

Nuclear Regulatory Authority of the Slovak Republic,  
Bajkalska 27, P.O.Box 24, 820 07 Bratislava 27,  
Trnava workplace, Okružná 5, 918 64 Trnava

Number: 708/310-152/2008

Slovenske Elektrarne, a.s.  
Units 3 and 4 of NPP Mochovce  
935 39 Mochovce

### **DECISION No. 267/2008**

The Nuclear Regulatory Authority of the Slovak Republic (hereinafter as "authority") as factually administrative body according to § 5 par. 1 and § 46 of the Act No. 71/1967 Coll. about administrative proceeding (administrative regulations) as amended, according to § 4 par. 2 letter f) point 2 of the Act No. 541/2004 Coll. about use of nuclear energy for peaceful purposes (Atomic Act) and about change and completion of some Acts according to Act No. 238/2006 Coll., Act No.21/2007 Coll., Act No.94/2007 Coll. and Act No. 335/2007 Coll. (hereinafter as "Act").

#### **gives a consent**

for Slovenske Elektrarne, a.s., Company ID: 35829052, address: Hranická 12, 827 36 Bratislava 212, with its place of business in NPP Mochovce Units 3 and 4, 935 39 Mochovce (hereinafter as "applicant"), bank connection: Tatra banka Bratislava, account No.: 2646000025/1100.

#### **to implement changes in document "Preliminary safety report of NPP Mochovce Units 3 and 4" in submitted scope.**

According to § 5 par. 5 of the Act the Authority binds its decision to fulfilment of following condition:

To implement comments listed in the amendment of this decision to Pre-operational safety report of NPP Mochovce Units 3 and 4.

Deadline: Before submitting the application for assessment of Pre-operational safety report of NPP Mochovce Units 3 and 4.

#### **Justification**

On the day of submitting, based on application of the applicant No. SE/2008/066170 from May 29, 2008, the Authority has started proceeding related to giving a consent to implement changes in document "Preliminary safety report of NPP Mochovce Units 3 and 4", reg. No. DMO/051/0001/T/F0/S issued on May 22, 2008 and approved by the applicant on May 29, 2008 with documentation No. EM03421351. Following documents were submitted related to this submitting:

- Chapter 1: Introduction
- Chapter 2: General characteristics of the nuclear facility and its design
- Chapter 3: Safety management
- Chapter 4: Assessment of the nuclear facility location from nuclear safety point of view
- Chapter 5: Aspects of nuclear facility design
- Chapter 6: Description of nuclear facility systems and their comparison with the design
- Chapter 7: Safety analyses
- Chapter 8: Procedure of the nuclear facility putting into operation
- Chapter 9: Conditions of operation
- Chapter 10: Preliminary Limits and conditions of safe operation
- Chapter 11: Ensuring radiation protection
- Chapter 12: Emergency preparedness
- Chapter 13: NPP M034 impact on the environment
- Chapter 14: Description of radioactive waste management
- Chapter 15: Nuclear facility decommissioning procedure.

On June 16, 2008 the submission was completed by personal submission by letter No. SE/2008/074993 from June 17, 2008, registered under number 775/310-170/2008 by documentation of "Amendment to PSR - Power plant response to severe accidents consequences".

The third completion of the submission was done on August 13, 2008 by personal submission by duty stamp having administrative fee value.

According to the fact that the preliminary safety report for NPP Mochovce Units 3 and 4 was elaborated in years of 1984 and 1986, the applicant has submitted updated version of

preliminary safety report in full scope to the Authority because of changed legislative requirements valid in the period of planned completion of NPP Mochovce Units 3 and 4.

During assessment of the submitted documentation the Authority has used also the documentation of the basic design that was submitted to the Authority by the applicant for parallel administrative proceeding No. 684/320-231/2008 related to change of construction before finishing "Nuclear Power Plant Mochovce VVER 4x440 MW 3<sup>rd</sup> construction" according to building law because the Authority is at the same time other building authority at nuclear facilities constructions. The documentation that was submitted to the Authority by the applicant for parallel administrative proceeding No. 685/320-232/2008 was also taken into account concerning giving a consent for implementation of changes of safety related equipment influencing the nuclear safety on nuclear facility of NPP Mochovce Units 3 and 4 during the construction.

