D7.1 Contract

#### **CONTRACT FOR CONSULTANTS' SERVICES**

**Lump-Sum Remuneration** 

CONTRACT N°: BIDSF 019 4 001

# FEASIBILITY STUDY FOR THE MANAGEMENT OF V1 NPP PRIMARY CIRCUIT COMPONENTS

between

Jadrová a vyraďovacia spoločnosť a.s. (JAVYS a.s.)

and

JSC Specialus Montažas-NTP, JSC All-Russian Research Institute for Nuclear Power Plant (VNIIAES), Lithuanian Energy Institute (LEI)

Dated:



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### **BIDSF project D7.1**

# FEASIBILITY STUDY FOR THE MANAGEMENT OF V1 NPP PRIMARY CIRCUIT COMPONENTS

**FORM OF CONTRACT** 



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#### **FORM OF CONTRACT**

This CONTRACT (hereinafter called the "Contract") made on , 2012 pursuant to § 269 (2) of the Commercial Code, comes into force on the date of the signature by the Parties and becomes effective the day after the date when the Contract is published in accordance with sec. 47a of the Civil Code and sec. 5a of the Act. No. 211/2000 Coll. on Free Access to Information and on Change and Supplement of Certain Acts (Act on Free Information), as amended between,

on the one hand, **Jadrová a vyraďovacia spoločnosť a.s.** a state owned joint stock company duly organised and existing under the Laws of the Slovak Republic with its registered office located at Tomášikova 22, 821 02 Bratislava, Slovak Republic and registered with the Trade Register of the District court Bratislava I in section Sa under number 4649/B, Company Identification No.: 35 946 024, duly represented by Mr. Peter Čižnár – Chairman of the Board of Directors and Mr. Miroslav Obert – Vice-Chairman of the Board of Directors, entrusted with the relevant powers in compliance with the Statute of Jadrová a vyraďovacia spoločnosť, a.s. (hereinafter called "the Client"),

and,

on the other hand, Joint Venture Partnership led by JSC Specialus Montažas-NTP and consisting of the following entities, each of which will be jointly and severally liable to the Client for all the consultant's obligations under this Contract, namely:

**JSC Specialus Montažas-NTP** a company existing under the Laws of Lithuania with its registered office located at Jaunystes st. 21, LT-31230, Visaginas, Lithuania, identification number 1555993787, registered with the State Enterprise Centre of Registers Utena Branch Office under number 086996 duly represented by Mr. Marijuš Koženevskij - Director, entrusted with the relevant powers in compliance with the Statute of JSC Specialus Montažas-NTP,

**JSC All-Russian Research Institute for Nuclear Power Plant Operation (VNIIAES)** a company existing under the Laws of Russian Federation with its registered office located at Ferganskaya Str. 25, Moscow, Russian Federation, identification number 1027721007797, registered with the Uniform State Register of Legal Entities of Russian Federation in 2002-11-13 duly represented by Mr. Evgeny Ivanov – Deputy General Director, entrusted with the relevant powers in compliance with the Statute of JSC VNIIAES and Power of Attorney No. 446/5537,

**Lithuanian Energy Institute (LEI)** a company existing under the Laws of Lithuania with its registered office located at Breslaujos St. 3 - LT-44403, Kaunas, Lithuania, identification number 111955219, registered with the State Enterprise Center of Register Kaunas Branch Office in 1992-01-29, duly represented by Mr. Eugenijus Ušpuras – Director entrusted with the relevant powers in compliance with the Statute of Lithuanian Energy Institute

(hereinafter called the "Consultant")



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(the Client and the Consultant jointly hereafter as "Parties")

#### **WHEREAS**

- (a) the Client has requested the Consultant to provide certain consulting Services as defined in Appendix A attached to this Contract (hereinafter called the "Services");
- (b) the Consultant, having represented to the Client that it has the required professional skills, and Personnel and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract;
- (c) the Client has received a grant from Bohunice International Decommissioning Support Fund being administered by the European Bank for Reconstruction and Development (hereinafter called the "Bank") towards the cost of the Services and intends to apply a portion of the proceeds of this grant to eligible payments under this Contract, it being understood (i) that payments by the Bank will be made only at the request of the Client and upon approval by the Bank, (ii) that such payments will be subject, in all respects, to the terms and conditions of the Grant Agreement, and (iii) that no party other than the Client shall derive any rights from the Grant Agreement or have any claim to the grant proceeds;

#### NOW THEREFORE the parties hereto hereby agree as follows:

- 1. The documents forming the Contract are to be taken as mutually explanatory of one another. For purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:
  - (a) The Special Conditions of Contract;
  - (b) The General Conditions of Contract;
  - (c) The following Appendices:
    - Appendix A: Description of the Services;
    - Appendix B: Key Personnel and Sub-Consultants;
    - Appendix C: Breakdown of Contract Price;
    - Appendix D: Services and facilities provided by the Client;
    - Appendix E: Terms of Reference of the Project;
    - Appendix F: Consultant's Financial Proposal;
    - Appendix G: QA and QC Surveillance Requirements;
    - Appendix H: Safety and Technical Conditions;
    - Appendix I: Form of Advance Payment Guarantee;
    - Appendix J: Request for Additional Services
- 2. The mutual rights and obligations of the Client and the Consultant shall be as set forth in the Contract, in particular:
  - (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract; and



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- (b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract. Payments to the Consultant hereunder will be made in EURO currency. Subject to sub-paragraph (c) hereunder, and notwithstanding any other provisions of this Contract, payments under this Contract shall not exceed 797 228 EURO.
- (c) The maximum amount specified in sub-paragraph (b) above has been fixed on the understanding that the Client will make available free of charge to the Consultant the exemptions, assistance, services and facilities provided for under Clause 5 of the General Conditions of Contract and in Appendix D as required for the purposes of the Services. If any such exemptions, assistance, services and facilities are not supplied, the parties shall consult regarding what additional allowance (if any) should be made to the Consultant as a result thereof to cover necessary additional expenditures not envisaged in the cost estimates in Appendix C.
- (d) This Contract shall be changed only based on a written amendment agreed by both Parties.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of Jadrová a vyraďovacia spoločnosť a.s.
Date:
Authorized Representative - Mr. Peter Čižnár, Chairman of the Board of Directors
Authorized Representative - Mr. Miroslav Obert , Vice-Chairman of the Board of Directors
For and on behalf of JSC Specialus Montažas-NTP:
Date:
Authorized Representative – Mr. Marijuš Koženevskij, Director
For and on behalf of JSC All-Russian Research Institute for Nuclear Power Plant Operation (VNIIAES):
Date:



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Authorized Representative - Mr. Evgeny Ivanov, Deputy General Director

For and on behalf of Lithuanian Energy Institute (LEI):
Date:
Authorized Representative – Mr. Eugenijus Ušpuras, Director



**D7.1**Special
Conditions
of Contract

### **BIDSF project D7.1**

# FEASIBILITY STUDY FOR THE MANAGEMENT OF V1 NPP PRIMARY CIRCUIT COMPONENTS

(A) SPECIAL CONDITIONS OF CONTRACT



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D7.1 Special Conditions of Contract

#### **SPECIAL CONDITIONS OF CONTRACT**

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.1 (a)	"Applicable Law" means all valid generally binding enactments, which are part of the legal order of the Slovak Republic.
	Delete and substitute the wording Government's country with: "Client's country"
1.1 (i)	Delete and substitute Sub-clause 1.1 (i) with: "Client's country" means Slovak republic.
1.1 (k)	Delete and substitute Sub-clause 1.1 (k): "Member" means any of the entities that make up the joint venture, and "Members" means all these entities.
1.1 (m)	Delete and substitute the wording Government's country with: "Client's country"
1.1 (n)	Delete sub-paragraph (n) of Sub-Clause 1.1 and substitute: "SC" means the Special Conditions of Contract by which the GC may be amended or supplemented and form part (a) of this Contract.
1.1 (r)	Add the following as a new Sub-Clause 1.1(r): "Commercial Code" means Act No. 513/1991 Coll. Commercial Code, as subsequently amended.
1.1 (s)	Add the following as a new Sub-Clause 1.1(s): "Bohunice V1 NPP" means Units 1 and 2 of the nuclear power plant located at Jaslovské Bohunice, Slovak Republic administrated by the Client.
1.1 (t)	Add the following as a new Sub-Clause 1.1(t): "Deliverables" means the documents, reports, and other matters which the

1.1 (u) Add the following as a new Sub-Clause 1.1 (u):

out in Appendix A .

"Deliverable submission date" means the date or dates set out in Appendix A on which Deliverables are to be achieved.

Consultant is to provide to the Client in a timely manner as more particularly set

1.1 (v) Add the following as a new Sub-Clause 1.1(v):



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"Grant Agreement" means the Grant Agreement No.019D for the "FEASIBILITY STUDY FOR THE MANAGEMENT OF V1 NPP PRIMARY CIRCUIT COMPONENTS" between the Bank, as administrator of the Bohunice International Decommissioning Support Fund, and the Client, as beneficiary, dated 01<sup>st</sup> July 2009, as amended and restated on 14<sup>th</sup> December 2011 for payment towards the cost of the Services.

**1.1 (w)** Add the following as a new Sub-Clause 1.1(w):

"PMU" means Project Management Unit an organization unit created by the Client to manage the implementation of the pre-decommissioning support projects of Bohunice V1 NPP.

**1.1 (x)** Add the following as a new Sub-Clause 1.1(x):

"Project" means: the project "FEASIBILITY STUDY FOR THE MANAGEMENT OF V1 NPP PRIMARY CIRCUIT COMPONENTS".

**1.1 (y)** Add the following as a new Sub-Clause 1.1 (y):

"Deliverable Acceptance Protocol" means the document confirming acceptance and approval by the Client of the relevant part of the Services, which certifies the Consultant's fulfilment of the relevant part of the Services in respect of satisfactory completion of activities specified for the relevant milestone as certified by signature on the Deliverable Acceptance Protocol by the Client. Deliverable Acceptance Protocol forms a basis for issuing an invoice.

**1.1 (z)** Add the following as a new Sub-Clause 1.1 (z):

"Final Deliverable Acceptance Protocol" means the document confirming acceptance and approval by the Client of all Deliverables, which certifies the Consultant for the final payment in respect of satisfactory completion of all activities specified in TOR as certified by signature on the Final Deliverable Acceptance Protocol by the Client".

**1.1 (aa)** Add the following as a new Sub-Clause 1.1 (aa):

"Review" means the review of any aspect of the Contract and/or Project undertaken by the Client.

**1.1 (ab)** Add the following as a new Sub-Clause 1.1 (ab):

"No Objection" means such consent, concurrence, approval or the like to be provided by the Bank and the exercise of such consent, concurrence, approval or the like shall be at the discretion of the Bank.

**1.1 (ac)** Add the following as a new Sub-Clause 1.1 (ac):

"Termination" is a premature cancellation of the Contract pursuant to Act



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40/1964 Coll., Civil Code, § 582, as amended, for reasons in compliance with Sub-Clause 2.6 hereof.

#### **1.1 (ad)** Add the following as a new Sub-Clause 1.1 (ad):

"Joint Venture or Consortium (JV-C)" shall mean a group of legal entities, whereby:

- (a) All members of this group shall be jointly and severally liable; and
- (b) The JV-C shall nominate a Representative who shall have the authority to conduct all businesses for and on behalf of any and all the members of the JV-C during the Tender process and, in the event the JV-C is awarded the Contract, during Contract execution.

#### **1.1 (ae)** Add the following as a new Sub-Clause 1.1 (ae):

"Entity Affiliated" shall mean:

- a) statutory body or member of the statutory body, leading Personnel, proxy holder, or member of the supervisory board of the legal entity,
- b) natural person or other legal entity, which has a qualified membership in the legal entity,
- c) statutory body or member of the statutory body, leading Personnel or proxy holder or the member of the supervisory board of the legal entity provided in letter b) above,
- d) close person of the natural person as provided in letters a) to c) above,
- e) other legal entity, in which the legal entity or one of the persons as provide in letters a to d has got a qualified membership,

#### **1.1 (af)** Add the following as a new Sub-Clause 1.1 (af):

"Qualified membership" shall mean direct or indirect share representing at least 5 % of the registered capital of the legal entity, or on voting rights in the legal entity, or the possibility to impact the leading of the legal entity, which is comparable to the impact corresponding the above share; indirect share shall mean the share hold indirectly via legal entities, in which the holder of the indirect share has a qualified share.

#### **1.3** At the end of Sub-Clause 1.3, add the following paragraphs:

This Contract is executed in Slovak and English language version. Should any conflicts in the wording of the language versions of this Contract occur, the English version of the Contract shall prevail and shall be binding for both Parties. As used in this Contract, the masculine includes the feminine and the neuter, and the singular includes the plural and vice versa.

Any document, submittal or Deliverable in accordance with the Appendix A shall be provided by the Consultant in English and/or Slovak languages as specified in the Appendix A. In the event of contradiction and/or conflict, the English language shall prevail.



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Any notice, request or other communications between the Parties pursuant to the implementation of this Contract shall be in English.

#### **1.4** Delete Sub-Clause 1.4 and substitute:

Notwithstanding the provisions of Sub-Clause 1.3, any request, information, notice, correspondence or other communication to be given by one Party to the other Party relating to the Contract shall be in writing and in the English language and shall be deemed to have been made when (i) delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, or facsimile to such Party and (ii) the appropriate receipts and/or statements confirming the receipt of those were issued by the Parties at the following address:

**CLIENT** 

Name: Mr. Jaroslav Mlčúch

Address: Jadrová a vyraďovacia spoločnosť, a.s., Tomášikova 22, 821 02

Bratislava, Slovak Republic

Telephone: +421 2 48 262 111

Fax: +421 33 531 4600

E-mail: mlcuch.jaroslav@javys.sk

**CONSULTANT** 

Name: Mr. Marijuš Koženevskij

Address: JSC Specialus Montažas-NTP, Jaunystes str. 21, LT-31230, Visaginas,

Lithuania

Telephone: +370 386 60 076

Fax: +370 386 31 388 E-mail: info@montazas.lt

**1.5** Delete and substitute the wording Government's country with:

"Client's country"

#### **1.6** Delete Sub-Clause 1.6 and substitute:

In case the Consultant consists of a joint venture of more than one legal entity, the Members hereby authorize the entity specified in the SC to act on their behalf in exercising all the Consultant's rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.

The Member in charge is JSC Specialus Montažas – NTP

1.7

The authorized representatives are:

For the Client: Mr. Jaroslav Mlčúch,

For the Consultant: : Mr. Marijuš Koženevskij



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At the end of Sub-Clause 1.7, add the following paragraphs:

The Client's representative authorized according this Sub-Clause shall act for and on behalf of the Client in carrying out the supervising of the Contract activities designated herein. The Client's authorized representative shall have no authority to amend the Contract for the Client. The Consultant shall comply with all instructions issued by the Client's authorized representative pursuant to this Contract. Save to the extent otherwise provided by the Client in writing the Client's authorized representative shall receive and issue all instructions, notices, consents and otherwise do all such things necessary to the discharge of the obligations of the Client under the Contract. The Client may, by written notification to the Consultant, modify the Client's authorized representative's authority or replace it without relieving the Consultant of any of its obligations under this Contract. Specifically, the Client's authorized representative's responsibilities under this Contract include but are not limited to:

- (a) The Client's authorized representative shall administer the Contract including all financial aspects.
- (b) The Client's authorized representative shall coordinate the interfaces between the Parties and the Bank involved in Contract implementation.

#### Delete Sub-Clause 1.8 and substitute: 1.8

In the field of taxes, customs duties and fees the course of action shall be taken in accordance with the Framework Agreement concluded between the Bank and the Slovak Republic. (http://www.javys.sk/en/bidsf/framework-agreement).

1.9 **Prohibite Practices** 1.9.1 **Definit**ions

Delete Sub-Clause 1.9 Fraud and Corruption, and substitute with Sub-Clause 1.9 Prohibited Practices as follows:

The Bank requires that Clients (including beneficiaries of Bank administered grants), as well as tenderers, suppliers, contractors, concessionaires and consultants under Bank-funded contracts, observe the highest standard of transparency integrity during the procurement, and execution implementation of such contracts. In pursuance of this policy, the Bank:

- (i) defines, for the purposes of this provision, the terms set forth below as **Prohibited Practices:** 
  - "coercive practice" means impairing or harming, or threatening to (a) impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party; and



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- (b) "**collusive practice**" means an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party; and
- (c) "**corrupt practice**" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party; and
- (d) **"fraudulent practice"** means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation.

Any occurrence, or suspected occurrence, of a Prohibited Practice in the procurement, award or implementation of a Bank-financed contract in the context of a Bank-funded Project shall be dealt with in accordance with the provisions of the Bank's Enforcement Policy and Procedures. Suppliers, contractors, concessionaires and consultants as well as the Bank's clients shall fully cooperate with the Bank in any investigation into an alleged Prohibited Practice to be carried out pursuant to the Enforcement Policy and Procedures and shall permit the Bank or its representative to inspect such of their accounts and records as may be relevant for such investigation and to have such records and accounts audited by the auditors appointed by the Bank.

#### 1.9.2 Measure s to be Taken

- (ii) will declare the Consultant ineligible indefinitely or for a stated period of time if it determines that it engaged in Prohibited Practices in competing or executing the Contract. In addition, the Bank will cancel the portion of the Loan allocated to the Contract if it at any time determines that Prohibited Practices were engaged in by representatives of the Client or of a beneficiary of the Loan during the procurement or the execution of that Contract, without the Client having taken timely and appropriate action satisfactory to the Bank to remedy the situation.
- **2.** Delete name of the Clause 2. and substitute with:

#### **Commencement, Completion, Modification and Expiration of Contract**

**2.1** *Delete Sub-Clause 2.1 and substitute:* 

This Contract shall come into force on the date of the signature by the Parties and becomes effective (the "Effective Date") the day after the date when the Contract is published in accordance with sec. 47a of the Civil Code and sec. 5a of the Act. No. 211/2000 Coll. on Free Access to Information and on Change and Supplement of Certain Acts (Act on Free Information), as amended.

**2.2** The date for the commencement of Services is the following day after the Effective Date of the Contract.



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#### **2.3** Delete Sub-Clause 2.3 and substitute:

This Contract is entered into a definite period. Unless terminated earlier pursuant to Sub-Clause GC and SC 2.6 hereof, this Contract shall expire at the period of 14 (fourteen) months after the Effective Date. The Services shall be completely performed within this period.

#### **2.4** *Delete Sub-Clause 2.4 and substitute:*

Either Party can initiate the Contract modification.

Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, shall only be made by written agreement between the Parties and shall not be effective until the No Objection by the Bank has been obtained.

If and in so far as any Review carried out in accordance with Clause 10 results in the adjustment and/or alteration of the Services (including any addition or omission) and/or manner and/or time for performance and/or appropriate cost and/or other alterations than, subject to No Objection by the Bank the Contract shall be modified to incorporate such adjustments and/or alterations.

#### **2.5.1** At the end of Sub-clause 2.5.1 add the following paragraph:

For the avoidance of doubt, strikes, lock-outs or other industrial action or litigation involving the Parties, their agents, Sub-Consultants or Personnel shall in no circumstances constitute an event of Force Majeure and shall not give the Consultant the right to delay or fail to perform under this Contract.

### **2.5.3** Delete sub-paragraph (b) of Sub-Clause 2.5.3 and substitute: **(b)**

As soon as reasonably possible after the cessation of an event of Force Majeure, that Party affected by the event of Force Majeure shall notify the other Party in writing of the cessation of the event of Force Majeure and shall promptly resume performance of its obligations under this Contract.

