



सत्यमेव जयते

भारत सरकार
GOVERNMENT OF INDIA

परमाणु ऊर्जा नियामक परिषद

ATOMIC ENERGY REGULATORY BOARD



अध्यक्ष
CHAIRMAN



No. AERB/CH/KAPP-3&4/2024/00199

February 09, 2024

Permission for Phase-C Commissioning of KAPP-4

Ref.: Application for Authorization of KAPP unit-4 for Phase-C Commissioning Stage;
KAPP-3&4/O&M/Plg./2024/S/19 dated January 16, 2024

Permission No.	KAPP-4/CM/PH-C/0/08022024
Stage	Phase-C Commissioning of KAPP-4
Person authorized by CMD NPCIL for applying	Shri Yash Lala Station Director, KAPP-3&4
Brief description of Nuclear Power Project	Name: Kakrapar Atomic Power Project Unit 3&4 Type: 700 MWe Pressurized Heavy Water Reactor based Nuclear Power Plant Location: Anumala, Dist. Surat, Gujarat, Pin-394651 Present Status: KAPP-3, lead unit of PHWR-700 design, is currently under Phase-C commissioning and reached power level of up to 97.5%FP and operating under the ambit of Technical Specification for Operation. At KAPP-4, FAC and Phase-B Low Power Physics Experiments (LPPE) have been completed.
Basis of issuing the Permission	AERB regulatory requirements as per the AERB Codes and Guides, mainly AERB/SC/G (Regulation of Nuclear & Radiation Facilities), AERB/SG/O-4 (Commissioning of PHWR based NPPs) and AERB/NPP&RR/SG/G-1 (Consenting Process for NPPs and Research Reactors). Also satisfactory compliance to the Safety Review Plan for Commissioning of KAPP-3&4.



नियामक भवन, अणुशक्ति नगर, मुंबई - 400 094

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Safety Review	After review by NPSD Review Groups and Working Groups/ Specialist Groups, Safety review was carried out by the Project Design Safety Committee for Pressurized Heavy Water Reactors (PDSC-PHWR), Advisory Committee for Project Safety Review of Nuclear Power Plants (ACPSR-NPP) and NPSD towards Phase-C Commissioning Stage of KAPP-4. The proposed activity of Phase-C Commissioning of KAPP-4 can be carried out without undue risk to the workers, public or the environment.
Responsibility of Safety	The Prime responsibility for safety of the facility or activity lies with the Consentee. It is the responsibility of the Consentee to comply with safety requirements as specified in the Regulations.
Other Statutory requirements	Consentee shall ensure that all other necessary Statutory Clearances are obtained and are valid for the present stage of the Consent, i.e. Phase-C Commissioning.
AERB Stipulations and Conditions	Refer Annexure-1

Based on the satisfactory Safety reviews as brought out above, Permission is hereby issued for the Phase-C Commissioning Stage of KAPP-4 with the Regulatory Hold Points as identified, and subject to satisfactory compliance to the Stipulations and Conditions, as brought out in Annexure-1; including Permission for raising nuclear steam by increasing the Reactor power up to 50% FP (Phase C-1) for the commissioning activities. The Permission will be subject to re-review for any non-compliance to the Stipulations and Conditions.

This Permission is valid till June 30, 2024. The activity as per AERB/NPP&RR/SG/G-1 shall be completed within the validity period, else extension shall be sought with justification.

Encl.: Annexure-1



(Dinesh Kumar Shukla)

Chairman & Managing Director
Nuclear Power Corporation of India Limited
Nabhikiya Urja Bhavan (NUB)
Anushakti Nagar
Mumbai – 400 094

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Head, NSAD
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Director (T)
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AERB Committees

Chairman & Member Secretaries, ACPSR-NPP
Chairman & Member Secretaries, PDSC-PHWR
Chairman & Member Secretary, CRSA
Chairman & Member Secretaries, SCRIP
Chairman & Member Secretaries, SCCI&CS

Kakrapar Site

Site Director
Station Director, KAPP-3&4
Project Director, KAPP-3&4
Chief Superintendent, KAPP-3&4



**AERB STIPULATIONS AND CONDITIONS DURING
PHASE-C COMMISSIONING OF KAPP-4**

- S.1.1. The following sub-stages during Phase-C Commissioning of KAPP-4 shall be taken up only after necessary Permission from AERB, based on the satisfactory compliance to the recommendations:
- (1) Phase C-2: Raising Nuclear Steam by increasing Reactor Power up to 90% FP
 - (2) Phase C-3: Operation up to rated Power, 100% FP
- S.1.2. All applicable recommendations of PDSC, ACPSR and AERB shall be strictly adhered to.
- S.1.3. Phase-C Commissioning of KAPP-4 shall be carried out in accordance with the programme approved by AERB and as per the approved commissioning procedures (CP) and applicable QA. Deviation from the CPs, if any, shall be promptly informed to AERB.
- S.1.4. The Consentee shall not operate the plant in excess of the maximum capacity (thermal power) authorised by AERB.
- S.1.5. The Consentee shall have an approved and periodically updated on-site and off-site emergency preparedness plan.
- S.1.6. The commissioning shall proceed only in accordance with design parameters and operational limits, conditions and procedures as approved by AERB. No changes shall be made to the programmes, procedures or Technical Specifications for Operation, which have been approved by AERB without such changes being given prior approval by AERB.
- S.1.7. The Technical Specifications for Operation of KAPP-3&4 shall be strictly adhered to.
- S.1.8. Any abnormal occurrence, significant event, industrial accident or fatality during the activity shall be promptly reported to AERB.
- S.1.9. The Consentee shall ensure that the plant is operated only under the control and supervision of authorised personnel in adequate numbers acceptable to AERB. Any changes in authorized personnel should be duly notified to AERB.
- S.1.10. Continuous & reliable core neutron monitoring and monitoring of reactivity devices shall be ensured at all times.
- S.1.11. The Consentee shall implement the Quality Assurance Program laid down as per requirements of the Quality Assurance Code AERB/SC/QA and other requirements stipulated by the Regulatory Body in this regard from time to time.
- S.1.12. Radiation Protection Procedures shall be strictly adhered to.
- S.1.13. Witness points identified by AERB as per the Safety Review Plan for Commissioning Phase of KAPP-3&4, and those communicated during the course of further review, shall be timely informed.



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- S.1.14. The Consentee shall provide approved storage facility for all nuclear and radioactive materials. Appropriate physical security measures shall be made effective.
- S.1.15. Stipulations related to Nuclear Security shall be adhered to.
- S.1.16. The Consentee may take reasonable action that departs from a consent condition or a technical specification in an emergency, if such action is immediately needed to protect the public health and safety and it is apparent that no action consistent with consent conditions and technical specifications can provide adequate or equivalent protection. Such actions shall be reported to the Regulatory Body within 24 hours, followed by a detailed report within 20 days.
- S.1.17. All the Industrial & Fire Safety Requirements shall be strictly complied.
- S.1.18. This Permission shall be suspended or cancelled, if any declaration made or information given in the application is found to be false or if any undertaking given in such application is not carried out.
- S.1.19. Compliance to the Stipulations of the Statutory Clearances shall be ensured.

