in SR and ensure its continuous update until the end of 2016.

Database of radioactive wastes coming from nuclear installations (NI) in SR is managed and updated in form of inventory of RAW in JAVYS, a. s., processed based on partial inventories of RAW in nuclear

installations of JAVYS, a. s. In view of responsibilities of authorization holders for operation of nuclear powerplants (see § 10, section 3 of the Atomic Act), this database offers also overall summary of individual types of RAW in those facilities. As required by Regulation No. 430/2011 Coll. Annex No. 4, Part B, Chapter I, point A, section 19 is inventory of RAW in clear form submitted to Nuclear Regulatory Authority of SR as a part of dossier of safety assessment of operation of nuclear installations on a quarterly basis.

The task is completed.

2.3.4 To construct facility for remelting of metallic radioactive wastes until the end of 2018

Facility for remelting of metallic RAW determined for effective way of processing of metallic waste generated predominantly in decommissioning process of NI with subsequent release of the highest possible volume of metallic wastes into environment was assessed within process pursuant to the Act No. 24/2006 Coll. on environmental impact assessment as amended, based on which Ministry of Environment of SR in 01/2015 issued Concluding opinion No. 1775/2015-3.4/hp concerning proposed activity recommended implementation of proposed activity in locality Jaslovské Bohunice. Construction of facility for remelting of metallic radioactive wastes is ensured within BIDSF project C7-A4 "Facility for remelting of metallic RAW".

Implementation started in 2016 and commissioning is planned for 2018

2.3.5 To construct and commission Facility for handling of IRAW and Captured Radioactive Material until the end of 2016

Storage places for long-term storage of IRAW and Captured radioactive material coming from all territory of SR up to period of their further handling should be in compliance with Concluding Opinion of Ministry of Environment No. 1165/2012-3.4/hp, issued in 05/2012 within process pursuant to 24/2006 Coll. on environmental impact assessment as amended, constructed in immediate vicinity of NI National Repository for RAW in Mochovce.

Facility for handling of IRAW and Captured radioactive material was after successful inspection of building site commissioned in 02/2016. Subsequently all IRAW stored up to this time in JAVYS, a. s. in NI NPP A1 in locality Jaslovské Bohunice were transferred into Facility for handling of IRAW and Captured radioactive material.

The task is completed.

2.4 Disposal of radioactive wastes and spent nuclear fuel

2.4.1 Construction of repository for Very low-level waste until the end of 2018

Repository for VLLW was in compliance with Concluding Opinion of Ministry of Environment of SR No. 1065/2013-3.4/hp issued in 05/2013 within process pursuant to the Act No. 24/2006 Coll. on environmental impact assessment as amended constructed in site of NI National Repository for RAW in Mochovce. The first module of repository for VLLW for VLLW from NPP A1 was commissioned in 06/2016. Currently construction of the second module of disposal places for VLLW from NPP V1 is in progress within implementation of C9:4 BIDSF project" Proposal and construction of new disposal places for LLW and VLLW from NPP V1 decommissioning in National Repository for RAW Mochovce" with planned date of commissioning until the end of 2018.

The task is underway

2.4.2 Construction of other repository structure after filling of the second double row in National Repository for RAW until the end of 2018

Construction of the third double row for disposal of LLW in NI National Repository for RAW is undertaken in conformity with Concluding Opinion of Ministry of Environment of SR No. 1065/2013-3.4/hp, issued in 05/2013 within process pursuant to the Act 24/2016 Coll. on environmental impact assessment as amended and is ensured within C9.4 BIDSF project "Proposal and construction of new disposal places for LLW and VLLW from NPP V1 decommissioning in National Repository for RAW Mochovce", implementation of which started in 2016. During implementation of investment project engineering-geological survey was conducted in locality of National Repository for RAW Mochovce. Subsequently project for construction permit in scope of implementation project was developed. Based on processed documentation application for Nuclear Regulatory Authority for issuance construction permit was submitted. Intention of application is to achieve construction and operation of disposal structure for disposal of LLW to be in compliance with current requirements for disposal of LLW from decommissioning and operation of NI in SR.

The task is underway

2.4.3 To adopt decision on continuation or stopping of twin approach in development of deep disposal – comprehensive assessment of the idea of joint international deep repository until the end of 2020.

As referred to in point 2.4.5 siting of deep repository of SR will be possible to be decided finally until the end of 2030. The idea of international deep repository is still one of existing possibilities for more EU countries. Therefore, it is appropriate to continue in twin approach of development of deep disposal and to postpone the decision on continuation respectively stopping of twin approach until 2030.

