3.1 After granting an authorization for commissioning the nuclear installation, it is necessary to ensure that all conditions specified in the ÚJD SR Decisions Nos. 246/2008, 266/2008 and 267/2008 are fulfilled, after the authorization by ÚJD SR for the commissioning and operation of MO 3 & 4 to ensure fulfilment of all the conditions specified in the relevant ÚJD SR authorizations.

Fulfilment: ***SE MO 3 & 4 continuously evaluates the fulfilment of all the requirements defined in the individual ÚJD SR decisions, and can document fulfilment of those, which had a specified deadline for fulfilment. The SE then submits the fulfilment of conditions with the application for authorization for commissioning of NI to ÚJD SR, and possibly to other applications for the Fire and Rescue Services of SR. Conditions defined in the ÚJD SR Decision No. 267/2008 have been reflected in the Pre-operational Safety Report, which will be reviewed by the ÚJD SR as part of the process of submitting of an application for authorization for NI.***

3.2 Continue to provide information and organize expert seminars in areas of common interest in nuclear safety with experts from Austria within the framework of the relevant bilateral Slovak-Austrian Agreement within the European Atomic Energy Community, Euratom coordinated by ÚJD SR, and accept the conclusions reached in these expert consultations.

Fulfilment: In cooperation with ÚJD SR, SE provided all information and experts for the following seminars organized by ÚJD SR:

Expert seminars on topics agreed during the 16th SK-AT bilateral meeting held in 2008:

1st Seminar: Severe accidents, including external causes – 15 Dec. 2009; some questions remain open, will be re-discussed, when the necessary information is available (see point 7)

2nd Seminar: Containment and vacuum-bubbler system – 28 April 2010; all questions posed by the Austrian party were discussed and satisfactorily answered

3rd Seminar: Seismic activity of the site and seismic reinforcement of EMO 3 & 4 – 14 July 2010; conclusions of this meeting are in a commenting procedure again; the topic will be re-discussed if necessary

4th Seminar: Consulting of documentation of Preliminary Safety Report to the Austrian experts – held on 6 and 7 June 2011

5th Seminar: Reactor pressure vessel strength – 20 Nov.2012; all questions of the Austrian party were discussed and closed

6th Seminar on the topic of Instrumentation and Control System – held on 11 Dec. 2015; all the pre-sent and supplementary questions were answered and evaluated as closed; except supplementary questions regarding a more detailed specification of the operator´s response to severe accidents, that are included in the topic of the next meeting – systems to cope with severe accidents,

7.seminar on the topic Severe Accidents – Part 2 – held on 27 and 28 April 2016; all the pre-sent and supplementary questions were answered and evaluated as closed, including point 1.

With the meeting held on Severe Accidents topic, the series of expert seminars was closed, and the Austrian side appreciated the detail of answers and the readiness of Slovak experts.

On the basis of seminars, the Austrian party has prepared "short technical reports" for its government, which will not be publicly accessible due to the sensitivity of information provided. After consultation with the Slovak party, only a brief summary – abstract was prepared and published.

At the conclusion of a series of seminars, SE representatives satisfied the request from Austrian experts and provided for a visit to EMO 3 & 4 site on 28 June 2016

3.3 Ensure the participation of statutory representatives and experts on the side of the proposer Enel and SE, a. s., on expert consultations on safety issues related to MO 3 & 4 that were not answered during consultations under the Espoo Convention from the assessment process, together with the Austrian party concerned and ÚJD SR in the framework of the authorization process for the commissioning of a nuclear installation.

Fulfilment: SE, ensured participation of not only the statutory representatives, if needed (e.g. the bilateral negotiations with Austria were attended by a representative of SEMO 3 & 4, e.g. the Project Manager of MO 3 & 4 or his appointed representatives), as well as always a group of experts for the expert meetings held between the Slovak Government represented by ÚJD SR and the Austrian party. SE, a. s., provided supportive legal opinions on request for consultations under the international Espoo and Aarhus Conventions (see the previous point). So far the last bilateral meeting was held on 7 and 8 June 2018.

3.4 Implement, in cooperation with the regulatory authorities, into the safety documentation, the recommendations set out in the European Community Commission´s opinion, pursuant to Art. 43 of the Euratom Treaty [K(2008)3560 dated 15 July 2008]. To this end, the Commission recommends that the investor, in close cooperation with the national authorities:

- *In line with international best practice, develop a reference scenario, including deterministic effect from an external source (e.g. small aircraft impact),*
- *Based on this, within the design-basis of the proposed investment, evaluate and apply appropriate additional elements, functional potential and management strategy to resist possible deterministic effects from an external source (e.g. impact of a small aircraft with malicious intent), that is by making the design compliant with the existing best practice.*

In addition, the Commission stresses the importance of diversification of supply sources in the context of secure nuclear fuel supply for the EU nuclear industry, as well as the sound management of funds earmarked for the financing of nuclear decommissioning and for spent fuel and radioactive waste management, in line with its recommendation

Fulfilment:

On the basis of risk assessment of an accidental aircraft impact according to international methodology and the current state of air traffic in the vicinity of EMO, the threat to nuclear safety of Mochovce NPP can be considered very low and no additional technical or organizational security measures are required.

The European Commission, in communication pursuant to Art. 43 of the EURATOM Treaty, recommended in the MO 3 & 4 completion project to evaluate the effect from an external source (e.g. deliberate impact of a small aircraft) and to apply appropriate additional remedial measures.

