

NEW NUCLEAR SOURCE AT THE DUKOVANY SITE

Vysočina Region, Community: Dukovany, Slavětice, Rouchovany

SCI CZ0614134 Jihlava Valley, CZ0623819 Rokytná River, SCI CZ0622226, Velký Kopec, SCI SCI CZ0623717 Tavíkovice – castle, CZ0622161 Ve Žlebě, SCI CZ0614133 Kozének, SCI CZ0622179 Široký, SCI CZ0614131 Oslava and Chvojnice Valleys, SCI CZ0622150 Biskoupský hill, SCI CZ0613695 Biskupice – church, SCI CZ0613696 Biskupice – school, SCI CZ0623707 Old castle Jevišovice, SPA CZ0621032 – Podyjí

contractor:

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Order No. 2018.017-1/EX



REVIEW OF NATURA IMPACT ASSESSMENT

in terms of Section 45i, Act No. 114/1992 Coll. as amended,

BACKGROUND PAPER FOR E.I.A. EXPERT REPORT
Under Act No. 100/2001 Sb., as amended by Act No. 326/2017 Coll.

RNDr. Milan MACHÁČEK

The authorized person for processing assessments according to Section 45i of Act No. 114/1992 Coll., as amended

Jihlava, May 2019

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Used main terms and abbreviations in relation to matters of evaluating the impacts on NATURA 2000 system

Natura impact assessment – actual evaluation of the project impacts on the Sites of Natura 2000 system, elaborated according to the Section 45i, Par. 2, Act No. 114/1992 Coll. by competent authorized person (evaluator) within the documentation (Notice) of E.I.A.

Review – opponent’s review of formal, material and methodical correctness of the natura impact assessment for purposes of E.I.A. expert review, elaborated according to the Section 45i, Act No. 114/1992 Coll., as amended by a competent authorized person (reviewer) as a sub-supply of the E.I.A. expert review for the author of the E.I.A. expert review nominated by the competent authority.

Evaluator – person authorized for performing the assessment according to the Section 45i, Act No. 114/1992 Coll., as amended, author of the natura impact assessment in the documentation (Notice)

Reviewer – author of the Assessment for purposes of the E.I.A. expert review, authorized person for performing assessment pursuant to Section 45i, Act No. 114/1992 Coll., as amended; independent on the team of the evaluator or author of the Documentation (Notice) E.I.A.

SCI – Site of Community Importance from the list of Sites of Community Importance in the territory of the Czech Republic in terms of annexes to Government Decree No. 132/2005 Coll.

SPA – Special Protection Area of birds, declared by respective Decree of Government of the Czech Republic

1. Introduction

The presented expert review deals with reviewing the natura impact assessment of the project “*New Nuclear Source at the Dukovany Site*“ on Sites of Natura 2000 system, elaborated according to the Section 45i Act No. 114/1992 Coll., as amended, by RNDr. Vlastimil Kostkan, Ph.D. with a team of cooperators (April 2017) for purposes of EIA documentation (Annex No. 3.2) in terms of Section 8, Act No.100/2001 Coll., as amended by later regulations, (Mynář P. et al., June 2017).

RNDr. Tomáš Bajer, CSc. is the ordering party of the presented Assessment as the author of the E.I.A. expert review for the documentation of the above mentioned project pursuant to Section 9, Act No.100/2001 Coll. as amended, nominated by the competent authority (Ministry of Environment, Prague).

The presented review is elaborated in accordance with Section 45i, Act No. 114/1992 Coll., on nature and landscape conservation, as amended, and Section 2 Decree No. 142/2018 Coll., directive on habitats 92/43/EEC, methodical recommendations of Ministry of Environment of the Czech Republic and European Commission (see Composite authors 2001, 2001a) and also in accordance with methodology of the Ministry of Environment regarding evaluation of impacts significance according to the Section 45i, Act No. 114/1992 Coll., as amended, on the grounds that it reflects needs of the EIA expert review structure in terms of appurtenances, prescribed by valid wording of the Act on environment impact assessment¹. Thus, it is not (and even cannot be) a new natura impact assessment according to the Section 45i, Act No. 114/1992 Coll., but only an opponent’s review of the submitted natura impact assessment for the above mentioned project.

The review is based on the natura impact assessment pursuant to Section 45i, Act No.114/1992 Coll., as amended (Kostkan V. et al., 04/2017), on the field survey of reviewer performed in June 2018², on the consultation of the reviewer at AOPK (Agency for Nature and Landscape Conservation) of the Czech Republic, September 2018, on EIA documentation pursuant to 100/2001 Coll. as amended (Mynář P. et al., June 2017), on selected paper agenda and on processing further printed and digital data about the monitored territory.

In terms of Section 2, Decree No. 142/2018 Coll., detailed description of individual aspects of the planned project and its impacts on particular environment components are not subject matter of this Assessment pursuant to Section 45i, Act No. 114/1992 Coll. Further information can be obtained mainly in the technical documentation of the project under review, eventually in the published E.I.A. Documentation pursuant to 100/2001 Coll. as amended³.

¹ Under Act No. 326/2017 Sb. and Act No. 225/2017 Coll.

² Follow-up of public hearing concerning the Documentation on 19.6.2018.

³ See IS EIA on www.mzp.cz or on www.cenia.cz, Project code MZP469

2. Data on the project and the notifier

2.1. Basic project data

Name of the project under review:

New Nuclear Source at the Dukovany Site

2.2. Project capacity and scope

Project capacity: net electrical power output: up to 2400 MW_e

The subject of the Project consists in the construction and operation of the new nuclear source at the Dukovany site consisting of the nuclear units, including all the related civil engineering objects and technological systems (technological equipment), used for power generation and transmission and assurance of safety operation of the nuclear facilities.

Power plant unit: number of units: up to 2
type: pressurised water reactor (PWR)
generation: III+
net electrical power output: up to 2400 MW_e
design lifetime: 60 years

The above mentioned power corresponds to two units with net electrical power output up to 2400 MW_e (2x1200 MW_e) or one unit with net electrical power output up to 1750 MW_e.

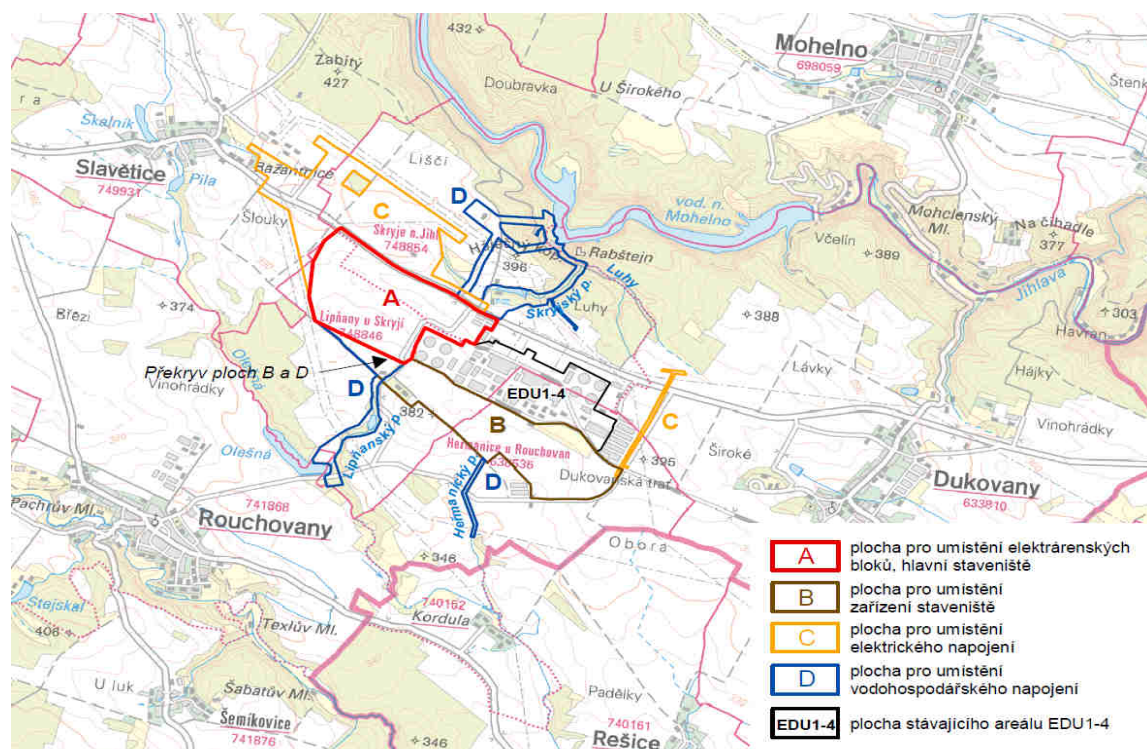
2.3. Project Location

Region: Vysočina

Community: Dukovany, Slavětice, Rouchovany

Cadastral Area: Skryje nad Jihlavou, Lipňany u Skryjí, Dukovany, Slavětice, Heřmanice u Rouchovan, Rouchovany

For the general layout of the project location, see the following document:

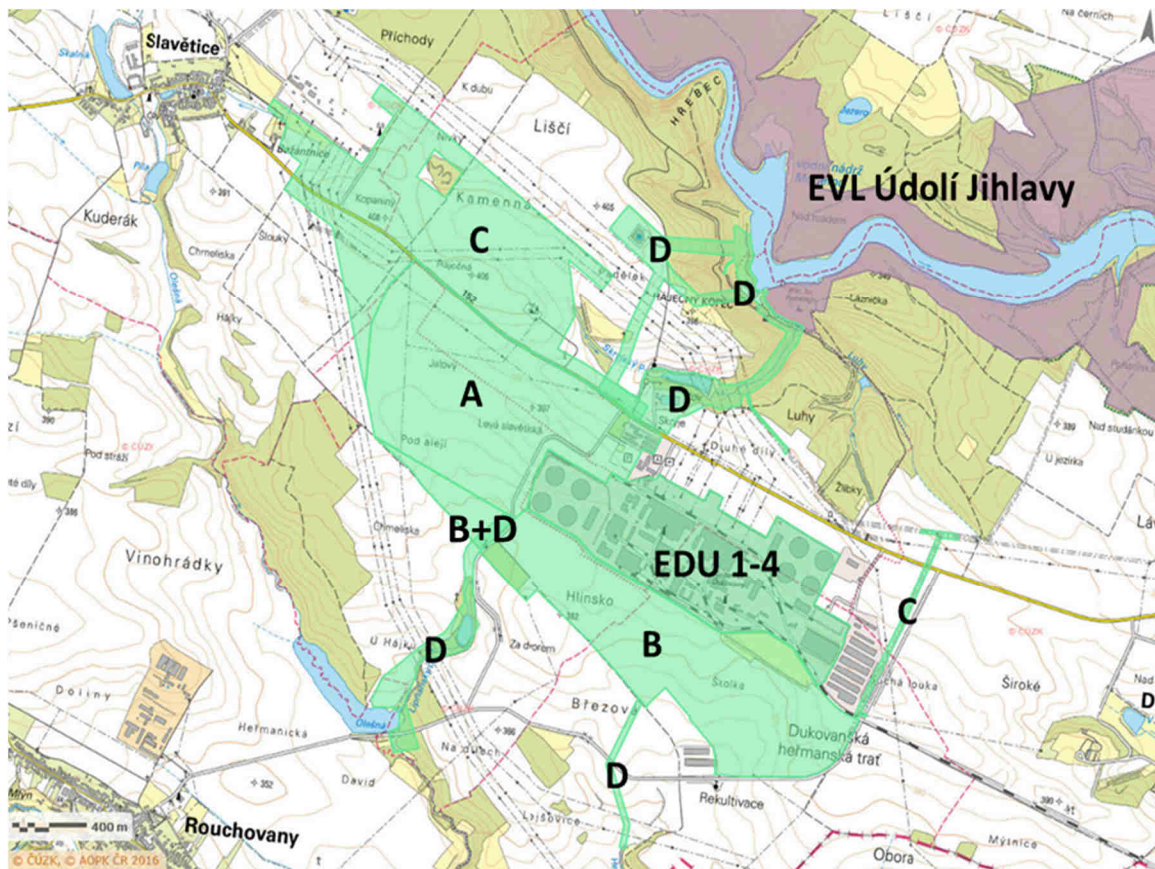


plocha pro umístění elektrárenských bloků, hlavní staveniště	area for power units, main construction site
plocha pro umístění zařízení staveniště	area for site installations
plocha pro umístění elektrického napojení	area for electrical connections
plocha pro umístění vodohospodářského napojení	area for water connections
plocha stávajícího areálu EDU 1-4	existing EDU1-4 site

2.4. Brief information on technical and technological solution of the project

Basic civil technical, technological and zoning data of the project are briefly presented in the subsequent text, especially those where relation to the sites of Natura 2000 system can be expected. Thus, the text concerns project concept as described in the natura impact assessment of V. Kostkan (04/2017) and presented also in the E.I.A. Documentation (Mynář P. et al. 06/2017).

The planned project “New Nuclear Source at the Dukovany Site” (area A) is situated west to south-west from the existing premises of the nuclear power plant Dukovany, while the construction site installations (area B) is planned south-east to south from the existing premises, areas and line elements of electrical connection (areas C) south-west and east from the premises and line corridors of water system connection (areas D) north from the premises and south-east and south from the construction site installations on areas B.



EVL Údolí Jihlavy	SCI Jihlava Valley
EDU 1-4	EDU1-4

Expected arrangement of project areas in relation to the nearest SCI:

- A – area for the power plant unit location, main construction site
 - B – area for the site equipment location (only temporary occupation)
 - C – area for electrical connections location
 - D – area for location of water management connections
 - EDU 1-4 – guarded area of the existing power plant
- Ex. Kostkan V., et al. (04/2017)*

The nuclear units include all the necessary civil engineering objects and technological equipment of the primary circuit, the secondary circuit, the tertiary (cooling) circuit, external plants and

auxiliary plants, including all the related and induced investments for the project construction and operation.

Layout solution of NNS is primarily determined by the location of nuclear island, turbine hall and cooling towers. Then, the arrangement of other objects is adapted to logic operating relationships and to remaining free area in the territory after locating the main objects of NNS (nuclear island, turbine hall, cooling towers). The elevations of entryways to the NNS premises are adjusted to public road, similar applies to elevation placing of the NNS parking-site. Concerning the elevation and layout, the NNS premises are situated with regard to the design of waste and rain water treatment and outflow from NNS so that it would be possible to drain away these waters gravitationally to the catchment area of Skryjský stream (except part of areas, from which rain water will be drained away to the catchment area of Olešná).

The power plant civil engineering is on principle divided into the following parts:

- civil engineering objects of the primary part (nuclear island),
- civil engineering objects of the secondary part and of the external cooling circuits (conventional island or turbine island),
- civil engineering objects of external facilities and other objects.

The NNS will be connected to the transmission system through transformer station Slavětice. Electric power of the NNS will be transmitted via the 400 kV overhead line to the Slavětice Transformer Station. The standby power supply of the NNS internal consumption will also be secured by two 110 kV underground lines from the Slavětice Transformer Station. Crossing of overhead 110 kV lines with other lines will be minimized in this way. It is a standard design with sufficient reliability and repairability both for the power outlet and the stand-by power supply. Generally, the connection of the NNS with transformer station Slavětice will be established in this way using technical solution resistant against failures from common cause, i.e. diversion technical solution.

Raw water will be taken from the Jihlava River (Mohelno Water Reservoir) to which waste water will be discharged (analogous to the water connection of the existing power plant). Electric power of the new source will be transmitted to the Slavětice substation (similarly as from the existing power plant). (ČEZ 2017)

Construction and operation of the NNS will be carried out according to the following performance options and their combinations with the operation and further decommissioning of the existing power plant (EDU1-4). The impacts of the NNS project on the subject of protection under the Natura 2000 network therefore also refer to contributing impacts of the existing EDU1-4, which are reflected in the assessment.

All power alternatives under consideration

In the years 2025-2035, concurrence of EDU1-4 with the development of the 1st unit of the NNS (EDU5) and conservatively also with the construction of the 2nd unit of the NNS (EDU6).

Power alternative (1st phase):

In the years 2035-2045, concurrence of EDU1-4 operation and the 1st unit of the NNS (EDU5) of clean electric power up to 1200 MW_e and the construction of the 2nd NNS unit (EDU6) of clean electric power up to 1200 MW_e.

Power alternative I (2nd phase):

In the years 2045-2105, decommissioning EDU1-4 and operation of the two units of the NNS (EDU5 and 6) of the total net electrical power of 2400 MW_e.

Power alternative II (1st phase):

In the years 2035-2045, concurrence of EDU2-4 operation and the 1st unit of the NNS (EDU5) of clean electric power up to 1750 MW_e without the construction of another unit and with current EDU1 decommissioning

Power alternative II (2nd phase):In the years 2045-2105, concurrence of decommissioning EDU1-4 and operation of one unit o NNS (EDU 5) of net electrical output up to 1750 MW_e

Mohelno Water Reservoir will be the point of raw water supply - the existing reconstructed, or a new pumping station near the existing pumping station. The preferred solution is to lead new discharge mains through a new corridor into the new water reservoir and new gravity mains to the NNS. As an alternative, new discharge mains are considered, led parallel with the existing discharge mains into the new water reservoir and new gravity mains to the NNS. It will be considered the existing storage volume of the Mohelno Water Reservoir, under applicable handling regulations. Transfer (standard improvement) of water from other streams into the Jihlava River is not considered. The NNS will have its own system of cooling water treatment and demineralized water production, and also waste water self cleaning and draining system (including the WWTP - waste water treatment plant). When calculating water withdrawal and consumption, as well as the qualitative and quantitative parameters of the Jihlava River, consideration was given on the assumption of climate change by + 2°C till 2100.

The removal of waste water (including treated sewage) from the NNS will be arranged by new drain pipes leading to the Mohelno Water Reservoir.

During construction and operation, rain water will be drained to the existing collection tank at the Skryjský stream via new collectors, and then through its river bed to the Mohelno Water Reservoir; some rain water will be drained by new drains to the Olešná catchment area during construction and operation.

The quality of waste water from the NNS and the thickening of water in the cooling circuit will approximately match the quality of waste water and the thickening of water in the cooling circuit ($Z = 2.5$) from EDU1-4; the balance data for the NNS even contemplate a potential degradation to the level of $Z = 2.3$.

At the time of the NNS development, raw water will be supplied by the branch from EDU1-4 gravity mains. Waste water (including treated sewage water) will be drained from areas A and B by new pipe mains into the storage reservoir on Skryjský stream during construction and further via the bed of Skryjský stream together with waste and rain water from the operations of ED1-4 to the Mohelno water reservoir.

The volume of raw water, waste water and rain water, evaporation from the cooling towers, quantitative and qualitative parameters on the Jihlava River for all the NNS power alternatives used in the assessment of project impacts of NNS construction and operation on the protection subjects of the Natura 2000 system correspond to the data specified in the EIA documentation (Mynář P. et al. 06/2017).

2.5. Identification of the project notifier

Elektrárna Dukovany II, a. s.