The task is underway

2.4.4 To elaborate plan for other stages of renewed development of deep disposal until the end of 2016

Implementation of the project "Deep repository – locality selection the I Stage" which included also proposal for further progress for development of Deep repository in SR" was completed in 2016. Currently preparation for the II Stage – of the 1 part of development of Deep repository in SR is in progress. Proposed work programme for development of deep repository in coming years is listed in point 5.

The task is completed.

2.4.5 To decide on siting of Deep repository of SR (in case of withdrawal from twin approach) until the end of 2030

As a part of project "Deep Repository – locality selection the I. Stage", completed on December 12, 2016 the document "Criteria for selection and assessment of localities for Deep Repository" was updated and document "Detailed work plan for the period 2017-2023 and proposal for further progress for development of Deep repository in SR" was elaborated in 2016. Within project "Deep repository – locality selection the II. Stage—the 1. part" is expected in 2017 inter alia elaboration of "the Project of geological task" in compliance with abovementioned documents pursuant to the Act

No. 569/2007 Coll. on geological works (Geological Act) as amended and the Regulation No. 51/2008 Coll. implementing Geological Act as amended. In the first step it will be elaborated for all geological activities and works and for localities Tríbeč and west part of Rimavská kotlina basin. In subsequent period further works concerning locality selection (terrain exploration works, public relations and so on) in selected localities will be implemented in such a manner as it would be possible (in case of withdrawal from twin approach) to adopt final decision on siting of Deep repository of SR up to 2030.

The task is underway

2.4.6 To commission of Deep repository until the end of 2065

Implementation of project "Deep repository – selection of locality the I. Stage" was completed on December 12, 2016 and implementation of project "Deep repository – locality selection the II. Stage – the 1. Part", which will take place in 2017 will ensure basic conditions for steps leading to selection of the site for construction of Deep repository in SR in such a manner as it would be possible in case of withdrawal from twin approach to ensure construction and commissioning of Deep repository in SR up to 2065.

The task is underway

2.5 Research and development

2.5.1 To develop framework programme for development and research in the area of deep disposal and set internal conditions for its implementation until the end of 2018

Within implementation of project "Deep repository – selection of locality the II. Stage – the 1. Part", which will take place in 2017 the document in compliance with detailed work plan for further period and proposal of further progress of development of Deep repository in SR will be generated. The document is entitled "Framework programme for development and research in the area of deep disposal including requirements for its implementation". Based on this document conditions for its subsequent implementation in expected date will be set in JAVYS, a. s.

The task is underway

2.6 Transparency

To develop and prepare to implement system for economic stimulation of localities affected by development and operation of repositories. To establish unified system for information and public relation for long-term period until the end of 2018.

2017 will be the first year JAVYS, a. s. will begin active public relations on topic siting of Deep repository of SR – see Chapter 5.

3 Handling of RAW

(for period from approval of National Programme until December 31, 2016)

3.1 Overview of generating and recording of RAW

Resulting from implementation of decommissioning activities of NI following types and quantities of RAW were generated and recorded for their further handling:

3.1.1 Decommissioning of NPP A1

- Liquid radioactive wastes: 880,8 m^3,
- Combustible solid radioactive wastes: 27,227 t,
- Compressible solid radioactive wastes: 292,168 t,
- Metallic RAW intended for remelting: 199,471 t
- Other solid radioactive wastes (fixed ra-sludges in matrix…): 167,239 t,
- Contaminated soils: 3 962,7 t,
- Contaminated concrete: 3 818,9 t,
- Contaminated used filter cartridges of ventilation systems: 2,169 t.

3.1.2 Decommissioning of NPP V1

- Liquid radioactive wastes: 150,08 m^3,
- Combustible solid radioactive wastes: 4,331 t,
- Compressible solid radioactive wastes: 247,453 t,
- Metallic RAW: 31, 114 t,
- Contaminated used filter cartridges of ventilation systems: 3,744 t.

3.1.3 Generated from operation of NPP V2 and NPP EMO 1,2 transferred by company SE, a. s following types and quantities of RAW are located in JAVYS, a. s for their further handling:

- Liquid radioactive wastes – concentrates: 92,85 m^3,
- Liquid radioactive wastes – ion exchange resins 45,672 m^3,
- Solid radioactive wastes – combustible: 46,585 t,
- Solid radioactive wastes – compressible: 35,455 t,
- Metallic RAW: 10,127 t,
- Solid radioactive wastes – non-combustible and non-compressible: 25,423 m^3.