To address this task, a methodology developed on the basis of internationally recognized documents was used to demonstrate the ability to perform more important safety functions:

- ***Physical protection of installations and structure that are important from the point of nuclear safety,***
- ***Reactor shutdown,***
- ***Keeping the Unit in a safe shutdown state,***

- ***Preventing significant releases of radioactivity into the vicinity of NPP.***

The analyses were carried out for a total of 12 building objects in MO 3 & 4 NPP premises and more than 60 conservatively selected aircraft impacts were analysed. Analyses after the aircraft impact on objects focused on the global effects on the building objects, on local effects on the structural elements of buildings, on vibration effects, the secondary effects of fires and fuel explosions, in current cases also radiation effects on the population in the vicinity of NPP.

The objectives of the analyses were achieved, as the ability of MO 3 & 4 NPP to safely shutdown the Unit and remove residual heat from the reactor after each such event (with proposed necessary modifications to the design of MO 3 & 4 NPP) was demonstrated.

The details of safety analyses are not publicly available, because in Slovakia these are in the category of classified information.

3.5 Initiate the relevant intergovernmental agreement on data exchange from 40 radiological monitoring stations located within 20 km from Mochovce NPP to the Hungarian National Centre and provide the results from measurements of the Hungarian Remote Radiation Monitoring System

Fulfilment:

- ***18 February 2012 – an amendment to MoU was signed between ÚJD SR and HAEA on the provision of data from 20 TDS stations in Mochovce to Hungary from Slovakia.***
- ***Provision of data (exchange of information on TDS measurements) is carried out regularly with the support of ÚJD SR by sending measurements from ÚJD SR by e-mail to the address of "liaison officer" in Hungary. These data are sent on a weekly basis.***

3.6 Allow the Hungarian authorities responsible for emergency planning to set up and operate at least three remote radiological measurement stations, towards the border with Hungary, at a distance of 30 km from Mochovce NPP

Fulfilment:

An amendment to the Intergovernmental Agreement between the Ministry of Environment of SR and the Ministry of Environment of Hungary on mutual exchange of data from radiation early warning systems was signed, on installation of 3 gamma radiation dose equivalent detectors, which will be located at the SHMÚ meteorological stations in Hurbanovo, Dudince and Kalná nad Hronom, to all relevant ministries, on 18 February 2016 in Šamorín.

The amendment was prepared in cooperation with ÚJD SR, Ministry of Environment of SR and SHMÚ.

At the moment, the technical aspects of probe installation are being addressed, because in the meantime SHMÚ has modernized its data collection system and the outputs from the probes are not compatible with this system.

In January 2018, the Hungarian side completed public procurement to purchase 3 probes. This information was provided by the representatives of Hungarian authorities in February 2018, at a meeting of a Hungarian-Slovak Working Group on Environmental safety at the Ministry of Environment of SR.

At the moment, the technical aspects of probe installation is being addressed, because in the meantime SHMÚ has modernized its monitoring network and also the possibilities for connecting these detectors have changed. The Slovak party, in cooperation with the Hungarian party, is preparing a joint technical meeting to be held on 17 July 2018 at the stations in Dudince, Hurbanovo and Kalná n/Hronom.

The Hungarian side expects installation by the end of 2018. The probes will be installed in new meteorological stations.

3.7 Ensure reciprocal exchange of aerosol monitors data operated by Austria on the territory of Hungary and Slovakia

Fulfilment:

SE has a letter of consent from Dr. Kargo of the Radiation Protection Department of the Ministry of Agriculture, Forestry and Water Management and Environment of Austria.

Authorizations to access data from aerosol monitors at metrology station in Jaslovské Bohunice were assigned to system administrators, represented by Dr. Kargo (for Austria), for the National Directorate to manage emergency situations – KATVED (represented by Mr. Atilla Szantoó).

3.8 In implementing occupational health and safety, develop methodological guidelines on employer´s obligations, in particular requirement pursuant to NV SR No. 391/2006 Coll., NV SR No. 395/2006 Coll., 355/2006 Coll., NV SR No. 555/2006 Coll.

Fulfilment:

- ***SE MO 3 & 4 has established a certified OHSAS management system according to OHSAS 18001 standard.***
- ***Methodological guidelines for security and protection of health at work are developed and regularly reviewed.***
- ***SE MO 3 & 4 plant received a "Safe Enterprise" award from the Ministry of Labour, Social Affairs and Family of the Slovak Republic.***
- ***SE MO 3 & 4 plant received "Good practice" award issued by the National Labour Inspectorate.***
- ***NV SR No. 395/2006 Coll. processed in a form of an internal guideline of SE.***
- ***Requirements arising from NV SR No. 355/2006 Coll. and NV SR No. 555/2006 Coll. are assessed by the Occupational Health Service (PZS). It includes risk assessment, health and hygienic characteristics, categorization of work (SE MO 3 & 4 staff is max in category 2). Employees are regularly attending medical preventive checks.***
- ***SE MO 3 & 4 plant has consensual decision of RÚVZ dated 19 September 2013 No. D1/2013/01710 for handling and storage of chemical carcinogens and mutagens.***

*3.9 Comply with all obligations arising from Act No. 261/2002 Coll. (**currently valid Act No. 128/2015**) on the prevention of major industrial accidents, and on amendments to certain laws, and to take all necessary measures to prevent major industrial accidents, and in case of such accident or its imminent threat to propose the measures necessary to cope with it and limit its consequences on the life and health of people, environment and property*

Fulfilment:

- ***SE MO 3 & 4 takes inventory of VNL (selected hazardous substances) during construction according to the ZPH prevention law. MO 3 & 4 are not categorized under this Act during their completion.***
- ***Inventory taking is still performed once every quarter – performed by individual suppliers (with NL and VNL warehouses). Results of inventory taking are sent to a specialist for ZPH prevention for assessment (specialist for ZPH- C0220 and specialist for ZPH – B0150)***

3.10 Observe limits of the working environment and environmental factors during operation at the lowest reasonably achievable level, and ensure compliance with the

Act No. 355/2007 Coll. on the protection, promotion and development of public health, and on amendments to certain laws as amended, and related legislation