Company Reg. No.: 04669207, Tax Ident No.: CZ04669207

Duhová 1444/2, 140 53 Prague 4

Represented by: Ing. Martin Uhlíř, MBA; Board Chairman and CEO

phone: +420 211 043 374; e-mail: njzedu@cez.cz

3. Review of natura impact assessment

3.1. Evaluation completeness

The natura impact assessment under review of project “*New Nuclear Source at the Dukovany Site*” on Sites of Natura 2000 system was elaborated for the phase of EIA documentation by RNDr. Vlastimil Kostkan, Ph.D., the person authorized pursuant to Section 45 I, Act No. 114/1992 Coll., on nature and landscape conservation, as amended (ANLC hereinafter) in April 2017, as separate annexes of this Documentation (Mynář et al., 06/2017). It updates the original natura impact assessment of the same evaluator from December 2014 to the Project Notice (Banaš M., 06/2014).

The assessment is based on the detailed field survey of potentially affected areas that was performed at least from 2009 till 2016 inclusive. The evaluator states referring to particular works that these were mainly botanic and entomologic (quot. Kostkan et Laciná 2013b, 2013d, 2014a, 2014c, 2016) and hydrobiologic surveys (Kostkan et Laciná 2013c, 2014b, 2016). Most of the surveys were conducted in 2012 to 2016 but the assessment also utilized surveys obtained as part of a feasibility study performed in 2009 to 2011 (Kostkan, Laciná et Heisig 2011). Furthermore, he states that documents on the conditions and spread of protection subjects in potentially/eventually affected areas, acquired by his own surveys as well as from literature sources, were evaluated in relation to documents concerning the NNS construction and operation, including microclimatic impacts with referring to the works of Sokol et Řezáčová (2016) and shielding due to steam plume, modelled by Siebert (2016).

Last but not least, further printed and digital data of the monitored area, quoted through the text of the natura impact assessment were used for elaboration of the submitted natura impact assessment; the report is substantiated by the list of used documents. The evaluator also presents brief basic characteristics of potentially affected SCI Jihlava Valley in Chapter 3.2 and more detailed characterization of biotopes, natural habitats and conditions in Jihlava River in Chapters 4.1.1 and 4.1.2., including the analysis potentially affected natural habitat as the protection subject. Further SCI within radii 5, 10 and 20 km from NNS (proved by map) and 6 special protection areas of birds in the distance from 27 up to 70 km (also proved by map) are briefly described, as well.

The copy of evaluator’s authorization valid in the time of the assessment elaboration is documented in the annex part.

Opinion of the reviewer:

The content of the submitted natura impact assessment corresponds to basic requirements of the Act 114/1992 Coll. as amended, the submitted natura impact assessment of the project impact is in accordance with Section 45i of Act No. 114/1992 Coll., as amended. The structuring into chapters does not exactly meet requirements of the currently valid Decree No. 142/2018 Coll., Section 1 (neither the current amendment of ANLC, effective since 1.1.2018, nor the quoted Decree, effective since 1.8. 2018, was in force at the time of finalization), but it contains all substantial data required by the Decree. The natura impact assessment corresponds formally with the valid methodology (Chvojková et al., 2011). Potentially affected Sites of Natura 2000 system (SCI Jihlava Valley) are correctly identified, the evaluation regarding the shielding plume is carried out, too, and data are also presented concerning impacts of waste water on water courses that are part of some SCI delimited on the water courses accepting recipients. The evaluation of impacts on protection subjects in water courses was also directly consulted with Research Institute of Water System in Prague, in relation to the long-term monitoring of

parameters in the water course of Jihlava River. Copies of opinions of ANLC (Agency for Nature and Landscape Conservation) of the Czech Republic and of the Office of Vysočina Region could be introduced that were issued pursuant to Section 45i of ANLC wording valid in the given time period, based on which was the evaluation was elaborated.

The natura impact assessment may be considered as formally complete, while the reviewer's more detailed commentary to material aspects of the natura impact assessment is provided hereafter.

3.2. Correctness of data specified in the evaluation including used evaluation methods

3.2.1. Description and characteristics of the project under review

The natura impact assessment contains brief description of the project nature in Chapter 2; it is a presentation of summary information about the project and a certain extract from respective parts of the documentation text; data are presented above all concerning such project aspects that could be related to eventual affectation of the sites of Natura 2000 system. Demands of raw water as the main input are presented briefly, as well as aspects of dealing with both sewage, and technological waste water and handling with rain water as main outputs. The evaluator points out that the volume of raw water, waste water and rain water, evaporation from the cooling towers, quantitative and qualitative parameters on the Jihlava River for all the NNS power alternatives used in the assessment of project impacts of NNS construction and operation on the subjects of protection of the Natura 2000 system correspond to the data specified in the EIA documentation.

Opinion of the reviewer:

The actual project description is rather brief, which is consequence of the technical solution being less detailed for the time being, especially as far as water system networks are concerned both at inlet and outlet (area D is dealt with more in form of a corridor, in which it will be possible to deal with the actual technical form of raw water inlet, cooling water outflow, rain water solution and the like. In this context, certain mitigating measures with requirements for technical or directional solution of these networks are generated from the submitted evaluation of the natura impact assessment.

Otherwise, even the brief description of inputs and outputs may be considered in principle as satisfactory for the purposes of natura impact assessment.

3.2.2. Identification of affected areas

The evaluator identified the respective Sites of Community Importance (SCI) and Special Protection Areas of birds (SPA), potentially affected project execution. He deals with 32 European sites in total, within distance radius of 0 – 38 m from the actual area of interest of the project (area of interest of its partial areas A - D) and with 6 special protection areas of birds in the distance 30 – 70 km that were declared in wider surroundings of the NNS on 29. 6. 2016. SCI CZ0614134 Jihlava Valley and SCI CZ0623819 - Rokytná River are determined as potentially affected above in relation to receiving all waste water and part of rain water from the planned the NNS Dukovany; they will be described more detailed later.

Opinion of the reviewer:

In the Table 2 List of Sites of Community Importance of Natura 2000 system in the distance up to 20 km from NNS and Special protection areas of birds up to 70 km from the NNS protection subjects of SPA Poodří are specified on page 15 for SPA CZ0621032 Podyjí; the same error repeats also in Table 10 on page 61. The barred warbler (*Sylvia nissoria*) and Syrian woodpecker

(*Dendrocopos syriacus*) should have been specified as protection subjects. With regard to circumstance that those are species that are not bound on water environment and that it is not possible hydrologically for the Dyje river in SPA Podyjí to be the recipient of waste water from the Dukovany NPP and the NNS, it can be confirmed that specified inadequacies do not generate any impacts that would influence the conclusions of the natura impact assessment under review. Otherwise without comments.

3.2.3. Characteristics of Natura 2000 sites, their protection subjects, context with the affected area

The evaluator presents in Chapter 3.2 detailed breakdown of SCI CZ0614134 Jihlava Valley with regard to protection subjects above all and highlights substantial aspects within introductory description of the current SCI condition. Detailed biotope analysis is presented in context with the affected area, especially related to the part of area of water system investments (discharging waste water from the NNS to the Mohelno reservoir along Skryjský stream, as it is the only territorial part of the project where the development area D borders directly upon the SCI CZ0614134 - Jihlava Valley (the left bank of Skryjský stream downstream the confluence with Luha stream forms the border) based on the revision of mapping biotopes carried out in the valley of Skryjský stream). The evaluator also points out among others that the area was strongly affected by the construction of Dalešice - Mohelno Waterworks as part of the energy system of EDU1-4 in the 70th of 20th century, whereas the influences of EDU1-4 and Dalešice – Mohelno Waterworks manifests most of all by the change of water regime in Jihlava downstream the reservoir dam (annual course of temperatures and level heights).

The natural habitat 3260 Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation is emphasized in the description. It consists of the biotope V4A - macrophyte vegetation of water courses – growths of currently present water macrophytes in water course Jihlava downstream Mohelno water reservoir. Its distribution and quantity is described in detail in context of evaluation of the water course biota based on detailed surveys in Chapter 4 as an input for evaluation of impacts on this habitat. In case of other protection subjects, the biotopes of which are not dependant on the river water course, it is referred to the possibility of plume shielding for natural habitats 9170 *Galio-Carpinetum* oak-hornbeam forests, biotope L3.1 Hercynian oak-hornbeam forests. Their condition is described in detail in the very contact place of the corridor of area D for discharging waste water to the Mohelno water reservoir as an input document for evaluation of possible impacts on this habitat, too.

A basic analysis only of protection subjects is carried out for 10 nearest SCIs as an input for the evaluation of impacts.

Opinion of the reviewer:

The identification of potentially affected protection subjects of SCI Jihlava Valley and of other SCIs in close surroundings and the specification of needed input data on occurrence, bionomics and ecology are correct. It is possible to state that this part of text is presented in detail enough and no substantial comments need to be raised, the actual delimitation of potentially affected protection subjects can be considered as objective, since the evaluation focuses above all on the affectation of the natural habitat 3260 in Jihlava river by waste water, the affectation of natural forest habitats 9170 oak-hornbeam forests *Galio-Carpinetum*, 9180 forests *Tilio-Acerion* of slopes, screes, and ravines, and of the habitat 6190 pannonic grasslands (*Stipo-Festucetalia pallentis*) by possible dust from the construction. In principle, without comments.

3.2.4. Methods of the evaluation used

As already mentioned, the evaluator uses among others detailed field survey of potentially affected areas that was performed at least from 2009 till 2016 inclusive. The evaluator states referring to particular works that these were mainly botanic and entomologic (quot. Kostkan et Laciná 2013b, 2013d, 2014a, 2014c, 2016) and hydrobiologic surveys (Kostkan et Laciná 2013c, 2014b, 2016). Most of the surveys were conducted in 2012 to 2016 but the assessment also utilized surveys obtained as part of a feasibility study performed in 2009 to 2011 (Kostkan, Laciná et Heisig 2011). Furthermore, he states that documents on the conditions and spread of protection subjects in potentially/eventually affected areas, acquired by his own surveys as well as from literature sources, were evaluated in relation to documents concerning the NNS construction and operation, including microclimatic impacts with referring to the works of Sokol et Řezáčová (2016) and shielding due to steam plume, modelled by Siebert (2016).

Data from the finding database of nature conservation (FDNC) provided with on-line approach by the Agency of nature and landscape conservation and outputs from long-term monitoring of parameters in the Jihlava water course downstream the Mohelno water reservoir were used, too.

Opinion of the reviewer:

The reviewer does not consider as necessary to raise comments of more substantial nature regarding the selected methodical approach to the impacts evaluation and the methods used for the evaluation may be considered correct. The evaluation of impacts on subjects of protection on Natura 2000 sites could use also the results of meteorological models, flow change models and characteristic physical parameters of water in the Jihlava River, as well as other documents; the set of these documents may be considered sufficient.

3.2.5. Evaluation of project execution impacts on protection subjects of Natura 2000 sites

Based on the performed condition analysis of protection subjects of SCI Jihlava Valley, the natura impact assessment deals more in detail with impacts on this nearest SCI above all, since Jihlava River downstream the Mohelno water reservoir is the recipient of waste water from Dukovany NPP on the one hand and the part of area D within the corridor for new waste water discharge is in direct contact with the SCI border above the right bank of Skryjský stream on the other hand.

SCI CZ0614134 Jihlava Valley: The evaluator analyses in detail namely the direct contact of the area D in the specified corridor first of all, within which will be drained waste water from the NNS will be drained back to the Mohelno water reservoir. The corridor for the raw water feeder runs at a sufficient distance from the border of the SCI, so any impact of construction works and operation of the feeder on the SCI is ruled out. According to the evaluator's opinion, the corridor for discharging waste water from the NNS, neighbouring with the SCI border, is delimited outside its border and with sufficient width to include all the necessary space for construction (i.e. including an area for the movement of construction machines and handling with soil) to ensure that none of the construction activities interfere directly with the SCI. This corridor leads through the valley of Skryjský stream, the bed of which drains currently the waste water from premises of the existing EDU1-4. Considering the increased temperatures of water discharged from EDU1-4, the water course is biologically significantly poorer compared to its natural condition. It is stated with regard to affecting the SCI protection subjects that no direct interference with the biotopes of SCI CZ0614134 Jihlava Valley will occur during the construction work. The following aspects are presented in this space furthermore:

- Biotopes L3.1., L4 and T3.1 found by detail mapping in the nearest vicinity of the construction site (development area D) might be during the construction affected by dust from the construction site, unless this pollution source is ruled out in time; the dust will not have the nature of substances chemically different from soil particles and may have short-time effect only on the plant photosynthesis.
- Calculations of the area concerned were made for the individual biotopes with the assumption that major dust pollutants may spread to a distance 20 m from the construction site (no significant transport by wind is possible in the valley). The area that can be affected by dust immissions from the construction site is not larger than 1000 m² for biotope L4 (0.02% of the total biotope area) and can reach the order of hundreds square metres for biotopes L3.1 in at maximum. (less than 0.001% of total area in SCI) and T3.1 (less than 0.05% of total area in SCI). The impacts are evaluated as slightly adverse and temporary.
- The entomological survey did not confirm the occurrence of the Jersey tiger within the space of the development area D.

Evaluation of impacts on the ecosystem of Jihlava water course, above all on the natural habitat 3260 water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetations is another presented aspect. It is stated based on detailed survey that partial changes occur in vegetation composition, in set-out of growth with buttercups and growth with algae only, whereas the differences of vegetation composition between the years 2013 and 2014 and 2016 are not significant. They were caused by different climatic conditions in the individual years and by the natural dynamics in development of water macrophytes; the relatively fast advancing of buttercups (*Batrachium fluitans*) against the stream is emphasized, as it indicates good conditions for this species and for the whole natural biotope V4A in Jihlava River downstream the Mohelno water reservoir according to the evaluator. This circumstance is documented by photo documentation and by map document of the degree of water course coverage by macrophytes at 29 monitored points in total. According to the evaluator, the course of Jihlava River downstream Mohelno water reservoir enables strong development of macrophytes, the main reason of this development being the relatively stable physical conditions of the environment, temperature and flow rates above all, on which the development of macrophyte vegetation is dependant considerably. That is why it is deduced that the impacts on the biotopes of water plants in the Jihlava River that are the protection subject in SCI CZ0614134 Jihlava Valley, cannot be expected, since the most important factor affecting the condition of these biotopes is the existence of the Mohelno Reservoir (and the entire Mohelno – Dalešice Waterworks). Their management controls the flow rate and temperature of water so much that in light of them, the impacts of EDU1-4 and the NNS are minor and not measurable.

Furthermore, the impact of NNS on precipitation is analysed based on detailed climatic models in relation to the documented influence of EDU 1-4 with the conclusion that the impact of EDU1-4 on precipitation, including industrial snowing, was not proved and the recorded deviations do not exceed changes following from natural fluctuations of climate. It is specified referring to background literature that the highest values of annual mass of droplet deposits from the cooling towers falling on the ground in the form of rainfalls are in the order of 10 g/m²/year, i.e. negligible, and this only in the smallest distances from the cooling tower (hundreds of metres). Since the impacts of the NNS is expected to be the same or similar (especially a similar quantity of evaporated water in the cooling towers), it is inferred from the conclusions of the evaluation of measurements made to evaluate the impact of EDU1-4 that the impact of changes in total rainfalls due to the operation of the NNS on sites of Community importance will not be significant, either.

The impact evaluation of shielding by buildings and steam plume based on detailed modelling of these conditions is also presented. The evaluator presents that the potential shielding of SCI CZ0614134 - Jihlava River Valley was the subject of interest, because, of all SCIs, it is the closest one to the NNS, which applies also to those of its parts that depend on high rate of insolation and on intake of solar radiation. These are especially alliances on the left bank of the Jihlava River (including the banks of the Mohelno Reservoir), oriented to the south and south-west, which are principally modelled by the duration of sunlight and the overall incident energy. These are in particular steppe positions/biotopes, i.e. thermophilic and xerophilic populations (T3.1 Dry moors in lowlands and highlands with the occurrence of common juniper (*Juniperus communis*), T3.3D Narrow-leaved dry grassland, vegetation without significant occurrence of orchids, T3.5B Acidophilic dry grassland without significant occurrence of orchids, T3.3A Sub-Pannonian steppe grasslands, S1.2 Crevice vegetation of siliceous rocks and offal and

L6.5A Acidophilic thermophilic oak forests with hairy green weeds (*Genista pilosa*). Other adjacent areas, particularly the slopes in SCI CZ0614134 - Jihlava Valley upstream of the Mohelno Reservoir, are also south-facing. The high intake of infra-red radiation (heat) is crucial for the conservation of the protected populations and species there. Based on the outputs of models carried out it is stated that the shielding of the SCI Jihlava Valley and of the close SCI Velký Kopec by NNS buildings will increase by tenths or lower units of hours compared with the current situation, even with the projected temporary overlapping of shielding due to EDU1-4 and the NNS. Other SCIs are affected by the shielding only in the order of tenths of hour per year only. As far as the models of shielding due to steam plume are concerned, the maximum shielding of the SCI Jihlava Valley is increased by 1 hour a year (from 19 to 20 with the operation of the NNS without EDU1-4) and to twice that amount (39 hours) in case of overlap of EDU1-4 and the NNS. Alternatives of the NNS project play no role. It is also mentioned that the shielding cannot even compensate the increase in the amount of solar energy incident onto the territory, as proven by the results of the ongoing measurements. In spite of the impacts of steam plume from EDU1-4, the total annual incident solar energy has been continuously growing over the last four decades.

The impacts related to transport load during construction are also evaluated. The load associated with the traffic ensuring deliveries for construction purposes is mainly planned on road No. II/152, while the road No. II/392, which intersects the SCI Jihlava Valley, is not expected to be used as a supply line. Traffic increase on the road II/392 intersecting SCI CZ0614134 - Jihlava Valley associated with the construction will be lower by 18% in case of heavy trucks and by 10% of total number of vehicles compared to their current condition according to the evaluator with reference to the dispersion study. It is stated that this will not significantly affect the air pollution and noise situation in the SCI (subject to compliance with the expected number of vehicles). In spite of that the evaluator proposes to limit the thoroughfare across SCI Jihlava Valley, e.g. by traffic signs.

