

No. CH/AERB/KAIGA-5&6/2022/65

March 31, 2022

EXCAVATION CONSENT FOR KAIGA -5&6

References

1. Application for Excavation Consent for KAIGA-5&6 vide NPCIL/KaigaSite-5&6/PD/2019/23 dated October 07, 2019.
2. Safety Review Plan for Excavation Consent (EC) of KAIGA-5&6 vide AERB / NPSD / SBC / CN / SR /513011/2019/00764 dated November 07, 2019.
3. Application (Revised) for Excavation Consent for KAIGA-5&6 vide NPCIL / KaigaSite-5&6 / CCE / 2021/247 dated June 19, 2021.

Consent No.	KAIGA-5,6/CN/EC/0/31032022
Stage of Consent	Site Excavation (EC) of Kaiga-5&6
Consent issued by	Chairman, AERB Competent Authority to enforce safety related rules issued under Atomic Energy Act, 1962
Applicant	<b>Nuclear Power Corporation of India Limited (NPCIL)</b> Chief Construction Engineer, Kaiga 5&6, submitted an application for Excavation Consent for KAIGA-5&6 at existing NPP site at Kaiga, Karnataka [ Ref.3].
Brief description of Nuclear Power Project	<b>Name:</b> KAIGA PROJECTS-5&6 <b>Type:</b> 700 MWe Pressurized Heavy Water Reactor based Nuclear Power Plant (Repeat Design of GHAVP-1,2) <b>Site:</b> Existing site <b>Location:</b> Kaiga Site, Kaiga, Karwar, Uttara Kannada, Karnataka- 581400. <b>Present Status:</b> Siting Consent was issued in November 18, 2020. Bifurcation fencing separating Kaiga 5&6 from operating stations of KGS 1 to 4 is completed, Vehicle Radiation Monitoring system and Access Control System are operational. Evaluations for safe grade level and for final scheme for Cut-off drain & Kaiga-Hole diversion are under progress.
Basis of issuing the Consent	AERB regulatory requirements as per AERB Safety Codes on (i) Regulation of Nuclear and Radiation Facilities, AERB/SC/G, (ii) Design of Pressurized Heavy Water Reactor Based Nuclear Power Plants, AERB / NPP-PHWR /SC/D (Rev.1) (iii) Site Evaluation of Nuclear Facilities, AERB/SC/S (Rev. 1) (iv) Quality Assurance in Nuclear Power Plants, AERB/NPP/SC/QA (Rev.1)

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	(v) Safety Guide on Consenting process for Nuclear Power Plants & Research Reactors (AERB/ NPP&RR/ SG/ G-1), and related AERB Safety Standards and Guides. Also satisfactory compliance to the Safety Review Plan for Excavation Consent of KAIGA-5&6 (Ref.2).
<b>Safety Review</b>	Safety review has been carried out by NPSD, DRP&E, Project Design safety Committee (PDSC-PHWR) & Civil Engineering Safety Committee (CESC) towards the issuance of Consent. The proposed activities of excavation can be carried out in compliance of this consent without undue risk to workers, the public and the environment.
<b>Responsibility of Safety</b>	The Prime responsibility for safety of the facility or activity lies with the Licensee. It is also the responsibility of Licensee to comply with safety requirements as specified in Regulations.
<b>Other Statutory requirements</b>	Licensee shall ensure that all other necessary statutory clearances are obtained and are valid for present stage of Consent, i.e. Site Excavation of Kaiga-5,6.
<b>AERB Stipulations and Conditions</b>	AERB Stipulations and conditions for Excavation Consent, to enable effective regulatory control are appended as Appendix.

Based on satisfactory review as brought out above, Consent for Site Excavation of Kaiga Unit-5&6 is hereby accorded, subject to satisfactory compliance to the Stipulations and Conditions, as brought out in Appendix. The Consent will be subject to review for any non-compliance to the Stipulations and Conditions.

This Consent is valid till March 31, 2024. The excavation activity of safety and safety related structures as per AERB/NPP&RR/SG/G-1 shall be completed within the validity period, else extension shall be sought with justification.

This consent shall be suspended or revoked, if any declaration made or information given in the application and associated submissions is found to be false, or if any undertaking given in the application is not complied with.

Hindi version follows.

Encl.: Appendix

  
31.03.2022  
fw (Chairman, AERB)

**Chairman & Managing Director**  
**Nuclear Power Corporation of India Limited**  
**Nabhikiya Urja Bhavan (NUB)**  
**Anushaktinagar, Mumbai-400094**

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Copy to:

**AERB**

Executive Director

Director, NFRG

Director, NSARG

Head, NPSD

Head, DRI

Head, OPSD

Head, DRPE

Head, PHWR-PS

Head, S&SES

**NPCIL**

Director (T)

Director (P)

Director (O)

