KRŠKO NUCLEAR POWER PLANT

TECHNICAL SPECIFICATION

ENGINEERING SERVICES

SP – ES5110

Revision 0

SAFETY-RELATED

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1.0 Background and Description of the Problem

The description and the reasons for the order of individual services are defined in Attachment 1 to this Technical Specification (see Item 1). The description shall clearly state the purpose and grounds for placing an order.

2.0 Scope of Service

The detailed scope of the service per this Technical Specification (TS) is defined in Attachment 1 (see Item 2). The description of work to be performed per the scope of the service shall be defined in detail in an itemised way.

3.0 Safety Classification of Contracted Work

Safety classification of the service is defined in the Attachment 1 (see Item 3) to this TS and may be as follows:

- Safety Related (SR), or
- Augmented Quality (AQ), or
- Non Safety Related (NSR).

4.0 Project Input Data

The project input data shall be prepared, reviewed and verified in compliance with the Engineering procedure set requirement (ESP-2.604, ESP-2.605). The collection of the input data can be left to Contractor, if defined so in Attachment 1 (see Item 4) to this TS. NEK is responsible for the review and verification of the service work in compliance with responsibilities prescribed in ESP procedures.

5.0 Design Control Program

For SR work, the overall controls of engineering services shall be performed in accordance with approved Contractor's QA Manual which complies to 10CFR50 Appendix B, QS 610 and QS 600 if applicable, as well as applicable NEK programs and procedures.
For AQ work, the overall controls of engineering services shall be performed in accordance with Contractor's QA Program, which complies with ISO 9001 or a comparable standard, and relevant requirements of NEK QS 610 and NEK QS 600 if applicable.
For NSR work, the overall controls of engineering services may be defined in Attachment 1 (Item 5) to this TS.
The procedures applicable to the scope of service described herein are defined in Attachment 1 (see Item 5) to this TS.

6.0 Codes, Standards and Criteria for the Project

Specific codes, standards, and plant design criteria for engineering services which the Contractor is expected to perform in accordance with NEK licensing and design criteria are defined in the Attachment 1 (see Item 6) to this TS.

7.0 Affected Systems

The services per this TS can be performed on all NEK systems. The system identification list is defined in the Attachment 1 (see Item 7) to this TS.

8.0 Identification of Affected Equipment

The services per this TS shall be performed on the equipment as defined in the Attachment 1 (see Item 7) to this TS.

9.0 Review and/or Verification of the Work

The Contractor is required to perform verification or review of the completed steps of the service in accordance with applicable reference procedure (ESP-2.607 or ESP-2.606) as defined in the Attachment 1 (see Item 5) to this TS. The Contractor shall submit verifier/reviewer qualification records and copy of all reference documents used in calculations as an appendix to the calculation or design input documents.
NEK personnel shall review, verify and approve the completed steps of service of the Contractor in compliance with the NEK's QA Plan, affected systems and requirements of associated procedures.

10.0 Schedule Requirements

Schedule requirements for particular services are defined in the Attachment 1 (see Item 8) to this TS.

11.0 Status Reporting Requirements

The Contractor shall provide periodic written status reports for the work being performed as defined in Attachment 1 (see Item 8) to this TS.

The Contractor shall report on the completed work in monthly and quarterly reports covering:

- detailed summary of completed work together with all the technical and other details;
- overall status of completed work regarding schedule requirements as determined in the service contract;
- potential proposals, recommendations and partial conclusions on service implementation.

12.0 Responsibilities of NEK

Responsibilitieas of the NEK are as follows:

- Provide the overall project coordination;
- Provide reviewed and verified input data needed for the service implementation;
- Ensure access to and the use of applicable NEK's programs and procedures (NEK QA Plan, Engineering Programs and procedures, administrative procedures);
- Provide other available and applicable technical documentation in connection with the service implementation (drawings, USAR, TS);
- Provide organisation, management and control over the service implementation;
- Grant unescorted access authorisations to Contractors and provide training/indoctrination for safe work in the technological part of the plant;
- Control the status of service implementation as the basis for payment in relation to the requirements drawn up in the Contract or purchase order.

13.0 Changes of the Scope of Service

The Contractor shall identify any scope changes that could cause an impact of a Contractor's cost or schedule of the project by the issuance of a Contractor Change of Work Scope Request. The Contractor shall not proceed with a change in the scope of the Work until written approval has been authorized by NEK. Unauthorized Work will not be reimbursed by NEK.

14.0 Responsibilities of Contractor

Responsibilities of the Contractor are as follows:

- Ensure the availability of sufficient expert and qualified personnel for the timely and quality implementation of the scope of services in compliance with the requirements of this TS;
- Deliver evidence or certificates of qualification for the personnel involved in the execution of the service (upon submitting the bid);
- Grant administrative authorisations to personnel in compliance with the Ionizing Radiation Protection and Nuclear Safety Act (ZVISJV);
- Ensure conformity with legislation, standards and regulations required for the service implementation;
- Provide monthly and quarterly status reports on the completed work according to schedule requirements;
- Prepare and deliver generated documentation (i.e. analyses, drawings, project documentation, etc.) and QA records which are required by this TS, the Contract and/or purchase order.

15.0 Records and Documents

All the final and interim documents in connection with the service implementation shall be in conformity with the format defined in the NEK procedures (analyses, drawings, project documentation, etc.).

All the final documents in connection with the service implementation shall be delivered to NEK in the prescribed format in time. They are property of NEK and can be modified depending on potential changes.
The Contractor shall provide NEK all original records generated during the project and these shall become NEK property.