Finally, the evaluator presents resulting summary table of impacts on the SCI Jihlava Valley:

habitat No.	description of habitat/biotope	Impacts on the habitat
3260	water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation	0 (+1)
	V4A macrophytic vegetation of water courses - vegetation of currently present aquatic macrophytes	0 (+1)
6190	Rupicolous Pannonic grasslands (<i>Stipo-Festucetalia pallentis</i>)	0
	T3.1 rocky vegetation with blue fescue (<i>Festuca pallens</i>)	0
6210	semi-natural dry grasslands and shrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>)	0
	T3.3D narrow-leaved dry grasslands - vegetation without significant occurrence of orchids	0
	T3.5B acidophilic dry grasslands without significant occurrence of orchids	0
6240	sub-Pannonic steppic grasslands	0
	T3.3A sub-Pannonic steppic grasslands	0
8220	siliceous rocky slopes with chasmophytic vegetation	0 (-1)
	S1.2 crevice vegetation of siliceous rocks and offal	0 (-1)
9170	<i>Galio-Carpinetum</i> oak-hornbeam forests	-1
	L3.1 Hercynian oak-hornbeam forests	-1
9180	<i>Tilio-Acerion</i> forests of slopes, screes and ravines	-1
	L4 detrital woods	-1
9110	Euro-Siberian steppic woods with <i>Quercus</i> spp.	-1
	L6.5A acidophilic thermophilic oak forests with hairy green weeds (<i>Genista pilosa</i>)	-1
Species	Jersey tiger (<i>Callimorpha quadripunctaria</i>)	0

Concerning other areas of Natura system 2000 in close vicinity of the NNS, the evaluator presents:

SCI CZ0622226 Velký kopec: the evaluator states that this SCI will be endangered neither by the construction, nor by the operation; it is a steppe site dependent on solar radiation. However, it is oriented

to the south to south-west and will not be influenced too much by shadows cast by NNS buildings because they will not differ from the current shielding due to EDU1-4 buildings; moreover, the NNS buildings will be placed on the far side of the current premises. The plume shielding is evaluated and it is documented that the value represents currently the time period of 8.4 hours per year, which will not change in case of separate operation of the NNS. In case of concurrent operation of EDU1-4 and the NNS, the maximum value of total shielding in SCI Velký Kopec may reach no more than 16.4 hours a year with the separate operation (current situation) of EDU1-4 or the separate operation of the NNS. The peaks could reach 32.8 h per year in case of concurrence theoretically. The evaluator presents that the slope site is exposed towards south to south-east in the direction with no incidence of the shade of NNS buildings, and with incidence of steam plume shielding only in case of prevailing northern or north-western wind and plume being longer than the 4.5 km distance of SCI from NNS. That is why he does not consider the theoretical impact of the calculated shielding time to be relevant and evaluates zero influence.

SCI CZ0623819 - Rokytná River: it is stated that the Site of Community Importance CZ0623819 - Rokytná River, into which the Olešná water course flows, will neither be affected by the project. Surface rain water only, with unchanged chemical and physical parameters, will be drained to the catchment area of Olešná from the NNS premises. Equipment for separating oil substances and sedimentation of solids will be mounted upstream of the rain water outlets to the receiving bodies. The role of the reservoirs on Lipňanský stream, the Olešná reservoir, the pond on Heřmanický stream in Kordula community and the reservoir on Olešná near Rešice is emphasized. Overall decrease of the precipitation amounts is expected with reference to models of climatic changes till 2099, but they expect higher variations of short-time precipitation and thus higher risk of high-flood water waves at the same time, which might be intensified by the rain water discharge from compacted surfaces within the NNS. The stabilizing role of several water reservoirs is presented that will mitigate the flow rates and it is assumed that these influences will not be effective as far as in SCI CZ0623819 - Rokytná River, However, slightly adverse influence is stated in the summary evaluation in table 11 on page 62 of the natura impact assessment.

SCI CZ0622161 Ve Žlebě: With regard to the situation and the only protection subject, the greater pasque flower, the impact of steam plume shielding is ruled out and thus also adverse impact on the protection subject.

SCI CZ0614133 Kozének: Zero affectation is stated with regard to the SCI position towards NNS and with regard to the nature of protection subjects – greater pasque flower and natural habitat 6210 Semi-natural dry grasslands and shrubland facies on calcareous substrates (*Festuco-Brometalia*) and 6510 Extensively managed hay meadows of the planar to submontane zones (*Arrhenatherion*, *Brachypodium-Centaureion nemoralis*) and with regard to the potential shielding on measurability threshold.

SCI CZ0622179 Široký: With regard to the protection subject nature – greater pasque flower, and with regard to the SCI position against NNS ruling out the incidence of the steam plume shielding, the adverse impact on the protection subject is thus ruled out as well.

SCI CZ0614131 Oslava and Chvojnice Valley: It is stated that 7 natural habitats, 3 plant and 2 animal species represent the protection subjects, while the nature of all specified protection subjects and the distance from the evaluated project rule out significant adverse impact on this site. This SCI is situated in the area, for which the impact of possible shielding by steam plume from the NNS cooling towers was modelled with the output that the potential shielding is on the measurability threshold here.

SCI CZ0622150 Biskoupský kopec is situated in the distance of approximately 9.2 km north-east from the NNS so that the shielding model of steam plume from the NNS cooling towers reaches to it, too. The model shows the potential shielding on the measurability threshold and the decrease of sunlight in hundredths to tenths of percent as compared with the current condition. Adverse impact can be excluded in relation to the protection subject (greater pasque flower).

SCI CZ0613695 Biskupice – church and SCI CZ0613696 Biskupice – school: both SCIs with the greater mouse-eared bat being protection subject are in the distance from the NNS of over 10 km and the space can be used for flying for food or hiding place. The construction and operation of the NNS will not

pose any risks for the bats because there will be no freely moving objects there (such as rotors of wind mills) which could present big problems for bats.

SCI CZ0623707 Old Castle Jevišovice: The SCI with the protection subject of the greater mouse-eared bat is situated in the distance of approximately 15 km from the NNS. The operation of the existing EDU1-4 and the NNS does not directly jeopardize these animals and any impact of the project and operation of the NNS on the subjects of protection and the entire SCI can be therefore be ruled out.

SPA CZ0621032 – Podyjí represents the nearest special protection area of birds to the NNS site, the evaluator specifies 4 species of birds as protection subjects: Eurasian bittern (*Botaurus stellaris*), gadwall (*Anas strepera*), common kingfisher (*Alcedo atthis*), western marsh harrier (*Circus aeruginosus*). It is stated that the distance of this special protection area of birds is approximately 35 km in a straight line, which is sufficient for the NNS construction and operation not to affect the protection subjects of this SPA.

Effects on further SCIs and SPAs: The evaluator states that the detail analysis of the range of NNS construction and operation impacts on SCI shows that the impacts are measurable within the distance of 5 to 10 km from the project site. The only overlaps of this distance that can be evaluated on rivers are in SCI CZ0614134 Jihlava Valley and SCI CZ0623819 Rokytňá River. The possible impacts of pollutants or other factors transported by the Jihlava and Rokytňá Rivers were assessed in both cases. Other SCIs and SPAs over this circuit were also included into the evaluation, but no measurable impacts are under the detection point in such distance. The evaluator concludes that there are no impacts on the area of Natura 2000 system beyond the specified range of 10 km from the NNS.

Opinion of the reviewer:

It is possible to state at the beginning that the evaluator endeavoured to approach the determination of the intensity and significance of impacts on the nearest Sites of Community Importance in relatively complex way and respecting all substantial relations based on evaluation of summary factors; especially the aspects of possible affectation of the nearest SCI Jihlava Valley are presented in very close detail, as it is affected by the design of corridor for waste water discharging to the Mohelno water reservoir and is closely contacted in the part around the ruin of Rabštejn Castle. The text extent indicates large background document material for the evaluation carried out with mutual relations and connections; it is possible in principle to accept the outputs of the evaluation carried out without substantial reservations. In spite of that it is reasonable to present the several comments hereafter:

- According to the opinion of the reviewer, the SCI border situated on the right bank of Skryjský stream could be marked more distinctly on the figures of biotopes mapping as per the AOPK as well as on figures of biotopes mapping revision as per the evaluator in relation to the evaluation of area D for waste water outflow to the Mohelno water reservoir. In spite of the declaration that the delimitation of the area D does not interfere with SCI, it was necessary to propose particular prerequisite that would ensure unambiguous fulfilment of the mentioned statement.
- It is not entirely clear, based on which analysis the final Table No. 6 on page 54 states a slightly adverse impact on the protection subject of the natural habitat 9110 Euro-Siberian steppic woods with *Quercus* spp. and L6.5A Acidophilic thermophilic oakwoods with hairy green weeds (*Genista pilosa*) due to eventual dustiness from the construction when the only interaction is noted in requirements on the steppic habitat in connection with possible shielding while it is confirmed in the contrary that the contact with the corridor for waste water discharge in Skryjský stream valley is not situated in the site (and thus neither within the reach of dusty emissions). No interaction occurs at the level of slightly adverse impact according to the reviewer's opinion.
- A slightly adverse influence on natural habitat 6190 Rupicolous pannonic grasslands (*Stipo-Festucetalia pallentis*) is not stated on the contrary, the temporary affectation of which by eventual dustiness is not ruled out on page 28, while analogous evaluation of slightly adverse impact on the

natural habitat 9180 Forests of *Tilio-Acerion* on slopes, screes and ravines and the natural habitat 9170 Oak-hornbeam forests *Galio-Carpinetum* is declared in Table 6 because of same reasons. Otherwise without principle comments.

Practically no comments concern the presentation of impacts on other SCI within the reach of the project outputs except certain discrepancy concerning the affectation of SCI CZ0623819 - Rokytná River.

- It is not fully clear from the text of the evaluation why slightly adverse impact on SCI Rokytná River (that is the recipient of part of the rain water from the NNS premises and from the construction site installations to the Olešná river catchment area) is stated in the resulting table 11, since this the value of this impact is not commented more closely in the respective text section. It was clarified based on the supplementation explaining information requested by the author of the EIA expert review that the impact on the Site of Community Importance CZ0623819 - Rokytná River, into which the Olešná water course flows, is very small - more likely of theoretical level; it can occur just theoretically in case of emergency situations. The evaluation slightly adverse impact (-1) stated hereafter and mentioned positive impact of dams and reservoirs as well as proposed mitigating measures in the form of collection tanks under the construction site and NNS objects correspond to this wording. The provided explanation can be accepted; it is essential that the positive impact of reservoirs is documented in the evaluation text.

It is necessary to comment with regard to the presentation of impacts on other SCIs and SPAs that the error persists concerning protection subjects of SPA Podyjí, where protection subjects of SPA Poodří are specified in table 10. The following ensues from the explanation data and documents requested and obtained by the EIA expert review author:

- It can be confirmed that the specified inadequacies cannot generate any significant impacts that would influence the conclusions of the submitted natura impact assessment and thus also the documentation under review in relation to evaluated sites of Natura 2000 system in any way.
- It follows from the requested document that an erroneous transcription of bird species was made in Table 10 of the natura impact assessment that are subject of protection in CZ0621032 – Podyjí. Species that belong to SPA Poodří, which is in the database of special protection areas of birds one line below, were taken over from the database instead of correctly specified species.

A correct listing of protection subjects in SPA CZ0621032 - Podyjí

Species	Permanent population/ Population share	Stopping/ preservation	Wintering/ Insulation	Nesting/ Overall evaluation	Influence
barred warbler <i>Sylvia nissoria</i>	C* ¹	A* ²	C* ⁴	30-50 pairs / A* ⁶	0
Syrian woodpecker <i>Dendrocopos syriacus</i>	10-15 pairs / C* ¹	B* ³	B* ⁵	B* ⁷	0

Explanations:

*¹ there is up to 2% of the population in the Czech Republic at the site

*² outstandingly preserved population

*³ well preserved population

*⁴ population is not isolated

*⁵ population is not isolated, but on the edge of the spread range

*⁶ highly important site for preserving the species

*⁷ important site for preserving the species

In spite of the mentioned error in listing the protection subjects of SPA CZ621032 – Podyjí, nothing changes in the final evaluation of the possible influence. SPA CZ0621032 – Podyjí is in the distance of approximately 35 km from the project. In case of such distance and project nature, the confusion of protection subjects does not influence the result of the assessment carried out. The conclusion remains the same, i.e. that the NNS project construction and operation does not affect the SPA CZ0621032 – Podyjí and its protection subjects. The stated explanation is acceptable according to the opinion of the reviewer.

Otherwise without comments.

3.2.6. Evaluation of the Project impact on integrity of Natura 2000 sites

It ensues from the natura impact assessment that adverse affection on integrity will not occur with regard to the form, nature and impact of identified influences on the sites in case of any SCI or SPA under review.

Opinion of the reviewer:

Without comments, it is possible to confirm with regard to the above mentioned that neither environmental integrity nor territorial integrity of individual sites will be affected in practice.

3.2.7. Evaluation of cumulative impacts

The evaluator analyses this evaluation aspect in close detail, especially for the crucial SCI CZ0614134 Jihlava Valley in the near neighbourhood of the NNS. It is stated in the introduction that no changes of existing plants and production technologies or other construction projects are known in the territory of the planned NNS construction, the impacts of which might cumulate with impacts of the NNS construction and operation. The following are considered to be further cumulative impacts above all:

- **impacts of operation of aEDU1-4 units and the NNS Project** the possible cumulative impacts of operation of all EDU1-4 units could be 10 years at the maximum (until 2045, possibly less), namely with one NNS unit only. During that time, the impacts of using water for cooling all units from the Mohelno – Dalešice Reservoir System and the thermal pollution of the Mohelno Reservoir could be accumulated. Thanks to the lower discharge from the Mohelno Reservoir to the Jihlava River, however, this pollution will not be manifested virtually at all in the Jihlava River downstream of the Mohelno Reservoir. It is stated that temperature changes will be manifested in the top layers of the reservoir that, however, do not have a significant impact on the SCI. Temperature changes downstream of the discharge from the Mohelno Reservoir may be in the tenths of a degree Celsius. As demonstrated in the surveys of biotopes – subjects of protection in the Jihlava River, such changes will not have a negative impact on the populations of water plants in the river. In addition to the higher thermal pollution of water in the Mohelno Reservoir, the potential concurrent operation of the existing four units and the planned first unit of the NNS would also result in higher consumption of water from the Mohelno – Dalešice Reservoir System. Even though the Mohelno – Dalešice waterworks represent large potential water reserve, a minimum residual water outflow from the Mohelno water reservoir to Jihlava River is guaranteed. The increased water consumption will not therefore result in lower minimum flow rates in the Jihlava River between the Mohelno Reservoir and Biskoupky (SCI border) and there will be no change compared to the existing condition. In case of the projected worst variant of climatic changes (increase of air temperature by 2°C), the temperature of water in the Jihlava River downstream of the Mohelno Reservoir will also increase. It may speed up the already observed propagation of the water crowfoot vegetation upstream the river, i.e. the enlargement of the overall area of natural habitat No. 3260 “Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation” of the subject of protection in SCI CZ0614134 - Jihlava Valley, which also declares the slightly positive impact presented for this subject of protection in bracket of Table 6.
- **Effects of the NNS operation and the model of climatic changes** are mainly dealt with linked to flow rates in Jihlava River and in the context of solar radiation. The evaluator considers the biggest potential problem for some biotopes in SCI CZ0614134 - Jihlava Valley (biotopes in the Jihlava River downstream of the Mohelno Reservoir) the lower flow rate in the river caused by the accumulation of impacts of NNS operation and the expected climate change, accompanied by smaller rainfalls. Enough water in the Mohelno – Dalešice Reservoir System for cooling the NNS should be secured by the large accumulated volume of water in the system and its supplementation during periods of increased rainfalls. An unbalanced and gradually decreasing total annual volume of rainfalls is particularly expected. The large volume of the Mohelno – Dalešice waterworks system will ensure accumulation of sufficient water amount also in this

case, which will enable continuous outflow from Mohelno water reservoir to Jihlava River apart its use for the NNS cooling. This will ensure that the operation of the NNS will not have any impact on the subjects of protection in SCI CZ0614134 - Jihlava Valley because there are no subjects of protection in the Mohelno and Dalešice water reservoirs (and within reach of their water surface, already fluctuating to a large extent now). The flow rate secured in this way will ensure that the biotopes – protection subjects in the Jihlava riverbed downstream the Mohelno water reservoir are not impaired. As demonstrated by hydrobiological surveys, the long-term stabilization of flow rates in the Jihlava River may, on the contrary, have a positive impact on these biotopes because they will not be disturbed by natural disturbing processes, including mainly floods and ice drifts which significantly disturb the bottom sediments with the roots of populations of higher plants; these populations constitute the basis of the subjects of protection in biotope V4A - Macrophytic vegetation of water courses - vegetation of currently present aquatic macrophytes in SCI CZ0614134 - Jihlava Valley.

- Modelling of possible changes of total solar radiation in the area is analysed further on. It ensues from the theoretically least favourable constellation of weather influences that include the wind flow directing the steam plume between Sun and the evaluated area, higher humidity, at which the steam plume does not dissolve, whereas the factors concur in day hours (late afternoon), when the Sun is low enough above the horizon so that the steam plume can overshadow the SCI. According to the evaluator, based on detailed analysis, the specified impacts will be manifested especially in the close vicinity of EDU1-4 and the NNS where only a small portion of SCI CZ0614134 Jihlava Valley is located, mostly forests on the south bank of the Mohelno Reservoir. In this section the SCI will have less sunlight due to shielding by the steam plume, amounting to 1 – 5%. This means that if, hypothetically, there was some shielding caused by the new nuclear power source today, the energy balance of the impact of the solar radiation would be comparable to the values from 1995 – 2000 and would be about 3 to 4% higher than the values before 1987 (start of measurement) and before shielding due to operation of the existing EDU1-4 cooling towers. Furthermore, the sensitivity of the National Nature Reservation of the Mohelno Serpentine Steppe, being the most valued part of SCI CZ0614134 Jihlava Valley, is emphasized. In that area the loss of incident energy caused by shielding due to the steam plume from the NNS is in tenths of a percent to one percent, which corresponds with the values of total energy input of sunlight in 2006 – 2008. It is stated that low values are at the limit of measurability of the intensity of such impacts (and only under special conditions modelled as the worst possible combination of all weather factors) and currently no changes in the structure of the populations of plants and animals due to such small changes are demonstrated and it is evidenced in graphics that changes of incident radiation in the order of percent units represent normal year-to-year fluctuation.

The evaluator comes to the conclusion based on the above mentioned analysis that the execution of the presented design of the project would not cause significantly adverse cumulative impact on the protection subjects or on the integrity of SCI Jihlava Valley.

Opinion of the reviewer:

Without significant comments

3.3. Order of variants with regard to impacts on sites of Natura 2000 system

The evaluator states that the execution of the zero variant does not mean a non-execution of the NNS project. For this variant, the environment corresponds with the condition at the time of publication of the EIA documentation for the NNS project, i.e. when 4 units of the Dukovany Nuclear Power Plant (EDU1-4) are operated at the site, along with other nuclear installations (two spent nuclear fuel storage facilities and a radioactive waste repository), and with its expected development trends. The active (execution) variant represents construction and operation of NNS of net electrical power output of 2400 MWe designed as 1 or 2 units at

Dukovany site. The condition at temporary parallel operation of NNS and EDU1-4 or EDU 2-4 for the time period of max. 10 years is evaluated as an execution variant as well as the condition after terminating the operation of EDU1-4 and the operation of NNS. This implementation variant is described in greater detail in the next section.

According to the evaluator, the execution of the active variant (presented project) does not mean a significantly adverse affection (pursuant to the wording of Section 45h,i of ANLC) of protection subjects of individual sites of the Natura 2000 within the reach of the NNS.

Opinion of the reviewer:

Without substantial comments to the assessment of single-variant solution.

3.4. Evaluation of significant project impacts on cross-border sites of Natura 2000 system

Natura impact assessment does not deal with these matters directly.

Opinion of the reviewer:

With regard to this fact, the author of the EIA expert review EIA requested supplementing data based on submitted statement of the Austrian side to the Documentation, from which follows that the project of NNS will not adversely affect the sites of Natura 2000 system on Austrian territory. For details, see comments of submitted statements to the documentation in Chapter 4 of the presented Assessment.

3.5. Assessment of the technical solution of the project with regard to achieved level of knowledge as far as influence on Sites of Natura 2000 system is concerned

The evaluator does not deal with this issue directly.