Fulfilment:

- ***Limits of working environment and environment factors are assessed. There is a risk assessment, integrated safety plans developed by individual contractors, health and hygiene characteristics, categorization of works in terms of health risks. Based on measurements made so far, employees are classified to maximum 2nd risk category.***
- ***In order to minimize generation of dangerous aerosol concentrations, there are ventilation devices installed that are used at the workplaces of construction completion as needed.***

3.11 Address the conditional comments made by the District Authority for road transport and roads in Levice

Fulfilment: Changes made in accordance with the opinion of the District Authority for road transport U/2010/007105 dated 7 Dec.2010 and Regional Road Administration and Maintenance Levice, a. s., No. 627/2010 dated 25 Oct.2010 on "Identification and use of temporary traffic signs on the regional road III/51110 in the cadastral area Mochovce" at the entrance and exit from the access road to the premises of NPP Mochovce through Gate 3. The following traffic signs were placed:

- ***Maximum permissible speed 70 km/h***
- ***"Other Dangers"***
- ***Supplementary sign E 12 "EXIT AND ENTRY FOR CONSTRUCTION VEHICLES"***

*3.12 Take measures that the exposure of the population due to the discharge of radioactive substances from the complex of nuclear installations in Mochovce into the environment during their operation shall not exceed the limit dose of 0.25 mSv per calendar year laid down in Government Ordinance No. 345/2006 Coll. on the basic safety requirements for the protection of health of workers and the public against ionizing radiation.(**Currently valid Act No. 87/2018 Coll. on radiation protection and on amendments to certain laws**)*

Fulfilment:

- ***As stipulated in* Act No. 87/2018, the exposure *of the population due to the discharge of radioactive substances from the complex of nuclear installations in Mochovce into the environment during their operation shall not exceed the limit dose of 0.25 mSv per calendar year. The limit dose is hereby stipulated for all nuclear installations located within one site, i.e. relate to SE, a. s., as well as JAVYS, a. s.***
- ***Valid Decision No. OOZPŽ/6773/2011 for EMO 1 & 2 stipulates a radiological limit for the limitation of exposure of the population in the vicinity of the nuclear facility caused by radioactive substances discharged into the atmosphere and into surface water during the operation of a nuclear power plant SE EMO 1 & 2 in expressing the value of effective dose per representative individual (dose per critical individual) 50 microSv per calendar year. For MO 3 & 4, ÚVZ SR has not yet issued a valid decision for a radiological limit to limit the exposure of the population in the vicinity of the nuclear installation. Communication was initiated with ÚVZ SR, and it is expected that the value for the radiological limit for MO 3 & 4 will be the same as for EMO 1 & 2.***
- ***An individual considered to be a representative individual is a person, whose dose caused by discharged radioactive substances is representative of***

exposure of a person in the zone with the highest radiation load in the vicinity of SE EMO 1 & 2.

- ***Investigation levels for <u>discharges into the atmosphere</u> are at the level of 1/365 of reference values, i.e. if the activity of discharged radioactive substances persists at the level of investigation levels, then the activity discharged per year would have reached the relevant reference value (see Table, p. 9)***
- ***The primary control of discharged radioactive substances is ensured by measuring activity of exhalates in the ventilation stack and in the waste water. Therefore, in addition to the exposure limit of the population, the decision also sets reference values for directly measurable quantities of discharged substances. The control of discharged radioactive substances in the waste water is carried out according to the valid operating documentation of EMO 1 & 2, which is also valid for MO 3 & 4 (one discharge facility). Control of discharged radioactive substances in the ventilation stack is performed according to the valid operating documentation of EMO 1 & 2, which will be updated also for MO 3 & 4.***
- ***The reference values were set for the activity discharged per calendar year sufficiently conservative to ensure compliance and not exceeding the limit dose. Balancing control of achieved parameters of discharged radioactive substances is performed once a month.***
- ***With expected 100% achievement of reference values for RA discharges, the calculated effective dose for a representative individual (dose for a critical individual = infants) is less than 50 microSv per calendar year.***
- ***For operational control of activity of discharged radioactive substances reference values have been set that allow continuous and operative control and manage discharges.***
- ***Response levels for the discharges into the atmosphere are derived from the reference values in the following way – if the activity of discharged substances would be at the level of response level, then the activity discharged per year would have reached five times the respective reference value (see Table p. 9).***
- ***Checking the current value of individual parameters is done once every 24 hours.***
- ***With the expected similar decision for SE MO 3 & 4, the effective dose for a representative individual will be probably also set at 50 microSv per calendar year.***
- ***Due to the fact that SE EMO as a result of its organizational and technical measures achieves very favourable results in the area of discharges of radioactive substances, no further measures are necessary. This will certainly not hinder further optimization of this process.***
- ***The favourable results achieved in discharges of radioactive substances are also confirmed by the fact that the effective doses achieved are significantly lower than the limit for a representative individual, Year 2016: 153.0 nano Sv Year 2017: 203.0 nanoSv.***
- ***Radiation protection management of EMO 1 & 2 and MO 3 & 4 is provided by one radiation protection unit (RP), which will ensure the application of the same approaches and procedures also on MO 3 & 4.***
- ***Radiological measurements in the fresh fuel node of MO 3 & 4 are tested to the required extent and are ready to receive fresh nuclear fuel.***
-

Place of discharge from NI	Discharged medium	Measured media components	Investigation levels	Response levels
			(Bq/24h)	(Bq/24h)
Ventilation stack for the dual-Unit	Contaminated air from air-conditioning systems and technological de-aeration of both Units and BPP	Mixture of noble gas radioisotopes (any mixture)	$1{,}10.10^{13}$	$5{,}50.10^{13}$
		Iodine ^{131}I radioisotope (gaseous form)	$1{,}80.10^{8}$	$9{,}00.10^{8}$
		Mixture of radionuclide radiation in aerosols	$5{,}00.10^{8}$	$2{,}50.10^{9}$
			(Bq/m^3)	(Bq/m^3)
Drain channel at the outlet from NI	Industrial waste water, rain and sewage	Volume activity H^3 (tritium)	$3{,}00.10^{7}$	$1{,}00.10^{8}$
		Volume activity of other radionuclides (excluding H^3 tritium)	$4{,}00.10^{4}$	$4{,}00.10^{4}$

3.13 Comply with all obligations under Act No. 541/2004 Coll. on the peaceful use of nuclear energy (Atomic Act) and on amendments to certain laws, and manage activities under the provisions of this Act.