- **2.5.3** Delete the wording "GC 7" and substitute with "GC 8" (e)
- **2.5.3** Delete the last paragraph of Sub-Clause 2.5.3 and substitute:

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant will not be considered in delay with fulfilling its obligations under this Contract up to cessation of the event of Force Majeure. The Consultant shall be entitled to be paid under the terms of this Contract only for the Services performed before the start the event of Force Majeure.

**2.6** Delete name of the Sub-Clause 2.6 and substitute with:



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#### **Termination**

**2.6.2** Delete sub-paragraph (a) of Sub-Clause 2.6.2 and substitute:

(a)

If the Client fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute pursuant to Clause GC 8 hereof within sixty (60) days after receiving written notice from the Consultant that such payment is overdue.

**2.6.3** Delete sub-paragraph (a) of Sub-Clause 2.6.3 and substitute:

(a)

"remuneration pursuant to Clause 6 for Services satisfactorily performed and not paid by the Client prior to the effective date of termination "

**2.6.4** Delete Sub-Clause 2.6.4. and substitute with Sub-Clause 2.6.4:

(a)

Upon termination of this Contract pursuant to Clause GC 2.6.1, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause GC 3.3 hereof, (iii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records set forth in Clause GC 3.8 hereof, and (iv) any right which a Party may have under the Applicable Law.

#### **2.6.7** *Add a new Sub-Clause 2.6.7:*

Upon termination of this Contract for whatever reason the Consultant shall promptly deliver up to the Client any and all materials, documents, software, products and documents including, but without limitation, the Deliverables developed and/or produced by or on behalf of the Client under this Contract (and copies thereof) and each Party shall return forthwith to the other any and all property (and copies thereof) on any media belonging to the other or which is received from any third party and in its possession or under its control and that Party shall confirm in writing to the other that it has complied in all respects with this Clause 2.6.4 (a) if requested to do so by the other.

#### **2.6.8** *Add a new Sub-Clause 2.6.8:*

Any expiration or termination of this Contract for any reason shall not affect any accrued rights or liabilities of either Party under this Contract nor the coming into force or the continuation in force of any provision of this Contract which is expressly or by implication intended to come into, or continue, in force on or after such expiration or termination.

#### **2.6.9** *Add a new Sub-Clause 2.6.9:*

In case of termination pursuant Sub-Clause 2.6.1, the Client shall be entitled, amongst other things, to make demand on any outstanding balance from the bank guarantee referred to in Clause 6.4.



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**D7.1** Special Conditions of Contract

#### 3.1 Delete in Sub-Clause 3.1 the words.

"The Consultant shall perform the Services..."

and substitute:

"With effect from the Effective Date, the Consultant shall perform the Services in accordance with the terms and conditions of this Contract and best industry practices for the provision of the Deliverables...".

#### 3.1.3 Add the following Sub-Clause 3.1.3:

#### **Sub-Contracts:**

The Consultant shall impose such terms and conditions as are necessary in any sub-contract, into which it enters in connection with the Project to ensure the performance by the Consultant of the provisions of this Clause 3, and shall ensure that any sub-contracts placed do not contradict the legal order of the Slovak Republic.

#### 3.1.4 Add the following Sub-Clause 3.1.4:

#### **Translation:**

The Consultant shall provide at its own expense oral and written translation by accredited translator(s), including, if necessary, the physical presence of interpreters.

#### 3.1.5 Add the following Sub-Clause 3.1.5:

#### **Progress and completion of the Services:**

The Consultant shall furnish sufficient Personnel, equipment and facilities, other than those provided by the Client, and shall work such hours so to assure fulfilment of the Services and any part thereof in accordance with the dates provided in Appendix A Description of the Services (Chapter Schedule of Consultant Activities).

The Client may at any time request the Consultant to provide, and the Consultant, upon such request, shall submit to the Client an updated Schedule of Consultant Activities showing actual progress of the Services. The comparison of the actual progress with Schedule of Consultant Activities (Appendix A) shall be provided together with the updated Schedule of Consultant Activities. If at any time, the Consultant's actual progress is inadequate to meet the dates provided in Appendix A, the Client may notify the Consultant to take such steps as may be necessary to improve its progress. If, within a reasonable period as determined by the Client, the Consultant does not improve performance to meet the dates provided in Appendix A, the Client may require an increase in the Consultant's labour force, the number of shifts, overtime operations, additional days of work per week and an increase in the amount of the Consultant's equipment, all without additional cost to the Client. Neither such notice nor the Client's failure to issue such notice



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shall relieve the Consultant of its obligation to achieve the quality of work and rate of progress required by this Contract. By executing Client's rights under this Sub-Clause, Sub-Clause 2.6.1 of the SC shall not be affected.

#### **3.2.2** *Delete Sub-Clause 3.2.2 and substitute:*

The Consultant agrees that, during the term of this Contract and after its expiration, the Consultant and any Entity Affiliated with the Consultant, as well as any Sub-Consultants and any Entity Affiliated with such Sub-Consultants, shall be disqualified from providing goods, works or services (other than consulting services) for any project resulting from or closely related to the Services.

**3.3** At the end of Sub-Clause 3.3, add the following paragraphs:

The Consultant shall protect against any unauthorized disclosure of the information and data (of whatever nature and however recorded or preserved) of the Client by using the same degree of care as it takes to preserve and protect its own confidential information of a similar nature but in no event shall this be less than a reasonable degree of care.

In the event of termination or expiration of this Contract the Consultant shall as soon as reasonably practicable thereafter, at the Client's option, destroy or return to the Client all confidential information received in relation to the provision of the Services, together with all partial or complete copies thereof.

With the signature of this Contract the Consultant hereby gives its consent to publish on the website of the Client and on any other places chosen by the Client, for an indefinite time period, the whole Contract including any eventual future amendments and appendixes and enclosures of the Contract and any other documents related to the Contract. Also, the Consultant hereby gives its consent to publish on the website of the Client and on any other places chosen by the Client for an indefinite time period any invoices issued by the Consultant in relation to this Contract. The Client shall bear all costs related to the publication of the above mentioned documents. To avoid any uncertainties, the Consultant grants also its consent to publish information underlying trade secrecy according § 17 of the Commercial Code contained in the above mentioned documents by means as stated above whereby the publication of these information does not represent breach of the trade secrecy by the Client. Also, the Consultant hereby acknowledges that any information provided by the Consultant contained in the abovementioned documents shall not be considered as confidential according §271 of the Commercial Code.

#### **3.4** *Delete Sub-Clause 3.4 and substitute:*

The Consultant shall take out and maintain insurance (risks insurance) at its own expenses but under conditions specified by the Client with the following minimum insurance coverage:

 General liability insurance covering damages induced to third persons (in accordance with lines of business entered in the Trade Register of the Slovak Republic or another similar register specifying a group of activities the



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Consultant is authorised to execute) with an insurance coverage amounting to no less than EUR 1 million per one and all insured events;

 Liability insurance covering damages induced in connection with rendering services (professional liability insurance) if the Consultant's activity (even though in part only) consists in rendering services whose rendering, pursuant to laws in force, is subject to taking out mandatory liability insurance. The insurance policy shall be taken out with an insurance coverage amounting to no less than EUR 1 million per one and all insured events.

The Consultant shall always produce a general liability insurance policy covering damages induced to third persons. The aforementioned professional liability insurance policies shall be produced by the Consultant only if the Consultant itself is authorized to execute such activities; otherwise, the Consultant shall produce the aforementioned professional liability insurance policies of entities executing these activities for the Consultant under a contract in writing.

If the Consultant itself is authorized to execute the aforementioned professional activities and, at the same time, the Consultant orders such works, either in whole or in part only, from another entity, the professional liability insurance shall be taken out separately by the Consultant as well as by its Sub-consultant.

In the aforementioned insurance policies or in general policy conditions applicable to the insurance policies, no clauses or exclusions may be agreed that might counteract the purpose of the Consultant's liability insurance applicable to D7.1 Project - Feasibility Study for the Management of V1 NPP Primary Circuit Components.

The scope of insurance shall include not only damages arising from material damage to a thing or damage to health but, in case of professional liability insurance, it shall include also net financial losses and losses which might arise due to imposition of penalties by public administration authorities.

The Consultant (and its Sub-consultants) shall take out such insurance together with any other insurance required to cover other Consultant's liabilities, if any, for the period of contract duration and afterwards for a period of 2 (two) years after expiration of the Contract with the Client. The underwriter (insurance company) selected by the Consultant shall be notified to the Client in advance to the insurance conclusion. Consultant's insurance policies shall be taken out with a renowned insurance company.

#### **3.5 (c)** The other actions are as follows:

- (i) Assigning the benefits from the Contract other than money.
- (ii) Initiating any subcontract for the performance of part of the Services. The Consultant shall provide the Client with a written information of the proposed scope and percentage of the services, time schedule, references and other necessary details for approval prior to the Consultant entering into such sub-



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contract and if and in so far as the Client provides comments on the terms of the sub-contract then the Consultant shall take proper account of such comments in agreeing the final form of such subcontract with the relevant Sub-Consultant. In any event, any such subcontract shall not include a provision entitling the Consultant to terminate such sub-contract without proper reason or for the Sub-Consultant to terminate at will.

- (iii) Initiating termination of the subcontract. In circumstances where the Consultant reasonably believes that the performance of its obligations under the Contract is being materially and adversely affected by the performance of one or more of its Sub-Consultants then the Consultant shall inform and consult with the Client prior to initiating any termination procedures under such subcontract and shall explain to the Client the reasons why the Consultant requires to terminate the subcontract. However, the Consultant shall not proceed to effect such termination before it has provided an explanation to the reasonable satisfaction of the Client as to the proposed arrangements for the proper performance of that part of the Services previously undertaken by the relevant Sub-Consultant.
  - (iv) Initiating any actions outside of the Contract scope, which the Consultant considers necessary for successful performance of the Services.
- **3.5** At the end of Sub-Clause 3.5, add the following paragraph:

Notwithstanding such Client's approval and Consultant's provision of services either by itself or through a third party, the Consultant shall remain solely responsible for the performance of the Contract and its results.



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**3.6** At the end of Sub-Clause 3.6, add the following paragraphs:

The Consultant shall ensure that Deliverables comply with nuclear, radiation, conventional safety and environmental valid legal enactments including, rules and recommendations provided by the Regulatory Authorities, the Client's existing safety rules, and best industry practices and shall be those prevailing when the Deliverables are taken over by the Client. References in the Contract to relevant standards shall be understood to be references to the edition applicable to the Effective Date of the Contract, unless stated otherwise.

If existing valid legal enactments including rules and recommendations provided by the Regulatory Authorities change or new legal enactments including recommendations provided by the Regulatory Authorities come into force in the Slovak Republic after the Effective Date of the Contract, the Consultant shall give notice to the Client and (if appropriate) submit proposals for compliance. In the event that:

- Client determines that compliance is required, and
- the Proposal for compliance requires a modification in the wording of the Contract,

than the Client shall initiate a modification in accordance with Sub-Clause 2.4.

Deliverables shall be achieved when they are approved by the Client, such approval by the Client not to be unreasonably withheld or delayed and to be communicated to the Consultants in writing and certified by signature on the Deliverable Acceptance Protocol by both Parties.

On completion of the review of the Deliverable, the Client shall identify issues concerning quality and/or content of received Deliverable and provide written comments to the Consultant. The Consultant shall (and in any event within a period of maximum thirteen (13) working days from the date of the Client's written comments) forthwith address Client's comments, correct any of the Deliverables (at no cost to the Client) and re-submit the relevant Deliverable to the Client for approval. In the case of reiteration of the approval process, the Consultant shall proceed according to this Sub-Clause.

If the re-submitted Deliverable still contains issues not properly addressed by the Consultant or ones solved not to the satisfaction of the Client, the Client may immediately issue a notice in writing to the Consultant and terminate this Contract pursuant to Clause 2.6.1.

At the end of sub-paragraph (a) of Sub-Clause 3.7, add the following paragraphs
Any concept, product, process (patentable or otherwise), copyrightable material
(including without limitation documents, specifications, calculations, maps,
sketches, notes, reports, data, models, samples, drawings, designs and electronic
software) or confidential information developed and/or produced by or on behalf
of the Consultant in the performance of its obligations under this Contract
(including, but without limitation, the Deliverables) shall belong absolutely and



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exclusively to the Client upon its creation.

The Client shall have, and the Consultant hereby grants the Client, a permanent, world-wide assignable, exclusive, royalty-free license to use any concept, product, process (patentable or otherwise), copyrighted material (including without limitation documents, specifications, calculations, maps, sketches, notes, reports, data, models, samples, drawings, designs, and electronic software) and confidential information developed, or produced by or on behalf of the Consultant in the performance of its obligations under this Contract (including, but without limitation, the Deliverables) and used by the Consultant or furnished or supplied to the Client by the Consultant in the course of performance under this Contract.

All rights and obligations from the license granted are regulated and shall be regulated by appropriate provisions of the Act no. 618/2003 Coll. on copyright and rights associated with copyright (Copyright Act) in valid version.

The Consultant will defend or settle any claim against the Client resulting from infringement of any third party intellectual property rights by the Deliverables and/or the Services and/or any other work product delivered and/or produced by or on behalf of the Consultant hereunder. The Consultant shall fully and effectively indemnify the Client and keep the Client indemnified against any and all damages, demands, claims, losses, liabilities, costs and expenses of any kind whatsoever suffered or incurred by the Client arising out of or in connection with the Client's use or possession of any materials, documents, instructions, software, products and documents including, but without limitation, the Deliverables, developed and/or produced by or on behalf of the Client under this Contract and/or any and all damages, demands, claims, losses, liabilities, costs and expenses of any kind whatsoever suffered or incurred by the Client arising out of or in connection with any infringement or alleged infringement of any third party intellectual property rights.

- **3.7 (c)** The Consultant shall not use the concept, product (patentable or otherwise), copyrightable material (including without limitation documents, specifications, calculations, maps, sketches, notes, reports, data, models, samples, drawings, designs and electronic software) or confidential information developed and/or produced by or on behalf of the Consultant in the performance of its obligations under this Contract (including, but without limitation, the Deliverables) for purposes unrelated to this Contract without the prior written approval of the Client.
- **3.9 (c)** Delete sub-paragraph (c) of Sub-Clause 3.9 and substitute:

The Consultant shall indemnify the Client from and against any and all claims, liabilities, obligations, losses, damages, penalties, actions, judgment, suits, proceedings, demands, costs, expenses and disbursements of whatsoever nature that may be imposed on, incurred by or asserted against the Client during or in connection with the Services by reason of: (i) infringement or alleged infringement by the Consultant of any patent or other protected right of intellectual property; or (ii) plagiarism or alleged plagiarism by the Consultant.



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**3.9 (e)** Delete sub-paragraph (e) (i) of Sub-Clause 3.9 and substitute: (i)

That Consultant is notified of such actions, claims, losses or damages at the first possible opportunity, but not later than 2 (two) months after the Client becomes aware of such actions, claims, losses or damages.

**3.9 (f)** At the end of sub-paragraph (f) of Sub-Clause 3.9, add the following paragraphs:

In addition to all other rights and remedies which the Client may have, the Consultant shall upon receipt of written notice from the Client, re-perform the Services free of charge to correct any deficiencies which result from the Consultant's failure to perform in accordance with herewith mentioned practices and standards for the period of Contract duration plus 2 (two) months maximum. The Client shall provide prior approval of the method and timing of such reperformance.

Non-compliance with the Client's written notice may be grounds for the Client's determination that the Consultant is not performing the Services with such diligence as will assure completion within the times specified. Upon such determination, the Client may terminate this Contract pursuant to Sub-Clause 2.6.1.

#### **3.10** *Delete Sub-Clause 3.10 and substitute:*

Equipment and/or facilities including those set out in Appendix D supplied or procured by the Client for the Project shall remain at all times the property of the Client and where practical shall be so marked. When the Services are completed or upon sooner termination of the Contract such equipment and/or facilities (including any spare parts and/or unused consumables) shall be returned by the Consultant to the Client in accordance with the Client's obligatory procedures save unless expressly agreed otherwise by the Parties.

#### **3.11** At the end of Sub-Clause 3.11 add the following:

Equipment and/or goods (including any spare parts and/or unused consumables) expressly supplied and/or purchased for the purposes of the Project by the Consultant or by a Sub-consultant employed by the Consultant shall be used only for the purposes of the Project. Upon expiration or sooner termination of the Contract such equipment and/or goods (free of any charges liens and/or mortgages) shall be transferred and delivered by the Consultant to the Client together with any manufacturers and/or supplier guarantees and/or warranties (including any necessary assignment thereof by the Consultant to the Client) and/or any unexpended proceeds from any insurance policy taken out by the Consultant in accordance with Clause 3.4, and all in accordance with the Client's normative procedures save unless expressly agreed otherwise by the Parties.



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At the end of Clause 3, add the following Sub-Clauses:

- The Consultant shall take account of, and comply with all reasonable directions and requirements provided by the Client from time to time when present at the Bohunice V1 NPP or Mochovce NRR site and shall, at all times, show consideration to the Client's employees, agents and Sub-Consultants.
- 3.13 The Consultant shall comply in full with all relevant valid legal enactments (including, comply with all access, security and/or procedures of the Client made known to the Consultant by the Client from time to time) and shall perform its obligations under this Contract so that its equipment, working conditions and methods are safe and without risk to health for its own, the Client's employees or subcontractors as well as for any other users of the Bohunice V1 NPP and Mochovce NRR site.

Until the expiry of this Contract the Consultant is obliged to fulfil the requirements stated in Appendix H "Safety and Technical Conditions".

- When required to enter the Bohunice V1 NPP and Mochovce NRR site for the purposes of performing their obligations hereunder the Consultant, its Personnel, representatives or Sub-Consultants shall at all times be in possession of appropriate documents to give proof of identity as the Client may from time to time require.
- The Consultant shall, at all times, comply fully with any and all work practices (including, providing the Client with risk assessments for the Services), health and safety, labour and any other requirements of the Client from time to time.
- The Client shall be empowered (without any cost or liability to the Client) to suspend the provision of the Services in whole or in part in the event of any non-compliance by the Consultant with this clause and/or its legal duties mainly regarding health and safety or environmental protection. The Consultant shall not resume the provision of the Services or such suspended part of it until the Client is duly satisfied that such non-compliance has been rectified.
- **3.17** (i) Contaminated equipment and goods as well as the Consultant's private contaminated property shall be dealt with according to Slovak Law.
  - (ii) The Consultant shall at all times maintain an asset register of all equipment and goods purchased for the Client for the purpose of the Project by the Consultant or by any Sub-consultant employed by the Consultant and such register shall be available for the periodic inspection by the Client upon reasonable notice to the Consultant.
  - (iii) The Consultant shall impose such terms and conditions as are necessary in any sub-contract into which it enters in connection with the Project to ensure the performance by the Consultant of the provisions of this Clause 6.
- **5.1** Not applicable



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#### **5.3** Delete Sub-Clause 5.3 and substitute:

The Client shall make available free of charge to the Consultant the Services and Facilities listed under Appendix D.

#### **6.1** *Delete Sub-Clause 6.1 and substitute:*

The Consultant's remuneration shall not exceed the Contract Price and shall be a fixed lump-sum price for the performance of the Consultant's obligations under this Contract which shall include, without limitation, all staff costs, Sub-Consultants' costs, printing, communications, travel, accommodation, and the like, and all other costs incurred by the Consultant in carrying out the Services described in Appendix A. Except as provided in Sub-Clause 5.2 and always subject to provisions of Sub-Clause 2.4 (Modifications), Sub-Clause 6.3 (Payment for Additional Services), Clause 10 (Review) and Clause 11 (Additional services), the Contract Price (a) may be increased above the amount stated in Sub-Clause 6.2 if the Parties have agreed to additional payments, and / or (b) may be altered and/or adjusted.