Opinion of the reviewer:

It ensues from text and concept of the natura impact assessment unambiguously that secured technical solution of the project is preferred⁴. It can be only stated from the reviewer's position that up to now, the areas C and D for technical infrastructure are dealt with more like corridors, in which the detailed technical concept of the power and water management infrastructure will only be elaborated. The context of prevention, minimization or elimination of potentially declared slightly adverse impacts will ensue from this concept based on outputs of natura impact assessment and measures that followed from the assessment of this evaluation.

3.6. Assessment of measures proposed for prevention, exclusion, reduction, eventually compensation of adverse impacts on Sites of Natura 2000 system:

When analysing the scope of NNS construction and operation and the nature and condition of subjects of protection at Natura 2000 sites, no major negative impacts that would interfere with the integrity of such sites were found. The NNS construction and operation may have a slightly negative impact on some Natura 2000 sites under certain circumstances; the following measures are suggested in order to mitigate these impacts:

⁴ It does not pertain to the reviewer to assess technical details of complex matters of nuclear operation within the nature assessment (evaluation of the documentation as a whole is matter of the expert review elaborated in parallel. The nature assessment presents and evaluates all needed data having possible impact on Sites of Natura 2000 system and takes them over into the description for purposes of the nature assessment.

- Considering the presence of sensitive biotopes – subjects of protection in SCI CZ0614134 - Jihlava Valley at the border with development area D (right bank of the Skryjský River upstream of its discharge to the Mohelno Reservoir), biological surveillance will be present during construction work in this development area to ensure that the defined border of the development area is not breached.
- If there is a risk of pollution due to dust generated during construction work, the person responsible for biological surveillance should provide for measures to eliminate dust and potential pollution of areas inside SCI CZ0614134 - Jihlava Valley (e.g. spraying of the construction site and service roads with water on dry days).
- The impact of shielding due to cooling towers and steam plume on SCI CZ0614134 - Jihlava Valley is very low, determined in individual hours to slightly more than 10 hours of the total annual sunlight. This impact cannot be mitigated by technical measures. Counting in the trend of climatic changes described based on the years 1983 to 2013, the loss of solar radiation exposure will be fully compensated by the increasing total sunlight due to such climatic changes.
- After the commissioning of the NNS, discharge from the Mohelno Reservoir on the Jihlava River will be preserved in a regime identical with the operation of the existing EDU1-4, which will ensure protection of the biotopes in the Jihlava River within SCI CZ0614134 - Jihlava Valley.
- After the commissioning of the NNS, discharge on the Jihlava River from the Mohelno Reservoir will be monitored annually in terms of physical and chemical parameters (temperature, oxygen content, pH, amount of organic substances, nitrogen, phosphorus and other substances). The scope of water plant biotopes on the Jihlava River within SCI CZ0614134 - Jihlava Valley will be monitored at least once every 5 years as an indicator of quality of the discharged water. The results of mapping of the structure and scope of these biotopes from 2013, 2014 and 2016 can be used as reference values.
- The rain water drainage system in the NNS will employ tanks to trap any potential leaks of oil substances and sediments so that the subject of protection in SCI CZ0623819 - Rokytná River is not affected. Similarly, this protective function is already served with respect to SCI CZ0614134 - Jihlava Valley by reservoirs.
- The NNS project design currently contains an estimate of transport directions during project construction. Road No. 152 will be subject to the main transport burden (due to the capacity and quality of the road); it does not pass through SCI CZ0614134 - Jihlava Valley and therefore does not affect this SCI, or does so to a minimum extent only. There are no animals (subjects of protection) there that could be killed by vehicles.
- The increased traffic through SCI CZ0614134 - Jihlava Valley, on road II/392, indicated in the detailed dispersion study (Bartoš 2016), does not constitute a major impact on the subjects of protection. It is necessary to comply with this expected number of vehicles and, in case of increased traffic, in particular of heavy trucks, to limit their number (for example with a traffic sign limiting their tonnage).
- Rain water drained from the NNS site will be regularly (at least four times a year) monitored in terms of pollution, including measurement of the level of radiation in this water, to make sure it does not affect the subjects of protection in SCI CZ0623819 - Rokytná River. This monitoring is already in place at discharges to SCI CZ0614134 - Jihlava Valley.
- Mitigating measures are not necessary against the accumulation of impacts of the projected climate changes and impacts of NNS construction and operation. The model results proved contrariwise that the NNS operation will mitigate potential impacts of the climatic change on the area of SCI CZ0614134 - Jihlava Valley.

Opinion of the reviewer:

According to the reviewer's opinion, the presented measures represent basic approaches only that might mitigate the identified slightly adverse project impacts. The third bullet in terms of detailed declaration of shielding by the cooling towers and steam plume of the area of SCI CZ0614134 Jihlava Valley that cannot be changed, and stating the full compensation of increased total radiation due to the climatic change cannot be considered as measures;

analogically, neither the seventh bullet represents wording of a suitable measure in terms of description of the main traffic load on the road No. 152 in relation to SCI Jihlava Valley and its protection subjects in relation to the road traffic.

The author of the EIA expert review EIA requested explaining data based on received statements to the Documentation, within which the modification of proposed mitigating measures would be presented.

The completing document states concerning Chapter 6 of the natura impact assessments that the unambiguous listing of measures specified in the natura impact assessment, which are really mitigating and will be executed by the investor is as follows:

- *considering the presence of sensitive biotopes – subjects of protection in SCI CZ0614134 - Jihlava Valley at the border with development area D (right bank of the Skryjský River upstream of its discharge to the Mohelno Reservoir), biological surveillance will be present during construction work in this development area to ensure that the defined border of the development area is not breached*
- *if there is a risk of pollution due to dust generated during construction work, the person responsible for biological surveillance should provide for measures to eliminate dust and potential pollution of areas inside SCI CZ0614134 - Jihlava Valley (e.g. spraying of the construction site and service roads with water on dry days)*
- *the discharge from the Mohelno Reservoir on the Jihlava River will be preserved in a regime identical with the operation of the existing Dukovany NPP after the commissioning of the NNS, which will ensure protection of the biotopes in the Jihlava River within SCI CZ0614134 Jihlava Valley.*
- *After the commissioning of the NNS, the outflow on the Jihlava River from the Mohelno Reservoir will be monitored annually in terms of physical and chemical parameters (temperature, oxygen content, pH, amount of organic substances, nitrogen, phosphorus and other substances). Monitoring of the extent of water plant biotopes in Jihlava River should be carried out as quality indicator of discharged water within SCI CZ0614134 - Jihlava Valley at least once each 5 years. The results of mapping of the structure and scope of these biotopes from 2013, 2014 and 2016 can be used as reference values. If the conditions of these biotopes deteriorate, corrective actions will be taken*
- *tanks to trap any potential leaks of oil substances and sediments will be used in the rain water drainage system of the NNS so that the subject of protection in SCI CZ0623819 Rokytná River is not affected.*
- *the increased traffic through SCI CZ0614134 - Jihlava Valley on road II/392 indicated in the detailed dispersion study (Bartoš 2016) does not constitute a major impact on the subjects of protection. In case of increased traffic of heavy vehicles above all, their thoroughfare will be limited (for example by a traffic sign limiting the vehicle tonnage) so that this expected number of vehicles is maintained.*
- *Rain water drained from the site of the NNS at the Dukovany site will be regularly (at least four times a year) monitored in terms of pollution, including measurement of the level of radiation in this water so that the subjects of protection in SCI CZ0623819 - Rokytná River are not affected. The same monitoring is already being executed with regard to effluents to the SCI CZ0614134 - Jihlava Valley.*

It is possible to agree with most of the above mentioned measures, but it would be reasonable to make partial modifications and more precise specifications for their inclusion into the draft of approving binding opinion to the E.I.A. expert review and also deal with further supplementations:

For the preparation phase

- Within documentation for zoning proceeding of the project for the solution of discharging waste water with content of radioactive substances from NNS to Mohelno water reservoir, to localize consistently the

route of the respective pipeline above the left bank of Skryjský stream downstream the confluence with Luha water course by reason of consistent respecting the border of SCI CZ0614134 Jihlava Valley that is situated above the right bank of the water course downstream the confluence – in particular is it the section between the entry of Skryjský Stream and its confluence with Luha water course of the length of approximately 0.3 km of Skryjský Stream.

- Tanks for catching eventual leaks of oil products and sediments will be part of the system of discharging rain water from the NNS to the catchment area of Olešná within the documentation for zoning proceeding so that the protection subject in SCI CZ0623819 Rokytná River is not affected.

For the execution phase

- Considering the presence of sensitive biotopes – subjects of protection in SCI CZ0614134 - Jihlava Valley at the border with development area D (right bank of the Skryjský Stream upstream of its discharge to the Mohelno Reservoir), biological surveillance will be present during construction work in this development area to ensure that the defined border of the development area is not breached.
- If excessive dust pollution threatens during the civil works, the person conducting the biological supervision will ensure through the contractor that execution measures are adopted limiting the occurrence of excessive dustiness and the potential contamination of areas within the SCI CZ0614134 Jihlava Valley (e.g. by spraying the surfaces of the construction site and service roads in contact with areas of the SCI by water on dry days).
- To arrange the organization of transportation to the construction site within principles of construction organization so that the thoroughfare of trucks on the road with difficult terrain passing the SCI Jihlava Valley and the NPR Mohelno Serpentine Steppe is limited as much as possible in order to prevent considerable increase of traffic across SCI CZ0614134 - Jihlava Valley (and NPR Mohelno Serpentine Steppe) on road II/392 in phase of construction.

For the operation phase

- It should be ensured consequently that the minimum residual flow rate in Jihlava river is maintained at least at the same value as during the operation of the existing NPP Dukovany at the monitoring point Jihlava-Mohelno downstream the Mohelno water reservoir after the NNS commissioning, which will ensure the protection of biotopes in Jihlava river within SCI CZ0614134 - Jihlava Valley taking into account the legislation valid at that time period
- It should be ensured that the outflow rate of Jihlava River from the Mohelno Water Reservoir will be monitored with regard to physical – chemical parameters (temperature, oxygen content, pH, amount of organic substances, nitrogen, phosphorus, and other substances stipulated in the water right decision) each year after putting the NNS into trial operation; the monitoring of the water plants biotopes should be conducted as an indicator of discharged water quality in Jihlava River within SCI CZ0614134 - Jihlava Valley once each 5 years at minimum; the results from mapping the structure and extent of these biotopes in the years 2013, 2014 and 2016 might be used as comparison values; if the condition of these biotopes deteriorates, corrective measures should be adopted.
- It should be ensured that the rain water discharged from the NSS premises to the catchment basin of Olešná water course will be regularly (at least 4 times a year) monitored with regard to their pollution, including the measuring of the tritium concentration level in this water, so that the protection subjects of SCI CZ0623819 - Rivera Rokytná are not affected; the scope of monitored indicators will be discussed and agreed with the competent water right authority.
- It should be ensured that rainwater discharged from the NNS site to the basin of Skryjský stream will be monitored regularly (4 times a year at least) with regard to its pollution including measuring the level of tritium concentration in this water, so that it does not influence subjects of protection in CSI CZ 0614134 - Jihlava Valley. The extent of monitored indicators will be discussed and agreed by the respective Water Right Office.

4. Settling all statements received with regard to the documentation concerning the Natura 2000 system

Within the provided statements related to the EIA documentation, the following statements concern the natura impact assessment, eventually the context of potential affectation of the sites of Natura 2000 system, or the connection with matters of sites of Natura 2000 system can be identified in them:

Czech Republic

1. Ministry of Environment

Director of Department of Species Protection and Implementation International Commitments

Statement of 19.12. 2017 Ref. No.: ENV/2017/VS/3794

Essence of the statement:

After having read up the documentation concerning the above mentioned matter, we inform you of following:

Within the documentation, the assessment of project impacts pursuant to Section 45i Act of No. 114/1992 Coll., on nature and landscape conservation, as amended (hereinafter “natura impact assessment” only) was elaborated by the authorized person, RNDr. Vlastimil Kostkan, Ph.D. Inadequacies were identified in the natura impact assessment concerning incorrectly specified protection subjects in the special protection area of birds Podyjí, since the species Eurasian bittern (*Botaurus stellaris*), gadwall (*Anas strepera*), common kingfisher (*Alcedo atthis*), and western marsh harrier (*Circus aeruginosus*) are described instead of barred warbler (*Sylvia nissoria*) and Syrian woodpecker (*Dendrocopos syriacus*) in the affected special protectio area of birds.

In some places of the natura impact assessment text (pages 21, 43, 48, 49), the name of the Site of Community Importance Jihlava Valley is not used correctly, as it is confused with “Jihlava River Valley”.

Further inadequacy in the evaluation concerns SCI Rokytná River, since it is stated in Chapter 4.2.2 at the end of the text that the impact of rain water inlet will not influence the Rokytná River any more, but the evaluation does not rule it out subsequently (in Chapter 4.2.12) and further evaluation text describes it then as slightly adverse (-1).

Mitigating measures are specified in Chapter 6 of the natura impact assessment, all from which cannot be considered as proposed mitigating measures; facts are stated in certain parts of the text that are obvious and not proposed mitigating measures that would require a measure from the side of the notifier during the construction execution.

Even though the mentioned inadequacies would probably not generate significant impacts that might require substantial change of the evaluation of the project as a whole, we consider as reasonable to correct them in the submitted natura impact assessment so that they are properly taken into account in the binding EIA statement.

Opinion of the reviewer:

Pursuant to Section 9 of Act No.100/2001 Coll. as amended, the team of the expert review authors requested completion of explaining documents concerning the specified matters in relation to the specified statement. It is possible to confirm that the specified inadequacies do not generate significant impacts that would influence the conclusions of the documentation under review.

It follows from the requested document that an erroneous transcription of bird species was made in Table 10 of the natura impact assessment that are subject of protection in CZ0621032 – Podyjí. Species that belong to SPA Poodří, which is in the database of special protection areas of birds one line below, were taken over from the database instead of correctly specified species.

Correct listing of protection subjects in SPA Podyjí:

Species	Permanent population/ Population share	Stopping/ preservation	Wintering/ Insulation	Nesting/ Overall evaluation	Influence
barred warbler <i>Sylvia nissoria</i>	C*1	A*2	C*4	30-50 pairs / A*6	0
Syrian woodpecker <i>Dendrocopos syriacus</i>	10-15 pairs / C*1	B*3	B*5	B*7	0

Explanations:

*1 there is up to 2% of the population in the Czech Republic at the site

*2 outstandingly preserved population

*3 well preserved population

*4 population is not isolated

*5 population is not isolated, but on the edge of the spread range

*6 highly important site for preserving the species

*7 important site for preserving the species

In spite of the mentioned error in listing the protection subjects of SPA CZ621032 – Podyjí, nothing changes in the final evaluation of the possible influence. SPA CZ0621032 – Podyjí is in the distance of approximately 35 km from the project. In case of such distance and project nature, the confusion of protection subjects does not influence the result of the assessment carried out. The conclusion remains the same, i.e. that the NNS project construction and operation does not affect the SPA CZ0621032 – Podyjí and its protection subjects.

It ensues from the requested document in relation to incorrect specification of SC that it is a typing error; the correct name is Site of Community Importance CZ0614134 - Jihlava Valley. The number of the SCI is in the text of the natura impact assessment specified correctly. In spite of the incorrect name, material confusion is not possible, because no SCI called „Jihlava River Valley“ exists in the Czech Republic. If Jihlava River Valley is mentioned wherever in the text, it is a general formulation concerning the geomorphological description, not the name of SCI.

The supplementing document states with regard to the mentioned SCI Rokytná River that it is a minor error in formulation when it is written in a sentence of Chapter 4.2.2.:

“Site of Community Importance CZ0623819 - Rokytná River, which is supplied by the Olešná River, will not be affected by the project, either.” The impact on the Site of Community Importance CZ0623819 - Rokytná River, to which Olešná water course flows, is very small, more like on theoretical level, and can occur only in cases of accident situations. The evaluation slightly „adverse impact“ (-1) stated hereafter and mentioned positive impact of dams and reservoirs as well as proposed mitigating measures in the form of collection tanks under the construction site and NNS objects correspond to this wording.

The completing document states concerning Chapter 6 of the natura impact assessments that the unambiguous listing of measures specified in the natura impact assessment, which are really mitigating and will be executed by the investor is as follows:

- *considering the presence of sensitive biotopes – subjects of protection in SCI CZ0614134 - Jihlava Valley at the border with development area D (right bank of the Skryjský River upstream of its discharge to the Mohelno Reservoir), biological surveillance will be present during construction work in this development area to ensure that the defined border of the development area is not breached*

- *if there is a risk of pollution due to dust generated during construction work, the person responsible for biological surveillance should provide for measures to eliminate dust and potential pollution of areas inside SCI CZ0614134 - Jihlava Valley (e.g. spraying of the construction site and service roads with water on dry days)*
- *the discharge from the Mohelno Reservoir on the Jihlava River will be preserved in a regime identical with the operation of the existing Dukovany NPP after the commissioning of the NNS, which will ensure protection of the biotopes in the Jihlava River within SCI CZ0614134 Jihlava Valley.*
- *After the commissioning of the NNS, the outflow on the Jihlava River from the Mohelno Reservoir will be monitored annually in terms of physical and chemical parameters (temperature, oxygen content, pH, amount of organic substances, nitrogen, phosphorus and other substances). Monitoring of the extent of water plant biotopes in Jihlava River should be carried out as quality indicator of discharged water within SCI CZ0614134 - Jihlava Valley at least once each 5 years. The results of mapping of the structure and scope of these biotopes from 2013, 2014 and 2016 can be used as reference values. If the conditions of these biotopes deteriorate, corrective actions will be taken*
- *tanks to trap any potential leaks of oil substances and sediments will be used in the rain water drainage system of the NNS so that the subject of protection in SCI CZ0623819 Rokytná River is not affected.*
- *the increased traffic through SCI CZ0614134 - Jihlava Valley on road II/392 indicated in the detailed dispersion study (Bartoš 2016) does not constitute a major impact on the subjects of protection. In case of increased traffic of heavy vehicles above all, their thoroughfare will be limited (for example by a traffic sign limiting the vehicle tonnage) so that this expected number of vehicles is maintained.*
- *Rain water drained from the site of the NNS at the Dukovany site will be regularly (at least four times a year) monitored in terms of pollution, including measurement of the level of radiation in this water so that the subjects of protection in SCI CZ0623819 - Rokytná River are not affected. The same monitoring is already being executed with regard to effluents to the SCI CZ0614134 - Jihlava Valley.*

Conditions ensued from the carried out evaluation of the natura impact assessment are formulated so for purposes of the Binding Opinion Draft that it is obvious that they are justified conditions, the fulfilment of which is required from the notifier at the project preparation and execution, eventually within operating measures:

For the preparation phase

- **Within documentation for zoning proceeding of the project for the solution of discharging waste water with content of radioactive substances from NNS to Mohelno water reservoir, to localize consistently the route of the respective pipeline above the left bank of Skryjský stream downstream the confluence with Luha water course by reason of consistent respecting the border of SCI CZ0614134 Jihlava Valley that is situated above the right bank of the water course downstream the confluence – in particular is it the section between the entry of Skryjský Stream and its confluence with Luha water course of the length of approximately 0.3 km of Skryjský Stream.**
- **Tanks for catching eventual leaks of oil products and sediments will be part of the system of discharging rain water from the NNS to the catchment area of Olešná within the documentation for zoning proceeding so that the protection subject in SCI CZ0623819 Rokytná River is not affected.**

For the execution phase

- **Considering the presence of sensitive biotopes – subjects of protection in SCI CZ0614134 - Jihlava Valley at the border with development area D (right bank of the Skryjský Stream upstream of its discharge to the Mohelno Reservoir), biological surveillance will be present during construction work in this development area to ensure that the defined border of the development area is not breached.**
- **If excessive dust pollution threatens during the civil works, the person conducting the biological supervision will ensure through the contractor that execution measures are adopted limiting the occurrence of excessive dustiness and the potential contamination of areas within the SCI CZ0614134 Jihlava Valley (e.g. by spraying the surfaces of the construction site and service roads in contact with areas of the SCI by water on dry days).**
- **To arrange the organization of transportation to the construction site within principles of construction organization so that the thoroughfare of trucks on the road with difficult terrain passing the SCI Jihlava Valley and the NPR Mohelno Serpentine Steppe is limited as much as possible in order to prevent**

considerable increase of traffic across SCI CZ0614134 - Jihlava Valley (and NPR Mohelno Serpentine Steppe) on road II/392 in phase of construction.