Fulfilment:

Act 541/2004 Coll. establishes obligations of the license holder for all phases of life cycle of the nuclear installation and applies not only to the operation of nuclear power stations. The obligations of the license holder are checked by the ÚJD SR in accordance with this Act, in particular pursuant to Section 4 par. 1 (c) and in accordance with the general legal regulations (ÚJD SR decrees). This control is exercised through inspections in all areas of peaceful use of nuclear energy. The ÚJD SR staff (nuclear safety inspectors) carry out supervision in accordance with the Building Act No. 50/1070 Coll. (Act on the Building Regulations) also in the phase of construction of MO 3 & 4 Project as the building inspection.

3.14 Observe the provisions of ÚJD SR Decree No. 50/2006 Coll., setting out the details of requirements for nuclear safety of nuclear installations in their siting, design, construction, commissioning, operation, decommissioning and at repository closure, as well as criteria for categorization of selected equipment into safety classes.

Fulfilment:

The ÚJD SR Decree No. 50/2006 Coll. is currently replaced by a new ÚJD SR Decree No. 430/2011 Coll. valid from 1 January 2012. The ÚJD SR Decree provides the details on the requirements for nuclear safety of NI, which must be fulfilled in all stages of life cycle of NI (siting, design, construction, commissioning, operation and decommissioning). It defines the criteria for categorizing selected equipment included in safety classes and defines further requirements for assessing the scope, content and impact of changes and feedback from the assessment of these changes and details of indicators and parameters of nuclear safety. The ÚJD SR staff controls the fulfilment of requirements of this Decree through:

- ***conducting inspections and compliance checks or other controls,***
- ***approving other documentation, such as additions to the basic design and their assessment for nuclear safety and impacts on already approved documentation.***

3.15 Comply, also in the following periods, with the provisions of Act of NR SR No. 543/2002 Coll. on the nature and landscape conservation as amended, and Act on

waste NR SR No. ***79/2015*** *replaced the original Act 223/2001 Coll.* ***(the New Act)*** *on waste as amended and related implementing regulations*

Fulfilment: SE, a. s., MO 3 & 4 introduced the following internal rules within the QMS system:

- ***Management of environmental activities;***
- ***Legislative requirements are also included in the Register of legal and other requirements of MO 3 & 4, which is regularly updated;***
- ***The Nature and Landscape Conservation Act – MO 3 & 4 concerns mainly the possible felling of trees (application, permit, compliance with permit conditions – substitute planting), last procedure was applied in 2017;***
- ***Waste Act – requirements are listed in the register, regular inspections are carried out to check compliance with these requirements through QMS audits, inspections by environmental department;***
- ***Waste Management Program (WMP) was developed – and is approved by the decision of the District Office, environmental section in Levice (OU-LV-OSZP-2014/00506-ODP-Z) and the consents from municipal office in N. Tekov and Kalna nad Hronom of 7 Dec. 2014;***
- ***Municipalities of Nový Tekov and Kalná nad Hronom issued consent for SE for handling municipal waste;***
- ***District Office, environmental dept., are sent monthly copies of Accompanying Letters for hazardous waste (in case of hazardous waste production) and once a year sends Report on production and handling of waste (according to applicable legislation)***

3.16 Comply with all obligations arising from Act No. 364/2004 Coll. on water and on amendment to Act of SNR No. 372/1990 Coll. on offences as amended (Water Act)

Fulfilment: These obligations are elaborated in internal rules, such as:

- ***Management of environmental activities;***
- ***At the same time, they are provided in a form of cooperation between SE MO 3 & 4 represented by C0220 unit, and SE EMO 1 & 2 represented by B0153 unit, which covers for the entire premises of Mochovce power station activities related to water management;***
- ***Legislative requirements are also listed in the Register of legal and other requirements, which is regularly updated and assessed;***
- ***Discharge of waste water from the construction site to the waste water treatment plant at EMO 1 & 2 is governed by internal regulation on Discharge of waste water to the sewage systems;***
- ***Discharge of waste water from the wastewater treatment plant, sewage into the Telinsky creek – according to the Decision No. OU-NR-OSZP2-2016/002855 of 13 January 2016 issued by the District Office Nitra, environmental dept., and its changes No. OU-NR-OSZP2-2017/004442 of 9 February 2017, issued by the District Office Nitra, environmental dept. - the established limits and periodicity of analyses according to the valid schedule are complied with.***

*3.17 Ensure that the limit values of indicators for the pollution of waste water and special waters discharged to surface water are not exceeded, according to NV SR No. 296/2005 (***replacing Act No. 269/2010)** *Coll., laying down the requirements for the quality and quality objectives for surface water and limit values for indicators for the pollution of waste water and special waters.*

Fulfilment:

- ***Valid Decisions were issued:***

- ***No. OU-NR-OSZP2-2016/002855 of 13 January 2016 and No. OU-NR-OSZP2-2017/004442 of 9 February 2017 discharges of waste water from wastewater treatment plant of MO 3 & 4***
- ***No. OU-NR-OSZP2-2015/043433 of 29 December 2015 valid until 31 March 2021 for the discharge of waste water into the Hron river, which relate to limit indicators for waste water and special waters discharged into the surface water, both for operation of Units EMO 1 & 2, as well as for the operation of Units 3 & 4.***

- ***The operation of future Units has established its procedures and physical barriers so as to avoid exceeding the allowed limits by the aforementioned decision, similar to those of the already operating Units.***

  For the start up and testing of equipment, a temporary condition was approved in the Decision No. OU-NR-OSZP2-2015/043433 of 29 December 2015 in the reporting mode of measurements at the discharge object. This condition, according to the Decision No.: OU-NR-OSZP2-2017/043415 is valid until 31 December 2019.

