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REGISTERED

भारत सरकार  
पर्यावरण एवं वन मंत्रालय  
GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT & FORESTS

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PARYAVARAN BHAWAN, C.G.O. COMPLEX,

लोदी रोड, नई दिल्ली-११०००३  
LODI ROAD, NEW DELHI-110003

No.J-14011/5/89-IA-I

Dated January 10, 1992.

To

The Managing Director,  
Nuclear Power Corporation,  
World Trade Centre,  
Cuffe Parade,  
BOMBAY- 400 005

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Subject: Environmental clearance of Kaiga Atomic Power Plant Units 1 & 2 (2 x 235 MW) Stage-II and Units 3 - 6 (4 x 235 MW) to be set up at Kaiga, Karnataka.

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Sir,

Reference is invited to the above proposal which has been examined and accorded environmental approval subject to effective implementation of the following conditions:

i) All the stipulations of Atomic Energy Regulatory Board (AERB) pertaining to safety and related aspects shall be strictly implemented and it will also be ensured that:-

a) The liquid effluents emanating from different plants of the power station are treated to conform to the standards stipulated by Central/State Pollution Control Boards and International Commission for Radiological Protection (ICRP)/AERB.

b) Radio-active emissions, fugitive or otherwise, are maintained within the safety standards prescribed by AERB.

c) Radio-active wastes (solid and semi-solid) generated during various operations are properly treated and disposed off after proper containment in accordance with the standards/guidelines prescribed by ICRP/AERB.

d) For transportation of radio-active fuel/wastes, adequate precautions are taken in accordance with guidelines prescribed by ICRP/AERB.

e) Adequate steps are taken to prevent ground water pollution and sufficient number of water quality monitoring stations are set up for periodic monitoring.

ii) Action plans included in the approved Environmental

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11/17

Management Plan relating to air, water including ground water, land, noise, solid wastes, socio-economic aspects, green belt development, forest management and environmental surveillance during as well as post construction phases shall be implemented as per schedule and reported to the Ministry every six months. Non-compliance may even result in revoking of approval.

iii) The modelling studies in progress regarding thermal discharges must be completed early so as to design the cooling water conveyor system as well as the outfall in such a way that the maximum temperature differential of 5°C between the outlet and the receiving body gets dissipated within a thermal wedge of 200 m.

iv) Epidemiological/Toxicity studies to be undertaken within 20 Km. of the project site to determine base-line status and to ascertain any epidemiological changes due to the project. These studies should be completed within one year preceded by a well planned community awareness programme. This report to be furnished to the Ministry of Environment and Forests and the exercise to be repeated periodically.

v) a) For risk assessment, studies at level I, II and III will be carried out taking into consideration available Indian data. Subsequently, data generated from epidemiological/toxicity studies should also be suitably incorporated in Risk Assessment Studies. The report shall be submitted to Ministry of Environment & Forests within one year.

b) Taking into consideration the results of Risk Assessment at level I, II and III, Disaster Management and Emergency Preparedness Plans will be prepared and submitted to Ministry of Environment & Forests within one year. No Unit should go into operation until these plans have been completed and approved.

vi) Studies on the decision-making and evaluation in Environmental Impact Assessment for minimising ambiguities and uncertainties need to be continued on the basis of recent systems of evaluation including Fussy Set Theory and Expert Systems etc. and results communicated to Ministry of Environment & Forests within six months.

vii) The proposed Rehabilitation Plan to be revised by the project proponents in consultation with State Government of Karnataka and got approved from Ministry of Environment and Forests taking into consideration:

a) All males above 18 years of age to be treated as a separate family unit;

b) to provide land for land;

c) to provide sufficient free homestead land along with rehabilitation amount so that oustees can build houses at new sites. Alternatively, built houses on reasonably sufficient area to be provided keeping in view that oustees would require space for livestock, agricultural inputs farm produce etc.;

12/17

- d) shifting grant to be provided;
- e) employment to atleast one member of the family;
- f) landless labour to be provided with a job;
- g) to protect special rights of ST oustees; &
- h) other basic amenities to be provided. This should be completed within six months.

viii) The carrying capacity study to be undertaken jointly by the project proponents of Kaiga Atomic Power Station, Karwar Naval Base and Karnataka State authorities will be completed within one year and the report submitted to Ministry of Environment & Forests. Based on the study additional safeguards, if any, will be imposed to be implemented effectively.

✓ ix) The temperature differential between condenser water at the discharge point and the ambient temperature of the receiving water body should under no circumstances shall be more than 5°C.

x) Periodical environmental surveillance covering all major parameters and monitoring for radio-active emissions should be undertaken for measuring radio-activity and records maintained.

xi) There would be periodic monitoring of the impact on the surrounding forests, especially in the Valley in which the plant is located, from demographic factors related to the project, as well as from the emissions and radiation caused by the project.

xii) All the vacant lands within the project zone should be afforested with indigenous species and sufficient tree density.

xiii) The area between the Gangavali river from its point of confluence with the sea to Ramanguli and the Kalinadi from its point of confluence with the sea to the point nearest to Vajralli (excluding the battery limits of Kaiga, Kadra Hydel and Karwar projects as well as existing towns/villages) will be declared a "No Development Zone" and the land use frozen for afforestation.

xiv) Periodical monitoring of the health status of the workers to assess occupational hazard as well as local population in the surrounding area of the power plant should be carried out, records maintained for taking additional safety measures, if so dictated.

2. There should be an Environmental Cell with suitable personnel and a laboratory at site.

3. Adequate financial provision should be made item-wise for implementation of the above provisions and there must be no diversion of such specified funds.

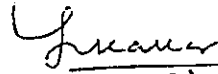
13/17

4. A Monitoring Committee be set-up with representatives of AERB, State Pollution Control Board, State Forest Department and at least two prominent public persons/NGOs to oversee effective implementation of the suggested safeguards and suggest mid-course corrections, if any.

5. NPC will prepare a note on the details of the studies to be undertaken alongwith time frame for their completion and implementation keeping in view that implementation of the studies has to be done before commencement of the plant. The note should be submitted to Ministry of Environment & Forests within 45-days.

6. The stipulations will be implemented among others, under the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986

Yours faithfully,

  
(Y.P. KAKAR)  
Director

Copy to:-

1. Secretary, Department of Atomic Energy, Govt. of India, Anushakti Bhawan, Chhatrapati Shivaji Maharaj Marg, Bombay-400 039
2. Secretary, Department of Environment, Govt. of Maharashtra, Mantralaya, Bombay.
3. Scientist Incharge, Regional Centre, Southern Zone, Ministry of Environment & Forests, No.493, I Main, III Block, III Stage, Basaveswara Nagar, Bangalore.
4. Secretary, Department of Environment, Govt. of Karnataka, Bangalore.

(Y.P. KAKAR)  
Director