For the operation phase

- It should be ensured consequently that the minimum residual flow rate in Jihlava river is maintained at least at the same value as during the operation of the existing NPP Dukovany at the monitoring point Jihlava-Mohelno downstream the Mohelno water reservoir after the NNS commissioning, which will ensure the protection of biotopes in Jihlava river within SCI CZ0614134 - Jihlava Valley taking into account the legislation valid at that time period
- It should be ensured that the outflow rate of Jihlava River from the Mohelno Water Reservoir will be monitored with regard to physical – chemical parameters (temperature, oxygen content, pH, amount of organic substances, nitrogen, phosphorus, and other substances stipulated in the water right decision) each year after putting the NNS into trial operation; the monitoring of the water plants biotopes should be conducted as an indicator of discharged water quality in Jihlava River within SCI CZ0614134 - Jihlava Valley once each 5 years at minimum; the results from mapping the structure and extent of these biotopes in the years 2013, 2014 and 2016 might be used as comparison values; if the condition of these biotopes deteriorates, corrective measures should be adopted.
- It should be ensured that the rain water discharged from the NSS premises to the catchment basin of Olešná water course will be regularly (at least 4 times a year) monitored with regard to their pollution, including the measuring of the tritium concentration level in this water, so that the protection subjects of SCI CZ0623819 - Rivera Rokytná are not affected; the scope of monitored indicators will be discussed and agreed with the competent water right authority.
- It should be ensured that rainwater discharged from the NNS site to the basin of Skryjský stream will be monitored regularly (4 times a year at least) with regard to its pollution including measuring the level of tritium concentration in this water, so that it does not influence subjects of protection in CSI CZ 0614134 - Jihlava Valley. The extent of monitored indicators will be discussed and agreed by the respective Water Right Office.

2. Agency of Nature and Landscape Conservation of the Czech Republic Regional Office Žďárské vrchy SCHKO statement of 20.12. 2017 Ref. No.: 04402/ZV/2017

Essence of the statement:

We consider the submitted documentation to be very robust. Annexes 3.1 (Biologic Evaluation), 3.2 (Natura impact assessment), (Evaluation of Effect on Landscape Character and Shielding of the Vicinity) were the main subject of our interest understandably. Chapters about natural components of the territory are elaborated in close details and it is evident that the documentation elaborating was preceded by comprehensive field surveys. It is possible to agree with conclusions of particular chapters without special reservations in absolute majority of cases.

Minor comment refers to Chapter D.I.8.2.3 Shielding by Steam Plumes of Cooling Towers. Certain disappointment should be expressed here concerning the fact that while the evaluation of the shielding effect of the actual buildings of the NNS and the existing power plant (EDU 1-4) is documented by detailed digital models (Chapter I.8.2.2), the shielding of steam plumes seems to be obviously so called expert estimate only. However, it is possible to agree with conclusions of the documentation considering this to be impact of low significance with regard to relatively short time period of parallel operation of both sources (10 years expectation) and relatively small affected area of SCI Jihlava Valley

Further comment refers to Chapter D.I.7 Effects on Biologic Diversity as well as to Chapter 4.1.2 of Annex 3.2 (Natura impact assessment). This concerns the protection subject of SCI CZ0614134 Jihlava Valley, namely the natural habitat 3260 - Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation and also the whole

biocenosis of Jihlava water course downstream the dam of Mohelno water reservoir at the same time. It is stated on p. 36 of annex 3.2 that “water flowing out from the Mohelno Reservoir will retain the same character even after the completion of the NNS (temperature, chemistry) and will not affect the condition of the water plant biotope ..” This is rather in contradiction with Chapter Effects on Surface and Ground Water that specifies noticeable changes in parameters of water environment in Jihlava River downstream Mohelno water reservoir, at least during the period of concurrence of both nuclear sources. This creates the impression that these newer data were not available or taken into consideration during the natura impact assessment elaboration.

Our last comment concerns the fact that the monitoring point in Jihlava River downstream the dam of the Mohelno water reservoir was not included among selected monitoring points of physical-chemical and biological parameters of water environment in annex 3.1 (Biologic Evaluation), Chapter 5.5 Hydrobiology, although it is important for the assessment of the NNS operation impact on the natural habitat 3260. This natural habitat cannot be reduced to the water macrophyte vegetation only, but it must be assessed as a complex ecosystem.

Opinion of the reviewer:

Pursuant to Section 9 of Act No.100/2001 Coll. as amended, the team of the expert review authors requested completion of explaining documents concerning the specified matters in relation to the specified statement. It is possible to confirm that the specified inadequacies do not generate significant impacts that would influence the conclusions of the documentation under review.

The explaining document states in relation to the comment concerning Chapter D.I.8.2.3. that with regard to the fact that it is known that the steam plume can overshadow certain places of SCI Jihlava Valley in limited time intervals at certain constellation of meteorological and time conditions already during the operation of EDU1-4, the impact of possible future steam plume shielding (Chapter D.I.8.2.3. of the documentation) from NNS cooling towers was also evaluated by means of detailed calculation model elaborated by the Institute of Atmosphere Physics of the Academy of Science of the Czech Republic, not only by mere estimate. Results of the mentioned model are commented in Chapter D.I.2.2. Effects on the climate (page 325 of the documentation). As background documents, a series of detail evaluation studies were elaborated for the purpose for the documentation elaboration that are specified in Chapter D.V.2.2. Internal documents (under number [I. 3]), i.e.:

- *Study of impact on the microclimate and determination of the shielding plume for NNS at the Dukovany site. Institute of Atmosphere Physics of Academy of Sciences of the Czech Republic, July 2016*
- *Distribution of drops flying away from cooling towers and evaluation of cooling towers impacts on local frost deposits. Institute of Atmosphere Physics of Academy of Sciences of the Czech Republic, February 2017*
- *Influence of EDU1-4 on climate characteristics of the territory. ČHMÚ (Czech Hydrometeorological Institute), May 2016*

These studies are not attached to the documentation with regard to its extent but they are taken fully into account. In connection with this, they are also included in the dealing with impacts on the SCI Jihlava Valley.

*The explaining document states regarding Chapter D.I.7 that the facts specified in Chapter D.I.4 were taken into consideration. The finding that the extent (length of Jihlava water course) with occurrence of the natural habitat No. 3260 – Water courses of plain to montane levels with the *Ranunculus fluitantis* and *Callitriche-Batrachion* vegetation expands continuously is one of the conclusions of the structure, quality and extent research of this habitat lasting several years. Volume as well as temperature balanced outflows from the Mohelno water reservoir are the*

main reason above all. Jihlava does not freeze in the winter and no consequent ice run occurs that would interfere mechanically with the associations otherwise. The increased temperature of water discharged from the Mohelno water reservoir in winter (compared to normal situation) and decreased temperature of this water in summer creates stable conditions for these associations including the influence on oxygen content and pH. This condition will be preserved in spite of partial change also for the NNS including the phase of possible temporary parallel operation. The increase of average and maximum temperatures as well as changes of chemical parameters in Jihlava River downstream the Mohelno water reservoir are provoked by the model assumption of the climatic change above all in the phase of separate NNS operation, while the actual contribution of NNS to these changes is practically the same like the contribution of the existing EDU1-4 that is manifested presently. The fact persists in spite of the impacts of EDU1-4 and expected changes related to the contribution of NNS that the impacts ensued from the existence of the system Dalešice and Mohelno water reservoirs are the biggest and for the biota of Jihlava River downstream Mohelno water reservoir entirely crucial factor that changes physical as well as chemical properties of water in Jihlava river as well as flow rate dynamics regardless to the existence of EDU1-4 and the planned NNS. Therefore, it is the decisive context in above mentioned sense of existing seasonal changes of flow rate conditions in the river ecosystem downstream both water reservoirs.

The explaining document states in relation to selected monitoring points of physical-chemical and biological parameters of water environment that the physical-chemical parameters (DIS, sulphates, N-NH₄, CHSK_{Cr}, BSK₅, N-NO₃, N_{total}, P_{total}, chlorides) of Jihlava river downstream the outlet of Mohelno water reservoir were monitored regularly by staff members of the Water System Research Institute in years 2005 – 2015. Results of Water System Research Institute are specified in Tables No. 6 and 7 (pages 26 – 30) in Annex No. 4 to the EIA documentation (Evaluation of impacts on surface and groundwater). It follows from these data that the physical and chemical water parameters are affected by the system of water reservoirs Dalešice – Mohelno above all. The impacts are manifold, from water temperature changes (high temperatures in winter, low temperatures in summer) to the content of organic substances (strong decrease of BOD₅ and total phosphorus downstream the Mohelno water reservoir). Thus, the system behaves as a trap for organic sediments and phosphorus to and markedly improves the water quality under the system.

The Water System Research Institute then evaluated the overall environmental condition of Mohelno water reservoir and Jihlava River at the monitoring point Řeznovice in table No. 43 on page 86 of Annex No. 4 of the EIA documentation as medium or good, which is the best condition in the whole water body of Jihlava River from Brtnice to Nové Mlýny II Reservoir. The hydrobiology survey was not performed at monitoring points in Jihlava River with regard to the above mentioned, long-time data collecting and the hydrobiology surveys focused on minor water courses in vicinity of Dukovany NPP, on which the NNS construction and operation might generate potential impacts.

Following recommendations are proposed in the opinion draft by the reviewer with regard to above mentioned:

- It should be ensured consequently that the minimum residual flow rate in Jihlava river is maintained at least at the same value as during the operation of the existing NPP Dukovany at the monitoring point Jihlava-Mohelno downstream the Mohelno water reservoir after the NNS commissioning, which will ensure the protection of biotopes in Jihlava river within SCI CZ0614134 - Jihlava Valley taking into account the legislation valid at that time period
- It should be ensured that the outflow rate of Jihlava River from the Mohelno Water Reservoir will be monitored with regard to physical – chemical parameters (temperature, oxygen content, pH, amount of organic substances, nitrogen, phosphorus, and other substances stipulated in the water right decision) each year after putting the NNS into trial operation; the monitoring of the water plants biotopes should

be conducted as an indicator of discharged water quality in Jihlava River within SCI CZ0614134 - Jihlava Valley once each 5 years at minimum; the results from mapping the structure and extent of these biotopes in the years 2013, 2014 and 2016 might be used as comparison values; if the condition of these biotopes deteriorates, corrective measures should be adopted.

- It should be ensured that the rain water discharged from the NSS premises to the catchment basin of Olešná water course will be regularly (at least 4 times a year) monitored with regard to their pollution, including the measuring of the tritium concentration level in this water, so that the protection subjects of SCI CZ0623819 - Rivera Rokytňá are not affected; the scope of monitored indicators will be discussed and agreed with the competent water right authority.
- It should be ensured that rainwater discharged from the NNS site to the basin of Skryjský stream will be monitored regularly (4 times a year at least) with regard to its pollution including measuring the level of tritium concentration in this water, so that it does not influence subjects of protection in CSI CZ 0614134 - Jihlava Valley. The extent of monitored indicators will be discussed and agreed by the respective Water Right Office.

Republic of Austria

3. **Joint opinion of the province of Burgenland, province of Carinthia, anti-nuclear coordination of provinces of Lower Austria and Upper Austria, province of Salzburg, province of Styria, province of Tyrol, province of Vorarlberg and Vienna legal representation for environmental protection as the authorized subject for anti-atomic protection of the province of Vienna statement of 12.1.2018**

n) Results of evaluating the impacts of ionising radiation on fauna and flora are dealt with on page 421. The zoology representatives specified as reference organisms in IAEA Safety Standards, Draft Safety Guide DS 427 are under review at that. Reducing costs of the applicant is the primary objective of this document as stated repeatedly. Taking into the account document “ICRP, Environmental Protection: the Concept and Use of Reference Animals and Plants, ICRP Publication 108, Elsevier (2008)” that is the basis for this document, it is clear that the selected estimate must be insufficient. Therefore, higher enrichment of radioisotopes should be expected in case of organisms at upper level of the food chain. With regard to National Park Dyje Valley (Thayatal) in particular, the presence of white-tailed eagle (*Haliaeetus albicilla*), most probably also sitting on eggs, must be taken into consideration, the same applies to the otter (*Lutra lutra*) and fox (*Vulpes vulpes*). Concerning deer as a reference organism, attention is drawn to the usually higher stress of roe (*Capreolus capreolus*) and wild boars (*Sus scrofa*) due to ingestion. The presence of the wildcat (*Felis sylvestris*) may be also considered a speciality due to the necessity to consider it as a particularly sensitive species because of the small number of individuals and the reproduction potential with domestic cats (*Felis sylvestris catus*) running freely about. Nevertheless, if scientific reasons for unchanged use of reference animals still exist, they should be documented.

Opinion of the reviewer:

The team of expert review authors requested supplementation explaining documents concerning the matters of cross-border impacts on nature pursuant to Section 9 of the Act No.100/2001 Coll. as amended, based on the received statements, the international consultations and the public hearing carried out. This explaining supplementation is documented in the annex part of the expert review on the one hand and is also included hereinafter for the sake of lucidity on the other hand, even though it is clear that this document does not bring any information that might

influence conclusions of the documentation with regard to evaluation of impacts on natural components of ecosystem.

The comment was settled in two steps:

1) The existence and extent of specially protected areas and areas of Natura 2000 system mentioned in the comment as well as the protection subjects of these areas were verified.

2) In relation to possible impacts on the identified areas and organisms specified in the comment, possible radiation impacts were evaluated according to the conclusions of the Summary Report on Radiation Effects of NNS at the Dukovany Site - Operating Conditions - Summary Study - Annex 5.1 of the EIA documentation (https://portal.cenia.cz/eiasea/detail/EIA_MZP469).

Settling the above mentioned comment is complemented by the presence of national parks and areas of Natura 2000 system in Austria that are mentioned in the comment and that could be affected potentially by the NNS operation.

Concerning the scientific aspect, the raised comment is not formulated precisely and expertly enough, as it does not differentiate between areas and target species that might be affected by entirely different forms of radiation load. The radiation load from the NNS operation has two entirely different routes of radionuclide emissions. Namely, effluents to atmosphere and effluents to receiving waters. These two forms of effluents must be dealt with separately, because not only characteristics and vectors of possible radioactivity transmission are entirely different, but they also interfere with different ecosystems and their components (species).

Areas of interest of the nature conservation in the Austrian Republic

NP Thayatal and area of Natura 2000 system FFH-Gebiet Thayatal bei Hardegg (AT1208A00)

The area of the NP Thayatal (as well as of the NP Podyjí on the side of the Czech Republic) cannot be exposed to impacts of radionuclides, spreading from effluents into receiving waters, because no water course flows into this part of Dyje River from the vicinity of NNS that could transport radionuclides.

It means that radiation impacts must be evaluated for the areas of NP Podyjí on the Czech side and NP Thayatal on the Austrian side only based on the model of radionuclide depositions from effluents in atmosphere transported by air. The model area of both national parks Podyjí/Thayatal covers the sectors 118 and 130 (distance 30 – 50 km) in calculation areas.

The Austrian NP Thayatal has an area of 13.3 km² only. The area of Natura 2000 system, part of which is the national park, has an area of 44.28 km² (<http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=AT1208A00>).

The NP Podyjí on the Czech side has an area of 62.76 km² plus the protection zone of 28.22 km². The special protection area of birds Podyjí having an area of 76.657 km² is included in the Natura 2000 system as well.

Possible influence on the wildcat population is mentioned in the comment. This species lives an extremely hidden life and it was exterminated in large parts of Europe in the past. Observations in the area of NP Podyjí/Thayatal are scarce only and not confirmed by systematic survey. Therefore, the wildcat is not listed among protection subjects either in the Natura 2000 system area FFH-Gebiet Thayatal bei Hardegg (AT1208A00) or in the NP Thayatal.

The administration of the Austrian NP Thaytal prepared a web application (in German, Czech and English languages) that collects documents on occurrence of this species (<http://www.wildkatze-in-oesterreich.at/cz/pages/kocka-divoka.aspx>). Several observations were

made thanks to this application indicating that wildcat individuals could occur in the NP Thayatal. However, this is definitely no stable population proved by scientifically based survey and monitoring.

The nearest wildcat population is situated in southern foothills of Slovak Carpathian Mountains overlapping to highland areas of Hungary and in small isolated areas of northern Austria. This is documented by the map shown at the above mentioned web site. However, this map is not quite precise, as it includes also the high mountain chains of Carpathian Mountains in Slovakia, Ukraine and Austria in the displayed natural range. However, the wildcat avoids higher altitudes, because its ability to hunt in high snow cover is limited. Wildcats prefer hardwood forests from lower to middle altitudes. Thus, the area of NP Podyjí/Thayatal is a very suitable territory for the cat in perspective with regard to biotope, but no separate population has been confirmed here yet.

Neither the fox nor the boar meet the mentioned criterion of “small population”. Both species are very numerous both in the territory of the Czech Republic and in the territory of Austria. Their populations are even so large in recent years that they begin to create problems of the nature of veterinary and humane zoonosis transmission risks in the territory of both states.

The loading for the European river otter and the white-tailed eagle, that are part of the food chain of water courses and reservoirs, will be minimal in this area, because water courses are not loaded by radioisotopes from effluents into receiving waters in wide neighbourhood of the Thayatal area. The author team of the expert review remarks in this connection that the specified sites cannot be affected by effluents of radioisotopes from the NNS operation to the receiving water with regard to the circumstance among others that they are not part of Jihlava catchment area within the hydrological network, into which the NNS related water system investments to exhaust.

Natura 2000 system area - FFH-Gebiet March-Thaya-Auen AT1202000 (analogy to our Site of Community Importance) and European Bird Protection Area March-Thaya-Auen AT1202V00 (analogy to our special protection area of birds)

This area is situated within the distance of 70 – 100 km south-east from NNS and consists of the Morava River floodplain from the confluence with Dyje to its stream mouth into Danube. The area of March-Thaya-Auen is, in addition to the incorporation into the European Natura 2000 system in Austria (overlapping also to the Czech Republic and Slovakia), protected as Ramsar Wetlands at the same time. There is a number of small-scale specially protected areas in the territory of all three states and the border water course is part of the Protected Landscape Area Záhorie in the Slovak territory.