The submitted documentation was inspected by the Authority from the point of view of legislative requirements fulfilment listed in the Act as well as following documents:

1. Decree of UJD SR No. 50/2006 Coll. that defines details about requirements for nuclear safety of the nuclear facilities during their location, designing, construction, putting into operation, operation, decommissioning and disposal site closing as well as the criteria for safety related equipment categorisation into the safety classes.
2. Decree of UJD SR No. 51/2006 Coll. that defines details to ensure the physical protection.
3. Decree of UJD SR No. 53/2006 Coll. that defines details about requirements during nuclear materials, radioactive wastes and burnt nuclear fuel management.
4. Decree of UJD SR No. 54/2006 Coll. that defines details about registration and inspection of nuclear materials and about annunciation of selected activities.
5. Decree of UJD SR No. 58/2006 Coll. that defines details about the scope, content and way of nuclear facilities documentation necessary for particular decisions.
6. "Requirements for NPP Mochovce Units 3 and 4 nuclear facility quality", reg. No. DMO/012/0501/T/F3/S, issued on March 13, 2008, approved by UJD SR decision No. 136/2008.
7. Relevant safety guides and decrees issued by the authority
8. Relevant safety guides and decrees issued by IAEA in Vienna
9. Requirements of the Association of the nuclear regulators of the European Union countries and Switzerland - WENRA.

Relevant parts of the submitted documentation were sent by the Authority together with the application for standpoint by letters No. 708/310-152/2008 from June 10, 2008 to the Ministry of Environment of the Slovak Republic and Public health authority of the Slovak Republic. Ministry of Environment of the Slovak Republic has sent its standpoint to the Authority by letter No. 7451/2008-3,4/hp from June 25, 2008 and the Public health authority by letter No. OOZP2/5447/2008 from July 3, 2007. Ministry of Environment in its standpoint did not give any comments. The Public health authority comments were implemented into the comments listed in the amendment of this decision.



Based on performed evaluation after assessment of submitted documentation, the Authority states its consent with the requirements required in mentioned documents except those requirements that need to be fulfilled according to the condition listed in declaration part of this decision.

Based on listed facts, the Authority in compliance with § 4 par. 2 letter f) point 2 taking into account § 2 letter u) point 2 decided as it is given in declaration part of this decision.

The administrative fee in amount 1000,-SKK (one thousand Slovak Crowns) was determined according to Act No. 145/1995 Coll. about administrative fees as amended, part XII item No. 198 letter a) and it was paid by a duty stamp.

Advice:

According to § 61 par. 1 of the Act No. 71/1997 Coll. about administrative proceeding (administrative regulations) it is possible to lodge and appeal against this decision to Nuclear Regulatory Authority of the Slovak Republic, Okružna 5, 918 64 Trnava in 15 days from this decision delivery. The appeal lodged in time has a dilatory effect.

If this decision after depletion of permissible remedial instrument comes into force, its legality can be evaluated by the Court.

In Trnava, on August 14, 2008

Duty stamp  
Stamp of Nuclear Regulatory Authority  
of the Slovak Republic

Ing. Peter Uhrík  
General director of  
the Department of Safety Evaluation  
and Inspection Activities

Amendment: Comments to submitted revision of the document "Preliminary safety report of NPP Mochovce Units 3 and 4"

**Copies to:**

1. Ministry of Environment of the Slovak Republic - Department of evaluation and assessment of impacts to environment, Namestie Eudovita Stura 1, 812 35 Bratislava
2. Public Health Authority of the Slovak Republic, Trnavská cesta 52, P.O.Box 45, 826 45 Bratislava.

## **Amendment to NRA SR Decision No. 267/2008**

Comments to submitted revision of the document "Preliminary safety report of NPP Mochovce Units 3 and 4" that need to be taken into account in Pre-operational safety report of NPP Mochovce Units 3 and 4 (hereinafter as "report"):