- **6.2 (a)** Not applicable
- **6.2 (b)** The price payable for the Services defined in Appendix C in EURO is 797 228 EUR (say: seven hundred ninety-seven thousand two hundred and twenty-eight EUR).
- **6.3** Delete Sub-Clause 6.3 and substitute

For the purpose of determining the remuneration due for additional services as may be agreed under Sub-Clause 2.4, a breakdown of the lump-sum price is provided in Appendix C.

#### **6.4** *Delete Sub-Clause 6.4 and substitute:*

Payments will be made to the account of the Consultant and according to the payment schedule stated herein.

Upon signing of the Contract, the Consultant shall be eligible for an advance payment, when the Consultant submits a guarantee in accordance with this Sub-Clause within sixty (60) days of submission of a request for advance payment together with a bank guarantee.

The advance payment can be invoiced once for 20 % of final Contract Price after the Client's receipt of advance payment guarantee(s) in the corresponding proportions of currencies in which the Contract Price is payable. The guarantee shall be issued by an entity and from within a country (or other jurisdiction) approved by the Client in writing, and shall be in the form set forth in Appendix I hereto or in another form approved by the Client.

The guarantee shall be returned to the Consultant immediately after its expiration.



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The Consultant shall ensure that the guarantee is valid and enforceable until the advance payment has been repaid, but its amount shall be progressively reduced by the amount repaid by the Consultant as indicated below. If the terms of the guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry date, the Consultant shall extend the validity of the guarantee until the advance payment has been repaid.

The advance payment shall be repaid through percentage deductions in each invoice, the amortization rate is equal to 1/5 of the advanced amount.

The total advance payment shall not exceed 20 % of the final Contract Price.

If the advance payment has not been repaid prior to the expiration of this Contract under Sub-Clause 2.3 [Expiration of Contract] or prior to termination under Sub-Clause 2.6 [Termination] (as the case may be), the whole of the balance than outstanding shall immediately become due and payable by the Consultant to the Client.

Payments shall be made according to the following payment schedule:

Milestone	Deliver able (s)	Event activating the payment	Amount in % of final Contract Price	Advance payment deduction in % of final Contract Price	Amount to be paid to Consultant in % of final Contract Price
M1*	D0	Deliverable accepted by Client	10%	4 %	6 %
M2	D1	Deliverable accepted by Client	20%	4 %	16 %
M3	D2	Deliverable accepted by Client	30%	4 %	26 %
M4	D3	Deliverable accepted by Client	30%	4 %	26 %
M5**	D4	Deliverable accepted by Client	10%	4 %	6 %
			100%	20 %	80 %

- All amounts shall be paid after approval by the Client as certified by signature on the Deliverable Acceptance Protocol.
- \* Payment milestone M1 includes accepted Inception Report



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\*\* - Payment milestone M5 includes accepted Final Contract Completion

The Consultant shall comply with the following when submitting invoices to the Client for payment:

- (a) All invoices with Deliverable Acceptance Protocol signed by the Client, shall be addressed and sent to the Client who will approve them and forward them to the Bank for payment. For the final payment, the Consultant shall attach to the invoice the Final Deliverable Acceptance Protocol for all Deliverables signed by the Parties.
- (b) The invoice shall include also a column marked "Gross" (price without taxes), a column marked "Advance payment portion", a column marked "Taxes" (tax rates and tax) and column marked "Net". The amount to be shown in the column "Gross" is the amount corresponding to the payment milestone and shall be free from any and all taxes, customs duties levied by in the territory of, the Slovak Republic. The amount to be shown in column "Net" is the amount to be invoiced after deduction of the advance payment portion. In the column "Taxes" should be the amount of the all taxes, customs duties levied by in the territory of, the Slovak Republic.
- (c) All foreign invoices shall be issued bilingually in English and Slovak language.
- (d) The name and telephone number of a person who may be contacted in case of need to raise queries shall be quoted on the invoice.
- (e) The Contract number and payment milestone shall be quoted on the invoice.
- (f) Invoices shall be marked as an invoice showing invoice number, issue date, delivery date of goods and services, due date of the invoice, the Consultant's and the Client's business address, company registration number and tax identification numbers and the banking information on which the transfer will be made. When services are provided into other EU member country, the VAT duty shall be transferred to the Client.
- (g) Invoices shall be submitted in two (2) originals and two (2) copies.

In the event of any refunding of taxes, customs duties levied by, or in the territory of the Slovak Republic (refunded by the Client out of its funds other than BIDSF), the Consultant shall ensure that:

- (a) the "VAT number" (VAT registration in Slovak tax office obtained on the basis of the registration of the Consultant in the Slovak Republic) will be stated on all invoices; and
- (b) all relevant documents (invoices and any copies thereof) demonstrating the amount and payment of the required refunding amount shall be enclosed with any request for reimbursement.



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All payments to the Consultant shall be made within 60 (sixty) days of receipt by the Client of the correct and valid invoice and documents specified in this Sub-Clause 6.4. The Consultant acknowledges that payment under this Contract shall be made to the Consultant by the Bank in accordance with the terms of the Grant Agreement.

#### **6.5** Delete Sub-Clause 6.5 and substitute:

If the Client has delayed payments beyond fifteen (15) days after the due date set out in Sub-Clause 6.4, the Client shall pay default interest to the Consultant for each day of delay at the rate of 1% per month above 1M EURIBOR.

For purposes of this Sub-Clause 6.5 "1M EURIBOR" means the percentage rate per annum determined by the Banking Federation of the European Union for the offering of deposits in Euro for a period of one month, displayed on the appropriate page of the Telerate screen or Reuters screen as of 11.00 a.m. (Bratislava time) on the due date. If no such screen rate is available, 1M EURIBOR shall be the arithmetic mean (rounded downward to four decimal places) of the rates as supplied to the Client at its request quoted by three reference banks, selected by the Client, to leading banks in the European interbank market, as of 11.00 a.m. (Bratislava time) on the due date.

#### **8.2** *Delete Sub-Clause 8.2 and substitute:*

Any dispute between the Parties as to matters arising pursuant to this Contract that cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for settlement by arbitration.

Arbitration proceedings shall be conducted in accordance with the rules of arbitration of the International Chamber of Commerce (the "Rules"). The arbitration shall be conducted by three (3) arbitrators designated pursuant to the Rules. The place of arbitration shall be Bratislava, Slovak Republic and the language of the arbitration shall be English.

The arbitration decision shall be final and binding upon the Parties.

The costs of the arbitration shall be in the discretion of the arbitrator.

Neither Party may initiate arbitration or legal action until the procedure described in this Sub-Clause 8.2 has been completed, except where any Party has good cause to do so to avoid damage to its business or to protect or preserve any right(s) of action it may have. Whilst this dispute resolution is being followed, the Parties shall be obliged to continue, as far as reasonably practicable in view of any dispute, to fulfill their respective obligations under this Contract.

#### **9.** Add the following as a new Clause 9:

If any term or provision of this Contract is held to be invalid or unenforceable, in



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whole or in part, that term or provision shall to that extent be deemed not to form part of this Contract but the invalidity or the enforceability of such term or provision will not affect validity and enforceability of the rest provisions of this Contract.

#### 10. Review

Add the following as a new Clause 10:

At any time the Client may initiate and, subject to the No Objection, conduct the Review of any aspect of the Project and/or of the Contract. Prior to the initiation of the implementation of the conclusions and/or recommendations of the Review, the Client shall obtain the No Objection. The implementation of the conclusions and/or recommendations of the Review shall always be subject to provisions of Sub-Clause 2.4 (Modifications or Variations).

#### 11. Addition al services

Add the following as a new Clause 11:

The Client may request in writing to carry out additional services in a form as specified in Appendix J of this Contract.

The Client's request for additional services shall clearly specify all necessary requirements for additional services, including but not limited to scope, timing and other relevant details. In case of Client's request for additional services, within 14 days of receipt of the Client's request, the Consultant shall prepare a response to the Client's request detailing the manner and/or mode and/or time for performance (including any adjustment to the term of the Contract) and/or if appropriate the cost of such additional services including a financial proposal which shall be calculated on the same basis as set out in Appendix C and using unit rates provided in Appendix C unless otherwise agreed between the Parties.

The Consultant can also make proposals for additional services, whereby the Consultant shall in its proposal clearly and in detail specify the manner, mode and time for performance (including any adjustment to the term of the Contract) and, if appropriate, the cost of such additional services including a financial proposal which shall be calculated on the same basis as set out in Appendix C and using unit rates provided in Appendix C unless otherwise agreed between the Parties and the reason of this proposal.

Within 30 days of receipt of the Consultant's response to the Client's request for additional services, or of receipt of a Consultant's proposal for additional services, the Client shall evaluate and decide about the additional services.

Should the Client decide so, it shall initiate an amendment to the Contract and shall instruct the Consultant to carry out the Additional Services.



**D7.1**General
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### **BIDSF project D7.1**

# FEASIBILITY STUDY FOR THE MANAGEMENT OF V1 NPP PRIMARY CIRCUIT COMPONENTS

**(B) GENERAL CONDITIONS OF CONTRACT** 



**D7.1**General
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#### **General Conditions of Contract**

#### 1. GENERAL PROVISIONS

#### 1.1 Definitions

- Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:
- (a) "Applicable Law" means the laws and any other instruments having the force of law in the Government's country, or in such other country as may be specified in the Special Conditions of Contract (SC), as they may be issued and in force from time to time.
- (b) "Bank" means the European Bank for Reconstruction and Development, London, UK.
- (c) "Consultant" means any private or public entity that will provide the Services to the Client under the Contract.
- (d) "Contract" means the Contract signed by the Parties and all the attached documents listed in its Clause 1, that is these General Conditions (GC), the Special Conditions (SC), and the Appendices.
- (e) "Contract Price" means the price to be paid for the performance of the Services, in accordance with Clause 6;
- (g) "Foreign Currency" means any currency other than the currency of the Client's country.
- (h) "GC" means these General Conditions of Contract.
- (i) "Government" means the Government of the Client's country.
- (j) "Local Currency" means the currency of the Client's country.
- (k) "Member" means any of the entities that make up the joint venture/consortium/association, and "Members" means all these entities.
- (I) "Party" means the Client or the Consultant, as the case may be, and "Parties" means both of them.
- (m) "Personnel" means professionals and support staff provided by the Consultant or by any Sub-Consultants and assigned to perform the Services or any part thereof; "Foreign Personnel" means such professionals and support staff who at the time of being so provided had their domicile outside the Government's



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country; "Local Personnel" means such professionals and support staff who at the time of being so provided had their domicile inside the Government's country; and "Key Personnel" means the Personnel referred to in Appendix C.

- (n) "SC" means the Special Conditions of Contract by which the GC may be amended or supplemented.
- (o) "Services" means the work to be performed by the Consultant pursuant to this Contract, as described in Appendix A hereto.
- (p) "Sub-Consultants" means any person or entity to whom/which the Consultant subcontracts any part of the Services.
- (q) "In writing" means communicated in written form with proof of receipt.

## 1.2 Law Governing Contract

This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

#### 1.3 Language

This Contract has been executed in the language specified in the SC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

#### 1.4 Notices

- 1.4.1 Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified in the SC.
- 1.4.2 A Party may change its address for notice hereunder by giving the other Party notice in writing of such change to the address specified in the SC.

#### 1.5 Location

The Services shall be performed at such locations as are specified in Appendix A hereto and, where the location of a particular task is not so specified, at such locations, whether in the Government's country or elsewhere, as the Client may approve.

## 1.6 Authority of Member in Charge

In case the Consultant consists of a joint venture/consortium/association of more than one entity, the Members hereby authorize the entity specified in the SC to act on their behalf in exercising all the Consultant's rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.



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## 1.7 Authorized Representatives

Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Consultant may be taken or executed by the officials specified in the SC.

#### 1.8 Taxes and Duties

Unless otherwise specified in the SC, the Consultant, Sub-Consultants, and their Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.

## 1.9 Fraud and Corruption

#### 1.9.1 Definitions

The Bank requires that Borrowers (including beneficiaries of Bank loans), as well as tenderers, suppliers, contractors, concessionaires and consultants under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Bank:

- (i) defines, for the purposes of this provision, the terms set forth below as follows:
  - (a) "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value to influence the action of a public official, or the threatening of injury to person, property or reputation, in connection with the procurement process or in contract execution in order to obtain or retain business or other improper advantage in the conduct of business; and
  - (b) "fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Borrower, and includes collusive practices among tenderers (prior to or after tender submission) designed to establish tender prices at artificial, non-competitive levels and to deprive the Borrower of the benefits of free and open competition;

## 1.9.2 Measures to be Taken

(ii)

pursuant to the policy defined in the Sub-Clause 1.11.1 above, the Bank will declare the Consultant ineligible indefinitely or for a stated period of time if it determines that it engaged in corrupt or fraudulent practices in competing or executing the Contract. In addition, the Bank will cancel the portion of the loan allocated to the Contract if it at any time determines that corrupt or fraudulent practices were engaged in by representatives of the Borrower or of a beneficiary of the loan during the procurement or the execution of that contract, without the



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Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;

## 1.9.3 Commissions and Fees

(iii) will require the successful Consultant to disclose any commissions or fees that may have been paid or are to be paid to agents, representatives, or commission agents with respect to the selection process or execution of the contract. The information disclosed must include at least the name and address of the agent, representative, or commission agent, the amount and currency, and the purpose of the commission or fee.

## 1.10 Relationship between the Parties

Nothing contained herein shall be construed as establishing a relation of master and servant or of principal and agent as between the Client and the Consultant. The Consultant, subject to this Contract, has complete charge of Personnel and Sub-Consultants, if any, performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

#### 1.11 Headings

The headings shall not limit, alter or affect the meaning of this Contract.

#### 2. Commencement, Completion, Modification and Termination of Contract

## 2.1 Effectiveness Contract

This Contract shall come into force and effect on the date (the "Effective Date") of the Client's notice to the Consultant instructing the Consultant to begin carrying out the Services. This notice shall confirm that the effectiveness conditions, if any, listed in the SC have been met.

### 2.2 Commencement of Services

The Consultant shall begin carrying out the Services not later than the number of days after the Effective Date specified in the SC.

## 2.3 Expiration of Contract

Unless terminated earlier pursuant to Clause GC 2.6 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SC.

## 2.4 Modifications or Variations

Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any proposals for modification or variation made by the other Party.

In cases of substantial modifications or variations, the prior written consent of the Bank is required.

### 2.5 Force Majeure 2.5.1 Definition

**Definition** (a) For the purposes of this Contract, "Force Majeure"



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means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by Government agencies.

- (b) Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party's Sub-Consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected both to take into account at the time of the conclusion of this Contract, and avoid or overcome in the carrying out of its obligations hereunder.
- (c) Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

## 2.5.2 No Breach of Contract

The failure of a Party to fulfil any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.

Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

## 2.5.3 Measures to be Taken

- (a) A Party affected by an event of Force Majeure shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.
- (b) A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any case not later than fourteen (14) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give written notice of the restoration of normal conditions as soon as possible.
- (c) Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform



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such action as a result of Force Majeure.

- (d) During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant, upon instructions by the Client, shall either:
- (i) demobilize, in which case the Consultant shall be reimbursed for additional costs they reasonably and necessarily incurred, and, if required by the Client, in reactivating the Services; or
- (ii) continue with the Services to the extent possible, in which case the Consultant shall continue to be paid under the terms of this Contract and be reimbursed for additional costs reasonably and necessarily incurred.
- (e) In the case of disagreement between the Parties as to the existence or extent of Force Majeure, the matter shall be settled according to Clause GC 7.

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

#### 2.6 Termination

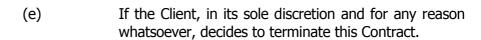
### 2.6.1 By the Client

The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (h) of this Clause GC 2.6.1. In such an occurrence the Client shall give a not less than thirty (30) days' written notice of termination to the Consultant.

- (a) If the Consultant does not remedy a failure in the performance of their obligations under the Contract, within thirty (30) days after being notified or within any further period as the Client may have subsequently approved in writing.
- (b) If the Consultant becomes insolvent or bankrupt.
- (c) If the Consultant, in the judgment of the Client has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
- (d) If, as the result of Force Majeure, the Consultant are unable to perform a material portion of the Services for a period of not less than sixty (60) days.



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- (f) If the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GC 8 hereof.
- (g) If the Consultant submits to the Client a false statement which has a material effect on the rights, obligations or interests of the Client.
- (h) If the Loan Agreement has been terminated or the Bank has suspended disbursements under the Loan Agreement.

### 2.6.2 By the Consultant

The Consultant may terminate this Contract, by not less than thirty (30) days' written notice to the Client, in case of the occurrence of any of the events specified in paragraphs (a) through (e) of this Clause GC 2.6.2.

- (a) If the Client fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute pursuant to Clause GC 7 hereof within forty-five (45) days after receiving written notice from the Consultant that such payment is overdue.
- (b) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- (c) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GC 8 hereof.
- (d) If the Client is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Consultant may have subsequently approved in writing) following the receipt by the Client of the Consultant's notice specifying such breach.
- (e) If the Client becomes insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary.



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#### 2.6.3 **Payment** upon Termination

Upon termination of this Contract pursuant to Clauses GC 2.6.1 or GC 2.6.2, the Client shall make the following payments to the Consultant:

- (a) payment pursuant to Clause GC 6 for Services satisfactorily performed prior to the effective date of termination;
- (b) except in the case of termination pursuant to paragraphs (a) through (c), (f), and (g) of Clause GC 2.6.1, reimbursement of any reasonable cost incidental to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel and their eligible dependents.

#### **Cessation of** 2.6.4 **Rights and Obligations**

Upon termination of this Contract pursuant to Clause GC 2.6, or upon expiration of this Contract pursuant to Clause GC 2.3 hereof, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause GC 3.3 hereof, (iii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records set forth in Clause GC 3.8 hereof, and (iv) any right which a Party may have under the Applicable Law.

#### 2.6.5 **Cessation of Services**

Upon termination of this Contract by notice of either Party to the other pursuant to Clauses GC 2.6.1 or GC 2.6.2 hereof, the Consultant shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultant and equipment and materials furnished by the Client, the Consultant shall proceed as provided, respectively, by Clauses GC 3.7 or GC 3.10 hereof.

#### 2.6.6 **Disputes** about Events of **Termination**

If either Party disputes whether an event specified in paragraphs (a) through (d), and paragraphs (f) and (g) of Clause GC 2.6.1 or in Clause GC 2.6.2 hereof has occurred, such Party may, within fortyfive (45) days after receipt of notice of termination from the other Party, refer the matter to Clause GC 7 hereof, and this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.

#### 3. Obligations of the Consultant

#### 3.1 General

#### 3.1.1 **Performance**

Standard of The Consultant shall perform the Services and carry out their obligations hereunder with all due diligence, efficiency and economy, in accordance with generally accepted professional



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standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as faithful advisers to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with Sub-Consultants or third Parties.

### 3.1.2 Law Governing Services

The Consultant shall perform the Services in accordance with the Applicable Law and shall take all practicable steps to ensure that any Sub-Consultants, as well as the Personnel of the Consultant and any Sub-Consultants, comply with the Applicable Law. The Client shall notify the Consultant in writing of relevant local customs, and the Consultant shall, after such notification, respect such customs.

### 3.2 Conflict of Interests

The Consultant shall hold the Client's interests paramount, without any consideration for future work, and strictly avoid conflict with other assignments or their own corporate interests.

#### 3.2.1 Consultant Not to Benefit from Commissions, Discounts, etc.

- (a) The remuneration of the Consultant pursuant to Clause GC 6 hereof shall constitute the Consultant's sole remuneration in connection with this Contract and, subject to Clause GC 3.2.2 hereof, the Consultant shall not accept for its own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or in the discharge of its obligations hereunder, and the Consultant shall use their best efforts to ensure that any Sub-Consultants, as well as the Personnel and agents of either of them, similarly shall not receive any such additional remuneration.
- (b) Furthermore, if the Consultant, as part of the Services, has the responsibility of advising the Client on the procurement of goods, works or services, the Consultant shall comply with the Bank's applicable procurement guidelines, and shall at all times exercise such responsibility in the best interest of the Client. Any discounts or commissions obtained by the Consultant in the exercise of such procurement responsibility shall be for the account of the Client.