The radiation impacts can be evaluated by no other than model based method with regard to the distance of the area of NP Podyjí on the Czech side and NP Thayatal on the Austrian side from the point of radioactive substances effluent from NNS to environment.

The model of radionuclide depositions from effluents in atmosphere transported by air is for the area Thaya – March – Auen in the sector No. 84 (70 – 100 km).

While air spread radionuclides are deposited following the predominant wind direction, radionuclides transported by water advance in water courses and may sediment for different time periods both in water courses and, above all, in standing or slowly flowing water where the sedimentation is considerably higher even of small particles. Each reservoir, even large one (Mohelno water reservoir, system of reservoirs Nové Mlýny), can deposit radionuclides into sediments for many years. Sediments in stream parts of river may accumulate for months even years, but large drift of all particles (including radionuclides) further downstream occurs always during periods of large flow rates (at snow thawing, strong rains in vegetation season).

Existence of the three large-scale reservoirs on Dyje near Nové Mlýny represents then really large trap for sediments that will be stopped in the reservoirs for many years even decades, until they are transported further downstream Jihlava down to Dyje river and eventually Morava and Danube. Water volumes that are the vector of radionuclides transmission are diluted significantly at that. Long-term average flow rates at the monitored route are as follows:

Jihlava – Mohelno monitoring point $5.35 \text{ m}^3 \cdot \text{s}^{-1}$

Dyje – Ladná monitoring point $36 \text{ m}^3 \cdot \text{s}^{-1}$

The specified values show that the average flow rate in Dyje upstream Břeclav is 6.7 times higher and the dilution value of potentially wafted substances also corresponds to this, should they all be transported up to this monitoring point. A large complex of areas protected according to the national legislation of the Czech Republic, Slovak Republic and Austrian Republic begins downstream Břeclav. Dyje falls after approximately 32 km of water course from the last measured monitoring point at Dyje (in Ladná) into Morava that has average annual flow rate of $61.1 \text{ m}^3 \cdot \text{s}^{-1}$ in the last measured monitoring point upstream the confluence with Dyje in Lanžhot. Several smaller water courses (Kyjovka, Včelínek) fall to both rivers in addition prior to leaving the Czech Republic. It means that Morava River has average flow rate of $98 \text{ m}^3 \cdot \text{s}^{-1}$ in the Slovakian – Austrian borderland and the dilution (compared to the monitoring point Mohelno as the potential source of substances with highest concentration) reaches values approaching the value of 1:20.

Since the values of loading water course and model organisms meet the parameters of IAEA Safety Standards, Draft Safety Guide DS 427 with large margin already in Jihlava downstream the Mohelno water reservoir, the load of model organisms in the area March-Thaya-Auen will be at least 20 times lower. However, the actual load in the Austrian territory will be even many times lower due to the slow transfer by Dyje, including partial or temporary sedimentation of radionuclides in the system of Nové Mlýny reservoirs.

With regard to the fact that models proved radiation safety of the NNS operation for water and water tied organisms already in Jihlava River downstream the Mohelno water reservoir where it reaches tenths or even hundredth of normed values safe load for reference organisms according to the IAEA Safety Standards, Draft Safety Guide DS 427, then these loads will be by at least one order lower in the area March-Thaya-Auen.

Protection subjects – habitat in the area Natura 2000 system “FFH-Gebiet Thayatal bei Hardegg” (AT1208A00) (analogy to our Site of Community Importance)

(Prepared according to the standard data form for the area FFH-Gebiet Thayatal bei Hardegg (AT1208A00), <http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=AT1208A00>)

3130 Oligotrophic to mesotrophic standing waters of plain to subalpine level of continental and alpine zone

3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition type vegetation

3260 Water courses of plain to mountain levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation

4030 European dry heaths

6110* Calcareous or basophilic grasslands (Alysso-Sedion albi)

6190 Rupicolous pannonic grasslands (Stipo-Festucetalia pallentis)

6210* Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia), notable places of occurrence of the orchid family

6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)

6430 Hydrophilous tall herb fringe communities of plains and of the mountain to alpine levels

6510 Extensively managed hay meadows of the planar to submontane zones (Arrhenatherion, Brachypodium-Centaureion nemoralis)

8220 Siliceous rocky slopes with chasmophytic vegetation

8230 Siliceous rock with pioneer vegetation (Sedo-Scleranthion, Sedo albi-Veronicion dillenii)

8310 Caves with no public access

9110 Beech forests of *Luzulo-Fagetum* association
 9130 Beech forests of *Asperulo-Fagetum* association
 9150 Medio-European limestone beech forests (*Cephalanthero-Fagion*)
 9170 *Galio-Carpinetum* oak-hornbeam forests
 9180* *Tilio-Acerion* forests of slopes, screes and ravines
 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* of temperate and boreal Europe (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)
 91M0 Thermophilic Pannonic-Balkan oakwoods of Turkey oak and sessile oak (do not occur in the Czech Republic)

- Vertebrates

- mammals

- Geoffroy's bat (*Myotis emarginatus*)
- western barbastelle (*Barbastella barbastellus*)
- Bechstein's bat (*Myotis bechsteinii*)
- greater mouse-eared bat (*Myotis myotis*)
- lesser horseshoe bat (*Rhinolophus hipposideros*)
- Eurasian otter (*Lutra lutra*)

- amphibians

- northern crested newt (*Triturus cristatus*)
- European fire-bellied toad (*Bombina bombina*)

- fish

- European bullhead (*Cottus gobio*)

- Invertebrates

- Butterflies

- eastern eggar (*Eriogaster catax*)
- scarce fritillary (*Euphydryas maturna*)
- dusky large blue (*Phengaris nausithous*)
- scarce large blue (*Phengaris teleius*)
- large copper (*Lycaena dispar*)
- Jersey tiger (*Euplagia quadripunctaria*)

- beetles

- stag beetle (*Lucanus cervus*)

- molluscs

- thick shelled river mussel (*Unio crassus*)
- narrow-mouthed whorl snail (*Vertigo angustior*)

- Higher plants

- greater pasque flower (*Pulsatilla grandis*)

Protection subjects of the National Park “Thayatal National Park”.

These protection subjects do not depend on above mentioned protection subjects of the site of Natura 2000 system “FFH-Gebiet Thayatal bei Hardegg” but they were selected based on the national legislation of the Federal Republic of Austria.

Taken over from the source http://www.natura.org/sites_at_thayatal.html,

Habitat:

3260 Water courses of plain to mountain levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation

4030 European dry heaths

6110* Calcareous or basophilic grasslands (*Alyso-Sedion albi*)

6210* Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*), notable places of occurrence of the orchid family

6240* Sub-pannonic steppic grasslands

- 6510 Extensively managed hay meadows of the planar to submontane zones (*Arrhenatherion*, *Brachypodio-Centaureion nemoralis*)
 8220 Siliceous rocky slopes with chasmophytic vegetation
 9110 Beech forests of *Luzulo-Fagetum* association
 9130 Beech forests of *Asperulo-Fagetum* association
 9150 Medio-European limestone beech forests (*Cephalanthero-Fagion*)
 9170 *Galio-Carpinetum* oak-hornbeam forests
 9180* *Tilio-Acerion* forests of slopes, screes and ravines

Zoology:

- Vertebrates
 - mammals
 - Geoffroy's bat (*Myotis emarginatus*)
 - Eurasian otter (*Lutra lutra*)
 - birds
 - black stork (*Ciconia nigra*)
 - Eurasian hoopoe (*Upupa epops*)
 - Eurasian wryneck (*Jynx torquilla*)
 - common kingfisher (*Alcedo atthis*)
 - white-tailed eagle (*Haliaeetus albicilla*)
 - reptiles
 - amphibians
 - northern crested newt (*Triturus cristatus*)
 - European tree frog (*Hyla arborea*)
 - pool frog (*Rana lessonae*)
 - agile frog (*Rana dalmatina*)
 - fish
 - spined loach (*Cobitis taenia*)
 - European bullhead (*Cottus gobio*)
- Invertebrates
 - Butterflies
 - clouded Apollo (*Parnassius mnemosyne*)
 - giant peacock moth (*Saturnia pyri*)
 - Old World swallowtail (*Papilio machaon*)
 - southern festoon (*Zerynthia Polyxena*)
 - Jersey tiger (*Euplagia quadripunctaria*)
- Higher plants:
 - needle grass (*Stipa dasyphylla*)
 - Hungarian iris (*Iris variegata*)
 - black false hellebore (*Veratrum nigrum*)
 - yellow monkshood (*Aconitum anthora*)
 - sedge (*Carex pediformis*)
 - Siberian melic grass (*Melica altissima*)
 - lady's-slipper orchid (*Cypripedium calceolus*)
 - gas plant (*Dictamnus albus*)
 - purple small-reed (*Calamagrostis canescens*)
 - night-scented stock (*Hesperis tristis*)

Protection subjects – habitats in the area of Natura 2000 system - FFH-Gebiet March-Thaya-Auen AT1202000 (analogy to our Site of Community Importance)

- 1530* Pannonic salt steppes and salt marshes (do not occur in the Czech Republic)
 2340* Pannonic inland dunes (do not occur in the Czech Republic)
 3130 Oligotrophic to mesotrophic standing waters of plain to subalpine level
 3150 Natural eutrophic lakes
 3270 Rivers with muddy banks with vegetation
 6240* Sub-pannonic steppic grasslands
 6250* Pannonic loess steppic grasslands

- 6440 Alluvial meadows of river valleys
 6510 Extensively managed hay meadows of the planar to submontane zones
 9160 Sub-Atlantic and Central European oak and oak-hornbeam forests
 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior*
 91F0 Riparian mixed forests of *Quercus robur*
 91G0* Pannonic oak-hornbeam forests
 * priority habitat

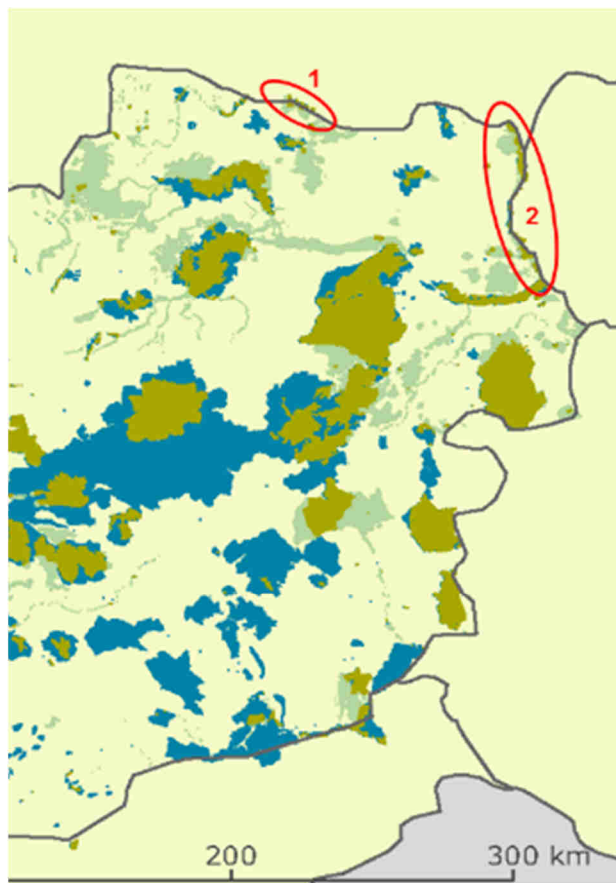
- vertebrates
 - mammals
 - Eurasian beaver (*Castor fiber*)
 - greater mouse-eared bat (*Myotis myotis*)
 - European ground squirrel (*Spermophilus citellus*)
 - Eurasian otter (*Lutra lutra*)
 - amphibians
 - Danube crested newt (*Triturus dobrogicus*)
 - European fire-bellied toad (*Bombina bombina*)
 - reptiles
 - European pond turtle (*Emys orbicularis*)
 - cyclostomes and fish
 - Mesopotamian asp (*Leuciscus aspius*)
 - Danube streber (*Zingel streber*)
 - common zingel (*Zingel zingel*)
 - European bitterling (*Rhodeus amarus*)
 - gudgeon (*Gobio gobio*)
 - schraetzer (*Gymnocephalus schraetser*)
 - European weatherfish (*Misgurnus fossilis*)
 - pigo (*Rutilus pigus*)
 - spined loach (*Cobitis taenia*)
- Invertebrates
 - beetles
 - flat bark beetle (*Cucujus cinnaberinus*)
 - stag beetle (*Lucanus cervus*)
 - great capricorn beetle (*Cerambyx cerdo*)
 - Butterflies
 - eastern eggar (*Eriogaster catax*)
 - dusky large blue (*Phengaris nausithous*)
 - scarce large blue (*Phengaris teleius*)
 - large copper (*Lycaena dispar*)
 - Dragonflies
 - green snaketail (*Ophiogomphus cecilia*)
 - molluscs
 - thick shelled river mussel (*Unio crassus*)

Protection subjects – species in the area of Natura 2000 system European Area of Birds protection March-Thaya-Auen AT1202V00 (analogy to our special protection area of birds)

Eurasian bittern (*Botaurus stellaris*)
 little bittern (*Ixobrychus minutus*)
 white stork (*Ciconia ciconia*)
 black stork (*Ciconia nigra*)
 black woodpecker (*Dryocopus martius*)
 merlin (*Falco columbarius*)
 spotted crake (*Porzana porzana*)
 little crake (*Porzana parva*)
 corn crake (*Crex crex*)
 common crane (*Grus grus*)
 ruff (*Philomachus pugnax*)
 short-eared owl (*Asio flammeus*)

Eurasian spoonbill (Platalea leucorodia)
European golden plover (Pluvialis apricaria)
black-crowned night heron (Nycticorax nycticorax)
common kingfisher (Alcedo atthis)
collared flycatcher (Ficedula albicollis)
European nightjar (Caprimulgus europaeus)
tawny pipit (Anthus campestris)
red kite (Milvus milvus)
black kite (Milvus migrans)
smew (Mergellus albellus)
Montagu's harrier (Circus pygargus)
hen harrier (Circus cyaneus)
western marsh harrier (Circus aeruginosus)
eastern imperial eagle (Aquila heliaca)
lesser spotted eagle (Aquila pomarina)
white-tailed eagle (Haliaeetus albicilla)
osprey (Pandion haliaetus)
barred warbler (Sylvia nisoria)
black-winged stilt (Himantopus himantopus)
ferruginous duck (Aythya nyroca)
whiskered tern (Chlidonias hybridus)
black tern (Chlidonias niger)
common tern (Sterna hirundo)
Caspian tern (Sterna caspia)
wood lark (Lullula arborea)
bluethroat (Luscinia svecica)
peregrine falcon (Falco peregrinus)
Syrian woodpecker (Dendrocopos syriacus)
middle spotted woodpecker (Dendrocopos medius)
red-backed shrike (Lanius collurio)
European honey buzzard (Pernis aviporius)
wood sandpiper (Tringa glareola)
great egret (Ardea alba)
purple heron (Ardea purpurea)
little egret (Egretta garzetta)
Eurasian eagle-owl (Bubo bubo)
grey-headed woodpecker (Picus canus)

Areas of Natura 2000 system and specially protected areas in Austria and their overlapping



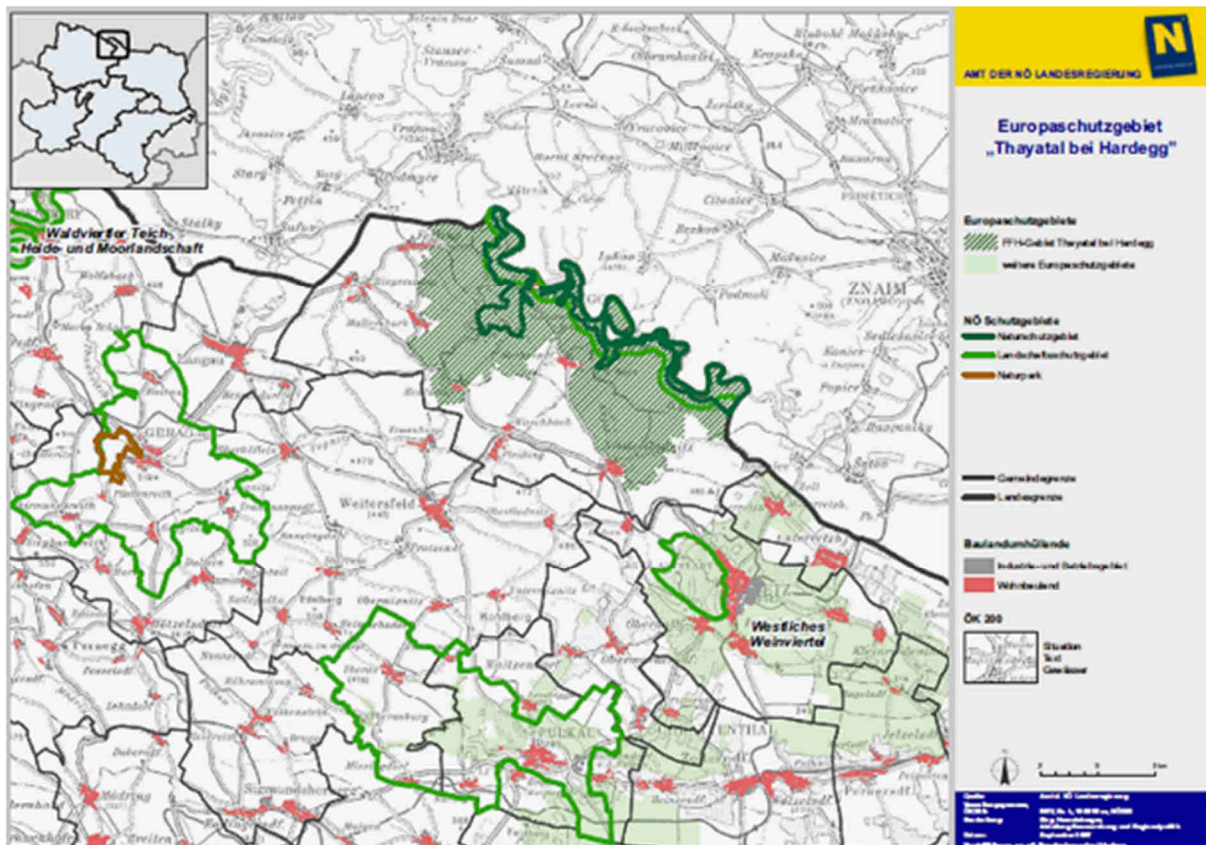
Území soustavy Natura 2000 a zvláště chráněná území v Rakousku a jejich překryvy

- Zvláště chráněná území podle národní legislativy a kategorií IUCN
 - Území soustavy Natura 2000
 - Překryv obou typů území
- Analyzovaná území:
- 1 – Národní park a lokalita Natura 2000 Thaytal
 - 2 – Chráněné území a lokality Natura 2000 March-Thaya-Auen AT1202000 a AT1202V00