3.18 When taking water from the Hron river for the operational needs, consider the flow-rate in the river, and potential impacts on the protected areas in Hungary. To deal with this task if due to the operation of Mochovce NPP, the balance stress in the profile VS V. Kozmálovce will increase in relation to minimum residual flow-rates, which are at present ecologically unacceptable. At the time of minimal flow-rates in the Hron river, it may result in not covering the needs of other water users and regulating them, as well as to a strain over the quality of surface waters in problematic indicators, such as for example, N-NO_3^-, N-NH_4^+, or water temperature).

(Due to the construction of Mochovce nuclear power plant, a decision on the minimal flow-rate at the profile of VS V. Kozmálovce at 6.6 m^3/s, which was set as temporary because the objective need in this section is approx. 11 m^3/s which corresponds to Q_{355} of daily water.).

Fulfilment:

- ***In connection with the improvement in the flow and quality conditions of surface water VS Veľké Kozmálovce, a project was realized to reduce the sediment supply to VD VK, as well as cleaning of the reservoir. Sediment cleaning was carried out and the sediment-control structures were installed. This has improved conditions for offtake of water.***
- ***"VD Veľké Kozmálovce Handling Rules" were elaborated and updated in 2017, governing the procedures in order to optimize the requirements for the customers.***

3.19 As part of the permitting procedure according to special regulations to prove ensuring the necessary quantity of water for operational purposes, and in case of extraordinary events. Fully respect the comments and requirements of the administrator of affected water courses.

Fulfilment:

- ***The Decision of the District Office, Environmental Section B. Bystrica No. 1094/2/177/405.1/93-M, of 6 July 1993, the balance for water offtake was set, valid for all 4 Units, i.e. the water consumption requirements are calculated also when all 4 Units are in operation,***
- ***Internal procedures are established also for emergencies, which address an effective response even when the raw water supply is lost.***

3.20 Carry out the necessary technical measures to ensure the necessary amount of water for operational purposes and for emergencies in the event of fall of minimum flow-rates in the Hron river in low-water periods and in the continuous reduction of the Hron river water content as a result of climatic and other changes (demonstrated decline in flow-rates in most of the territory of the Hron river basin in the period 1980 – 2000 by almost 20%). Consider the possibility of creating water accumulation or other way of cooling.

Fulfilment:

- ***Internal operational procedures are set to define the security limits on water balance and regime measures to ensure safe operation (0-HP/3002 loss of raw water supply) in case of raw water offtake reduction due to climatic and other changes in the watercourse.***
- ***There are reservoirs of cooling water – a stock to be used case of emergencies to make-up service water into safety relevant operating systems.***

3.21 Demonstrate, within the framework of permitting procedure according to special regulations, sufficient capacity of the offtake object for reliable provision of necessary quantity of water for operational purposes and for dealing with an emergency situation at NPP Mochovce after its completion.

Fulfilment:

- ***Decision of the District Office, Environmental section B. Bystrica No. 1094/2/177/405.1/93-M of 6 July 1993 for offtake of water from the Hron river allows max. 1.8 m^3/s; the average offtake volume 1.5 m^3/s, which is 129,600m^3/day, 47,304,000 m^3/year. The capacity of the offtake object has been designed to reliably provide for the necessary amount of water for both operational purposes and emergency situations. Water is transported by 8 pumps into Dobrica reservoir (with a volume of 2 × 6,000 m^3) in accordance with the issued permit. The output of each pump is 600 l/s. Water is transported to the reservoir by a steel pipe with a diameter of 2 × 1,200 mm.***
- ***Internal procedures are established even for emergencies that address effective response even when the raw water supply is lost.***

3.22 Ensure that in the proposed operation, technical solutions are in place that ensure that equipment, which will contain hazardous substances allows capturing of such hazardous substances, which could leak during technical failure or destruction or would be washed out when extinguishing fire with water, and which are constructed in accordance with the requirements of the Slovak technical standards.

Fulfilment:

- ***Chemical substances are stored in warehouses that are managed by the contractors, and therefore the contractors are responsible for the method and safety of storage of these substances.***
- ***Emergency kits for capturing hazardous substances that could leak during technical failure are placed in objects handed over "to the operator".***
- ***After commissioning, hazardous chemicals are to be handled only in designated and leakproof premises.***
- ***MO 3 & 4 performs regular monthly inspections focused on fire safety, safety at work with a focus on environmental protection and prevention of leakage of chemicals or the occurrence of an accident related to the storage and***

handling of chemicals. Also, daily consumption on the construction site is checked.