# 3.2.2 Consultant and Affiliates Not to be Otherwise Interested in Project

The Consultant agrees that, during the term of this Contract and after its termination, the Consultant and any Entity Affiliated with the Consultant, as well as any Sub-Consultants and any Entity Affiliated with such Sub-Consultants, shall be disqualified from providing goods, works or services (other than consulting services) for any project resulting from or closely related to the Services. The Consultant shall not engage, and shall cause their Personnel as well as their Sub-Consultants and their Personnel not to engage,

### 3.2.3 Prohibition of Conflicting



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#### **Activities**

either directly or indirectly, in any business or professional activities which would conflict with the activities assigned to them under this Contract.

#### 3.3 Confidentiality

Except with the prior written consent of the Client, the Consultant and the Personnel shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant and the Personnel make public the recommendations formulated in the course of, or as a result of, the Services.

## 3.4 Insurance to be Taken Out by the Consultant

The Consultant (a) shall take out and maintain, and shall cause any Sub-Consultants to take out and maintain, at their (or the Sub-Consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage, as shall be specified in the SC; and (b) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums have been paid.

#### 3.5 Consultant's Actions Requiring Client's Prior Approval

The Consultant shall obtain the Client's prior approval in writing before taking any of the following actions:

- (a) any change or addition to the Personnel listed in Appendix C.
- (b) Subcontracts: the Consultant may subcontract work relating to the Services to an extent and with such specialists and entities as may be approved in advance by the Client. Notwithstanding such approval, the Consultant shall retain full responsibility for the Services. In the event that any Sub-Consultants are found by the Client to be incompetent or incapable in discharging assigned duties, the Client may request the Consultant to provide a replacement, with qualifications and experience acceptable to the Client, or to resume the performance of the Services itself.
- (c) Any other action that may be specified in the SC.

### 3.6 Reporting Obligations

- (a) The Consultant shall submit to the Client the reports and documents specified in Appendix B hereto, in the form, in the numbers and within the time periods set forth in the said Appendix.
- (b) Final reports shall be delivered in CD ROM in addition to the hard copies specified in said Appendix.

### 3.7 Documents Prepared by the

(a) All plans, drawings, specifications, designs, reports, other documents and software submitted by the Consultant under this Contract shall become and remain the property of the



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#### Consultant to be the Property of the Client

Client, and the Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof.

- (b) The Consultant may retain a copy of such documents and software, and use such software for their own use with prior written approval of the Client. If license agreements are necessary or appropriate between the Consultant and third parties for purposes of development of any such computer programs, the Consultant shall obtain the Client's prior written approval to such agreements, and the Client shall be entitled at its discretion to require recovering the expenses related to the development of the program(s) concerned.
- (c) Other restrictions about the future use of these documents and software, if any, shall be specified in the SC.

# 3.8 Accounting, Inspection and Auditing

The Consultant (i) shall keep accurate and systematic (a) accounts and records in respect of the Services hereunder, in internationally accordance with accepted accounting principles and in such form and detail as will clearly identify all relevant time changes and costs, and the bases thereof, and (ii) shall periodically permit the Client or its designated representative and/or the Bank, and up to five years from the expiration or termination of this Contract, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Client or the Bank, if so required by the Client or the Bank as the case may be.

### 3.9 Liability of the Consultant

- (a) The Consultant shall be responsible for, and shall indemnify the Client, in respect of loss of or damage to equipment and materials furnished by the Client, or purchased by the Consultant in whole or in part with funds provided by the Client.
- (b) The Consultant undertakes full responsibility in respect of life, health, and accidents for the Personnel and for the dependents of any such Personnel.
- (c) The Consultant shall indemnify the Client from and against any and all claims, liabilities, obligations, losses, damages, penalties, actions, judgment, suits, proceedings, demands, costs, expenses and disbursements of whatsoever nature that may be imposed on, incurred by or asserted against the Client during or in connection in the Services by reason of: (i) infringement or alleged infringement by the Consultant of any patent or other protected right; or (ii) plagiarism or alleged plagiarism by the Consultant.



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- (d) The Consultant shall ensure that all goods and services (including without limitation all computer hardware, software and systems) procured by the Consultant out of funds provided or reimbursed by the Client or used by the Consultant in the carrying out of the Services do not violate or infringe any industrial property or intellectual property right or claim of any third party.
- (e) The Consultant shall indemnify, protect and defend at their own expense the Client, and its agents and employees from and against any and all actions, claims, losses or damages arising out of Consultant's failure to exercise the skill and care required under Clause GC 3.1.1 provided, however:
  - that Consultant is notified of such actions, claims, losses or damages not later than the number of months after conclusion of the Services indicated in the SC;
  - (ii) that the ceiling on Consultant's liability under Clause GC 3.1.1 shall be limited to the amount indicated in the SC, except that such ceiling shall not apply to actions, claims, losses or damages caused by Consultant's gross negligence or reckless conduct;
  - (iii) that Consultant's liability under Clause GC 3.1.1 shall be limited to actions, claims, losses or damages directly caused by such failure to exercise the said skill and care, and shall not include liability for any actions, claims, losses or damages arising out of occurrences incidental or indirectly consequential to such failure.
- (f) In addition to any liability the Consultant may have under Clause GC 3.1.1, the Consultant shall, at its own cost and expense, upon request of Client, re-perform the Services in the event of Consultant's failure to exercise the skill and care required under Clause GC 3.1.1.
- (g) Notwithstanding the provisions of paragraph (a) of this Clause GC 3.9, the Consultant shall have no liability whatsoever for actions, claims, losses or damages occasioned by: (i) Client's overriding a decision or recommendation of the Consultant or requiring the Consultant to implement a decision or recommendation with which the Consultant does not agree; or (ii) the improper execution of Consultant's instructions by agents, employees or independent contractors of the Client.

3.10 Equipment, Vehicles and

Equipment, vehicles and materials made available to the Consultant by the Client, or purchased by the Consultant wholly or partly with funds provided by the Client, shall be the property of the Client and



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### Materials Furnished by the Client

shall be marked accordingly. Upon termination or expiration of this Contract, the Consultant shall make available to the Client an inventory of such equipment, vehicles and materials and shall dispose of such equipment and materials in accordance with the Client's instructions. While in possession of such equipment, vehicles and materials, the Consultant, unless otherwise instructed by the Client in writing, shall insure them at the expense of the Client in an amount equal to their full replacement value.

## 3.11 Equipment and Materials Provided by the Consultant

Equipment or materials brought into the Government's country by the Consultant and the Personnel and used either for the Project or personal use shall remain the property of the Consultant or the Personnel concerned, as applicable.

#### 4. CONSULTANT'S PERSONNEL

### 4.1 Description of Personnel

The Consultant shall employ and provide such qualified and experienced Personnel and Sub-Consultants as are required to carry out the Services. The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Consultant's Key Personnel are described in Appendix C. The Key Personnel and Sub-Consultants listed by title as well as by name in Appendix C are hereby approved by the Client.

# 4.2 Removal and/or Replacement of Personnel

- (a) Except as the Client may otherwise agree, no changes shall be made in the Personnel. If, for any reason beyond the reasonable control of the Consultant, it becomes necessary to replace any of the Personnel, the Consultant shall provide as a replacement a person of equivalent or better qualifications.
- (b) If the Client finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Consultant shall, at the Client's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Client.
- (c) The Consultant shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.



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#### 5. OBLIGATIONS OF THE CLIENT

### **5.1 Assistance and Exemptions**

The Client shall use its best efforts to ensure that the Government shall provide the Consultant such assistance and exemptions as specified in the SC.

# 5.2 Change in theApplicable LawRelated to Taxes andDuties

If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred to in Clauses GC 6.2 (a) or (b), as the case may be.

### **5.3 Services and Facilities**

The Client shall make available free of charge to the Consultant the Services and Facilities listed under Appendix F.

#### 5.4 Access to Land

The Client warrants that the Consultant shall have, free of charge, unimpeded access to all land in the Government's country in respect of which access is required for the performance of the Services. The Client will be responsible for any damage to such land or any property thereon resulting from such access and will indemnify the Consultant and each of the Personnel in respect of liability for any such damage, unless such damage is caused by the default or negligence of the Consultant or any Sub-Consultants or the Personnel of either of them.

#### 6. PAYMENTS TO THE CONSULTANT

### 6.1 Lump-Sum Payment

The total payment due to the Consultant shall not exceed the Contract Price which is an all inclusive fixed lump-sum covering all costs required to carry out the Services described in Appendix A. Except as provided in Clause 5.2, the Contract Price may only be increased above the amounts stated in Clause 6.2 if the Parties have agreed to additional payments in accordance with Clause 2.4.

#### **6.2 Contract Price**

- (a) The price payable in foreign currency/currencies is set forth in the SC.
- (b) The price payable in local currency is set forth in the SC.

### **6.3 Payment for Additional Services**

For the purpose of determining the remuneration due for additional services as may be agreed under Clause 2.4, a breakdown of the





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lump-sum price is provided in Appendices D and E.

# 6.4 Terms and Conditions of Payment

Payments will be made to the account of the Consultant and according to the payment schedule stated in the SC. Unless otherwise stated in the SC, the first payment shall be made against the provision by the Consultant of an advance payment security for the same amount, and shall be valid for the period stated in the SC. Such security shall be in the form set forth in Appendix G hereto, or in such other form, as the Client shall have approved in writing. Any other payment shall be made after the conditions listed in the SC for such payment have been met, and the Consultant has submitted an invoice to the Client specifying the amount due.

### 6.5 Interest on Delayed Payments

If the Client has delayed payments beyond fifteen (15) days (after the due date stated in the Clause SC 6.4, interest shall be paid to the Consultant for each day of delay at the rate stated in the SC.

#### 7. GOOD FAITH

#### 7.1 Good Faith

The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

#### 8. SETTLEMENT OF DISPUTES

### 8.1 Amicable Settlement

The Parties agree that the avoidance or early resolution of disputes is crucial for a smooth execution of the Contract and the success of the assignment. The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

### 8.2 Dispute Resolution

Any dispute between the Parties as to matters arising pursuant to this Contract that cannot be settled amicably within thirty (30) days after receipt by one Party of the other Party's request for such amicable settlement may be submitted by either Party for settlement in accordance with the provisions specified in the SC.



**D7.1** Appendix E

#### **BIDSF project D7.1**

### FEASIBILITY STUDY FOR THE MANAGEMENT OF V1 NPP PRIMARY CIRCUIT COMPONENTS

### APPENDIX E – CLARIFICATION QUESTIONS AND ANSWERS TERMS OF REFERENCE OF THE PROJECT



**D7.1** Appendix E

#### **Clarification Questions and Answers**

No	Question	Received	Answer	Sent
		Date		
1	Within the Data Sheet on page 21 of the ITT a list of documents that will be provided to the selected consultant is given – can you please confirm when these will be available?	22.02.2012	The input data as listed in Section II, para. 1.4 will be provided to the selected Consultant during the Kick-off meeting.	02.03.2012
2	Can you confirm what information will be provided within the BIDSF Project B6.4 Decommissioning Database – eg. What are the deliverables of this project?	22.02.2012	Full access to the B6.4 database will be provided to the selected Consultant.	02.03.2012
3	Page 63 of the RfP document suggests that preliminary data on plant characterization is available: Can you confirm whether this information will be issued to tenderers at this stage?	22.02.2012	Preliminary data on plant characterization (schemes and drawings) will be provided to the short-listed Consultants during the pre-proposal conference on 8 <sup>th</sup> March 2012.	02.03.2012
4	Could you please explain this note? "Short-listed firms will be formally invited to submit proposals following this Invitation. A firm (and/or its associates and affiliates) selected for this consultancy assignment, will be requested to limit its role to that of Consultant and disqualify itself from work in any other capacity except that of consulting services for follow on services within the Project."  If an entity decides to submit to this call for tender as sub-contrator of a shortlisted company, is it exact that this entity or its associates and affiliates will not be allowed anymore to submit to follow services within the Project?	22.02.2012	Any short-listed Consultant (and/or its associates and affiliates) and/or any subconsultant of a shortlisted company submitting its Proposal for this Project shall take into account paragraph 3.28 in EBRD's Procurement Policies and Rules (this document is available at EBRD website) and para. 1.6.1 of RfP, Section II (Instructions to Consultants).	02.03.2012
5	We kindly ask JAVYS, a.s. to extend the deadline for submission of Clarification Requests by Tenderers for at least 1 week after 27th February, 2012.	23.02.2012	The deadline for submission of clarification questions will be extended by 08 <sup>th</sup> March 2012.	02.03.2012
6	We kindly ask JAVYS, a.s. to extend the deadline for submission of Tender Proposals for at least 1 week after 26 <sup>th</sup> March, 2012.	23.02.2012	The deadline for submission of Proposals will be on 26th March 2012 at 02.00 p.m, Bratislava local time, as specified in Section II, para. 4.5.	02.03.2012



7	Reference is made to the item 1.6.1 of RFP Section II – Instructions to Consultants (Conflicting Activities).  Please clarify whether the Sub-Contractor whose participation in Project D7.1 is limited to the Deliverable D7.1-D0:	23.02.2012	See answer no. 4.	02.03.2012
	a) will be allowed itself to provide consulting services in the subsequent stages of the project (such as Basic Design and Detail Design),			
	b) will not preclude the participation of another firm from the same company group as a supplier of goods, works, or services, other than consulting services in the subsequent stages of the project (such as supply of tools and equipment, dismantling works)			
8	Please clarify whether the similar participation of Sub-Contractor in Deliverable D7.1-D1 would affect the opportunities described in question 7 a) and b).	23.02.2012	See answer no. 4.	02.03.2012
9	Please clarify whether the similar participation of Sub-Contractor in Deliverable D7.1-D2 would affect the opportunities described in question 7 a) and b).	23.02.2012	See answer no. 4.	02.03.2012
10	According to deliverable D7.1-D1 – Scoping, subsection 1: Scoping Activities: what is the intent of the detailed survey of the site and its surroundings (roads, other properties of the site) and the detailed site reconnaissance (site conditions, topography, water distribution areas, etc.) as stipulated under point 1 of the description for Deliverable d7.1-D1 (Scoping)? The main purpose of the project is a feasibility study for the management of V1 NPP primary circuit components, so that the link to the detailed site investigation is not obvious.	27.02.2012	An understanding of site characteristics through its recognition provides Consultant with first-hand information of site conditions pertinent to the study. This information is necessary to evaluate potential V1 NPP large components removal alternatives. Please refer to requirements in subchapter 3.1.2.2 of Section V for more insights on the subject.	02.03.2012
11	According to the Technical Standard Form 3C, the Consultant has to name the "Field Office Staff", the "Home Office Staff" and the	27.02.2012	The reason for differentiation of the "Field Office Staff" and "Home Office Staff" is basically using the	02.03.2012



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	"Support Staff". Is this "differentiation" mandatorily to be followed or can it be stated differently, as our foreseen technical professionals (KE1 to KE4) and Non-Key Expert(s) will work "in the field" as well as "in the home office"? For which reason the support staff (home office technical assistant, financial/controlling officer etc. or field office secretary) needs to be named, when they are anyway considered in the Overhead Costs?		different rates for these staff categories. Should this differentiation be not suitable for the Consultant's proposed breakdown of remuneration, the Consultant may use different structure of the cost breakdown.  The support staff have to be itemized in Form 3D of Section III due to providing adequate input in Section IV, Form 4D (Breakdown of overhead cost) in column "Item description".	
12	According to Section II. Information to Consultants and Data Sheet paragraph 3.4 (i): It is stated that in the event of a Joint Venture the consultant shall include a Letter of Intent as well as a Letter of Undertaking.  Please confirm that our understanding is correct, that there is no Form provided in the Tender documents for the Letter of Intent as well as for the Undertaking and that the consultant has to provide these as self-certification?	27.02.2012	No form is provided within the Request of Proposals. Self-certification will be acceptable.	02.03.2012
13	According to Data Sheet 3.4 (i): It is stated in the first sentence "Delete at the end of the first sentence" required in Form TECH-2 of Section 3" and substitute with: "required in Form 3C 03 and Form 3I of Section III."  Please clarify if the Form 3I is missing in Section III: Technical Proposal – Standard Forms.	27.02.2012	Please refer to Form 3H.	02.03.2012
14	Section IV. Financial Proposal, Form 4B, 4C, and 4D: It is highly problematic for us to provide you with the basic salaries as well as social charges from our employees, since this is not in line with the German laws for "governing data protection" and "data security". We would like to ask you to explain in more detail which figures we have to provide or to confirm if it is possible to send our financial proposal without these forms.	27.02.2012	Breakdown of prices will be part of the Contract as Appendix C and will constitute the basis for calculation of proposal for additional services (Sub-clauses 6.3 and 11 of section VI). Forms 4B, 4C and 4D do not have to be certified by as correct by the independent auditor. However during Contract negotiations, these forms shall be appropriately certified as correct by the independent auditor. Therefore	02.03.2012



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			breakdown of prices in Forms 4B, 4C and 4D are mandatory part of the Financial Proposal.	
			Detailed Instructions for components of the Financial Proposal are specified in Section IV (p. 44 of the Request for Proposals).	
			Concerning the revealing of personal data of the Consultants' employees (e.g. salaries), the Client has made appropriate arrangements ensuring protection of the provided personal data. Furthermore, it is the sole liability of the Consultant to arrange any necessary steps (e.g. agreement of the respective personnel to provide its personal data for specified purposes) in relation to its' employees (or third parties) to ensure that provision of any information to the Client are in compliance with all applicable legal regulation.	
15	Paragraph 2.1 of the Tender Data Sheet states that the latest date for the submission of Clarification Questions is 28 days before the date for submission of proposals. As this date has already passed will it be possible to submit questions during or after the pre-proposal conference? If questions are received at the pre-proposal conference will a response be issued prior to submission date?	06.03.2012	Based on the Consultant's request, deadline for the submission of Clarification Questions was extended by 8 <sup>th</sup> March 2012, so that the Consultants may have opportunity to raise their questions during the pre-proposal conference, as well (see answer no. 5 from Log of Questions and Answers sent on 2nd March 2012). The Client's response to the questions raised at the pre-proposal conference will be sent within one week after the Pre-proposal Conference.	14.03.2012
16	If an organisation successfully participates in tendering for this project on their own, as a member of a consortium or joint venture or as a subcontractor and is awarded the contract would they be prevented from participating in any other current or future tenders funded under the BIDSF on the grounds of it being considered a conflict of interest?	06.03.2012	At present stage it is not possible to assess future conflict of interest generally for any future BIDSF tender procured under EBRD's Procurement Policies and Rules. Please refer to answer no. 4 from Log of Questions and Answers sent on 2nd March 2012.	14.03.2012