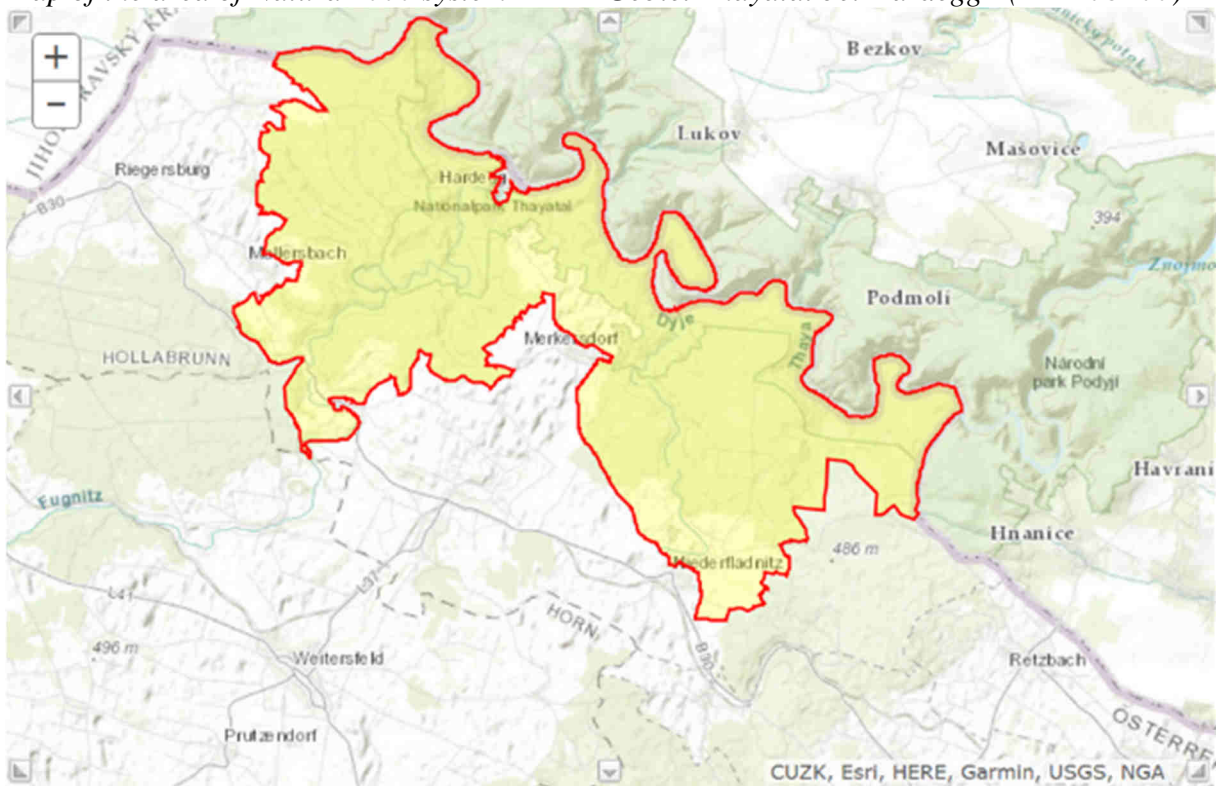
(upraveno podle výřezu východní části mapy ze zdroje: <https://www.eea.europa.eu/countries-and-regions/austria>)

Území soustavy Natura 2000 a zvláště chráněná území v Rakousku a jejich překryvy	Areas of Natura 2000 system and specially protected areas in Austria and their overlaps
Zvláště chráněná území podle národní legislativy a kategorií IUCN	Specially protected areas according to the national legislation and IUCN categories
Území soustavy Natura 2000	Areas of Natura 2000 system
Překryv obou typů území	Overlap of both area types
Analyzovaná území	Analysed areas
Národní park a lokalita Natura 2000 Thaytal	National park and Natura 2000 site Thaytal
Chráněné území a lokality Natura 2000 March-Thaya-Auen AT1202000 a AT 12D2V00	Protected areas and Natura 2000 sites March-Thaya-Auen AT1202000 and AT 12D2V00
upraveno podle výřezu východní části mapy ze zdroje	modified according to the cut out of eastern part of the map from the source

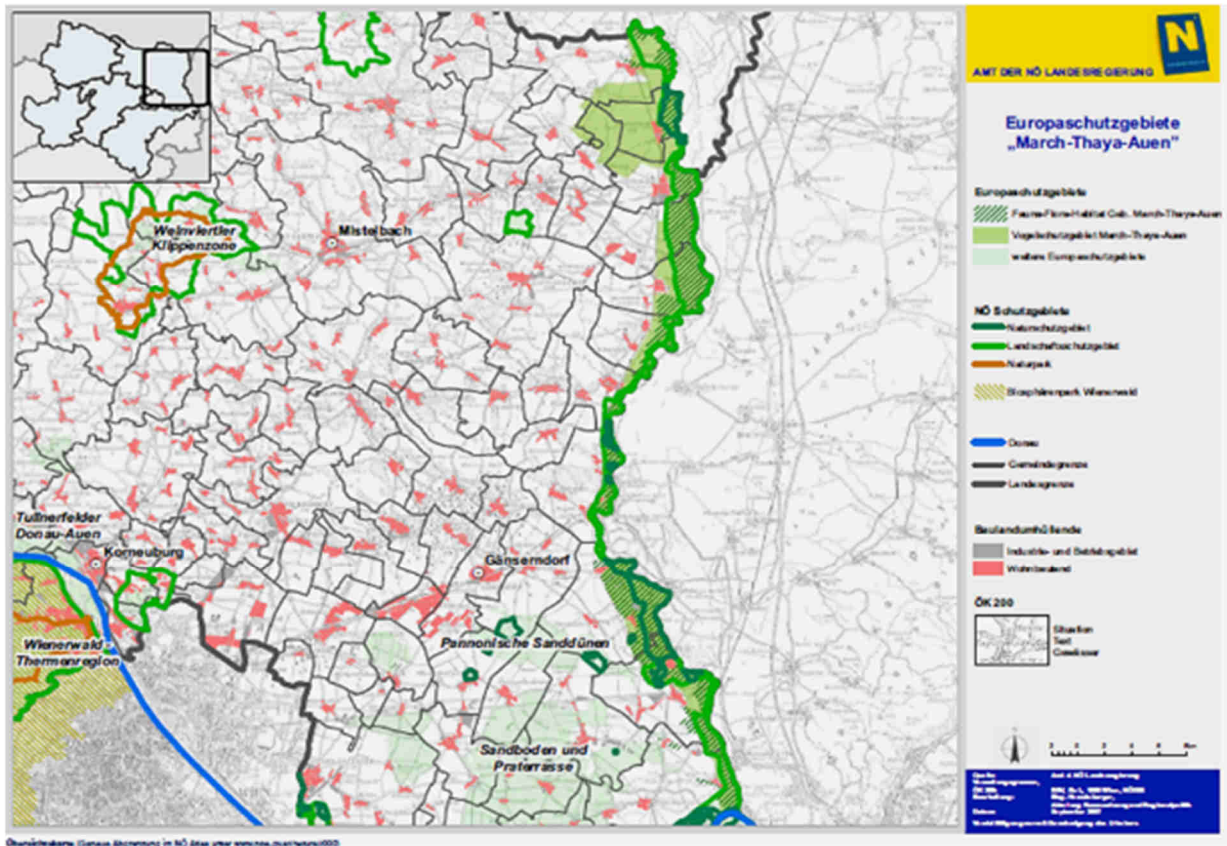
General map of the overlap of Natura 2000 system area “FFH-Gebiet Thayatal bei Hardegg” (AT1208A00) and NP Thayatal



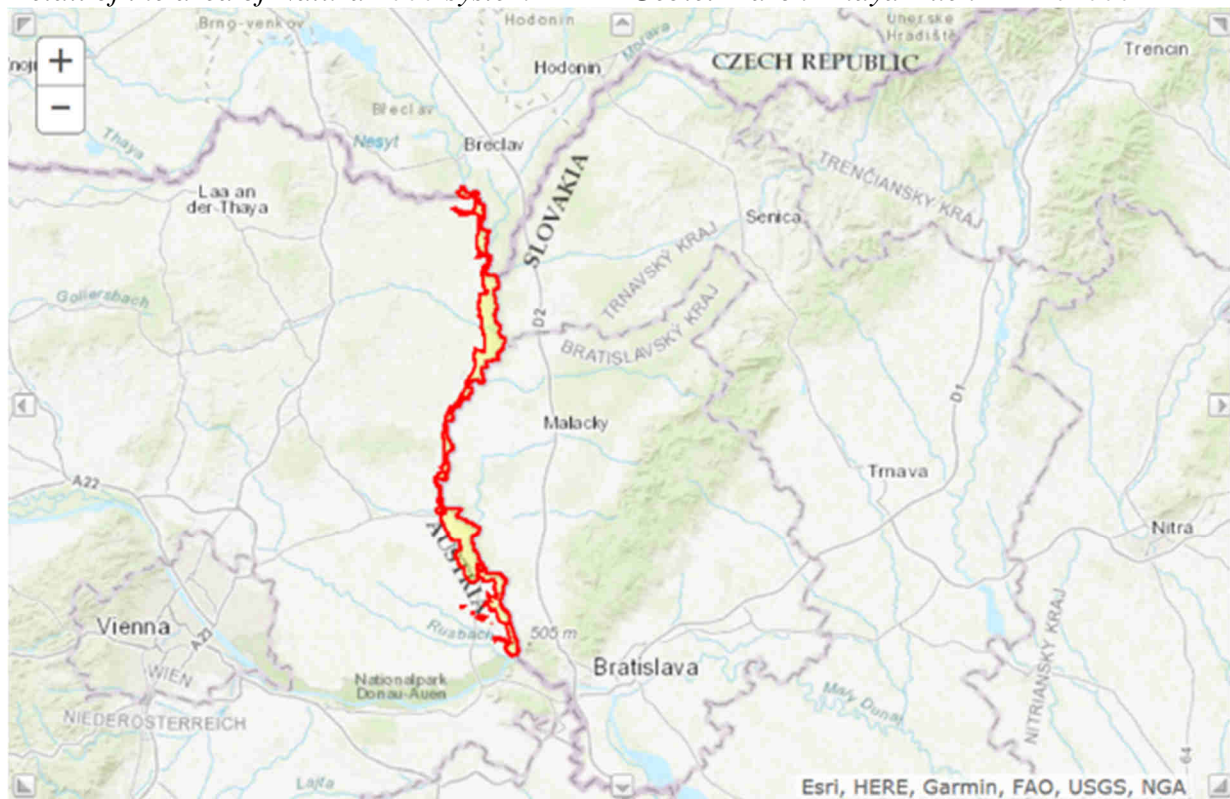
Map of the area of Natura 2000 system “FFH-Gebiet Thayatal bei Hardegg” (AT1208A00)



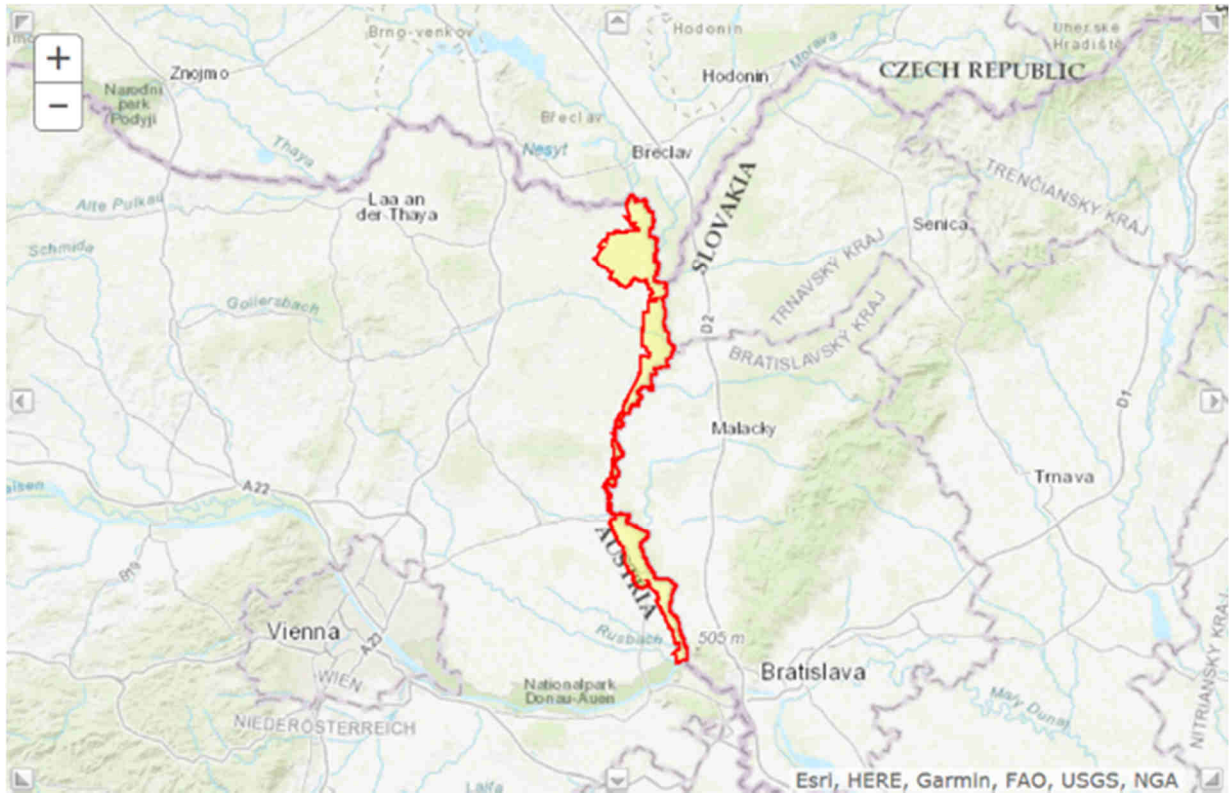
Area of Natura 2000 system - FFH-Gebiet March-Thaya-Auen AT1202000 and European birds protection area March-Thaya-Auen AT1202V00 overlapping with specially protected areas according to the Austrian legislation



Detail of the area of Natura 2000 system - FFH-Gebiet March-Thaya-Auen AT1202000



Detail of the Natura 2000 Europäischen Vogelschutzgebiet March-Thaya-Auen AT1202V00



Current spread of the wildcat (*Felis sylvestris*) in Europe



The calculated radiation loading on reference animals and plants is many digit places under the derived reference levels in all analysed cases of annual operating effluents from NNS. Calculations of radiation load of the population of reference organisms were performed using the program ESTE Annual Impacts according to the ICRP 108 and ICRP 114 methodology. If reference levels are reached, it would be justified that specific study and specific monitoring of specific groups of organisms were performed in order to determine the transient and accumulation factors more precisely, eventually to determine the habits of individual organisms.

Individual areas of interest for calculating impacts on biosphere are shown at the figure below. Sectors 130 and 118 cover the area of National Park Podyjí, the sector 106 represents the area with strongest impacts on biota from atmospheric effluents and the sector 83 represents the area with strongest impacts on biota from effluents to hydrosphere, all in the territory of Austria.

Impacts on reference animals and plants in the area of National Park Podyjí, caused by operating effluents from NNS to atmosphere, are specified in the table below.

Impacts on reference animals of operating effluents from NNS to hydrosphere at the most severely affected water course of Dyje in Austrian territory (sector 83) and, for comparison, impacts on the most severely affected water body in Czech territory (Mohelno, sector 28, population of reference organisms living in Mohelno reservoir), are also specified in the table below.

Calculated values of irradiation of individual reference organisms are so low in the whole vicinity of NNS that they make possible application of safety margin at the level of two digit places, i.e. to increase calculated values of dose rates to individual organisms 100 times so that we are able to eliminate any possibility of underestimating the irradiation of organisms even more strongly. Safety margin at the level of factor 100 allows to assume that even in case of (unknown and purely hypothetical) activity cumulation in individual specific organisms, the biosphere is endangered by operating effluents from NNS neither in the National Park Podyjí, nor wherever in the territory of Austria.

Plants are the most severely affected organisms in case of effluents to atmosphere; up to 99.8 % of their dose rate (Gy/day) is caused by H-3 and C-14. Impacts on animals are caused by Cs, Co and I nuclides above all.

Impacts on biota from effluents to hydrosphere are zero for the area of National Park Podyjí. Dyje River is not a recipient of effluents from the NNS site in the respective area. Jihlava River joins with Dyje as far as within the system of water reservoirs Nové Mlýny.

The following nuclides contribute dominantly to the dose rate of organisms in case of the impact of effluents to hydrosphere: H-3 (15 - 20 %), Cs-137, Cs-134, Co-60, C-14 and Sr-90. Organisms living in Mohelno reservoir are most severely affected, but the impacts are 3 digit places at minimum under reference levels even here.

It is also possible to mention as a supporting argument concerning the influence of NNS operation on human beings and other live organisms that the NNS operation will not represent any dramatic change of the existing situation, that lasts for approximately 30 years already, as far as operating effluents to atmosphere and to hydrosphere are concerned. It means that even if the effluents have harmful impact on the biosphere (or measurable harmful impact on the biosphere), such harmful impact could have manifested itself already.

Sectors 130 and 118 cover the area of National Park Podyjí, the sector 106 represents the area with strongest impacts on biota from atmospheric effluents and the sector 83 represents the area with strongest impacts on biota from effluents to hydrosphere, all in the territory of Austria

Delimitation of sectors under review

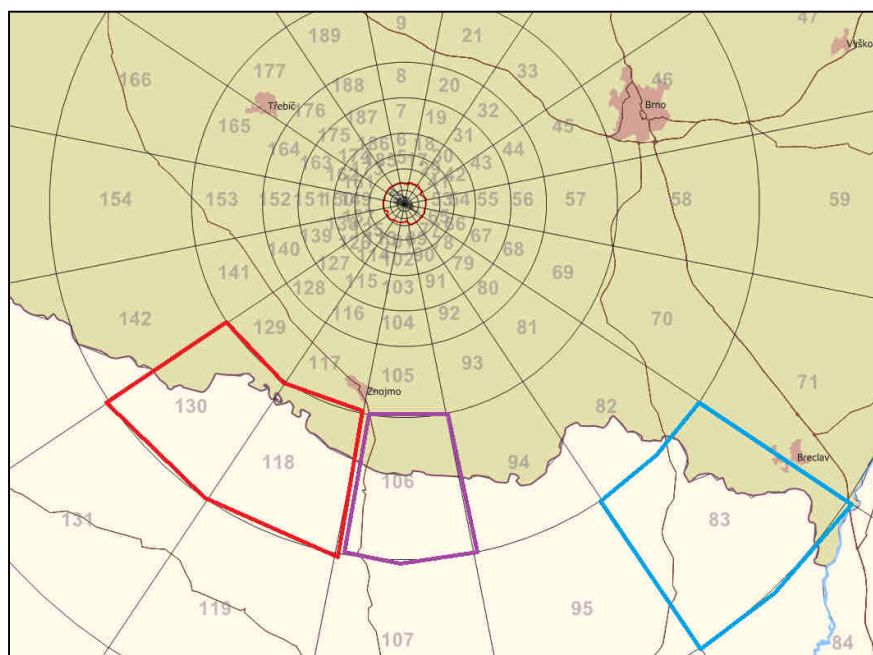


Table Impacts on reference animals and plants in the area of National Park Podyjí, calculation for the power alternative: NNS 2 x 1200 MWe, EDUI-4 decommissioning

Reference animal or plant (RAP)	Impacts on biota Sector 130 [Gy/day]	Impacts on biota Sector 118 [Gy/day]	Impacts on biota Sector 106 [Gy/day]	Derived reference value according to IAEA [Gy/day]
Deer	2.5E-13	3.8E-13	2.0E-12	1E-04 to 1E-03
Norway rat	2.8E-13	4.2E-13	2.2E-12	1E-04 to 1E-03
Duck	5.0E-13	8.1E-13	4.3E-12	1E-04 to 1E-03
Frog	8.3E-14	1.3E-13	6.5E-13	1E-03 to 1E-02
Bee	1.4E-13	2.1E-13	1.1E-12	1E-02 to 1E-01
Earthworm	3.5E-13	5.4E-13	2.7E-12	1E-02 to 1E-01
Pine	1.1E-10	1.8E-10	8.2E-10	1E-04 to 1E-03
Grass	1.0E-10	1.7E-10	7.6E-10	1E-03 to 1E-02
Trout	0.0E+00	0.0E+00	0.0E+00	1E-03 to 1E-02

Table: Impacts on reference animals from effluents to hydrosphere at the most severely affected water course of Dyje in Austrian territory (sector 83) and at the most severely affected water body in Czech territory (Mohelno, sector 28), calculation for the power alternative: NNS 2 x 1200 MWe, EDUI-4 decommissioning

Reference animal or plant (RAP)	Impacts on biota, Dyje River Sector 83 [Gy/day]	Impacts on biota, Mohelno Sector 28 [Gy/day]	Derived reference value according to IAEA [Gy/day]
Duck	1.1E-08	2.4E-06	1E-04 to 1E-03
Frog	5.6E-09	2.9E-07	1E-03 to 1E-02
Trout	2.2E-08	1.8E-06	1E-03 to 1E-02

The reviewer holds the view based on the information presented above that specially protected area and sites of Natura 2000 system including their protection subjects cannot be adversely affect by the outputs, the explanation can be accepted as exhaustive.