16.0 Organizational Contact

The Contractor shall coordinate all technical and schedule matters wiht the assigned NEK Project Manager/Responsible Engineer. Commercial terms and matters are to be addressed with NEK Purchasing Department representative.
For SR work only, notification pursuant to 10CFR21 shall be submitted to NEK ING.POD Superintendent.
Contact persons are named in Attachment 1 (see Item 9) to this TS and/or in the purchase order specifying:

- Name and surname;
- Job position or entrusted task/assignment;
- Phone/fax/mobile phone;
- e-mail.

17.0 Contractor Technical Approach to Work

In his Bid, the Contractor shall prepare Technical Approach to Work which shall describe the expected method of executing the service and shall indicate whether the scope of the service is understood and whether the expected goals can be achieved.
The Contractor shall appoint responsible persons and state their roles in the tasks to be executed (e.g. Project Manager, peer review, etc.). As part of corresponding bidding documentation, NEK may request that potential contractors provide special references or work experience and may, during bid evaluation, also decide on their suitability.

18.0 Access to Contractor Facility and Documents

The Contractor will provide NEK representatives with access to the Contractor's and/or to the Authorized Subtier Contractor's facility (-ies) and documents for the purpose of review, verification, auditing, witnessing and control.

19.0 Subcontracted Work

The Contractor shall not subcontract any portion of the Work without the written approval of the NEK PM or RE. The Contractor shall impose and ensure that all Subcontractors meet the requirements of this TS.

20.0 QA Requirements

SR work shall be performed in accordance with Contractor's QA Program, which complies to 10CFR50 Appendix B, NEK QS 610 and NEK QS 600 requirements if applicable, and which

had been previously evaluated and accepted by NEK. Reporting of defects and noncompliance in accordance with 10CFR21 requirements, shall be implemented by the Contractor.
AQ work shall be performed in accordance with Contractor's QA Program, which complies with ISO 9001 or a comparable standard, and relevant requirements of NEK QS 610 and NEK QS 600 if applicable. Contractor's QA Program shall be previously evaluated and accepted by NEK. Reporting of defects and noncompliance in accordance with Contractor's QA Program and relevant requirements of NEK QS 610, shall be implemented by the Contractor.
QA/QC activities will be performed in accordance with specific Quality Plan/Control Plan, contractor's internal technical and quality control procedures, which must be approved by NEK beforehand; and under surveillance of NEK and contractor's qualified QA/QC personnel.
Quality requirements for Non Safety Related Work shall be defined in Attachment 1 (Items 3 and 5) to this TS.
The Contractor shall retain full responsiblity to perform QA function in all project phases and activities and his responsibility for QA implementation can not be transfered to others or reduced in any way.

21.0 NEK Proprietary Data

NEK has proprietary interest in all of the drawings, specifications, documents, information or know-how which may be furnished pursuant contract execution and in any know-how, improvement, discovery or invention which may be made, developed, or conceived in the performance of the work hereunder or which may arise or result therefrom (hereinafter collectively referred to as the "Information"). All such information shall be considered as proprietary to NEK. The right to use such information shall be transmitted to the Contractor only for its own use, shall be entirely restricted to the performance of the service and subject to the confidentiality provision.

22.0 Attachments

Attachments to this TS shall be listed in numerical order. ESD Design Changes Department administration office assigns Identification number for Attachment 1 (LL-xxx) and stores completed and approved forms.
1. Attachment LL-XXX
2. ....

Attachment	25-03	Service	**ING.MOD Training Course 2025**

Item	Table of Contents	
1.	Background and Description of the Problem	NEK has performed analysis of MCR ventilation VA72521 and the conclusion of the analysis is that the current MCR configuration is not optimal for providing protection in all scenarios. Proposed improvements include adjusting the ventilation system to allow for stable overpressure and removing the chlorine detection system, as it is no longer needed according to the latest risk assessments (CAP 2023-2348). Implementing these measures will ensure greater reliability of the ventilation system and compliance with safety standards, as well as improve the habitability of the MCR in the event of emergencies. To ensure the safe and effective implementation of modifications in nuclear power plants, it is crucial that personnel understand not only the documented requirements but also the principles and design assumptions that may not always be explicitly stated in the technical documentation. As part of the lecture, it is necessary to present the design basics of the following ventilation systems: ➢ Control Building Main Control Room – VA72521, VA72531 ➢ Reactor Building Purge Supply & Exhaust System - VA72171 ➢ Auxiliary Building – VA72231, VA72241, VA72201 ➢ Fuel Handling Building – VA72431, VA72441 Failure Mode and Effects Analysis (FMEA) is not included in the modification process. FMEA is addressed only in ESP-2.303 (Safety evaluation Screening) but not as part of modification process. The lecture shall include FMEA background and its incorporation into NEK design modification process.
2.	Scope of Service	Provide a three-day training course to address the above-described issues: • Design Bases of ventilation systems. • FMEA background and its incorporation into NEK design modification process.
3.	Safety Classification	***Non-Nuclear Safety Related***
4.	Project Input Data	• ZKP analysis 2024-44 (Main Control Room leakage testing). • DCM-SD-018: Main Control Room Charcoal Cleanup System-System Design Description-VA72521. • ESP-2.602 and other ESD procedures. • USAR.
5.	Design Control Program	All work shall be performed in accordance with the requirements of NEK Engineering Services Division ADP and ESP.
6.	Codes, Standards and Criteria	• ASTM E741-11 • NEI 99-03 • RG-1.95, RG-1.78 • EPRI 5652

7.	Affected Systems and Equipment	VA		
8.	Schedule Requirement	May 6 – May 8, 2025		
9.	Contact Persons	NEK:	Peter Jan Boštjan Pevec	
10.			Signature:	Date:
	Prepared by:	B. Pevec		20.03.2025
	QA: (for AQ & SR)	N/A		
	Approved by:	P. Jan		20.03.2025
SP-ES5110, Rev. 0, Attachment 25-03				