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17	Are the acceptances criteria for the planned size reduction and decontamination facility already fixed or can these being influenced by the components study?		The acceptance criteria for the planned size reduction and decontamination facility can be influenced by the components study.	
18	What transportation is available at Bohunice for the decommissioning purposes?	06.03.2012	There are available cranes inside Reactor Hall, train connection from Reactor Hall to other NPP facilities (incl. decay storage) and special trucks and vehicles are available for transportation by roads inside NPP location.  All other necessary transportation means will be analysed and described during project implementation.	14.03.2012
19	What the material is used for Reactor Shaft Protection Lid production?	06.03.2012	The Reactor Shaft Protection Lid is used to hermetically isolate the reactor hall from the upper part of the shaft where the reactor is located. RSPL is a metallic construction with internal inserted concrete slabs. The overall weight of this structure is 100950 kg and its dimensions are as follows: maximum height 6825 mm, maximum external diameter is Ø7520 mm.  Any other details related to composition of RSPL will be provided to the selected Consultant during project implementation.	14.03.2012
20	Is the inventory of Mogilnik available?	06.03.2012	Yes, the inventory of Mogilnik is available and will be provided to the selected Consultant during project implementation.	14.03.2012
21	What limits are there for the transport to and storage of large components at Mochovce? Is the construction of a decay facility for large components at Bohunice foreseen? Such a decay store would need to be part of the options study.	06.03.2012	The limits for the transport to and storage of large components at Mochovce will be analysed during project implementation by selected Consultant – but limits for transportation of any RAW are defined in act No 355/2007 Col. and act No 541/2004 Col. and related resolutions/decisions of Nuclear Regulatory.  Additionally for transportation are fully valid all specific ADR standards and RID standards.  Construction of a decay facility for large components at Bohunice is foreseen in 2017 – more details will be provided to the selected	14.03.2012



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			Consultant during project implementation.	
22	Is it possible to propose different deadlines of the intermediate stages in the time Schedule in the Technical Proposal in comparison what is requested in ToR? In case this is possible, which is the limit?	08.03.2012	Estimated submission dates for all deliverables as set in Section V. of RfP are recommended to be fulfilled by the Consultants without significant modifications.	14.03.2012
23	Will the Consultant be responsible for the support with authorities, if yes, please indicate expected number of visits or meetings with authorities?	08.03.2012	Yes, the Consultant will be responsible for the support in communication with authorities. There is necessary to expect need for one meeting quarterly.	14.03.2012
24	Could you confirm if some kind of information is missing or is not updated in the provided drawings/documents, so that they would need to be collected by site survey?		Yes, if some kind of information is missing in the provided drawings/documents, so that they would need to be collected by site survey, interviews or reviews.	14.03.2012
25	Will the selected Consultant be provided with the remote access to all databases?	08.03.2012	No, there will be provided the direct local access to all databases for selected Consultant.	14.03.2012
26	Are there any other organizations or authorities involved in the decision making/or taken into account during the project implementation? What is the role of PMU BIDSF in this area?		There will be important opinion of Nuclear Regulatory, Public Health Authority and Ministry of Environment in the assessment of proposed solution. But decision making will be in full responsibility of Client.  The primary role of PMU BIDSF is supervisory during project implementation, on-going consulting and review of deliverables.	14.03.2012
27	Is it possible to be provided with adequate rooms at Bohunice site by the Client for field office staff and under which conditions?	08.03.2012	The Client shall provide office accommodation for the Consultant's staff of not less than 20 m² and not more than 40 m² free of charge. The Consultant may indicate its requirements for office accommodation and other services in Section III, Form 3B. Office accommodation above 40 m² and associated renting costs will be agreed upon during Contract negotiations.	14.03.2012
28	Does the Client provide interpretation for monthly or technical meetings during the project performance?	08.03.2012	According to Sub-clause 1.3 the language of communication between the Parties pursuant to the implementation of this	14.03.2012



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		T		
			Contract shall be English.	
29	Is it necessary to provide the CVs of <b>non-key experts</b> in the Proposal, as they will not be assessed during evaluation and in case of award these experts can be changed/added anyway?	08.03.2012	Yes, it is, in compliance with Section II, para. 3.4 (vi).	14.03.2012
30	Will the Client provide to the selected Consultant exact boundary conditions and interfaces with other projects and Plant activities during project's implementation?	08.03.2012	Yes, the Client will provide all data to the selected Consultant during project's implementation as necessary.	14.03.2012
31	Are there any penalties associated to Consultant's delay?	08.03.2012	If you mean contractual penalty, no, there are no penalties for delay delivery by the Consultant. However, the Consultant shall be liable for damages according Sub-Clause 3.9 of the Section VI, Standard Forms of the Contract.	14.03.2012
32	How could we handle with potential cost overruns or delays for which the Consultant is not responsible?	08.03.2012	Any deviations from the Contract Price or change of the contract duration shall be subject to a written amendment and prior consent of the contractual parties.  In case of delayed payments, Sub-Clause 6.5 of the Section VI, Standard Forms of the Contract shall apply.  In case of delays in performance of any delivery under the	14.03.2012
			Contract, the delay shall be considered case-by-case. If appropriate in the specific case, Sub-Clause 2.5 of the Section VI, Standard Forms of the Contract shall apply.	
33	Section VI. Last two paragraphs of Point 3.4. Our consortium is in not able at the moment to comply with such insurance requirements. Will this be dealt with in the negotiation phase or preclude us from participation to this tender?	08.03.2012	This matter will be dealt in during Contract negotiations.  Nevertheless, according to the referred Sub-Clause 3.4: "The Consultant (and its Subconsultants) shall take out such insurance together with any other insurance required to cover other Consultant's liabilities, if any, for the period of contract duration and afterwards for a period of 2	14.03.2012



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			(two) years after expiration of the Contract with the Client." In other words, according to the Contract, the required insurance shall cover the period of the contract duration + 2 years, i.e. it shall start from the Effective date of the Contract at the latest and shall last throughout the whole duration of the Contract + 2 years after expiration of the Contract at minimum.	
34	Clarify if the below listed documents which, as per section II, para 1.4 will be provided in electronic format, are available in english language  Intention (Preliminary EIA), Scope of Assessment (issued by MŽP SR), and EIA Report of Interim Storage of Radioactive Waste, National Radioactive Waste Repository Mochovce.  Pre-operational Safety Analysis Report of National Radioactive Waste Repository Mochovce.  Pre-operational Safety Analysis Report of Bohunice Radioactive Waste Treatment Centre.  Drawings of large components and other JAVYS facilities part of project scope.	08.03.2012	Selected Consultant will be provided with English transcriptions of documents as described in Section V, Chapter 5.0 REFERENCES – all other documents or data will be provided in Slovak only.	14.03.2012
35	The ToR does not give any indications on the status of implementation and then on the availability of results and data/information of the Projects implemented within the BIDSF (in particular items 1-9 of Section V, Chapter 5.0 REFERENCES).  Please, provide the above mentioned information.	08.03.2012	See question No 30	14.03.2012
36	With particular reference to the previous question, please clarify the status of implementation of the	08.03.2012	BIDSF Project B6.4 - Decommissioning database is finished already and all data are fully available for selected	14.03.2012



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				-
	following project and, if any, type		Consultant	
	and quality of the data produced useful for the FS implementation:  - BIDSF Project B6.4 - Decommissioning database.		BIDSF Project C10 - Free Release of Decommissioning is ongoing and will run in parallel with project D7.1	
	- BIDSF Project C10 - Free Release of Decommissioning - BIDSF Project D2 - Decontamination of the Primary Circuit.		BIDSF Project D2 - Decontamination of the Primary Circuit is under preparation and will run in parallel with project D7.1  All relevant data related to	
	In particular, clarify if relevant data related to contamination is available for all involved SSCs object of the FS and the final status of them after decontamination completion.		contamination is available for all involved SSCs object of the FS.  The final status of all involved SSCs object of the FS after decontamination completion will be provided to the selected Consultant.	
37	Please, clarify if complete characterization of FS involved SSCs has been performed and in case, provide relevant quality data.  In case data are not available, please clarify if their production should be in the scope of the FS contract.	08.03.2012	Complete characterization of FS involved SSCs has been performed in scope of project B6.4 (resulted in Decommissioning Database) and all relevant quality data will be provided to selected Consultant.	14.03.2012
38	Relevant project information of the V1 NPP FSAR should be made available to the consultant in English transcription (see item 10 of Section V, Chapter 5.0 REFERENCES).  Please, inform on the possibility to get selected part in English.	08.03.2012	See question No 34	14.03.2012
39	BIDSF Projects C7-A2, C7-A4, C16.1, C15A&B, D8, Information on NRR at Mochovce and V1 NPP FSAR are included in Section V, Chapter 5.0 but, according to para 1.4 of Section II, Data Sheet, they will be not provided in electronic form. Please, clarify if they will be provided anyway and in which format.	08.03.2012	All inputs from BIDSF Projects C7-A2, C7-A4, C16.1, C15A&B, D8, Information on NRR at Mochovce and V1 NPP FSAR will be provided to the selected Consultant in electronic form. There are standard formats as follows:  - MS Office (.doc, .xls, .ppt)  - MS Project (.mpp)  - Adobe (.pdf)  - AUTOCAD (.dwg)	14.03.2012



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- 10		00.00.0040		11000010
40	Will the Client' experts be available for consultations during the project implementation?		Yes, there will be joined Project Team consisting of experts from Consultant side and Client side – this team will provide full support during the project implementation.	14.03.2012
41	What is the extent of the documentation provided as input data in the Slovak language only?	08.03.2012	Approx. 1000 pages but there is possible increase of that number with other documents and data in the Slovak language which will occur during project implementation.  Anyway there is not necessary to translate complete documents — but only parts or subchapters will be relevant for project purposes.	14.03.2012
42	What is the size in number of pages of individual chapters of both PSARs?	08.03.2012	Rev 1 2010 15 Chapters+3 Annexes. Number of pages is 335. Chapter (Number of pages) Acronyms (10) 1. Intro (5) 2. Background (40) 3. Organisation (15) 4. Site Assessment (35) 5. Nuclear facility data (56) 6. System Description (134) 7. Safety Analysis (70) 8. Go Live Procedure (14) 9. Operation Conditions (48) 10. Limits and Conditions (12) 11. Radiation protection (26) 12. Emergency Readiness (26) 13. Environmental Impacts (63) 14. RAW Treatment (10) 15. Decommissioning Procedure (55)  NRR PO SAR (RÚ RAO) Release 4 / Rev. 0 2011	14.03.2012
			15 Chapters+6 Annexes.  Number of pages 535.  Chapter (Number of pages)  1. Intro (19)  2. Background of RÚ RAO (40)  3. Organisation RÚ RAO (16)  4. Assessment of locality (38)  5. Operation RÚ RAO (65)  6. System Description (31)  7. Safety Analysis RÚ RAO (86)  8. Go Live Procedure (31)  9. Operation Conditions (57)  10. Limits and Conditions (42)	



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43	When the project C9.4 will be	08.03.2012	11. Radiation Protection (18) 12. Emergency Readiness (25) 13. Environmental Impacts (20) 14. RAW Treatment (9) 15. Closure of locality (26)  Annex C. 1 (1) Annex C. 2 (5) Annex C. 3 (1) Annex C. 4 (1) Annex C. 5 (1) Annex C. 6 (3)  Scope of C9.4 project includes	14.03.2012
	delivered and what is the scope of the project?		design and licencing process for new disposal spaces for LILW and VLLW in NRR Mochovce. Results of the project are expected on 2016.	
44	Will the waste quantities estimation be part of the deliverables?	08.03.2012	Yes, the waste quantities estimation will be part of the deliverables.	14.03.2012
45	Will the FS include transport of RAW to interim storage (IS)?	08.03.2012	Yes, the FS will include transport of RAW to interim storage (IS)	14.03.2012
46	Who will deal with the authorities during transportation?	08.03.2012	Client (JAVYS) is fully responsible to deal with the authorities during transportation.	14.03.2012
47	Will there be any limitation for IS concerning containers or size of packages or unpacked components/fragments? If so, provide estimation and types.	08.03.2012	There are no limitations for IS for now – it is necessary to respect approved packaging forms for fragmented RAW.  But IS is possible to use for storage of large components as well (packed or unpacked) regarding to results of project D7.1.  For IS EIA purposes were considered packaging forms as follows:	14.03.2012
			<ul> <li>FCC (Fiber-Concrete Container)</li> <li>Size: 1,7 x 1,7 x 1,7 m</li> <li>Container mass: 4200 kg</li> <li>Maximum capacity with waste: 12 500 kg</li> <li>200 I MEVA drums:</li> <li>Dimensions: Ø600x800 mm</li> <li>Mass with waste: 450 kg</li> <li>Container 2 EM-01:</li> <li>Dimensions: 1,1 x 1,1 x 1,7 m</li> <li>Mass with waste: 1500 kg</li> </ul>	



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			- ISO kontajner: ISO 20' serie 1, (STN 26 9341, STN 26 9343 a ISO 1496-1+Amdl) • Steel made • External size: 2438 x 2438 x 6058 mm • Container Weight: 3 000 kg  However Consultant shall feel free in this area using all approved packaging forms	
48	Will it be possible to accept HLW in IS? If so, provide limits.	08.03.2012	It will be possible to accept in IS High Level RA Waste with maximum activity 1x10 <sup>18</sup> Bq (IS RAW EIA Report).  There is not considered to store heating and nuclear materials in IS.  All other details (incl. limits) will be provided to selected Consultant during project implementation	14.03.2012
49	Could you specify the exact location of shielding assemblies?	08.03.2012	Shielding assemblies in the amount of 36 pcs from reactor pressure vessel of Unit 1 and 36 pcs from reactor pressure vessel of Unit 2 were transported and are stored in nuclear spent fuel storage pool (BSVP) of Unit 2. Shielding assemblies are placed on basic racks. The level of demineralised water in the nuclear spent fuel storage pool of Unit 2 is kept on 6,5 m. Detailed cartogram of all 72 pcs of shielding assemblies loading to nuclear spent fuel storage pool of Unit 2 can be provided to the selected Consultant, upon demand.	14.03.2012
50	Are the containers for internal reactor parts within the scope of the FS?	08.03.2012	No, the containers for internal reactor parts are out of the scope of the FS.	14.03.2012
51	Will these containers be available for the manipulation?	08.03.2012	Yes, these containers will be fully available for the manipulation.	14.03.2012
52	Will there be any waste stored in Mogilnik during project implementation?	08.03.2012	Yes, there will be RA waste stored in Mogilnik during implementation of project D7.1.	14.03.2012



#### **BIDSF 019 4 001**

**D7.1** Appendix E

#### TERMS OF REFERENCE OF THE PROJECT

#### **DEFINITIONS, ABBREVIATIONS AND ACRONYMS**

ARRS Applicable or Relevant and appropriate Requirements

BIDSF Bohunice International Decommissioning Support Fund

Client JAVYS, a.s. (Jadrová a vyraďovacia spoločnosť)

**Consultant** Consultant of the Project

**D&D** Dismantling and Decommissioning

**Decommissioning** Slovak Atomic Law, Act No. 541/2004 Coll., Section 2, letter s) states that

decommissioning shall mean activities after termination of the operation taken to allow removal of a nuclear installation from the coverage of the

present Act except of a repository.

**EBO** Nuclear Power Plants at Jaslovské Bohunice

**EBRD** European Bank for Reconstruction and Development

**EC** European Commission

**EMO** Nuclear Power Plant at Mochovce

**FCC** Fiber-Concrete Containers

FS Feasibility Study

IS Interim Storage

**ISFSF** Interim Spent Fuel Storage Facility **ISO** International Standard Organization

JAVYS, a.s Jadrová a vyraďovacia spoločnosť (Slovak for *Nuclear and Decommissioning* 

Company)

**MARSSIM** <u>M</u>ulti-<u>Agency</u> <u>R</u>adiation <u>Survey</u> and <u>Site</u> <u>Investigation</u> <u>M</u>anual

MethodA description document for each decommissioning activity that includesStatementactivity purpose, description of task, applicable criteria (e.g. site access, performance, costs, timing, health and safety, QA/QC, environmental

protection, etc.), and sequencing of events to accomplish the task

**NPP** Nuclear Power Plant

NR SR National Council of the Slovak Republic

NRR SR National Radioactive Waste Repository of the Slovak Republic (in Mochovce)

**OHSAS** Occupational Health and Safety Assessment Series

**PMU** Project Management Unit

**PO SAR** Pre-operational Safety Analysis Report

QAP Quality Assurance Plan
RAI Residual Activity Index



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**RAW** Radioactive Waste

**RCSA** Reactor Core Shielding Assemblies

**RPV** Reactor Pressure Vessel

**RTC** Radwaste Treatment Centre

**SE, a.s.** Slovak Electric, plc. (English for *Slovenské elektrárne, a.s.*)

SR Slovak Republic

**SSC** Systems, Structures and Components

**ÚJD SR** Nuclear Regulatory Authority of the Slovak Republic

**V1 NPP** Jaslovské Bohunice V1 NPP

**VLLW** Very Low Level Waste

**WAC** Waste Acceptance Criteria



**D7.1** Appendix E

#### 1. INTRODUCTION

#### 1.1 BACKGROUND

In 1999, the Slovak Government committed to the final shutdown of units 1 and 2 of Bohunice V1 NPP in December 2006 and 2008, respectively (Resolution No. 801/99). Both units were shut down on the agreed dates.

The scope of the decommissioning project is on the Bohunice V1 NPP structures, systems and components which are not shared with other facilities. In accordance with this criterion, the Interim Spent Fuel Storage Facility, the Radwaste Treatment Centre (RTC) and the Auxiliary Boiler will be kept as they are. The decommissioning of V1 NPP nuclear installation requires the erection of a new facility – the Interim Storage of RAW – coded as project C8. The C8 facility will be in operation for an approximately 50 to 70 years. Decommissioning of V1 will be performed in two stages, in addition to the pre-decommissioning activities which have been carried out previously to the proper decommissioning. The foreseen time frame of these stages is the following:

- Pre-Decommissioning activities: until Stage 1 license was issued by the Slovak Authorities<sup>1</sup>
- Decommissioning Stage 1: from January 2012 to December 2014
- Decommissioning Stage 2: from January 2015 to December 2025

Pre-decommissioning activities include the complete defueling of both reactors, the conditioning of historical wastes, the preparation of the licensing documentation for Stage 1 licensing, the plant physical and radiological characterization, the modifications of electrical and mechanical systems and their tag-out to allow the starting of the dismantling operations, the access control and physical security and the preparation of buffer waste storage places onsite, and the primary circuit decontamination. During this stage, technical studies, technical specifications and tender documents for contracting Stage 1 projects will be performed.

Decommissioning Stage 1 activities refer to the removal of non-active systems and demolishing of structures no longer needed for Stage 2 dismantling. It includes the removal of systems from the turbine building, demolishing of structures such as the cooling towers and other buildings associated with the cooling function, partial dismantling of electrical outdoor equipment and switchgears, and dismantling of some outdoor tanks. During this stage, technical and procurement documentation shall be prepared to contract the Stage 2 projects and some conditioning of the buildings for future use will also be performed.

Finally, Decommissioning Stage 2 activities cover the removal of the remaining Plant systems and demolishing of remaining structures within the decommissioning scope. This includes the removal of systems and components from the reactor building, the auxiliary building, and the diesel generator building. Outdoor tanks and buried piping trenches and cables will also be dismantled. Building decontamination and demolition will be performed when they are empty. Site restoration will be the final major activity to be performed on site.

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<sup>&</sup>lt;sup>1</sup> ÚJD SR Decision No. 400/2011 for Stage I decommissioning of Units 1 & 2 of V1 NPP in Jaslovské Bohunice, issued 19 July 2011.



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The removal of the plant large components (e.g. RPV and its internal components), which requires more care and the highest technology, deserves special consideration. Some preliminary data on plant characterization are available. Further characterization efforts to obtain the isotopic distribution of large components and other structures of the nuclear island are underway in the frame of BIDSF project B6.4 extension.

In addition, waste acceptance criteria for the Mochovce repository practically do not envisage the acceptance of activated material, especially if it is in big parts neither different engineered disposal solution that the current licensed containers. This situation logically leads one to assume that the Mochovce repository was not licensed for large activated items. This must be analyzed in a specific study to be performed at the shortest possible time. Based on the common practices in other plants under decommissioning, we can observe that the internal components are generally stored on site for a long period of time. They could be kept uncut inside their own vessel, and transferred to the special onsite building, or they could be removed from the vessel, cut remotely underwater and then stored in special containers.