5. Global assessment of the project acceptability with regard to impacts on Sites of Natura 2000 system

The evaluator states that the assessed project of construction of the NNS is located outside any Natura 2000 site, including the closest SCI CZ0614134 Jihlava Valley. During construction work, there will be no direct interference with the biotopes of SCI CZ0614134 - Jihlava Valley; however, there may be locally, in the border area of the SCI and development area D, some air pollution due to dust particles. The risks associated with failure to comply with technological discipline (interference of building machinery beyond the defined area of interest, dust from the construction site) can be easily avoided by ensuring biological surveillance at the construction site during construction and by making sure that construction machinery does not leave the border area between the SCI and the development area. The evaluator states regarding individual aspects:

Impacts of microclimatic changes, including impacts of potential shielding of thermophilic populations and cumulative impacts on SCI CZ0614134 - Jihlava Valley, were ruled out through the modelling of such phenomena.

Impacts on the biotopes of water plants in the Jihlava River, which are the subject of protection in SCI CZ0614134 - Jihlava Valley, cannot be expected. The most important factor affecting the condition of these biotopes is the presence of the Mohelno Reservoir (and the entire Mohelno – Dalešice Reservoir System). Their management controls the flow rate and temperature of water so much that in light of them, the impacts of EDU1-4 and the NNS are minor and not measurable.

The impact on other Natura 2000 sites in the vicinity is not significant, considering their distance from the project of NNS construction and operation.

The construction and operation of the assessed project will not therefore have any significant negative impact on any subject of protection and will not result in any interference with the integrity of Natura 2000 areas. Some impacts may have a minor negative impact on the subjects of protection (-1) in SCI CZ0614134 - Jihlava Valley and SCI CZ0623819 – Rokytňá River. Most of these impacts can be mitigated or eliminated entirely. Change of insolation in SCI CZ0614134 - Jihlava Valley cannot be mitigated by any other measure but given the expected change of climate, the receipt of the total amount of energy will not decline in any way. Shielding cannot be even compensated by an increase in the amount of incident solar energy onto the territory, as attested by the results of the ongoing measurements. In spite of the impacts of steam plume from EDU1-4, the total annual incident solar energy has been continuously growing over the last four decades.

The summary shown below represents the resulting evaluation of impacts based on the principle of the weakest chain link. If a major negative impact (-2) or a minor negative impact (-1) on one subject of protection was therefore identified in any SCI in the detailed analysis, this lowest rating would then apply to the entire site.

Determination of the scope of impacts on the subjects of protection at Natura 2000 sites

Natura 2000 site (number and name)	Distance from the NNS in km	Assessment of impacts of project construction and operation on SCIs and SPAs
SCI CZ0614134 - Jihlava Valley	0 – 6	-1
SCI CZ0622226 - Velký Kopec	4.5	0
SCI CZ0623717 - Tavíkovice - castle	6.6	0

SCI CZ0614131 - Oslava and Chvojnice Valley	7 to 14	0
SCI CZ0622161 - Ve Žlebě	7.5	0
SCI CZ0623819 - Rokytaná River	7.5 – 14	-1
SCI CZ0614133 - Kozének	7.6	0
SCI CZ0622179 - Široký	8	0
SCI CZ0622150 - Biskoupský Kopec hill	9.2	0
SCI CZ0613695 - Biskupice - church	10.5	0
SCI CZ0613696 - Biskupice - school	10.6	0
SCI CZ0610179 - Jedlový Les forest and Rokytaná Valley	12.1 – 14.1	0
SCI CZ0620101 - Mikulovický Les forest	12.4 – 14.0	0
SCI CZ0613816 - Náměšťská Obora	12.5 – 14.0	0
SCI CZ0622169 - Na Kocourkách	13.2	0
SCI CZ0624128 - Krumlovsko-Rokytnské Slepence site	13.7 – 15.5	0
SCI CZ0612147 - Špilberk	14.3	0
SCI CZ0623365 - Rakšické Louky meadows	14.7	0
SCI CZ0622175 - Pekárka	14.8 – 15.6	0
SCI CZ0623707 - Jevišovice old castle	15.3	0
SCI CZ0623708 - Jevišovice new castle	15.6	0
SCI CZ0620013 - Pod Šibeničním Kopcem site	15.1	0
SCI CZ0613003 - Maršovec and Čepička	16.8	0
SCI CZ0624064 - Krumlovský Les forest	16.8 – 21.5	0
SCI CZ0620204 - Lapikus	17.4 – 18.3	0
SCI CZ0622223 - U kapličky	17.7	0
SCI CZ0623367 - U Huberta	18	0
SCI CZ0620056 - Výrovické Kopce hills	18.1	0
SCI CZ0623348 - Jankovec	19.1 – 19.9	0
SCI CZ0624106 - Tvořhrázský Les forest	18.1 – 24.1	0
SCI CZ0623041 - Jevišovka	19.1 – 38.4	0
SCI CZ0623019 - Oleksovická Mokřina wetlands	20	0
SPA CZ0621032 - Podyjí	26 – 35	0
SPA CZ0621031 - Jaroslavické Rybníky ponds	34.9 – 37.7	0
SPA CZ0621030 - Middle reservoir of the Nové Mlýny water system	39.1 – 43.3	0
SPA CZ0620009 - Lednické Rybníky ponds	54.5 – 61.3	0
SPA CZ0621026 - Hovoransko - Čejkovicko	59.7 – 65.8	0
SPA CZ0621027 - Confluence - Tvrdonicko	65.8 – 78.9	0

The impacts on sites as a whole were also assessed on the basis of the principle of preservation of their integrity. These are cases when no subject of protection is affected separately on a Natura 2000 site but the identified impact would impair the overall function of the ecosystems, with subsequent damage to the site. No such impact was identified on any of the Natura 2000 sites.

Opinion of the reviewer:

The natura impact assessment under review ensued from large set of documents, data and information of comprehensive nature exceeding mere documents and data concerning biota or ecosystems, based on which it was possible to assess both individual impacts and their accumulation with other factors.

The natura impact assessment under review contains all substantial data and is carried out using methodically correct set of objective evaluation methods. The content of the submitted natura impact assessment corresponds to basic requirements of the Act 114/1992 Coll. as amended, the submitted natura impact assessment of the project impact is in accordance with Section 45i of Act No. 114/1992 Coll., as amended. The structuring into chapters does not exactly meet requirements of the currently valid Decree No. 142/2018 Coll., Section 1 (neither the current amendment of ANLC, effective since 1.1.2018, nor the quoted Decree, effective since 1.8. 2018, was in force at the time of finalization), but it contains all substantial data required by the Decree. The natura impact assessment corresponds formally with the valid methodology (Chvojková et al., 2011). Potentially affected Sites of Natura 2000 system (SCI Jihlava Valley) are correctly identified, the evaluation regarding the shielding plume is carried out, too, and data concerning effects of waste water on water courses that are part of some SCI delimited on the water courses as accepting recipients are also presented.

The evaluation of impacts on protection subjects in water courses was consulted directly with the Water System Research Institute in Prague, in connection with the long-term monitoring of parameters in water course of Jihlava River, whereas many members of the evaluator's team are erudite experts in their specializations and participate in the monitoring of environment quality or in comprehensive surveys for long time.

The summary evaluation presented above can be confirmed in principle with the conclusion that the project "*New Nuclear Source at the Dukovany Site*" of the presented active variant **will not generate significant adverse impacts** on protection subjects and integrity of sites of Natura 2000 system situated in vicinity of the project under review.

Thus, the mitigating measures ensuing from Chapter 3.6 of the presented Assessment can be reflected in the draft of the binding opinion.

Jihlava, May 2019

Signature of the reviewer:

RNDr. Milan MACHÁČEK

- the authorized person for processing assessments according to Section 45i of Act No. 114/1992 Coll., as amended, the Decision on authorisation Ref. No. 2396/630/06 as of 30.1.2007; the authorisation extended by the Decision of the Ministry of Environment Ref. No. 2882/ENV/17 154/630/17
- the holder of a certificate of competency for processing documentation and expert reviews according to Act No. 100/2001 Sb., the certificate No. 6333/246/OPV/93, the authorisation extended by the Decision Ref. No. 90668/ENV/16

List of the used literature, documentation and other documents

1. New Nuclear Source at the Dukovany locality. Documentation on evaluation of environment impacts according to the annexes No. 4 of Act No. 100/2001 Coll., as amended, with annexes. Ing. Petr Mynář et al., Amec Foster Wheeler s.r.o., Brno, June 2017, digital version, November 2017 (*IS EIA on www.cenia.cz, Project code MZP469*)
2. New Nuclear Source at the Dukovany locality. Biological, surveys and evaluations. Evaluation of the impact of the project construction and operation on protection subjects of Natura 2000 system according to the Section 45i, Act No. 114/1992 Coll., on nature and landscape conservation, as amended. Annex No. 3.2 of the EIA documentation, quoted under Item 1. RNDr. Vlastimil Kostkan, Ph.D. et al., Conbios s. r. o., Conservation Biology Service, Ivančice, April 2017, digital version November 2017 (*IS EIA on www.cenia.cz, Project code MZP469*)
3. New Nuclear Source at the Dukovany locality. Evaluation of the impact of the project construction and operation on protection subjects of Natura 2000 system according to the Section 45i, Act No. 114/1992 Coll., on nature and landscape conservation, as amended. Annex No. 3.1 of EIA documentation, quoted under Item 1. RNDr. Vlastimil Kostkan, Ph.D. Et al., Conbios s. r. o., Conservation Biology Service, Ivančice, May 2017, digital version November 2017 (*IS EIA on www.cenia.cz, Project code MZP469*)
4. Received written statements of subjects, concerning the documentation of environmental impact of the project pursuant to the Act 100/2001 Coll., as amended.
5. The requested supplementation of explaining data by the notifier based on the request of expert review author to the statement Ministry of Environment, Department of Species Protection and Implementation of International Commitments and Agency of Nature and Landscape Conservation of the Czech Republic, Regional Office of Administration of Protected Area Žďárské vrchy; Power Plant Dukovany II, a. s. + Amec Foster Wheeler s.r.o., Brno, June 2018
6. The requested supplementation of explaining data by the notifier based on the request of expert review author to the part of statement raised within the framework of Joint Opinion of Austrian Legal Representations for the Environment and Nature Protection, Power Plant Dukovany II, a. s. + Amec Foster Wheeler s.r.o., Brno, January 2019
7. Chvojková, E. (ed.), 2011: Manual for significance evaluation of impacts on protection subjects of the sites of Natura 2000 system. Ministry of Environment the Czech Republic Prague, 98 pp.
8. Chytrý, M., Kučera, T., Kočí, M., Grulich, V. et Lustyk, P. [eds.] (2010): Catalogue of Biotopes of the Czech Republic. Ed. 2. ANCLP CR, Prague.
9. Composite authors (2001a): Tending Sites of Natura 2000 system: Stipulation of Article 6 of Directive on habitats 92/43/EHS, edition Planet, IX/ 4.
10. Composite authors (2001b): Evaluation plans and projects, significantly affecting Sites of Natura 2000 system: Methodical manual to stipulations of articles 6(3) and 6(4) of the directive on habitats 92/43/EHS, edition Planet, XII/1.
11. Act No. 114/1992 Coll., on nature and landscape conservation , as amended
12. Act No. 100/2001 Coll., on environmental impact assessment and amending certain related acts (Environmental Impact Assessment Act), as amended.

Internet sources:

www.mzp.cz;

www.cenia.cz;

www.ochranaprirody.cz;

www.biomonitoring.cz;

www.cuzk.cz;

Annexes

Copy of reviewer's authorisation for performing assessment according to the Section 45 i, Act No. 114/1992 Coll.

Copy of the decision on authorization

MINISTRY OF ENVIRONMENT
Vršovická 65, 100 10 Prague 10

Mr. RNDr. Milan Macháček Za Prachárnou 4723/11 586 05 Jihlava
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Ref. No.: 69909/ENV/06
2396/630/06

Prague, 30.1.2007

DECISION

After the administration proceeding performed pursuant to No. 500/2004 Coll., Administrative Procedure Code, the Ministry of Environment, as the competent administration body according to the Section 45i, Par. 3 of Act No. 114/1992 Coll., on nature and landscape conservation, as amended (hereinafter „Act“ only), grants the application, Ref. No. 2396/630/06 that was filed on 30.1.2007 by

RNDr. Milan Macháček,
born on 9.12.1958 in Frýdlant, resident at Za Prachárnou 4723/11, 586 05 Jihlava
and

awards the authorization for performing assessment according to the Section 45i of the Act.

The authorization to perform assessment commences on the day of legal effect of this decision. The authorization is awarded for the time period of 5 years in accordance with Section 45i Par. 3 of the Act and it is possible to extend it repeatedly by further 5 years based on a new application filed at least 6 month prior to the validity expiry of the existing authorisation. The granted authorization is not transferable to another person.

Grounds

The applicant requested that the authorization is awarded and he fulfilled the conditions for the award of authorization stipulated by Section 45i Par. 3 and 4 of the Act and by Decree No. 468/2004 Coll., on persons authorized pursuant to the Landscape and Nature Conservation Act. The university education of corresponding specialization was documented by the diploma and the certificate of final state exam; the integrity was documented by the of convictions; passing the examination of professional competence was documented by the confirmation of passing the professional competence exam.

In view of the fact that the submitted application contains all the requisites and all the conditions were fulfilled for extending the authorization to conduct the assessment pursuant to Section 45i of the Law, the Ministry of the Environment has decided as stated in the operative part of this decision.

Instructions for appeal

A remonstrance can be submitted against this decision to the minister of environment by filing at the Ministry of Environment, Vršovická 65, 100 10 Prague 10, within 15 days after serving this decision.

(Round stamp)

Illegible signature
RNDr. Petr Roth, CSc.
Director of Department
of International Biodiversity Protection

round stamp: Ministry of Environment

This decision will be received by:

- a) applicant – participant in administration proceeding
- b) body competent for evidence – Department of International Biodiversity Protection of the Ministry of Environment

I confirm that I waive the possibility of submitting remonstrance against this decision.

Date: 30.1.2007

Signature. *Illegible signature*

SENDER:

RECIPIENT:

Department of Species Protection and Implementation of International Commitments Vršovická 65 100 10 Prague 10	Mr. RNDr. Milan Macháček Holíkova 3834/71 586 01 Jihlava
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Prague on January 17th, 2017
Ref. No.: 2882/ENV/17
154/630/17

DECISION

After the administration proceeding, the Ministry of Environment (hereinafter „Ministry" only), as the competent administration body according to the Section 45i, Par. 3 of Act No. 114/1992 Coll. on nature and landscape conservation, as amended (hereinafter „Act" only), grants the application Ref. No. 59770/ENV/16 - 3078/630/16 that was filed on 2. 9. 2016

by RNDr. Milan Macháček
born on 9.12. 1958 in Frýdlant,
resident at Holíkova 3834/71, 586 01 Jihlava
and

**extends the authorization for performing assessments according to the Section 4
5 i Act.**

The authorization is extended by further 5 years in accordance with Section 45i, Par. 3 of the Act, starting on **31.1. 2017** that is the day of enforceability of the decision.

The authorization cannot be transferred to another person.

It is possible to extend the authorization repeatedly by further 5 years under conditions stipulated by Decree No. 468/2004 Coll., on authorised persons, hereinafter “Decree” only).

Justification:

The applicant is holder of authorisation to perform assessment according to the Section 45i of the Act based on the decision on the authorisation award Ref. No. 69909/ENV/06 - 2396/630/06 dated 30. 1. 2007 that was awarded to him for the time period of 5 years in accordance with Section 45i Par. 3 of the Act and extended for the time period of 5 years by decision on extension of the authorisation Ref. No. 92226/ENV/11 -3152/630/11 dated 24. 11. 2011.

On 2. 9. 2016, an application Ref. No. 59770/ENV/16 - 3078/630/16 for extension of the mentioned authorisation was served at the ministry. The Ministry verified in accordance with stipulations of Section 45i, Par. 3 of the Act and Section 5 of the Decree, whether the applicant fulfils the conditions for the authorisation awarded set by law, and because in the period since the previous authorisation granting occurred change of substantialities decisive for assessment of professional competence of the authorized person (legal regulations related to the activities of authorized person changed since 2011 when the authorisation was extended), the Ministry imposed re-examination of professional competence of the applicant.

The re-examination took place on 17. 1. 2017 with the result "satisfied", as specified in the examination protocol that is part of the background paper for issuing this decision.

In view of the fact that no facts preventing the extension of the authorisation resulted from the re-examination, the submitted application contains all the requisites, and all conditions for extending the authorization to conduct the assessment pursuant to Section 45i of the Law were fulfilled, the Ministry of the Environment has decided as stated in the operative part of this decision.

Advice on remedial measure:

A remonstrance can be submitted against this decision to the minister of environment by filing at the Ministry of Environment, Vršovická 65, 100 10 Prague 10, within 15 days after serving this decision.

Round stamp:
Ministry of Environment

Ing. Jan Šíma,
Director of Department of Species
Protection and Implementation of
International Commitments

I confirm that I waive the possibility of submitting remonstrance against this decision.

Date: 17 / 1 /2017

Signature: *Illegible signature*

2/2