

J 13012/38/2010-IA.II (T)

Government of India

Ministry of Environment & Forests



e-mail:plahujarai@yahoo.com

Paryavaran Bhawan

CGO Complex, Lodi Road

New Delhi-110 003

Dated: May 20, 2011

To

M/s PPN Power Generating Company Pvt. Ltd.

3rd Floor, Jhaver Plaza

1-A, Nungambakkam High Road

Chennai – 600 034.

Sub: Expansion by addition of 3x360 MW (Phase-II) Gas Based Combined Cycle Power Plant at villages Pillaiperumalnallur and Manickapangu, in Tharangambadi Taluk, in Nagaapattinam Distt., in Tamil Nadu - reg. Environmental Clearance.

Sir,

The undersigned is directed to refer to your letter no. PPN-II-EIA-14, dated 02.12.2010 on the subject mentioned above seeking environmental clearance under the provisions of EIA Notification, 2006.

2. The Ministry of Environment & Forests has examined the application. It has been noted that the proposal is for expansion by addition of 3x360 MW (Phase-II) Gas Based Combined Cycle Power Plant at villages Pillaiperumalnallur and Manickapangu, in Tharangambadi Taluk, in Nagapattinam Distt., in Tamil Nadu. The existing plant 330 MW (Phase-I) based on natural gas and naphtha was accorded environmental clearance in March, 1996 and is in operation since 2001. Land requirement will be 23.765 acres, which is available within the existing power plant. The co-ordinates of the site are at Latitude 11°04'08"N to 11°04'55"N and Longitude 79°49'37" E to 79°51'23"E. Gas requirement will be 4.89 MMSCMD. Comfort letter from the Ministry of Petroleum & natural Gas for gas allocation has been obtained. Water requirement will be 6000 m³/hr and will be sourced from the Bay of Bengal through a pipeline at a distance of 1.0 km. The existing plant uses once through cooling system. For the proposed expansion induced draft cooling towers will be adopted for cooling system. Dry Low NO_x Burners / Steam injection will be installed. Three stacks of 60 m height are proposed for the proposed expansion. There are no national parks, wildlife sanctuaries, tiger/biosphere reserves etc. within 10 km of the site. However Tharangambadi Fort and Melayur Temple are located within 10 Km of the plant. There are no reserve forests blocks within 10 Km distance of the plant. Public hearing was conducted on 11.11.2010. Cost of the project will be Rs 4073 Crores.

3. The project has been considered in accordance with the provisions of the EIA notification issued by the Ministry of Environment & Forests vide S.O. 1533 (E), dated September 14, 2006.

4. Based on the information submitted by you as at para no.2 above and others and presentation made by you before the Expert Appraisal Committee (Thermal) in the 15th Meeting held during January 10-11, the Ministry of Environment and Forests hereby *accords environmental clearance* to the above project under the provisions of EIA notification dated September 14, 2006, subject to the compliance of the following Specific and General conditions:

A. Specific Conditions:

- (i) CRZ clearance for permissible activities in CRZ area (as may be applicable) shall be obtained before starting construction activity.
- (ii) Prior clearance from the Archaeology Survey of India shall be obtained (as may be applicable) with regard to protected monuments / sites if any within the study area.
- (iii) The Govt. of Tamil Nadu's restriction of activities related to River Cauvery (as may be applicable in this case) shall be strictly adhered to.
- (iv) In case fuel for running the power plant is proposed to be changed from natural gas to other fuel (liquid or solid) the project proponent shall apply for such a change in environmental clearance along with necessary documents as required under EIA notification, 2006 (and its amendments). In such a case the necessity for holding public hearing again or otherwise will be determined by the Ministry in consultation with the Expert Appraisal Committee (Thermal Power).
- (v) Vision document specifying prospective plan for the site shall be formulated and submitted to the Ministry **within six months**.
- (vi) COC of 1.25 shall be adopted.
- (vii) No ground water shall be extracted for the project work at any stage.
- (viii) It shall be ensured that the area drainage is not disturbed due to the proposed expansion.
- (ix) Hydro-geological study of the area shall be reviewed annually to assess the sustainability of the source of water particularly in lean season. The review report duly vetted by the concerned Dept. in the state government shall be submitted to the Ministry. In case adverse

impact on ground and surface water is observed, immediate mitigating steps to contain the same shall be undertaken.