3.2 Processing and conditioning of RAW

3.2.1 In NI Facility for Treatment and Conditioning of RAW following activities for handling of RAW were implemented

Incineration plant of RAW – by incineration were processed:

- By incineration following quantities were processed,
- 42,193 t of solid RAW from nuclear facility decommissioning,
- 58,54 t of solid RAW from nuclear facility decommissioning,
- 1,104 m^3 of combustible liquid RAW and spent sorbents from nuclear facility decommissioning,
- 6,3 m^3 combustible liquid RAW and spent sorbents from nuclear facility decommissioning.

High pressure compression of solid RAW – by high pressure compression were processed:

- 266,355 t of compressible solid RAW from nuclear facility decommissioning,
- 20,99 t of compressible solid RAW from nuclear facility decommissioning.

Cementation of RAW – by cementation into FCC were conditioned:

- 659,496 t of solid RAW for nuclear facility decommissioning,
- 37,56 t of solid RAW from nuclear facility decommissioning,
- 394,505 m^3 LRAW from decommissioning,
- 67,097 m^3 of LRAW from nuclear facility decommissioning.

By fragmentation were processed:

- 361,659 t of metallic RAW from nuclear facility decommissioning,
- 10,127 t of metallic RAW from nuclear facility decommissioning.

By decontamination were processed:

- 285,023 t of metallic RAW from nuclear facility decommissioning,
- 10,127 t of metallic RAW from nuclear facility decommissioning.

3.2.2 Following activities for handling of RAW were implemented in other specialized technology facilities

vitrification line for chrompik (aqueous solution of chromium and potassium dichromate $K_2Cr_2O_7$),

- In the course of commissioning of the line there were processed 0,25 m^3 of chrompik III,

Work place for handling of contaminated concrete

- There were processed 3 818,9 t of contaminated concrete,

Work place for fragmentation of casings of long-term store

- There were processed 56 pieces of upper parts of casings for long-term store and 5 pieces of canisters of upper parts of casings of long-term store,

Facility for fixation of sludges

- There were 32,453 of ra-sludges m^3 fixed into cement matrix.

3.2.3 In Nuclear Facility for Final Treatment and conditioning of LRAW in Mochovce

There were processed and conditioned predominantly by bitumenization of ion exchange sorbent resins and by cementation

- 175,031 m^3 of RAW from nuclear facility decommissioning,
- 193,487 m^3 of LRAW from nuclear facility EMO 1,2 operation.

3.2.4 The need for project implementation in the area of technology lines for processing and conditioning of RAW results primarily from requirement for removal of so-called bottlenecks in the course of processing and conditioning of RAW. To meet the abovementioned requirements in the area of processing of RAW, investment project for construction of Facility for remelting of metallic radioactive waste is ensured. The procedure of implementation is assessed in the point 2.3.4.

3.3 Storage of RAW

3.3.1 Storage in JAVYS, a. s.

To date December 31, 2016 in locality Jaslovské Bohunice there were stored following quantities in certified stores of RAW as a part of nuclear facility Technologies for Treatment and Conditioning of RAW:

- Room No. 30/54 in the object 32 – 3 266 pieces of drums of RAW to volume of 0,2 m^3,
- Room No. 97 in the object 32 – 1 668 pieces of drums of RAW to volume of 0,2 m^3,
- Room No. 106 in the object 32 – 1 259 pieces of drums of RAW to volume of 0,2 m^3,
- Room No. 1 in the object 34 – 2 860 pieces of drums of RAW to volume of 0,2 m^3,
- Object No. 723 – 723 pieces of drums of RAW to volume of 0,2 m^3.

3.3.2 Storage in SE a. s.

To date December 31, 2016 in stores of NPP V2 following quantities were stored:

- 140,885 t of solid RAW,
- 464 pieces of ventilation-technical filters,
- 1 505,7 m^3 of concentrates,
- 144,7 m^3 of ionexes.

To date December 31,2016 in stores of EMO 1,2 following quantities were stored:

- 5,5014 t of solid RAW,
- 1 040,634 m^3 of concentrates,
- 79,120 m^3 of ionexes.

3.3.3 Ensuring of adequate storage capacities needed for handling of RAW from NPP A1 and NPP V1 decommissioning process is implemented in a form of investment project Integral Storage Facility for RAW. The procedure of construction and commissioning is assessed in the point 2.3.1.