- ***All chemicals must be approved within the meaning of internal document Management of chemicals for the completion of 3 & 4, the contractors provide for approval the Safety Data Sheets, technical product sheets, certificates and other documents as necessary.***
- ***In 2013, tightness tests of all capture tanks in the warehouses were carried out and are valid until 2018. In the 3 and 4 quarters of 2018, repeated tightness tests of these capture tanks will be performed.***

3.23 To ensure occupational health and safety, elaborate the employer´s responsibilities

- ✓ *Minimum safety and health requirements for the workplace under Government Ordinance No. 391/2006 Coll.;*
- ✓ *Minimum requirements for the provision and use of personal protective aids under Government Ordinance No. 395/2006 Coll.;*
- ✓ *Protection of employees against the risks related to exposure to chemical agents at work under Government Ordinance No. 355/2006 Coll.;*
- ✓ *Minimum health and safety requirements to protect employees from risks related to exposure to noise under Government Ordinance No. 115/2006 Coll. as amended by Government Ordinance No. 555/2006*

The answer is the same as in point 3.8

3.24 Reassess the monitoring system for the components of the environment (air, surface and ground water) in connection with the commissioning and operation of MO Units 3 & 4. If necessary, customize the monitoring system.

Fulfilment:

System of monitoring components of the environment is described in Regulation 0-PLN/0006 - Monitoring Plan for Radiation Control of Mochovce NPP surroundings. From the beginning, the monitoring system was designed for all 4 Units of Mochovce NPP (a sampling and measurement system in the vicinity of NPP, tele-dosimetric system, system of placement thermo-luminescent dosimeters, observation wells along the discharge pipe and the Hron river), and it does not require any radical change.

In the premises of MO 3 & 4, additional monitoring wells for ground water were implemented. Monitoring of ground water from these wells started in 2018. The Monitoring Plan for the radiation control of Mochovce NPP surroundings will be updated by the end of 2018.

3.25 After putting into operation, provide for monitoring of parameters to the extent specified by the relevant regulatory authorities and the specialized state administration bodies in the consent with operation of MO 3 & 4. Ensure continuous and detailed monitoring of the impact of operation of the power plant on the environment, by measuring releases and radioactive materials released from control to the environment, and assessing the dose burden on population caused by operation of a complex of nuclear facilities in Mochovce for the whole time.

Fulfilment:

Monitoring the releases of radioactive substances from the operation of MO 3 & 4 will be performed to comply with the legislation of the Slovak Republic

and the European Union, valid decisions of regulatory authorities, internal regulations, the ALARA principle and international recommendations.

- ***Releases of aerosols, iodine I-131, radioactive noble gases, tritium, C-14 radio carbon, strontium and transuranium in the ventilation stack of MO 3 & 4 will be monitored. In addition, activation and fission products, tritium, strontium and transuranium in liquid discharges will be monitored too.***
- ***During monitoring not exceeding the alert and response levels will be monitored, reference values of releases, as well as radiological limit control,***
- ***Monitoring will be carried out by metrologically validated gauges. On the basis of measured values of radioactive releases and other input data, a radiological impact assessment of releases will be performed on a representative individual from the population by approved radiological model.***
- ***Radioactive materials may be released from the controlled zone to the environment only on the basis of compliance with the conditions of the legislation and the authorization of the regulatory body, and after prior monitoring and comparison with the criteria, by metrologically validated designated gauges.***

For MO 3 & 4, or for the common NI of EMO, Units 1 to 3, the competent regulatory authorities and the specialized public administration authorities have not yet issued valid decisions for the radiological limit, nor for the monitoring of releases and radioactive materials. Communication was launched with ÚVZ SR and the expectation is that the limits and the system of monitoring releases of radioactive materials at MO 3 & 4 will be the same as for EMO 1 & 2.

Radiation protection management, monitoring activities of EMO 1 & 2 and MO 3 & 4 are provided by one RP Unit that will ensure the application of the same approaches and procedures also at MO 3 & 4.

3.26 Evaluate regularly all proposed monitoring activities. The results of monitoring to be regularly provided to the public authorities and the public concerned.

Fulfilment:

- ***Control of gaseous discharges will be performed continuously during the shift, by the radiation safety technician, as is currently the case for EMO 1 & 2. On one hand it is done from continuous monitors of discharges of radioactive substances in the ventilation stack of MO 3 & 4, as well as summary value once every 24 hours (control of not exceeding reference levels).***
- ***Control of not exceeding reference values will be done after the end of calendar month from the balance measurements.***
- ***Control of not exceeding the radiological limit will be done after the end of calendar quarter and the whole year by radiological model.***
- ***Control of liquid discharges will be done from samples taken from control tanks before they are discharged. Only water meeting the radiation criteria given in the permit by the regulatory authorities will be discharged from the control tanks.***
- ***During the discharge of water, the shift engineer for radiation safety will continuously monitor not exceeding the reference levels valid for their discharge from the premises of NPP. In case of exceeding reference level, the discharge of wastewater from the control tanks is automatically interrupted. The volume activity of wastewater is also monitored continuously by monitoring systems and is secured representative sampling***

of wastewater for the following laboratory analyses at the boundary of the premises and the vicinity.

- ***Results of monitoring of radioactive releases and their radiological impact, as well as the results of monitoring of the vicinity of Mochovce NPP will be processed into regular quarterly and yearly reports and sent to the regulatory authorities, public administration authorities, as well as the mayors of the surrounding municipalities. Any exceeding of reference levels, guideline values and radiological limit would be examined and reports on the outcome of investigation will be submitted to the regulatory bodies within the time limits set in the decisions.***
- ***Radiation protection management, monitoring activities of EMO 1 & 2 and MO 3 & 4 are provided by one RP Unit that will ensure the application of same approaches and procedures also at MO 3 & 4.***

3.27 In the periodic nuclear safety assessment, which will be performed during the operation according to the ÚJD SR Decree No. 49/2006 Coll. on the periodic nuclear safety assessment it will also assess the impact on the health of the population.