Therefore a feasibility study has to be undertaken by the Consultant to support the final alternative to be selected because it is foreseeable in this Decommissioning Stage 2 the removal of large components located in the reactor building will be the activity that will take the longest time to be completed. This will also requires other existing handling systems and, potentially, the use of the spent fuel pools for cutting some activated parts. Therefore, it is to commence at the beginning of this stage.

One of the most critical decisions during D&D operations is the selection of the reactor vessel and highly activated by neutron radiation reactor internals management. Two options are considered: (1) Ship the vessel with the internals intact or (2) remove and segment them. However, disposal site restrictions can preclude the first option mainly considering the high activation level of the internals. In that case, one solution is cutting the internals under water in the reactor cavity or in the spent fuel pool and place the segmented portions in HLW or LILW containers depending on their radioactive classification. The HLW specially fabricated containers need to be stored onsite due to their activity, while the LILW containers are taken to the respective disposal facility.

The Reactor Pressure Vessel (RPV) can be either segmented in-situ (e.g. in Shoreham (USA), planned for BR-3 (Belgium), Trino (Italy), Sizewell B (UK) and José Cabrera (Spain).) or removed intact for storage or disposal elsewhere (e.g. in Yankee Rowe, Trojan, Big Rock Point, Maine Yankee and San Onofre. All plants are in USA).

In Greifswald, NPP with similar VVER reactors, the company EWN has removed the RPVs to a storage building located onsite. In some units, internals have been cut remotely while, in others, were kept uncut inside their respective RPV. This and other experiences suggest making a decision on the internals removal based in the level of activation with regard to the disposal site waste acceptance criteria.

The knowledge of the radiological status of the plant is essential during the planning phase to reduce the dose. The rule should be to "remove the hot stuff first"; when this premise and practice is accomplished, lower than the projected dose results. The use of localized tenting is an effective and low-cost technique for controlling the spread of contamination during dismantling execution.

In respect waste management area, first of all, the governmental decree No. 974/2000 establishes that radioactive waste not fulfilling the NR SR Mochovce acceptance criteria will be temporarily stored at Radioactive Waste Interim storage planned to be built on Bohunice site



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Slovakia has an Interim Spent Fuel Storage Facility to manage the spent nuclear fuel and the NRR at Mochovce for LILW management. For this reason, many decommissioning waste alternatives chosen in other decommissioning projects had their origin in the un-availability of this disposal facility and the corresponding waste acceptance criteria.

This study will apply appropriate waste management criteria such as to identify clearly and to prepare the different treatment pathways for re-use or disposal of each type of material or waste produced by the decommissioning activities is key to cost effectiveness, minimization of waste volumes as well as safety and radiation protection of workers.

The V1 operational waste is currently shipped by road to NRR Mochovce. Therefore, this repository is licensed to accept the operational typical packages (fibre concrete containers – FCC), which are transported by trucks. The use of special shipments must be analyzed in the scope of these ToR.

#### 1.2 V1 NPP AT JASLOVSKÉ BOHUNICE

The V1 NPP is located in the Southwest part of the Slovak Republic. The site is roughly 60 km in Northeast direction from the capital Bratislava. The site lay out will change during the next years (see and ).

The V1 NPP is a nuclear facility with twin reactors type VVER-440/V230 (see ). Primary circuit for each unit consists of the following main components:

- 1 Reactor Pressure Vessel (RPV) and internal structures
- Main circulation pipeline (6 main circulation loops) equipped with:
  - o 6 Steam Generators
  - 6 Main Circulation Pumps
  - o 12 Main Gate Valves
- 1 Pressurizer
- 1 Pressurizer tank

A brief explanation of the features of these components and other relevant SSC for this project is given in the following subchapters.

#### 1.2.1 Reactor Pressure Vessel (RPV) and Internal Structures

The Reactor Pressure Vessel (RPV) houses reactor internal structures (mainly reactor core barrel with reactor core barrel bottom, core basket and protection tubes block). The RPV main features are (see Table 1):

- Maximum dimensions: Height: 11800 mm, External diameter: Ø4270 mm
- Material: Low alloyed steel with complete lining of internal surfaces made from austenitic steel.

Table 1 - Main Features of RPV

RPV and RPV-internals	Length [mm]	Diameter [mm]	Mass [kg]	Material
Core basket	3930	Ø3020	22500	OCH18N12T



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RPV and RPV-internals	Length [mm]	Diameter [mm]	Mass [kg]	Material
Reactor pressure vessel	11800	Ø4200	210000	15Cr2MFA+9 mm thick stainless steel liner
Reactor core barrel bottom	2750	Ø3605	23000	OCH18N12T
Reactor core barrel	8122	Ø3300	48000	OCH18N12T
Protection tube block	7000	Ø3200	27300	OCH18N12T

The protection tube unit was designed to fix the fuel, control and protection assemblies in the core basket in order to prevent their swimming up or vibration during operation due to the influence of the primary circuit coolant and to guide the drive rods of the control and absorber assemblies.

The core basket was designed to hold the 312 fuel assemblies and to guide the 37 assemblies of the control and protection systems. The reactor core barrel, with the reactor core barrel bottom, are designed to hold the core basket with the fuel, control and absorber assemblies, guide the coolant flow in the core area and separate the incoming coolant flow from the outgoing coolant flow. shows the moment when one of the two RPV was located in the reactor shaft at V1 NPP.

#### 1.2.2 Main Circulation Pipeline (MCPL)

One of the primary circuit components is the main circulation pipeline. The pipeline connects the reactor with main coolant pumps and steam generators. Main coolant valves are welded on "hot" and "cold" parts of the main circulation pipeline. The pipeline is manufactured from the stainless steel OCH18N12T. Internal diameter of the pipeline is Ø496 mm and the thickness is 34 mm. Elbow-pipe thickness is 52 mm.

#### 1.2.3 Steam Generator (SG)

The Steam Generator is a horizontal heat exchanger consisting of a cylindrical vessel blinded by elliptic fronts. The material of the vessel is carbon steel 22K. The length of the vessel is 11800 mm, internal diameter is Ø3210 mm and the thickness of the vessel wall varies from 72 to 132 mm. The weight of an empty SG is 156680 kg. 5536 heat exchange stainless steel pipes of diameter Ø16 mm and length up to 12500 mm are welded to the central part of two collectors. The vessel is equipped with inspection manholes of diameters Ø712 and Ø500 mm.

#### 1.2.4 Main Circulation Pump (MCP)

The Main Circulation Pumps are vertical canned glandless single-stage centrifugal pumps equipped with asynchronous electric motor. Hydraulic parts consist of the solid shell equipped by the suction and outlet nozzles welded to the main circulation pipeline. Every pump weights 50200 kg. shows the MCP and views of its components.



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#### 1.2.5 Main Gate Valves (MGV)

Main Gate Valves of inner diameter  $\emptyset$ 500 mm are designed to separate the circulation loops from the reactor. They are mainly used during non-standard operation, decontamination and maintenance. Every valve weights 7200 kg with the electric motor, and 725 kg without it.

#### 1.2.6 Pressurizer (KO)

The Pressurizer is a vertical cylindrical pressurized vessel designed to compensate coolant volume changes. The pressurizer is welded from 4 steel rings and elliptic bottom and lid. The thickness varies from 153 to 204 mm. Material is carbon steel coated by a stainless steel liner of 9 mm. The height of the pressurizer is 10860 mm. The internal diameter is Ø2396 mm. The total volume is 40 m³. The empty pressurizer weights 118800 kg. shows dismantlement operations of the pressurizer in a VVER-440 reactor.

#### 1.2.7 Pressurizer Tank (PT)

The Pressurizer Tank is a horizontal cylindrical pressurized vessel. It is designed to accept, capture and minimize the volume of steam from the Pressurizer. The total volume is 15 m<sup>3</sup>, the length 5400 mm and the diameter Ø2000 mm. The thickness is 10 mm.

#### 1.2.8 Annular Water Tank (AWT)

During the operation of the plant, the annular water tank served as neutron reflector and shielding against neutron and gamma radiation originating in the reactor core. The annular water tank holds the measuring channels for the probes belonging to the reactor out-core instrumentation. Above the annular water tank there are the RPV supports that take the RPV load (weight) to the building structure in the reactor building.

Overall mass of the AWT is approx. 62000 kg, and the dimensions are: height: approx. 4950 mm, external diameter is approx. Ø6800 mm. The material of the AWT is carbon steel.

#### 1.2.9 Mogilnik

For a safe storage of reactor wastes from the V1 NPP, a storage facility is located in the reactor hall (the so-called Mogilnik) enabling easy emplacement of solid radioactive wastes (mostly internal reactor parts-absorbers, intermediate masts, in-core measuring channels, etc.). This facility ensures an adequate level of personnel protection against ionizing radiation.

The facility consists of a vertical arrangement of 399 locked tubes located in concrete shielding (see ). Tubes are 9000 mm long; their diameter is  $\emptyset$ 200 mm. Their upper, non-shielded, part is used to insert the RAW. The concrete shields the radiation induced by the stored wastes.



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#### 1.2.10 Reactor Shaft Protection Lid (RSPL)

The Reactor Shaft Protection Lid is used to hermetically isolate the reactor hall from the upper part of the shaft where the reactor is located. RSPL is a metallic construction with internal inserted concrete slabs. The overall weight of this structure is 100950 kg and its dimensions are as follows: maximum height 6825 mm, maximum external diameter is Ø7520 mm.

In Table 2 are summarized the main features of large components.

Table 2 - Features of Primary Circuit Large Components

Equipment	Number per unit	Length [mm]	Diameter [mm]	Weight [Kg]	Material
Main Circulation Pipeline • hot leg • cold leg	12	13815 21436	Ø496	-	OCH18N12T Thickness: 34 mm
Steam Generators	6	11800	Ø3400	156680	Carbon Steel (22K)
Main Circulation Pumps	6	6610	-	50200	Stainless Steel
Main Gate valves	12	3875	Ø500	7200	0CH18N9TL
Pressurizer	1	10860	Ø2890	118800	Carbon steel+9 mm thick stainless steel liner
Pressurizer Tank	1	5400	Ø2006	6350	Carbon steel+9 mm thick stainless steel liner
Annular Water Tank	1	4950	Ø6800	62000	Carbon Steel
Reactor Shaft Protection Lid	1	6825	Ø7520	100950	Carbon Steel

#### 1.2.11 Reactor Core Shielding Assemblies (RCSA)

The reactor core shielding assemblies are intended to reduce neutron fluence to the RPV of VVER-440 V-230 type reactor. They are located in the reactor core periphery and amount to a total of 36 pieces. The RCSA itself consists of 7 steel rod bundle, tube cover, head and footing.

Shielding elements are of hexagonal cross section. External steel casing cover the filling comprised of 7 tight steel rods with diameter of  $\emptyset$ 48 mm attached to lower and upper supporting plate. Shielding elements are made of austenite steel. They are significantly activated along with their whole height. The construction of head and footing is identical to fuel rod element components. During the reactor operation, the shielding element remains immovable. Data of RCSA are summarized in Table 3. A picture of the RCSA is shown in .



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Table 3 - RCSA Data

Feature	Value
Nominal diameter (key size)	144 [mm]
Length	3217 [mm]
Mass	300 [kg]
Material	08Ch18N10T
Number of pieces in the reactor core (one reactor)	36

and show the arrangement of VVER-440/V230 reactor and the primary system similar to V1 NPP at Bohunice site.

The total primary circuit volume (for one unit) is  $223 \text{ m}^3$  and its surface area is about  $17 000 \text{ m}^2$ . Therefore, the overall wetted surface is approximately  $34 000 \text{ m}^2$ .

In the reactor building, there is a closed compartment system, namely pressure compartment system, with a net volume of about  $14000 \text{ m}^3$ , which encloses, as a confinement, the main components of the primary circuit and it was designed for an overpressure of 1 bar. This compartment system is connected to the environment by exhaust ventilation flaps.

It must be mentioned the dimensions of the bigger item (RPV) were constrained by the railway requirements because it was the transport mode used in these plants.

The V1 activated material inventory is compiled in the BIDSF Project B6.4 Decommissioning Database (mainly in B6.4-D7 and B6.4-D12<sup>2</sup>). The contamination status of the two primary circuits is going to be changed because it is foreseen the two primary circuit decontamination will be finished in 2012.

#### 1.3 NRR MOCHOVCE

The NRR at Mochovce (Annex 1. Location of NPPs and Mochovce NRR) is a near surface repository designed to dispose of LILW with a short half-life resulting from the operation (historical and operational radioactive waste) of all Slovak NPPs (i.e. V1 NPP, V2 NPP and EMO NPPs) and decommissioning of nuclear facilities (i.e. A1 NPP and in the near future from V1 NPP) and from research institutes, laboratories, hospitals and other institutions (the above-mentioned institutional radioactive waste).

The territory of the NRR covers approximately 11 hectares, with only 20 % of this capacity is now used (in operation) to dispose of RAW (). All waste, without considering their activity level, are at present time packaged in fiber-concrete containers (FCC), with an effective volume of  $3.1~\text{m}^3$  and an "occupied" volume of  $5~\text{m}^3$ . The existing disposal facility consists of two double-rows of reinforced concrete vaults (see ). The dimensions of a vault are 17.4~x~5.4~x~5.5~m. Each row includes 20 vaults divided into five expansion units

<sup>&</sup>lt;sup>2</sup> B6.4-D12 is under development since March 30, 2011 until June 2012.



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containing four vaults each. Each vault is able to house 90 FCC (). The Table 4 summarizes the description of the National Repository at Mochovce.

Table 4 - Mochovce National RAW Repository General Description

Parameter	Description	
Type of facility	near-surface engineered facility, vault disposal system	
Arrangement	80 concrete vaults arranged in two double-rows	
Vaults dimensions	Internal dimensions of the disposal vaults: 17.4 x 5.4 x 5.5 m	
Concrete walls	reinforced walls with a thickness of 0.6 m	
Sealing material	compacted clay sealing surrounds the individual double-row	
Thickness of clay bathtub	on the bottom, the front and the rear part: 1 m	
	• on the sides: 3.5 m	
Overall capacity	7200 Fiber Reinforced Containers (existing double-rows)	

Studies to include a VLLW repository or eventually also the disposal of low and intermediate level waste (LILW) by means of a new package form in the areas of the NRR are in progress. These studies are developed in the frame of BIDSF Project C9.4 – "Design and Licensing of New RAW Disposal Space at the National Radioactive waste Repository, Mochovce."

#### 1.4 RAW INTERIM STORAGE AT BOHUNICE SITE

The RAW Interim Storage (RAW IS) at JAVYS site will consists of four storage modules. The execution of this project is in the scope of the BIDSF Project coded C8 (Interim Storage of RAW at Bohunice Site). The maximum capacity of one module corresponds to 678 FCC containers with a volume of  $3.1 \text{ m}^3$ . Dimensions of the modules are: 3x(25.150x61.425) m, 1x(25.150x50.225) m. Height of the hall will be 16.2 m.

RAW IS consists of an independent storage hall of a module type, services outbuilding, siding track and necessary engineering networks. RAW stored in the Interim RAW Storage will be placed exclusively in the following packages:

- FCC containers which are/are not exclusively suitable for the final disposal in LILW NRR in Mochovce
- MEVA drums with a volume of 200 liters
- ISO containers 20' for storage of large metallic RAW pieces wrapped in plastic sheets
- 2EM-01 containers

#### 1.5 BOHUNICE RADIOACTIVE WASTE TREATMENT CENTRE

The Bohunice Radioactive waste Treatment Centre is designed for the processing and treatment of low and intermediate level RAW from the operation of the A1, V1, V2 and EMO NPPs. The individual facilities of the



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Bohunice Radioactive waste Treatment Centre process different types of RAW, which are then placed into fiber concrete containers (FCCs) and sent off for final disposal in the NRR in Mochovce.

In principle, the whole RAW processing and treatment process can be divided into the following independent but interconnected facilities: sorting, incineration, high-pressure compacting, evaporation, and cementation (the activity limit for cementation of solid RAW is 2.1010 Bq/m³).

The erection of a large capacity fragmentation and decontamination facility is being prepared at the V1 NPP nuclear facility, the purpose of which will be to provide the necessary means for the management and processing of all metallic and building waste from the V1 NPP decommissioning, in order to fulfill the objectives of optimizing personnel doses and minimizing the production of RAW and gaseous and liquid discharges, as well as minimizing the impact on the environment. Both metallic and building low and intermediate level waste shall be dismantled (segmented), fragmented, sorted, decontaminated and released into the environment or processed into a form suitable for its disposal in the National Repository in Mochovce (NRR). This facility is planned to be in operation from December 2014.

#### 2. OBJECTIVE OF THE PROJECT

The objective of this Feasibility Study is to identify, analyze, justify and rank alternative solutions for the management of the SSC (henceforth large components) of the two units of V1 NPP Primary Circuit toward their dismantlement and subsequently management. High ranked alternatives resulting from the comparative analysis in the frame of this Feasibility Study will provide Client's decision makers with sufficient information to justify its acceptance for implementation.

The scope of service of the Consultant shall include:

- 1. Identify, analyze, justify and rank alternative solutions towards the dismantling and management of the large components included in the following list (only one Unit SSC are listed):
  - 1. RPV
  - 2. Reactor Internal Structures
  - 3. Main Circulation Pipelines
  - 4. Steam Generators
  - 5. Main Circulation Pumps
  - 6. Main Gate Valves
  - 7. Pressurizer
  - 8. Pressurizer Tank
  - 9. Annular Water Tank
  - 10. Mogilnik
  - 11. Reactor Shaft Protection Lid
  - 12. Shielding Assemblies
- 2. Elaboration of the PO SAR Upgrade Proposal for concerned nuclear installations (e.g. NRR Mochovce and RTC Bohunice) for the selected alternatives, where the upgrade is necessary.



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#### 3. SCOPE OF THE PROJECT

#### 3.1 DEVELOPMENT OF THE PROJECT

#### 3.1.1. **General**

The Feasibility Study (FS) is the mechanism for the development, screening, and detailed evaluation of alternative actions towards the dismantling and waste management (D&WM) of V1 NPP large components. The FS process shall include the following phases:

- 1. Scoping
- 2. Development and Screening of Alternatives
- 3. Detailed Analysis of Alternatives

In accordance with project objectives, the Consultant's scope of services comprises the following deliverables:

- 1. Inception Report (see subchapter 3.7)
- 2. Deliverable D7.1-D0 Methodology
- 3. Deliverable D7.1-D1 Scoping
- 4. Deliverable D7.1-D2 Development and Screening of Alternatives
- 5. Deliverable D7.1-D3 Detailed Analyses of Alternatives
- 6. Deliverable D7.1-D4 PO SAR Upgrade Proposal for Concerned Nuclear Installations

#### 3.1.2. Detail Project Description

#### 3.1.2.1. Deliverable D7.1-D0 – Methodology

The assessment and selection of a preferred alternative(s) is a complex process involving diverse inputs and factors, a considerable number of disciplines linked to the evaluation process of the alternatives against the optioneering criteria. The Consultant shall address all key aspects for the implementation of the Feasibility Study as it is required in the next chapters. In this context, Consultant shall outline in the methodology all the necessary arrangements to deal with major project issues (for instance, acquisition of input data to develop the FS), the description of FS implementation phases, and the establishment of a comprehensive framework for rapid and successful implementation of the assignment.

Consultant shall explain the methods to be applied to achieve Project objectives. For example, the methods of data collection, safety analysis methodology that will be applied, ranking, optionering and decision-making methods (e.g. Multi-Criteria Decision Analysis), etc. shall be explained in sufficient detail to allow the Client understand where they fit. These explanations and details shall enable the Client to assess and accept their adequacy. The Client will approve the Methodology.



