

PART- III

Subject: - Environmental Clearance – 2 x77MW reg.

Reference: - MoEF. Lr. No. J-13011/81/2007-IA.II(T), Dated: 31.03.2008

A. SPECIFIC CONDITION:

SL. NO.	CONDITIONS	COMPLIANCE
i	The total land requirement for the project shall be restricted to 79.105 acres.	The land area utilized for power plant is 73.435 acres.
ii	Sulphur and ash contents in the coal to be used in the project shall not exceed 1.2% and 15% respectively.	The Indonesian coal used in this plant is having maximum 10% ash respectively.
iii	Two stacks with continuous online monitoring equipments for SO ₂ , Nox and particulate matter shall be provided. The height of the stacks shall be as per the standards prescribed under the Environment (protection) Rules in this regards or 140 m whichever is more. Exit velocity of flue gases shall not be less than 20.14 m/sec.	1-Common stack with online continuous monitoring system for SO ₂ , Nox and SPM was installed. The height of the chimney is 140m and the exit velocity of flue gases is more than 20.14 m/s. The online stack monitor has been linked with TNPCB CARE AIR centre for real time data transfer, LED display for stack emission data has been fixed in the main gate of the plant.
iv	High efficiency Electrostatic Precipitator (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	1. 99.9% Efficiency ESP has been installed to ensure the PM level below 50mg/Nm ³ . 2. Bag filters are installed in all the transfer towers 3. Online data for SO _x /Nox/SPM is being streamed to SPCB
v	Coal transportation will be done by rail up to Gummidipoondi Railway station and thereafter by road.	Coal will be transported from Chennai port to Gummidipoondi by Road. Clearance given by MoEF at the 54 th meeting.
Vi	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. 100 % fly ash utilization shall be ensured from day one. Unutilized bottom ash shall be disposed off in the ash pond in conventional slurry mode.	A silo each for fly ash and bottom ash is provided. The fly ash / bottom ash is collected in dry form and will be entirely used in cement plants.
vii	Ash pond shall be lined with LDPE lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	Ash dyke is provided with Three layers of LPDE line.
viii	Adequate dust extraction system such as cyclones / bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Yes water sprinkler / and 11 Bag filters at all transfer points have been provided in the coal storage /handling area to control the fugitive emission.
ix	Water requirement shall not exceed 4.3m ³ /hr.	Clearance already obtained from

	Necessary prior permission for drawl of groundwater for the project shall be obtained from the Competent Authority.	SGWB for the quantum of 540 KLD. However the enhancement of Rainwater harvesting expansion is being planned to cater the water requirement in lean season.
X	Air cooled condenser shall be provided.	Air cooled condenser has been provided for main condensate. 99% water recovery is being achieved.
Xi	The treated effluents conforming to the prescribed standards shall be re-circulated and reused within the plant. There shall be no discharges outside the plant boundary except during monsoon for storm water. Arrangements shall be made that effluents land storm water do not get mixed.	The treated effluents which are conforming to the prescribed standards are being recycled/reused only. The plant is proposed with zero discharge.
Xii	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt / plantation.	Sewage treatment plant as per consent of TNPCB has been installed, and the treated water is being used for green belt.
Xiii	Rain water harvesting should be adopted. Central Groundwater Authority /board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Storm water drains have been provided and connected to an earthen pond for recharging of ground water. There is a clear demarcation has been made to ensure non mixing of effluent and storm water.
Xiv	Regular monitoring of Ground water in and around the ash pond area shall be carried out, records maintained and six monthly reports shall be furnished to the Regional Office of this Ministry.	Regular samples from bore wells has been taken and analysed.
Xv	Leq of Noise levels emanating from steam turbines shall be limited to 75 dBA . for people working in the high noise area , requisite personal protective equipment like ear plugs / ear muffs etc. shall be provided. Workers engaged in noisy areas such as steam & gas turbines , 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.	<ol style="list-style-type: none"> 1. All noise generating equipments have been provided with anti – vibratory pads , bolts etc. 2. Green belt has already developed to minimize any impact on ambient noise. 3. Control rooms provided with Glass enclosures. 4. Fans of Boilers have been provided with silencers. 5. Safety valves are provided with silencers.
Xvi	Storage facilities for storing LDO & HFO shall be made in the project area where risk of getting fire is minimum. Necessary safeguard measures ffor protection against fire hazard in the coal /LDO & HFO storage area shall be taken.	HFO/LDO tankers have been provided in an area away from main plant with adequate dyke wall and fire hydrants. Clearance has been obtained from CCoE.
Xvii	On –site Disaster Management plan shall be prepared and implemented. Regular mock drill shall conducted and training programmes for the employees to handle fire and chemical hazards and to deal with the emergency shall be conducted. Safety alarms shall be installed at	On site emergency preparedness plan has been prepared and it is being followed.

	strategic points including main gate , assembly points , first aid center.	
Xviii	A green belt of adequate width and density shall be developed around the plant periphery covering about 20 acres of project area preferably with local species.	In a total of 73.435 acres land, about 20 acres of land has been developed for green belt .Around 23000 saplings were planted already.
Xix	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	A Doctor has been provided at site regularly, and also sanitation facilities have been provided.
Xx	Regular monitoring of ground level concentration of SO ₂ , NO _x , SPM and RSPM shall be carried out in the impact zone and records maintained. If at any stage these levels are found to be 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. Six monthly reports shall be submitted to the Regional Office of this Ministry.	4 number of permanent Ambient Air Quality monitoring stations already established.
Xxi	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 .	Newspaper advertisement was published. 1. Published paper : The Indian Express Published date: 9 th April 2008 2. Published paper: Dhinamalar Published date : 9 th April 2008
Xxii	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A separate Environment Management Cell has been set up for implementation of the stipulated environmental safeguards. The qualified environmental team has already been appointed with full-fledged lab facility to monitor Air / Water quality and noise levels in and around the plant and ensures the Environmental Standards prescribed by CPCB / TNPCB are met.
Xxiii	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry / Regional office /CPCB /SPCB.	It is being followed.
Xxiv	Regional Office of the Ministry of Environment & forests located at Bangalore will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environmental Management plan along with the additional information / copy of presentation submitted from time to time shall be forwarded to the Regional Office for their use during	It is being followed.

	monitoring.	
Xxv	Separate funds shall be allocated for implementation of environmental protection measures along with item –wise breakup. 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.	Separate fund was allotted for environmental and protection measures and has been implemented. 1. APC measures: 115 Cr 2. Water pollution control: 8 Cr 3. EHS 1.5 Cr 4. Green belt: 1.5 Cr 5. Others : 15 Cr
Xxvi	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.	Plant was commissioned on April 14, 2010.
Xxvii	Full cooperation shall be extended to the Scientist /Officers from the Ministry /Regional Office of the Ministry at Bangalore /the CPCB / the SPCB who would be monitoring the compliance of environmental status.	Extended.