Fulfilment:

- ***Originally cited ÚJD SR Decree 49/2006 Coll. on the periodic nuclear safety assessment in its wording requires assessment of impact on the environment. This concerns in particular Section 16 The impact of operation of the nuclear installation on the environment, where the requirements are formulated in par. (1) and (2),***
- ***Amended ÚJD SR Decree 33/2012 Coll. on a regular, comprehensive and systematic assessment of nuclear safety of nuclear installations requires an environmental impact assessment in Section 17 "Radiological impact on environment". Requirements are formulated in par. (1) and (2).***
- ***The valid Period Nuclear Safety Assessment Methodology EMO 1 & 2 - Project PSR EMO 1 & 2, does not specifically require the evaluation of health condition of the population.***

  This recommendation is currently not being implemented due to the fact that the assessment of impact on the health condition of the population requires a comprehensive assessment of this requirement and the present recommendation is now beyond its scope beyond the requirements of the legislation and the internal regulations. After the SE MO 3 & 4 Units are put into operation, the fulfilment of the requirements will be re-examined before the periodic safety assessment itself.

3.28 In the area of radiation protection, in cooperation with the permitting authority, to review the method and formulations for the limitation of discharges from individual nuclear installations at the site, so as to make it clear:

- *what annual committed effective dose represent the upper optimization limit for their deduction,*
- *what are site specific conversion factors activity/dose,*
- *what are the requirements for monitoring discharges in relation to the limits that should reflect the need to evaluate discharges in terms of committed dose for the population,*
- *what will be the way (content and frequency of reporting) for communication with the regulatory authorities on the matter;*

Fulfilment:

- ***The upper optimization limit is 250 microSv/year for a location with NI.***

- ***For EMO 1 & 2 operation, a radiological limit for dose from discharges was set at 50 microSv/year. For MO 3 & 4, it is expected that the same value will be applied***
- ***To calculate the radiological impact from MO 3 & 4 it is currently not required to use conversion factors, but a radiological model directly.***
- ***Monitoring discharges or sampling for balancing purposes shall be continuous and representative in accordance with the approved design. The measurement systems must be metrologically verified as designated instruments. The program for determining doses for the population must be approved by the regulatory authority.***
- ***The content and frequency of reporting is determined by the regulator in its decision, which is then performed by the operator (regular reports are on a quarterly and annual basis, exceeded levels, system failures are reported within a few days).***

3.29 Observe the protection zones of existing and new energy facilities in the area pursuant to Section 36 of Act No. 656/2004 Coll. on energy sector and on amendments to certain laws, and also to take measures to prevent damage to existing energy equipment.

Fulfilment:

- ***This recommendation concerning protection zones for the equipment of the power system, which are explicitly listed in addition to the technical demands and requirements, which is prohibited in the protection zone of the outer overhead power lines, for example, to establish structures and landfills, to plant and grow permanent crops, etc.***
- ***The fulfilment of recommendations falls within the competence of SEPS, a. s. Those facilities that are located within the area of Mochovce NPP (Units 1, 2, 3, 4), meet the requirements of this Act in its amendment by Act No. 251/2012 Coll. and MoE SR Decree No. 271/2012 Coll., laying down the details of the scope of technical conditions for access and connection to the system and the grid and the rules for the operation of the system and the grid.***

3.30 In the next stages of design documentation to propose technical solution for overhead power line that prevents the killing of birds.

Fulfilment:

SE MO 3 & 4 has developed an analysis of impact of HV lines on bird mortality and the results of this analysis are as follows:

***Injuries of birds on the HV lines** mainly occur **on 22kV, 35kV lines and for these types of lines the causes are the following**:*

- ***An electrical shock** when contacting "earth" caused by, for example stretching wings when **touching ground or taking off** of birds from the power line masts.*
  - *By way of example, "ridge tops" or use of "claw" masts, that do not atract the birds for landing.*
- ***Accidental impact of the flying bird on the wires or the structure***
  - *Measures applied in critical locations, such as flying corridors and locations with increased density of threatened species, various "visual" objects,*

On EHV type lines (110kV, 220kV, 400kV) the situation is completely different and more favourable (for example, the Czech legislation does not require application of protection).

***An electrical shock** when contacting "earth" caused by, for example stretching wings when **touching ground or taking off** of birds from the power line masts.*

- *Because of greater clearances between the individual lines and insulating distances, this type of injuries is unlikely. This fully applies to 400kV lines.*

Accidental impact of airborne birds on lines and structure

- *EHV and ZVN lines are much more robust and better visible, and this is true for 400kV lines with bundle conductors and spanners.*
- *In terms of visibility and those that have been in place for a long time and the birds know their position, this is not an issue and it is not necessary to deal with it.*

In some risky areas (reserve and areas with a high bird density, protected bird areas) local measures may be applied in the interest of nature conservation, but these must also be assessed by the nature conservation authorities, possibly following consultations with NGOs and ornithologists.

SE MO 3 & 4 project has only these types of lines on the territory of NPP and the part that links the EHV connection to Veľký Ďúr substation, is in the competence of SEPS, a. s.

3.31 During operation of the plant, strictly observe all legislation and regulations concerning the recovery and disposal of non-radioactive waste generated during the operation of the plant. Ensure regular removal of hazardous waste, other waste, as well as municipal waste through authorized organizations. Ensure the disposal of waste in accordance with the Act No. 223/2001, replaced by Act No.79/2015 Coll. on waste as amended, and VZN of municipality Kalná nad Hronom.