**AERB Committees**

Chairman & Member Secretary, ACPSR-NPP

Chairman & Member Secretaries, PDSC-PHWR

Chairman & Member Secretary, CESC

Chairman & Member Secretary, CRSA

**Kaiga Site**

Project Director, Kaiga-5&6

Chief Construction Engineer, Kaiga-5&6

**AERB STIPULATIONS AND CONDITIONS FOR EXCAVATION CONSENT OF KAIGA – 5,6**

**1.0 Specific Stipulations**

- a) Recommendations of PDSC-PHWR, CESC and CRSA shall be complied with, including the timelines for submissions indicated therein.
- b) Activities under Excavation Consent for Kaiga 5&6 shall be carried out as per the approved construction/ excavation procedures. Deviation, if any, shall be promptly informed to AERB. No changes shall be made to the programs & procedures, which have been approved by AERB, without prior intimation and review by AERB.
- c) As regards deviations from Atomic Energy (Factories) Rules, 1996 in buildings design of Kaiga-5&6, NPCIL shall adhere to the commitment made during review w.r.t. increasing the width of staircase & landing width. NPCIL shall make all efforts to further minimise the quantum of deviations during actual construction. Need for exemption in this regard can be considered at a later stage, based on the actual quantum of deviations, if any.
- d) Work procedures & QAP for excavation and dewatering scheme shall be reviewed and approved by NPC-SRC before start of actual excavation at site. These documents after approval should be submitted to AERB.
- e) NPCIL shall formally confirm that the current boundary of plant layout and the change in natural drainage scheme including re-routing of Kaiga Hole have been unambiguously conveyed to MoEF&CC.  

In case there is any change in the plant layout boundary or re-routing schemes of natural drains agreed by AERB, due to later MoEF&CC interventions, the entire exercise of flood hazard assessment and estimation of safe grade level would need to be revisited, and the consent will need to be revalidated.
- f) Seismic margin assessment exercise for the identified safety related SSCs shall be completed as part of the design and reviewed before FPC.
- g) NPCIL shall ensure the availability of full-fledged First Aid Centers of contractors before commencement of excavation activities.
- h) Utmost importance shall be given to potential for industrial safety hazard during excavation and dumping of excavated material, and its prevention.
- i) NPCIL shall periodically report the bore-hole water sample radiological monitoring data during excavation of Kaiga-5&6.
- j) NPCIL shall ensure availability of provisions as per the approved emergency preparedness plan.

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2.0 General Stipulations

- a) NPCIL shall implement the Quality Assurance Programme laid down as per requirements of the Quality Assurance Code and any other requirements stipulated by AERB in this regard from time to time and adhere to commitments made as part of Licensee submissions to AERB;
- b) The Consent shall be subject to revocation, suspension, modification or amendment, for causes as provided in the Atomic Energy Act and rules made thereunder, in accordance with the procedures laid down in the Act;
- c) The terms and conditions of the Consent can be amended, revised, or modified as considered necessary by AERB in the interest of safety;
- d) NPCIL shall ensure provision for the development, revision, implementation, and maintenance of its emergency preparedness programme including adequate interfaces with state and local governments;
- e) This Consent shall be suspended or revoked, if any declaration made or information given in Form A of the application is found to be false or if any undertaking given in such application is not carried out;
- f) No activity or operation shall be carried out for purposes other than those mentioned in the application;
- g) Full access to facilities shall be accorded to any authorised representative of the AERB;
- h) Any changes in the authorised personnel shall be duly notified to AERB;
- i) NPCIL shall take such steps as may be necessary to prevent unauthorised persons from entering the site or such part thereof as AERB may stipulate;
- j) NPCIL shall provide suitable access restrictions and/or fences on the site and shall ensure that these are properly maintained;
- k) NPCIL shall ensure compliance to all necessary statutory clearances and availability of land acquisition records.
- l) No modification affecting plant safety shall be carried out without prior approval of the AERB;
- m) NPCIL may take reasonable action that departs from a Consent condition 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 of these actions shall be reported to AERB as per reporting criteria.
- n) NPCIL shall appoint authorised persons who are qualified to perform functions under the License;
- o) All Industrial & Fire Safety requirements including prompt reporting of industrial accidents or fatalities as per the Atomic Energy (Factories) Rules, 1996/AERB notifications and Control of Works shall be strictly adhered to.
- p) Any abnormal occurrence, significant events, industrial accidents or fatalities during the activity shall be promptly reported to AERB. Significant Event or Change shall be reported as per SECRC (Significant Event/Change Reporting Criteria).
- q) Compliance to the Stipulations of the Statutory Clearances shall be ensured.

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- r) NPCIL shall submit and make available in due time all information specified by AERB. It shall be the responsibility of NPCIL to make proper arrangements with vendor(s) and/or contractor(s) to ensure availability of all required information. It shall also be the responsibility of NPCIL to keep AERB constantly informed of all relevant additional information or changes in the information submitted earlier.
- s) The facility shall be designed and constructed in accordance with design basis reviewed by AERB for relevant site parameters provided in safety analysis reports; NPCIL shall not deviate from design provided in safety analysis reports in any way that might affect safety, without prior approval of AERB;
- t) Any nuclear or radioactive material shall not be brought to site without the authorisation of AERB;
- u) Feedback and observations (including those emanated in RI) from earlier projects during their construction should be appropriately addressed.

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