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#### 3.1.2.2. Deliverable D7.1-D1 - Scoping

Scoping is the initial planning phase of the Feasibility Study process. Many of the planning steps beginning here shall continue and shall be refined in later phases of the FS. Scoping activities shall begin with the collection of existing site data. On the basis of this information, scoping activities shall include:

- 1. A study plan (the plan shall incorporate a survey of the site's surroundings and provide details for activities that verify or identify the location and status of: roads, waste treatment and storage facilities, and other site environs information) should be prepared before the Site Reconnaissance<sup>3</sup> to anticipate every reconnaissance activity and identify specific information to be gathered.
- 2. Initiating the identification and discussion of potential regulatory and/or client Applicable or Relevant Requirements (ARR's).
- 3. Determining the types of decisions to be made and identifying the data and other information needed to support these decisions.
- 4. Preparing the work plan.
- 5. Developed a baseline risk assessment to identify the existing or potential risks posed by the site to human health and the environment.
- 6. The Consultant shall carry out inspections in the plant, the roads and rail in those areas where the information of interest are located according to the information collected during the review of the technical documentation of the plant.
- 7. Evaluate the quality of the compiled data in terms of "fitting for purpose".

The Consultant shall identify the different areas of expertise (e.g. civil, mechanical and electrical engineering and radiological protection) and provide necessary experts in these matters to verify the status of the plant.

The Consultant shall compile all information obtained from the inspections and walk-downs carried out as well as the base information use to develop the scoping and include all this information in annexes to the Feasibility Study.

#### 3.1.2.3. Deliverable D7.1-D2 – Development and Screening of Alternatives

The development of alternatives phase of the Feasibility Study process usually begins during scoping when likely response scenarios are first identified. The development of alternatives shall include:

- 1. Identification of D&WM objectives.
- 2. Identification of potential technical solutions (e.g. kerf techniques), resource recovery, and containment technologies, such as shielding, aerosol confinement, packaging, etc., that will satisfy these objectives.

<sup>3</sup> Preparing for the Site Reconnaissance includes initially gathering necessary materials and equipment. This includes a camera to document site conditions, health and safety monitoring instruments including a radiation detection meter for use during the site visit, and extra copies of topographic maps to mark target locations, water distribution areas, and other important site features. A logbook is critical to keeping a record of field activities and observations as they occur. For documentation purposes MARSSIM recommends that the logbook be completed in waterproof ink, preferably by one individual. Furthermore, each page of the logbook should be signed and dated, including the time of day, after the last entry on the page. Corrections should be documented and approved.



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- 3. Screening the technologies based on their effectiveness, implementability, and cost; and
- 4. Assembling technologies and their associated containment or disposal requirements into alternatives for the contaminated media at the site or off-site.

Once potential alternatives have been developed, Consultant shall screen out certain options to reduce the number of alternatives that will be analyzed. The screening process shall include the evaluation of alternatives with respect to their effectiveness, implementability and cost.

Consultant shall document in the **V1 NPP Large Components Management FS Report** the methods, rationale, and results of the development and screening of alternatives process (e.g., through graphical representations, tables and technical descriptions). This information serves as the basis for ulterior development of the alternatives and their analysis in next chapters of the FS.

#### 3.1.2.4. Deliverable D7.1-D3 – Detailed Analysis of Alternatives

Detailed analysis is the last phase of the Feasibility Study process. Once sufficient data are available, Consultant shall evaluate the alternatives in detail with respect to a set of evaluation criteria. The set of criteria (see Table 5) shall include at least:

- 1. Short and long-term Client (i.e. JAVYS, a.s.) Policy and Criteria.
- 2. Overall protection of human health and the environment.
- 3. Compliance with ARRs.
- 4. Long-term effectiveness and permanence.
- 5. Short-term effectiveness.
- 6. Reduction of volume.
- 7. Implementability.
- 8. Cost.

#### **Individual Analysis of Alternatives**

The alternatives shall be individually analyzed against each criterion and then compared against one another to determine their respective strengths and weaknesses and to identify the key trade-offs that must be balanced for the site. From the environmental point of view a zero alternative ("no action") should also be considered. The results of the detailed analysis are summarized so that an appropriate solution consistent with the regulatory requirements and other constraints can be selected.

In Table 5 are included the optioneering criteria to be used during the analyses of alternatives.

Table 5 - Optioneering Criteria

Criteria	Description
Short and long-term	Addresses whether or not an alternative will meet all of the applicable or
Client (i.e. JAVYS	relevant and appropriate criteria of Client's general strategy and the
a.s.) Policy and	interfaces with other Client's projects.
Criteria	



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Criteria	Description
Overall Protection of Human Health and	Addresses whether or not an alternative provides adequate protection and describes how risks posed through each pathway are eliminated,
the Environment	reduced, or controlled through treatment, engineering controls, or institutional controls. Risks assessments (e.g. radiation exposure analysis
	and exposure to other non-radiological contaminants, like chemicals, etc.) supporting the analysis shall also be developed and included.
Compliance with ARRs	Addresses whether or not an alternative will meet all of the applicable or relevant and appropriate requirements of Regulatory Offices and environmental statutes and/or provide grounds for invoking a waiver.  - International references to regulatory body acceptance of similar
	projects for each considered alternative will be quoted.
	- State Acceptance (Support Agency) addresses the technical or
	administrative issues and concerns the support agency may have regarding each alternative.
	- Community acceptance addresses the issues and concerns the public may have to each of the alternatives.
Long-term	Refers to the ability of an alternative to maintain reliable protection of
effectiveness and permanence	human health and the environment over time once cleanup goals have been met (e.g. on-site radioactive waste storage long-term effectiveness could be considered in any alternative including long period with "on- site" storage).
Reduction of volume	It is the anticipated performance (e. g. stored volume, number of places, etc.) of the adopted removal option, used technologies, etc. adopted for a project.
Short-term	Addresses the period of time needed to achieve protection and any
effectiveness	adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup
	goals are achieved (e. g. on site radioactive waste storage short-term
	effectives could be the unique effectiveness considered in any alternative
- 1	with immediate disposal or clearance).
Implementability	It is the technical and administrative feasibility of an alternative, including the availability of materials and services needed to implement a particular option.
Cost	Includes estimated capital and operation and maintenance costs, and net present worth costs.

Although all alternatives shall be thoroughly assessed, ranked and described in the method statements, it is important for the Client that the method statement for on-site storage alternatives describes the design requirements (e.g. dimensions, equipment, etc.) of the facility(ies) necessary to store the large components part of the scope of this Feasibility Study.

#### **Presentation of Individual Analysis**

The analysis of individual alternatives with respect to the specified optioneering criteria shall be presented by the Consultant in the **V1 NPP Large Components Management FS Report** as a narrative discussion accompanied by a summary table. This information will be used to compare the alternatives. The narrative discussion shall, for each alternative, provide:



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- a description of the alternative
- a discussion of the individual criteria assessment

The description of the alternative shall provide data at least on the following issues:

- Project management and organization issues
- Preparatory activities
- Training requirements
- Technology to be used (use of any innovative technology shall be identified) for dismantling, handling, decontamination and sorting
- Support services
- Quantities of radioactive and hazardous materials to be handled
- Transportation, storage and disposal
- Risks and health & safety issues (including risks assessments)
- Sequence of activities
- Time required for implementation
- Process sizing
- Implementation requirements
- Surveillance program
- Assumptions

These descriptions, by clearly articulating the various dismantling and waste management strategies for each alternative, are the basis for documenting the rationale of the applicability or relevance and appropriateness of potential state offices, and state nuclear and environmental regulatory requirements. Therefore, the significant ARRs for each alternative shall be identified and integrated into these discussions.

The narrative discussion of the analysis shall, for each alternative, present the assessment of the alternative against each of the optioneering criteria. This discussion shall focus on how, and to what extent, the various factors within each of the criteria are addressed. The uncertainties associated with specific alternatives shall be included when changes in assumptions or unknown conditions could affect the analysis.

The V1 NPP Large Components Management FS Report also shall include a summary table highlighting the assessment of each alternative with respect to each of the eight criteria.

#### **Comparative Analysis of Alternatives**

Once the alternatives have been described and individually assessed against the criteria, a comparative analysis shall be conducted to evaluate the relative performance of each alternative in relation to each specific evaluation criterion. This is in contrast to the preceding analysis in which each alternative was analyzed independently without a consideration of other alternatives. The purpose of this comparative analysis is to identify the advantages and disadvantages of each alternative relative to one another so that the key tradeoffs the Client will balance can be identified.

Short and long-term Client policy and criteria, overall protection of human health and the environment and compliance with ARRs will serve as threshold determinations in that they must be met by any alternative in order for it to be eligible for selection. The next five criteria (long-term effectiveness and permanence; reduction of volume; short-term effectiveness; implementability and cost) shall require the most discussion because the major tradeoffs among alternatives will most frequently relate to one or more of these five.



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#### **Presentation of Comparative Analysis**

The comparative analysis shall include a narrative discussion describing the strengths and weaknesses of the alternatives relative to one another with respect to each criterion, and how reasonable variations of key uncertainties could change the expectations of their relative performance. An effective way of organizing the presentation of this comparative analysis is, under each individual criterion, to discuss the alternative(s) that performs the best overall in that category, with other alternatives discussed in the relative order in which they perform. If innovative technologies are being considered, their potential advantages in cost or performance and the degree of uncertainty in their expected performance (as compared with more demonstrated or proved technologies) shall also be discussed.

The presentation of differences among alternatives shall be measured both qualitatively and quantitatively, and shall identify substantive differences (e.g., greater short-term effectiveness concerns, greater cost, etc.). Quantitative information that was used to assess the alternatives (e.g., specific cost estimates, time for completion, dose levels, etc.) shall be included in these discussions.

The content of the V1 NPP Large Components Management FS Report depicted in Table 6 is of preliminary nature and can be extended to reflect all assessed alternatives, their analyses, assumptions, technologies, outcomes, conclusions and recommendations. Responsibility rests on Consultant to provide the Report in compliance with the objectives and scope of services of this assignment. The Client will review and approve the V1 NPP Large Components Management FS Report.

Table 6 - V1 NPP Large Components Management FS Report

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### 3.1.2.5. Deliverable D7.1-D4 - PO SAR Upgrade Proposal for Concerned Nuclear Installations

Consultant shall take in consideration all nuclear installations of the Client in the Feasibility Study. If the Consultant during the analysis of each alternative identifies the need to improve some of the facilities of the Client, the Consultant, together with the justifications, design improvement analyses, and list of proposed modifications, shall make a proposal to improve the pre-operational safety analysis report (PO SAR) of the facility.

Among the facilities that will be subject of analysis during the FS can be noticed the NRR at Mochovce, and the Bohunice Radioactive Waste Treatment Centre (RTC).

Following are the descriptions of the requirements for the possible upgrade needs of each facility.

#### **NRR at Mochovce**

Currently the licensing documentation of the NRR will be changed within the scope of BIDSF project C9.4 "Design and Licensing of New RAW Disposal Space at the National Radwaste Repository, Mochovce". Current planned changes envisage two main issues:



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- Enlargement of the existing NRR keeping the current packaging concept that is, the construction
  of 1 (one) new double-row of vaults of adequate dimensions for FCC containers in addition to the
  two already present double-rows, with the objective to accommodate LILW from V1 NPP
  decommissioning, and
- 2. Erection of new near surface VLLW type repository inside the NRR Mochovce site that is, the construction of a new facility for all Slovak waste belonging to the lowest class of radioactive waste.

Therefore, the defined scope of project C9.4 did not consider the assessment of the disposal of large items or new (bigger) containers for larger parts in NRR Mochovce.

The Consultant's required approach will consists of two phases:

- Initially, as a baseline to the Feasibility Study, the Consultant shall analyze the technical, economical and licensing feasibility to dispose large items in NRR Mochovce.
- As the second phase, if any large item disposal option would be selected (as conditioned whole large components or new (big) container for larger parts) during the analysis of FS alternatives, a new license change proposal to upgrade the PO SAR of the NRR Mochovce shall be prepared.

**NRR Mochovce PO SAR Upgrade Proposal Report**. The documentation included in this report shall argument and demonstrate that the disposal of the new large items resulting from the analysis of Feasibility Study alternatives (i.e. those alternatives requiring improvements to NRR Mochovce) is not a major safety issue and can be either covered by the current license envelop or by improving the actual license envelop. In either case, Consultant shall argument the proposed solution to dispose large items in Mochovce. The arguments to be included in the Report shall include all the assumptions, engineering analyses, and calculations supporting this proposal.

#### **Bohunice Radioactive Waste Treatment Centre (RTC)**

The Consultant shall analyze the characteristics of this facility and determine whether or not the actual design satisfy the treatment needs resulting from the Feasibility Study.

**Bohunice RTC PO SAR Upgrade Proposal Report**. The documentation included in this report shall argument and demonstrate that the treatment needs resulting from the analysis of Feasibility Study alternatives (i.e. those alternatives requiring improvements to Bohunice RTC) is not a major safety issue and can be either covered by the current license envelop or by improving the actual license envelop. In either case, Consultant shall argument the proposed solution for treatment needs in the Bohunice RTC. The arguments to be included in the Report shall include all the assumptions, engineering analyses, and calculations supporting this proposal.

#### 3.1.3. Deliverables

The Table 7 summarizes the deliverables that shall be submitted by the Consultant. The table specifies the estimated dates for the submission, the number of required copies, and the languages of the documents.



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Table 7. D7.1 Project Deliverables

Deliverab Document le		Submission Date	Copies & Language
		(from effective date of commencement - EDC)	(Languages/copies)
-	Inception Report	1 month	English/3; Slovak/5
D7.1-D0	Methodology	1 month	English/3; Slovak/5
D7.1-D1	Scoping	3 months	English/3; Slovak/5
D7.1-D2	Development and Screening of Alternatives	5 months	English/3; Slovak/5
D7.1-D3	Detailed Analyses of Alternatives	8 months	English/3; Slovak/5
D7.1-D4	PO SAR Upgrade Proposal for Concerned Nuclear Installations	13 months	English/3; Slovak/5

#### 3.2 PROJECT ORGANIZATION

#### 3.2.1. Personnel

Successful completion of the Project involves multidisciplinary activities, and the participation of experts in different fields of knowledge. The Consultant has to define the role, expertise and composition of the different working groups, their managers and responsibilities, and the functional and hierarchical links between them.

The Consultant shall define an **Organization Chart** where the aforesaid information is graphically shown. At the top of the chart, there shall be a Consultant's Team Leader, a fully qualified and experienced manager, ultimate responsible for the activities of the project, and the interlocutor with the Client. In case one of the experts of the Team will not be unable to fulfill its role, another expert shall replace the impaired responsibility.

The organization of the project shall provide the following capabilities, as a minimum:

- Expertise in NPP large components removal and civil works.
- Expertise in safety assessment and regulations.
- Expertise in radioactive waste management.
- Expertise in radiological protection.
- Expertise in managerial and organizational issues.

#### 3.2.2. Key Experts

All experts having a crucial role in implementing the contract are referred to as key experts. All experts shall be fluent in English, have a university degree in their field of expertise.

The profiles of Key Experts for this contract are as follows:

#### **Key Expert 1: Team Leader (Consultant's Project Manager)**



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#### **Qualifications and skills**

- Senior expert with a university degree in Nuclear Engineering or Mechanical Engineering or degree in other allied field.
- Minimum of 10 years of experience managing nuclear projects.
- Experience in radioactive waste and conventional waste management, and in decommissioning projects.
- Experience in international and multicultural projects.
- Demonstrated team management and communication skills are essential.
- Excellent oral and written communication skills.

#### **Tasks**

The Consultant's project manager shall be a long-term international expert acting as Manager of the project. S/he together with the rest of the Team shall be responsible for the management of the project at technical, financial and operational level. The Consultant's Team Leader shall be responsible for project development in accordance with the Slovak legislation and regulatory requirements, European Union, and EBRD related policies, and the best international practices. S/he shall also ensure project planning and implementation.

S/he shall be responsible for the development of Project Deliverables.

S/he shall be, and have, overall responsibility for accomplishing the reporting requirements of the Project. The Consultant's Team Leader shall also:

- Understand the issues involved.
- Define tasks and develop an appropriate work program.
- Set time lines for delivery.
- Estimate and manage the budget.
- Establish an organizational structure.
- Put together an interdisciplinary team.
- Establish standards and maintaining quality of work.
- Manage and co-ordinate the information generated by the Study.
- Prepare and issue the updated documentation to comply with the terms of reference.
- To be responsible for the execution and control of all activities.
- To be responsible for the risk management of project activities.
- Identify all open issues and implement the necessary countermeasures to solve them.
- Prepare the strategy decision documents.
- Enhance fluid co-ordination among all the involved organizations (Consultant, Client and Sub-consultants).
- Perform any other tasks necessary to ensure a smooth performance of the Team and implementation of the Project.

#### **Key Expert 2: Civil Engineering Expert**

#### **Qualifications and skills**



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- Senior expert with a university degree in Civil Engineering or degree in other allied fields (e.g. Construction engineering, Structural engineering).
- Minimum of 5 years of experience managing nuclear projects.
- Experience with VVER reactors civil construction.

#### **Tasks**

Engineering expert shall support the civil aspect of the Feasibility Study; specifically, structural considerations and transport aspects. S/he is responsible for the engineering part of the methodology development and implementation. Knowledge on specific NPP civil engineering field is decisive for assurance of proper and relevant technical level of the documentation/reports delivered to the Client.

#### **Key Expert 3: Mechanical Engineering Expert**

#### **Qualifications and skills**

- Senior expert with a university degree in Mechanical Engineering or degree in other allied field.
- Minimum of 10 years of experience managing nuclear projects.
- Experience with VVER reactors equipment and systems.

#### **Tasks**

Mechanical Engineering expert shall support the mechanical, civil and logistics aspects of the Feasibility Study. S/he is responsible for the engineering part of the methodology development and implementation. Knowledge on specific NPP engineering field is decisive for assurance of proper and relevant technical level of the documentation/reports delivered to the Client.

#### **Key Expert 4: Environmental & Radiation Protection Expert**

#### **Qualifications and skills**

- Senior expert with a university degree in Environmental Science or degree in other allied field.
- Minimum of 3 years of experience managing nuclear projects.
- Experience with radiological protection.
- Experience in design and implementation of radiological characterization programs in nuclear facilities.
- Experience in radiological inventory elaboration.
- Knowledge of WER reactors.
- Knowledge of Slovak and EU legislation is considered essential. Possibility to communicate in Slovak language will be considered an asset.

#### **Tasks**

This expert shall support the environmental, radiological, and health and safety aspects of the Feasibility Study, environmental impact study. S/he is responsible for the safety and environmental part of the methodology development and implementation. Knowledge on specific NPP licensing field is decisive for assurance of proper and relevant technical level of the documentation/reports delivered to the Client.



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#### 3.3 INTERFACE MANAGEMENT

The Consultant is responsible for managing the project interfaces between him, the Client and Sub-Consultants (if any). In particular, the Consultant shall as a minimum:

- Identify all Project interfaces
- Identify delays on Deliverables, or in the approval process of such Deliverables, and to develop and implement remedial actions.
- Guarantee an adequate communication level between all parties.
- Agree / Resolve conflicts that might arise during the execution.
- Monitor the status.
- Report the status.

Consultant shall develop and maintain an **Interface Control Manual** that shall be presented together with the **Inception Report**.

#### 3.4 RISK MANAGEMENT

Managing the risk is one of the most important contributions to the success of this project. The Consultant is responsible for all of the project risks, and as the risks owner has the ultimate responsibility for identifying, analyzing, mitigating, and controlling project risks, including acceptance of the project risks, or modification, or termination of the project - all of which are integral part of project risk management activities.

The Consultant shall establish and put into operation a **Risk Management Plan (RMP)** within the **Inception Report**. The Consultant's **RMP** shall integrate all the components of risk management, i.e. risk identification, analysis, and mitigation - into a functional whole. The **RMP** should be an integral part of the Project Management Plan that informs all members of the Consultant's project team and their supervisors, as well as the Client of the risks of the project, how they shall be managed, and who shall manage them throughout the life of the project.