Fulfilment:

- ***Legislative requirements are stated also in the Register of Legal and Other Requirements, which is regularly updated and evaluated. It includes also VZN of the relevant municipalities.***
- ***Inspections, audits (inspections also from other plants).***
- ***Waste removal is contracted (with Marius Pedersen and internal contract with waste management of EMO 1 & 2). Since the power plant has been put into operation, a centralized contract will cover waste management through a contractor, with whom RSE concludes a contract (single contract for all plants).***
- ***Waste disposal from the offices is done in cooperation with EMO 1 & 2. The construction site is covered by the establishment of Waste Collection Yard operated by MO 3 & 4 in cooperation with an organization authorized to handle hazardous and other waste.***
- ***The Collection Yard provides municipal waste collection bins, separate waste collection and also provides services for contractors, who produce waste in the sense of waste producer. Contractors submit monthly reports on generation and management of waste to the relevant department at MO 3 & 4.***
- ***Annual reports on waste generation are prepared and sent by the contractors themselves. A copy of this report is sent to the environmental unit of MO 3 & 4. MO 3 & 4 drafts annual report on generation of waste only for the wastes, where it is a waste producer.***

The Waste Management Program was drafted in accordance with the law.

3.32 Provide training of staff focusing on occupational health and safety, prevention of accidents and dealing with emergencies

Fulfilment:

- ***There are regular trainings for our staff – induction, periodic and on-the-job training.***

- ***Training of staff is carried out when new employees start to work to the extent required by internal regulations of Slovenské elektrárne, a. s., and also include training in the field of OHS, PPA, movement on the construction site, environmental protection, accident prevention and dealing with emergencies and implementation of the system of physical protection of the plant.***
- ***Trainings are periodical, every two years in accordance with the relevant legislation. Contractor staff is trained at regular yearly intervals by an external organization.***
- ***Every year there is a site exercise, interoperability environmental exercise and fire and evacuation exercise, to verify cooperation of all rescue teams – firefighters, rescuers, emergency groups and staff of the plant and contractors. After each exercise a report is produced, which also includes corrective actions and thus also improvement in dealing with possible emergencies.***

3.33 Resolve infrastructural issues in management of spent nuclear fuel at Mochovce site (construction of interim spent nuclear fuel storage facility).

Fulfilment: As part of the project preparation, an Intent was developed for environmental impact assessment for the interim storage facility for spent nuclear fuel at Mochovce site (the EIA process) – 06/2013,

- ***Following the submission of Intent to the Ministry of Environment (MoEnv) on 7 February 2014, a meeting was held at MoEnv SR, where the scope of assessment report was agreed for the cross-border assessment of the proposed activity – letter of MoEnv SR No. 3431/2014-3.4/hp dated 7 February 2014,***
- ***The Assessment Report (EIA) was completed in 03/2015,***
- ***Under the current legislation (Atomic Act), SE, a. s., is not an authorized entity for disposal of RAW and SNF according to Section 3, par. 9. For this reason, all activities of SE, a. s., in the framework of project preparation of the Dry Storage Facility for SNF at Mochovce site, were completed in 04/2015,***
- ***The authorized legal entity (Section 3, par. 9, Act No. 541/2004 – JAVYS a. s.) is currently preparing an extension of the storage capacity for SNF in Jaslovské Bohunice. More details are available at:*** https://www.enviroportal.sk/sk/eia/detail/dobudovanie-skladovacej-kapacity-medziskladu-vyhoreteho-jadroveho-pali
- ***JAVYS, a. s., does not consider building storage capacity for SNF at Mochovce. SNF from the operation of EMO 1 – 4 will therefore continue to be transported to storage capacities in Jaslovské Bohunice***
  The Strategy and Program for Radioactive Waste and Spent Nuclear Fuel Management will be updated in 2021. If Program modifications are required due to operation of MO 3 & 4, they will be incorporated into the Program.

3.34 Possibility to implement into practice - as soon as possible - the approved Strategy for the back-end of the nuclear energy sector in the field of final phase of management of spent fuel and radioactive waste that cannot be disposed in the existing National Repository

Fulfilment:

- ***Pursuant to Section 3 par. 9 of Act No. 541/2004 Coll. as amended (the Atomic Act) the disposal of radioactive waste or spent nuclear fuel may only be performed based on permit by a legal entity established or commissioned by the Ministry of Economy of the Slovak Republic (the "Ministry of***

Economy"). The legal entity according to the first sentence must hold a permit for operation of a repository and the Slovak Republic must have 100% ownership interest in that entity and that entity may not hold a license for the operation of a nuclear facility pursuant to Section 2 (f) first point.

- ***SE, a. s., is not such a legal entity and cannot, in the sense of the above, be.***
- ***For this reason, it is not within its competence to implement the approved Strategy for the final phase of the nuclear energy sector in the area of solution for the final phase in management of spent fuel and radioactive waste that cannot be disposed at the existing National Repository***
- ***SE, a. s., fulfils its obligations in the area of the back-end of nuclear energy sector, which is imposed on operators of nuclear facilities by the Atomic Act and Act on the National Nuclear Fund. This is primarily the payment of mandatory contributions to the National Nuclear Fund earmarked for the activities of the National Program for the Management of Radioactive Waste and Spent Nuclear Fuel (formerly the Strategy for the Final Phase of Nuclear Energy Sector).***

3.35 Consider the possibility of bridging the Hron river between the municipalities of Nový Tekov and Starý Tekov, which would serve as an escape route for the inhabitants of Novy Tekov in case of emergency (request from the Mayor of Nový Tekov and a resident, Mr. Jozef Pacala from Stary Tekov).

Fulfilment: SE, a. s., considered the possibility of building such an infrastructure and following meetings with specialized departments of MoI SR responsible for the protection of the population (the emergency response committee at NPP and its vicinity SE, a. s., did not receive such request to consider this bridging as another evacuation route in case of RA substances released from NPP to the environment. This bridging was done through an investment project:

Bridging between the municipalities of Nový and Starý Tekov

Investor: Most Tekov s. r. o., Markušovská cesta 22, 052 01 Spišská Nová Ves

Final building approval: 3 June 2015 No. 311/2015

- ***The evacuation routes from these municipalities are part of the Population Protection Plans at the relevant district offices, as well as the statutory body at the municipal level is acquainted with these plans.***