1. In corresponding part of Chapter 7 of the report add the categorisation of the solved postulated initial events list according to the frequency of possible occurrence in compliance with requirements of NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B LA. letter 1).
2. In corresponding part of Chapter 7 of the report for analysed postulated initial events implement requirement in compliance with NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B LB. 3 letter a).
3. In corresponding part of Chapter 7 of the report for analysed postulated initial events implement requirement in compliance with NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B LB. 3 letter c).
4. In corresponding part of Chapter 6 of the report add analysis of postulated initial events actuation for those systems and components where such evaluation is not given or to evaluate possibility of impact on these systems and components activity from the external postulated initial events actuation point of view in compliance with NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B I.H. (7).
5. To complete the chapter No. 7.4.20 of the report in order to be able sufficiently to prove fulfilment of the requirement from NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B II.E (2) letter a) point 2 taking into account present good practice used in this points of issue.
6. To complete the chapter No. 14 of the report by the requirements and to give the way of their fulfilment to maintain sub-criticality while radioactive waste management in compliance with requirements of § 21 par.3 letter a) of the Act.
7. To complete the chapter No. 14 of the report by the requirements and to give the way of their fulfilment to ensure residual heat removal while radioactive waste management in compliance with requirements of § 21 par.3 letter b) of the Act.
8. To complete the chapter No. 14.6 of the report by requirement in compliance with § 21 par. 10 of the Act.
9. To complete the chapter No. 14 of the report by the requirement that the radioactive waste samples are stored till their receiving in the disposal site in compliance with requirement of § 3 par. (3) of the NRA SR Decree No. 53/2006 Coll.
10. Corresponding parts of Chapter 9 of the report should be completed by requirements for co-ordination of registration of also other nuclear materials as fresh nuclear fuel and burnt nuclear fuel.
11. To reconcile classification of nuclear materials listed in Chapter 9.5.5 of the report with regulation of the European Committee No. 302/2005 and to add the possibility of nuclear materials sending from MBA created in M034 nuclear facility.
12. In Chapter 11.05 to take into account the programme of radiation protection quality ensuring according to Annex No. 4 of the Act No. 355/2007 Coll.
13. Corresponding parts of Chapter 11 of the report should be remade sufficiently to use experience and knowledge from operation of NPP Mochovce Units 1 and 2 in the field of radiation protection ensuring.
14. To the part of Chapter 11 of the report, describing radiation sources, add gama and neutrons rays penetrations and to describe possible measures to eliminate or exclude the penetrations.



15. To the part of Chapter 11 of the report, describing radiation sources, add information about experience with chemical modes exercise in NPP Mochovce Units land 2 in relation to radiation protection ensuring.
16. To the part of Chapter 11 of the report add the aims of radiation protection as e.g. limit dose for workers, regulation levels for individual radiation and aims in the field of collective dose.
17. To the part of Chapter 11 of the report add evaluation about how the operation of NPP Mochovce Units 3 and 4 effects individual doses on personnel that will act on all the four units of the power plant.
18. To the part of Chapter 11 add the statement that radiation protection ensuring is the primary condition for safe operation of the nuclear facility and for this purpose the division providing radiation protection management should be independent from economic and operational indicators.
19. To the part of Chapter 11 add, evaluate and stress the importance of professional representative for radiation protection, his competence, rights and duties.
20. In Chapter 11 of the report to re-classify working activities in controlled area into corresponding categories of risk rights in compliance with valid legislation of the Slovak Republic.
21. To corresponding parts of the report add analysis of the possibility of the failures occurrence and their consequences (FMEA) of all relevant systems that will prove in full scope the impacts of particular failures of the elements to the system operability.
22. To corresponding parts of the report add analysis of internal floods in the scope of requirements of Chapter 2.5.4.3. of approved *Requirements for nuclear facility quality of NPP Mochovce Units 3 and 4*.
23. To corresponding parts of the report add analysis of events related to fires and floods that are caused by seismic event in compliance with requirement of IAEA guide GS-G-4.1,3.68 b).
24. Division of nuclear facility putting into operation, described in Chapter No. 8 of the report should be put into compliance with requirements of NRA SR Decree No. 50/2006 Coll. Annex No. 4, part B II. Letter A point (1).
25. To recalculate values of LERF and CDF listed in Chapter 7.5.1 of the report for decommissioned reactor.
26. To modify the content of Chapter 5.1.1.3 to be in compliance and to prove unambiguous fulfilment of requirements listed in NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B.I.C (1) letter c).
27. To corresponding parts of Chapters 5.2 and 7.4 of the report to add information about for what limit conditions the systems and components are important from nuclear safety point of view are designed in compliance with requirement listed in NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B.I.F (1).
28. To add corresponding safety analyses for operation modes without power production and decommissioned reactor by application of single failure criterion in compliance with the requirement listed in NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B.I.H(1).
29. To add corresponding chapters of the report about eventual failure to fulfil the criteria of single failure together with justification in compliance with requirements listed in NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B.I.H (4).
30. To corresponding chapters of the report add explosion or fire risk analysis to determine required fire resistance of fire-separations in the structures in compliance with requirement listed in NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B.I.I (5) and in compliance with requirements of Chapter 2.5.4.3 of approved *Requirements for nuclear facility quality of NPP Mochovce Units 3 and 4*.

31. To corresponding parts of the report add the analysis of combination of the phenomenon caused by natural conditions and human action in compliance with requirement listed in NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B.I.J (2) letter b).
32. To complete the safety analyses so as they fulfil the requirements listed in NRA SR Decree No. 50/2006 Coll., Annex No. 3 part B.II.F in full scope