Currently administrative procedure for issuance of approval for implementation of change in process of operation of Technology for Treatment and conditioning of RAW is in process, in Nuclear Regulatory Authority in scope of commissioning of the object 641 with the purpose of storage of RAW there. Construction object 641 was originally included into object structure of NPP V1, then JAVYS removed it within change of territory borders into Technology for Treatment and Conditioning of RAW. The object after change of use became part of this nuclear facility. After approval of Nuclear Regulatory Authority, it will be used as certified store of RAW. Pursuant to submitted documentation the object is intended for storage of RAW from NPP A1 decommissioning, from NPP V1 decommissioning and for storage of other RAW up to the level of inventory specified by safety analysis. Documentation declares capacity of circa. 10 000 of drums, what is not negligible amount in comparison to other stores in Technology for Treatment and Conditioning of RAW.

3.4 Disposal of RAW

3.4.1 Disposal of FCC in nuclear facility National Repository for RAW Mochovce

- To date December 31, 2016 were in National Repository for RAW deposited together 4 804 pieces of fibre concrete containers (FCC) included Low-level RAW conditioned by cementation from decommissioning and from operation of nuclear facility,
- Out of this quantity there have been deposited for a period from approval of National Programme in nuclear facility National Repository for RAW 770 pieces of FCC.

3.4.2 Disposal to repository for VLLW

- After commissioning of the first module of VLLW repository in 06/2016 were until December 31, 2016 deposited 599,7 m^3 of VLLW from NPP A1 in repository.

3.4.3 Ensuring of adequate capacities for disposal of LLW and VLLW mainly from decommissioning process of NPP V1 is implemented in BIDSF project C9.4 “Proposal and construction of new disposal places for LLW and VLLW from NPP V1 decommissioning in National Repository for RAW Mochovce”. Its progress of implementation is assessed in points 2.4.1 and 2.4.2.

4 Handling of SNF

(for period since approval of National Programme until December 31, 2016)

4.1 Acceptance of SNF for storage

Following quantities of SNF were transferred from NPP V2 and NPP EMO 1,2 operation to long-term storage to nuclear facility Interim Spent Fuel Storage by company SE, a. s.:

- Spent nuclear fuel from NPP V2 operation: 88 pieces,
- Spent nuclear fuel from NPP EMO 1, 2 operation: 240 pieces.

4.2 Storage of SNF

To date December 31, 2016 in nuclear facility Interim Spent Fuel Storage 11 766 pieces of fuel assemblies of SNF were stored, out of this:

5 143 pieces from nuclear power plant V1 (definitive number currently in process of decommissioning),

4 847 pieces from nuclear power plant V2,

1 776 pieces from nuclear power plant EMO 1, 2.

Status of ensuring completion of construction of storage capacities of SNF for the needs of long-term safe operation of nuclear units in SR in investment project Completion of construction of storage capacity of SNF in locality Jaslovské Bohunice is assessed in the point 2.3.2.

5 Proposed programme of works on development of deep repository in subsequent years

The II. Stage – 1. part

- Preparing of framework programme for development and research in the area of deep disposal including requirements for its implementation,
- Developing of proposal for implementation of system for economic stimulation of localities affected by development and operation of deep repository,
- Preparation and ensuring of task implementation resulting from plan of works for further period within the project “Deep repository – selection of locality, the II. Stage – 2. part” from 2018,
- Launching of an information campaign of public relations, establishing of working groups included representatives of municipalities and the general public.

Deadline: 2018

The II. Stage – 2. part

- Preparation of geological works project
- Involvement of public in decision and information process in development of Deep Repository
- Process of assessment and safety demonstration of Deep Repository

Deadline: 2025

6 Conclusion

After one and half year since approval of the National Policy for handling of spent nuclear fuel and radioactive wastes and Proposal of the National Programme for implementation of the National Policy, significant progress has been made in the area of decommissioning of nuclear power plants and disposal of radioactive wastes. The II. Stage of NPP A1 decommissioning in Jaslovské Bohunice was completed and continuation of this decommissioning in the III. and the IV. Stage was prepared and approved. Similarly, work procedure of the II. Stage of NPP V1 decommissioning in Jaslovské Bohunice is in progress within the timetable. There is a fully functioning flow of radioactive wastes from their generation up to their disposal at the National Repository in Mochovce in the Slovak Republic. Storage of SNF is ensured and completion of construction of storage capacities is in preparation. Programme for works for development of Deep Repository for disposal of spent nuclear fuel planned from 2014 until 2016 was completed and programme for further period is prepared and approved. Funding and withdrawal of financial means in the National Nuclear Fund during the reference period are consistent with the data given in the National Programme.