**RMP** is a dynamic document that is used to guide day-to-day decisions by the project team. **RMP** shall be updated and shall be part of all subsequent project planning and performance reviews.

The Consultant shall be aware of the risk that represents for the successful completion of the Contract a rejected documentation by the Client. In this sense, the Consultant shall establish the corresponding measures or countermeasures to prevent this major risk.

#### 3.5 QUALITY MANAGEMENT SYSTEM

Within one (1) month after the signature of the Contract and in any case before the actual start of the contractual activities, the Consultant shall develop and submit to the Client for approval a **Quality Assurance Plan (QAP)** which determines the policies, procedures and instructions for implementing the works within the project, in accordance with the main project schedule.

The **QAP** shall provide a detailed description of the following chapters:



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- Introduction: to describe the purpose, aim and content of the QAP;
- Scope of the project: to describe the scope of the BIDSF project and if the subject-matter of the
  contract is the procurement of goods and works, it is also necessary to describe the impact of the
  project on nuclear safety, radiation protection, the environment, safety at work, fire protection,
  metrology, specific requirements on the equipment, etc.;
- Responsibilities and competences: to describe the responsibilities and competences of the individual
  members in the project from the side of the Consultant including the organization structure and
  communication channels between individual members of the Consultant and Client, the persons
  responsible for the individual deliverables including their contact information (telephone numbers,
  e-mail addresses);
- Requirements on the quality system of the Consultant:
  - i. general requirements in compliance with ISO 9001:2008, if appropriate ISO 14001:2004 and OHSAS 18001:2007 if the Consultant has these systems implemented and certified (copies of certificates are to be included in the appendix)
  - ii. documentation requirements
  - iii. quality manual
  - iv. management of documents
  - v. management of records
- Other chapters in compliance with ISO 9001:2008 depending on the character of the BIDSF project: to define briefly how the resource management is managed within the project, the realization of the product, design and development (if applicable), purchasing, production and provision of services, control of monitoring and measuring devices, measuring, analysis and improvement (customer satisfaction, internal audit, monitoring and measuring of processes and the product), management of nonconforming product, analysis of data, improvement (continual improvement, corrective and preventive actions)
- Source documentation
- Reference documentation
- Appendices

The **QAP** shall particularly deal with the following aspects:

- Input data validation, to ensure that input data is up to date and suitable for specific use in the project.
- Documentation management, to ensure that all documents can be accessed in their last edition and to keep track of the progress of the documentation processing.
- Methodology and procedures for calculations (design, radiological, geological, diffusion, or radioprotection codes calculations).
- Reviewing and checking of output data and conclusions.

Specific areas of the **QAP** project management shall include the implementation of quality assurance, responsibilities and competences, document control, quality assurance records and audits. These areas are described in more detail in the following paragraphs.



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#### 3.5.1 Responsibilities and Competences

The Consultant shall deliver to the Client the requested set of deliverables with the required quality. The Consultant shall ensure that each sub-consultant either keeps its own adequate QAP or conforms to the applicable section of the Consultant's Quality Assurance Plan. The Consultant shall identify all applicable QA requirements in the documents for its Sub-Consultants in order to achieve the fulfilling of the Consultant's Quality Assurance responsibilities. This shall include audits, which the Client will have a right to attend.

#### 3.5.2 Document Management

The Consultant shall maintain supervision of the project documents up to its acceptance to ensure that all documents can be accessed in their last edition and to keep track of their changes. A project records checklist shall be created to identify the records required for the final project file.

#### 3.5.3 Quality Assurance Records

The Consultant shall keep Quality Assurance Records and will be required to manage them in accordance with the applicable quality assurance requirements of the Client.

#### **3.5.4 Audits**

External audits are to be performed by means of the Quality Assurance Performance Assessment of the Client to assure compliance with the requirements of the QAP. Audits will be performed in accordance with the **QAP**.

#### 3.5.5 Sub-Consultant Quality Assurance Plan

The Consultant is required to ensure that all Sub-Consultants (if any) maintain a commensurate QAP inhouse, and/or the Sub-Consultants meet the applicable Sections of the Consultant's QAP.

The Consultant shall identify, in documents to its Sub-Consultants, all applicable technical and quality assurance requirements imposed by its own contractual requirements and shall ensure compliance thereto. This shall include any audits of Sub-Consultants or methods to enable validation of a material's authenticity and ensure compliance to the requirements of this ToR.

#### 3.5.6 Right of Access

All work, performed by the Consultant and its Sub-Consultants, is subject to audit, surveillance, and/or inspections by the Client or the Client's authorized representative. This surveillance shall in no way relieve the Consultant of any Contractual responsibilities. The Client's representatives or designated personnel shall be given free access, on reasonable request, to the Consultant's and its Sub-Consultant's facilities and records to perform audits, surveillances and inspections on all phases of the work at all reasonable times.

#### 3.5.7 Non-conforming Items

The Consultant shall notify the Client of non-conformances, which may adversely affect the technical compliance, reliability or performance of any items. This notification shall include the technical justification for these non-conformance dispositions. All dispositions, which do not return the items to the condition stated in the Client approved drawings, requirements, or contract documents shall require the approval of the Client. In case of any impact on the approved detailed work plans, Non-Conformance with rework and



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rejected dispositions shall be sent to the Client. Copies of all non-conformance reports shall be included in the documentation package for each applicable shipment.

#### 3.6 HEALTH AND SAFETY

The entire on-site activities must be performed in accordance with Slovak legal regulations and industrial safety and radiation protection regulations in force in JAVYS, a. s.

#### 3.7 REPORTING

In addition to the Deliverables described below, the Consultant shall present the following reports on the progress of their assignment.

#### **Inception Report**

**Inception Report** defines the project's scope of services and work plan. This **Inception Report** shall eventually allow comparing the activities as planned at the onset of the project with the project achievements at the end of the project period. The **Inception Report** shall describe in detail:

- Objectives of the project,
- Scope of work,
- Consultant's Organization Chart,
- Activities and planning,
- Proposed methodology,
- Description of project deliverables 3.1.1
- Schedule of Consultant Activities, deliverables and milestones,
- Interface Control Manual see subsection 3.3, and
- Risk Management Plan (RMP) see subsection 3.4.

The scope of this Project requires the involvement of experts from different fields. For this reason, the **Inception Report** shall define the role and composition of the different experts, working groups and their responsibilities, and clearly show links and coordination between the different project positions. It shall be provided an **Organization Chart** and the foreseen Project Base Line Time Schedule of the assignment. The Consultant shall have a Project Team Leader that shall be the counterpart of the Client and shall coordinate the Consultant's Project Team.

#### **Schedule of Consultant Activities** (work plan) shall include following information:

- The project activities/tasks
- The milestones for the submission of the Deliverables described in 3 as well, including the time for Client revision and approval.
- The associated resources and manpower.
- The estimated workload for the particular parts and activities/tasks
- The interfaces with the Client, the Sub-Consultants (if any).
- Dependencies and Constraints of project activities/tasks



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The Consultant shall submit the schedule on an integrated project basis, reflecting the inter-dependency between the different activities and the critical path. The schedule shall be preliminarily discussed and agreed with the Client during the **Kick-Off Meeting**.

This Schedule of Consultant Activities shall be consolidated in the **Inception Report** and shall be updated periodically, and reflected in the Monthly Progress Reports. Deviations from the original planning shall be notified to the Client, along with the respective cause and mitigation plan.

#### **Monthly Progress Reports**

The Consultant shall organize monthly meetings to check and discuss project progress. As a conclusion of these meetings, the Consultant shall submit a **Monthly Progress Report** describing the work carried out during that time period against the work plan and describing the problems or constraints that are affecting the progress.

**Monthly Progress Reports** shall be used to compare planned activities against developed activities, inputs, outputs, and to plan detailed project activities and resources for the next reporting period. The review of project implementation during the current period shall refer to the planning document for this same period and demonstrate whether, and if so, how plans have been realized. The Consultant shall give explanations on the deviations of activities, and propose remedial actions if such deviations could delay the project development. The Consultant shall submit a draft of the **Monthly Progress Report**, no later than four (4) working days before the monthly meeting. Final version of **Monthly Progress Report** shall be submitted not later than five (5) working days after the monthly meetings are held.

Periodicity of the meetings and progress reports can be modified any time by agreement between the Client and the Consultant.

The Client or the Consultant shall request other **Project Meetings** in case unforeseen circumstances take place, or problems arise, which could jeopardize the project's success. In these meetings, the Consultant shall report the unforeseen circumstances or problems, and propose a course of action to solve them.

#### **Interim Reports**

As the assignment is phased, **Interim Reports** can be required to inform the Client of preliminary results, alternative solutions, and major decisions that need to be made. Since the recommendations of an interim report may affect later tasks or phases of the assignment and even influence the results of the project, both the Client and the EBRD should discuss the draft Interim Reports with Consultants in the field. The Client should not take more than five (5) working days to review and approve draft **Interim Reports**.

#### **Final Contract Completion Report**

At the conclusion of the project, the Consultant shall prepare a **Final Contract Completion Report**. This **Final Contract Completion Report** shall outline the project as a whole, from the situation at the start of the project, project implementation, comparison of actual project development with the proposed project plan in the **Inception Report**, relevant milestones, difficulties, and a set of important conclusions, evaluating whether the project's objectives have been achieved. Additional information to be included in the **Final Contract Completion Report** shall be agreed with the Client during preparation of the **Inception Report**.



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The Table 8 summarizes the reports that shall be submitted by the Consultant. The table specifies the dates for the submission, the number of required copies, and the languages of the documents.

Table 8 - D7.1 Project Reporting Requirements

DOCUMENT	Submission Date	Copies & Language	
	(from effective date of commencement, EDC)	(Languages/copies)	
Inception Report	1 month	English/3; Slovak/5	
Interim Reports	To be agreed	English/3; Slovak/5	
Monthly Progress Reports	monthly	English/3; Slovak/5	
Final Contract Completion Report	14 months	English/3; Slovak/5	

#### 3.8 SCHEDULING

The Consultant shall develop a Schedule of Consultant Activities indicating the following:

- The project activities/tasks.
- The milestones for the submission of the Deliverables, including the time for Client revision and approval.
- The associated resources and manpower.
- The estimated workload for the particular parts and activities/tasks.
- The interfaces with the Client, the Sub-consultant(s) (if any).
- Dependencies and constraints of project activities/tasks.

In its Proposal the Consultant shall submit the schedule in an integrated project basis, reflecting the interdependency between different activities of the project. The schedule shall be discussed and agreed with the Client during the Project **Kick-Off Meeting**.

This time schedule shall be consolidated after the Inception Period in the **Inception Report** and later on shall be updated periodically, and reflected in the periodic reports. Deviations from the original planning shall be notified to the Client, along with the respective cause and mitigation plan.

Total Project Duration: 14 months



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#### 4. PROJECT IMPLEMENTATION

#### 4.1 GENERAL IMPLEMENTATION ARRANGEMENTS

#### 4.1.1 Legislation and Client's Policies and Procedures

The Consultant is requested to fulfil all legislative requirements in force at the date the Contract is signed. Compliance with additional legal requirements not approved at the time of the Effective Date of the Contract shall be according to Section VI Sub-clause 3.6 of the Contract..

The description of the activities in the selected alternative shall consider all valid relevant Slovakian Acts, regulations, ordinances and norms as well as EU Directives, Regulations and recommendations. Special consideration shall be paid to safety and human health protection. In this regard, it is important to consider the requirements of the references [ 27 ], [ 28 ] and [ 29 ].

Consultant shall consider in all their analyses policies and procedures being used by the Client. When there will be a necessity for changing a procedure, the proposal shall be developed by the Consultant and agreed with the Client before being included in the proposals.

#### 4.1.2 Language, Documentation and Reporting

The official language in all communications between the Client and Consultant shall be English. The Consultant shall work in close co-operation with the Client and shall report both in English and Slovak, as specified in subsection 3.7. In case of discrepancies between English and Slovak text, the English text shall prevail. The documentation to be delivered (see Table 8) shall be submitted in English and Slovak. In this sense, the Consultant shall adopt the necessary arrangements to deal with these issues. An accredited translator shall review and approve English/Slovak version of documents at the Consultant's expense.

The Consultant shall be conscious that majority of available documentation for the needs of the assignment and, specially, legal documentation, are only in Slovak language. Other data necessary to meet the objectives of the project shall be supplied by the Consultant himself. It is also important to note that, in the eventual case a clarification meeting would be held with Slovakian authorities, the official language is Slovak. In these circumstances, Client is the only authorize to call for such meetings and Consultant will be invited even when the proposal is coming from Consultant side. Consultant shall guarantee the simultaneous translation in such events.

#### 4.1.3 Client and Consultant Representatives

A representative will be nominated by the Client for representation in official contacts with the Consultant Team Leader which shall be responsible for the implementation of the proposed project **Organization Chart**, as required in subsection 3.2.1 of this document.

The project organization shall ensure that during the implementation of the project, all modifications in documentation derived from other projects are taken into consideration. The Consultant shall consider the V1 NPP decommissioning schedule (IPBTS).



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#### 4.2 THE CONSULTANT'S AND CLIENT'S RESPECTIVE RESPONSIBILITIES

The following table lists the repartition of duties between Consultant and Client during this assignment:



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Cons	sultant's Duties		Client's (i.e. JAVYS, a.s.) Duties
and clarification	all participate in technical on meetings as per the Client and project needs.		
activities with	all assist the Client in those regulatory authorities when tion is deemed necessary.		
	Submitting and Approval Process		
issuance of al	all be responsible for timely Deliverables and shall		Client will review and control deliveries are n general conformance to these ToR.
	submit the documentation in hard copy, as well as in electronic format with required quality.	İI	The usual period for review, comments, incorporation of comments and approval be ten (10) working days for each of the
	digital form shall be he following MS Office 2010 rmats:	stated Deliverables.	
<ul><li>drawings - 2008).</li><li>data - *.p.</li></ul>	*.pdf and *.doc - *.pdf and *.dwg (AutoCAD  df and *.xls *.jpeg or *.png		
incorporation the draft docu	responsible for the of the Client's remarks into ment and to redeliver the accordance with schedule		
incorporation	iod for review, comments, of comments and approval 0) working days for each of iverables.		
	Rep	ortin	g
Report and re	all prepare the Inception lated documents and to Client in due time.	iı	Client will review and control documents are n general conformance to reporting requirements of these ToR.
	all develop a QAP for the on of the project.	• (	Client will guarantee the presence of relevant personnel to the MPR meetings.
advancements responsible fo meetings and	all monthly report the s of the project and is r the preparation of MPR all the materials (charts,	• (	Client should not spend more than five (5) working days to review and approve draft interim Reports

presentations, etc.) necessary to develop



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Consultant's Duties	Client's (i.e. JAVYS, a.s.) Duties
successful meetings.	
<ul> <li>Consultant shall sent four (4) working days before the MPR meeting a draft report to the Client, and shall not spend more than five (5) working days to issue MPR after meetings are held.</li> </ul>	
<ul> <li>Consultant may be requested to issue Interim Reports of the advancements of the activities when the conditions in the project demand such reports.</li> </ul>	

#### 4.3 PHASING OF THE PROJECT IMPLEMENTATION

The implementation of this Feasibility Study as in every project is phased in nature. The following phases are identified being the Consultant responsible for the smooth development of each of them:

#### 1. Initiating Phase

Technical Kick-off Meeting

#### 2. Planning Phase

- Project Inception Phase (Inception Report)
- Methodology (D7.1-D0)

#### 3. Execution Phase (Monitoring and Control included here)

- Feasibility Study Development
  - Scoping (D7.1-D1)
  - Development and Screening of Alternatives (D7.1-D2)
  - Detailed Analyses of Alternatives (D7.1-D3)
- PO SAR Upgrade Proposal for Concerned Nuclear Installations (D7.1-D4)

#### 4. Closeout Phase

Final Contract Completion Report

Client representative will maintain a rigorous project Scope Control during the development of the project. Although some overlapping might exists between activities inside project phases, the Client representative will pay close attention to these overlapping issues.

Consultant is responsible for managing conflicting priorities that might arise and also for applying recognized and adequate project management standards.

Consultant is also responsible for monitoring and controlling project processes and to observe project execution so that potential problems can be identified in a timely manner and corrective actions can be taken, when necessary, to control the execution of the project.



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#### 5. REFERENCES

- [1] BIDSF Project B6.2 The Environmental Impact Assessment of V1 NPP Decommissioning (English version).
- [2] BIDSF Project B6.3, The V1 NPP Decommissioning 1st Stage Plan & Other Licensing Documentation mainly, Deliverables D0, D4, D5, D7, D25 & D26 (English transcription).
- [3] BIDSF Project B6.4 Decommissioning Database mainly deliverable B6.4-D7.
- [4] BIDSF Project C9.1 Enlargement of the National Repository at Mochovce. Contract Number: BIDSF 009 4 001. 2010.
- [5] BIDSF Projects C7-A2, C7-A3, C7-A4, C16.1, C15-A&B.
- [ 6 ] BIDSF Project C9.4, Design and Licensing of New RAW Disposal Space at the National Radwaste Repository, Mochovce
- [7] BIDSF Project C8 Interim Storage of RAW at Bohunice Site.
- [8] General Deliverable D8 Report on Bohunice V1 NPP Decommissioning and Historical Waste Management Strategy (English transcription).
- [9] Information on NRR at Mochovce (mainly Design Information and Drawings).
- [ 10 ] V1 NPP FSAR (only in Slovak).
- [ 11 ] ToR Template PMU Document (English transcription).
- [ 12 ] Act of the National Council of the Slovak Republic No. 541/2004 Coll. on peaceful use of nuclear energy and on alterations and amendments to some Acts (English transcription).
- [ 13 ] Regulations No. 49 58/2006 Coll. to Atomic Act (English transcription).
- [ 14 ] Act of the National Council of the Slovak Republic No. 24/2006 Coll. as amended on EIA (English transcription).
- [ 15 ] Council Directive 96/29/Euratom. Basic Safety Standards.
- [ 16 ] Act of the National Council of the Slovak Republic No. 355/2007 Coll. Health Act (English transcription without Appendixes).
- [ 17 ] Regulations No. 345/2006 Coll. on basic safety requirements for health protection of the workers and general public against the ionizing radiation (English transcriptions of some appendixes are available).
- [ 18 ] EBRD Procurement Policies and Rules. 2009.
- [ 19 ] EBRD Environmental and Social Policy. 2008.
- [ 20 ] EBRD Public Information Policy, 2000.
- [ 21 ] IAEA TEC-DOC-1133. The Decommissioning of WWER type Nuclear Power Plants, VIENNA, 2000
- [ 22 ] IAEA TECDOC-1394. Planning, Managing and Organizing the Decommissioning of Nuclear Facilities: Lessons Learned. May 2004.
- [ 23 ] EPRI. Reactor Internals Segmentation Experience Report. Ref. 1015122. July 2007.
- [ 24 ] USNRC/USEPA. Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM).NUREG 1575. Rev. 1. August 2000.
- [ 25 ] USEPA. Data Quality Assessment: A Reviewer's Guide. EPA QA/G-9R. EPA/240/B-06/002. February 2006.
- [ 26 ] Brenk Systemplanung. Decommissioning of Nuclear Installations in Germany. Commissioned by the Federal Ministry of Education and Research (BMBF). Aachen, December 2010.



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- [ 27 ] Governmental Order No. 396/2006 Coll. on the Minimum Safety and Health Requirements of Construction Sites.
- [ 28 ] Act No. 124/2006 Coll. on Health and Safety at Work and on Changes and Amendments to Certain Acts, as amended.
- [ 29 ] Act No 50/1976 Coll. on Land-use Planning and Building Order (the Building Act), as amended.