- (x) The treated effluents conforming to the prescribed standards only shall be reused to the extent possible and excess discharged. Arrangements shall be made that effluents and storm water do not get mixed. No discharge shall be made into the estuary nor intake for raw water shall be located in the estuary.
- (xi) A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation. Continuous monitoring of effluent discharge shall be undertaken and it shall be ensured that when discharge enters the natural drain the temperature of effluent shall be at ambient.
- (xii) Monitoring of ground and surface water quality (if any nearby) shall be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.
- (xiii) A well designed rainwater harvesting shall be put in place. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within **a period of three months** from the date issue of clearance and details shall be furnished. Status of implementation shall be submitted to the Regional Office of the Ministry.
- (xiv) Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.
- (xv) Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA at 1m from the source of noise. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.
- (xvi) NO_x emission from each Gas Turbine shall not exceed 50 ppm.
- (xvii) Stacks of 70 m shall be provided with continuous online monitoring equipments. Exit velocity of flue gases shall not be less than 22 m/sec.

- (xviii) Regular monitoring of ground level concentration of SO₂, NO_x, RSPM (PM₁₀ & PM_{2.5}) etc. shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.
- (xix) Impact on fishery shall be studied in case sea water use is feasible and adopted. Accordingly a scheme for uplifting the livelihood of fishermen community shall be formulated and a separate **Fishermen Welfare Fund** created to enhance their quality of life through creation of facilities for fish landing platforms / fishing harbour / cold storage etc. and also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc. The fund shall be created not out of CSR budget.
- (xx) Local employable youth shall be trained in skills relevant to the project for eventual employment in the project itself. The action taken report and details thereof to this effect shall be submitted to the Regional Office of the Ministry and the State Govt. Dept. concerned from time to time.
- (xxi) An amount of Rs 17.0 Crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 5.0 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be **submitted within one month** along with road map for implementation.
- (xxii) As part of CSR programme the company shall conduct need based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.
- (xxiii) It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.

- (xxiv) Green Belt consisting of 3 tiers of plantations around the plant of 150 m width and adequate tree density not less than 2500 per ha with survival rate not less than 80 % shall be developed. In areas where 150 m width is not possible, Green Belt of not less than 50 m width shall be raised with adequate justification submitted to the regional Office of the Ministry.
- (xxv) Shelter Belt shall also be raised additionally. To meet the expenditure of these plantations and their management, a common **Green Edowment Fund** shall be created by the project proponent. The interest earned out of it shall be utilised for the development and management of green cover of the area.

B. General Conditions:

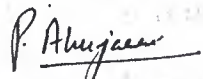
- i) A Corporate Environmental Policy shall be formulated and after due approval of the Board of Directors of the Company shall be submitted to the Ministry **within six months**. The policy shall specifically address issues of adherence to environmental policy so formulated and environmental clearance conditions stipulated for the power project and also others including matters related to violations of stipulated conditions (if any) to the Board.
- ii) Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS (if any) shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.
- iii) First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
- iv) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- v) The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>.

- vi) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.
- vii) An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the organization.
- viii) The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.
- ix) The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.
- x) **The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.**
- xi) Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six monthly basis. **Criteria pollutants levels including NO_x (from stack & ambient air) shall be displayed at the main gate of the power plant and in public domain.**
- xii) Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other

purposes and year-wise expenditure should be reported to the Ministry.

- xiii) The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.
- xiv) Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.
4. The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.
5. The environmental clearance accorded **shall be valid for a period of five years** to start operations by the power plant.
6. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
7. In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.
8. The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and its amendments, the Public Liability Insurance Act, 1991 and its amendments.

Yours faithfully,


(Dr. P.L. Ahujarai)
Scientist 'F'

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Environment Department, Government of Tamil Nadu.

3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Tamil Nadu State Pollution Control Board, No. 76, Mount Road, Mount Salai, Guindy, Chennai - 600 032
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Regional Office (SZ), Kendriya Sadan, 4th Floor E&F Wings 17th Main Road, 1 Block , Koranmangala, Bangalore -560 034.
7. The District Collector, Nagapattinam District, Govt. of Tamil Nadu.
8. The Director (EI), MOEF.
9. Guard file.
10. Monitoring file.

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(Dr. P.L. Ahujarai)
Scientist 'F'