

**Compliance status of EC Conditions (dt 18.04.2007) for Stage-I, Phase-I (2 x 500 MW) of NTECL  
(Vallur Thermal Power Project)**

S. N	Stipulation	Status as on 30.09.2023
(3)	The proposal has been considered and in accordance with para 12 of EIA notification dated 14 <sup>th</sup> sep, 2006 read with para 2.2.1 (i) a of the circular no. J-11013/41/2006-1(A).II(I) dated 13 October, 2006 and environmental clearance is hereby accorded under the provisions there of subject to implementation of the following terms and conditions:-	
(i)	The total land requirement shall not exceed 1184 acres for all the activities/ facilities of the power project put together.	The total land for phase-I is 1139.97 acres.
(ii)	The requisite CRZ clearance for the greenbelt area, which partially falls within CRZ, shall be obtained before starting development of greenbelt work in that area.	Complied The requisite CRZ clearance for the green belt area has been obtained vide MOEF&CC letter dated 14.07.2009 before start of the work on the project.
(iii)	The requisite CRZ clearance for the conveyor belt for transportation of coal passing through CRZ and any other activity in CRZ area shall be obtained before starting work on these activities.	Complied The requisite CRZ clearance for the conveyor belt for transportation of coal has been obtained vide MOEF&CC letter dated 14.07.2009.
(iv)	Adequate maintenance of the drainage network shall be carried out for ensuring the storm water drainage efficiency in accordance with the study carried out by CWPRS.	The storm water drainage system has been designed as per recommendation of CWPRS, Pune. The same is being properly maintained for its maximum efficiency.
(v)	The fill material required for leveling of the area shall be met from the pond ash of the Ennore Thermal Power Station and North Chennai Thermal Power Station to the Extent possible.	Complied The fill material for leveling the plant area was obtained from the pond ash of the Ennore Thermal Power Station and North Chennai Thermal Power Station.
(vi)	The intake water point shall be selected based on CWPRS study.	Complied The intake point has been located on the sea water intake channel of North Chennai Thermal Power Station based on CWPRS study.
(vii)	A copy of the complete report on area drainage study reported to be undertaken by CWPRS shall be submitted to the Ministry within one month of the issue of this letter.	Complied The report on area drainage studies for the project carried out by CWPRS, Pune has been submitted to MOEF&CC on 02.05.2007.

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(viii)	Ash and sulphur content in the coal to be used in the project shall not exceed 34% and 0.34% respectively.	As per MoEFF&CC notification dated 21 <sup>st</sup> May 2020, stipulation regarding ash content in coal used by thermal power plants is removed.  Sulphur content in Indian coal is generally between 0.3 to 0.55% range. However, in order to mitigate SO <sub>2</sub> emission in flue gas and to comply with MoEF&CC new emission notification dated 07.12.2015 for TPP, station has already taken action for installation of FGD system. Contract for supply and installation of FGD is awarded in April 2020 and works are in progress.
(ix)	A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments. Exit velocity of at least 22.2 m/sec shall be maintained.	Complied  A bi-flue stack of 275 m height is in service. Continuous online stack monitoring facility for measurement of Particulate Matter, SO <sub>2</sub> and NO <sub>x</sub> is provided. The exit velocity of flue gas is more than 22.2 m/sec.
(x)	High efficiency Electrostatic Precipitators (ESPs) with an efficiency of not less than 99.9% shall be installed to ensure that particulate emission does not exceed 100 mg/Nm <sup>3</sup> .	The high efficiency electrostatic precipitators with designed efficiency of 99.935% have been installed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> in compliance to latest MOEF&CC emission norms for TPP dated 07.12.2015.
(xi)	Space provision shall be made for Flue Gas Desulphurisation (FGD) unit, if required at later stage.	Station is having adequate space for installation of Flue Gas Desulphurization unit. Installation of FGD is in progress at NTECL. Contract for supply and installation of FGD was awarded in April 2020 and works are in progress.
(xii)	Adequate dust extraction system such as bag filters and water spray system in dusty areas such as ash handling areas, transfer areas and other vulnerable areas shall be provided.	Complied  NTECL has installed water spray system (Dry Fog Dust Suppression) for control of dust in all transfer points of Coal handling plant. Bag filters are provided in ash silos. The water spray system on coal piles at stack yard is installed. Dust Extraction System in crusher house of Coal Handling is operational.

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(xiii)	Fly ash shall be collected in dry form and shall be used in a phased manner as per provisions of the notification on Fly Ash Utilization issued by the Ministry in September, 1999 and its amendment. By the end of 9 <sup>th</sup> year full fly ash utilization should be ensure. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry.	<p>Fly ash is collected in dry form and is taken by various agencies for Cement, brick, tiles manufacturing. Ash utilization for the financial year 2019-20 and 2020-21 were 121.96% and 122.80 %. 2022-23 ash utilization is 69 % , 2023-24 till oct'23 is 92.42%.</p> <p>In 2007, HCSD system was an emerging technology and its use was advocated for conservation of fresh water. However, its use with sea water was not proven. NTECL is using only sea water for all its purpose. Based on the recommendations of a study report of CEA, undertaken on the request of MoEF&amp;CC, it was recommended that the choice of slurry system shall be left to the utility.</p> <p>NTECL requested for amendment to MoEF&amp; CC vide letter dated 30.05.2008 and adopted lean slurry system with ash water recirculation in place of HCSD.</p>
(xiv)	Adequate safety measures shall be implemented to protect the ash pond bond from getting breached.	<p>The structure of ash dykes has been designed, constructed as per the State of the Art engineering practices for the design and construction of earth dams with adequate factor of Safety including the seismic parameters. The ash dyke is being operated following the adequate safety measures and Regular monitoring and inspection of ash dykes is being done to protect ash pond from getting breached.</p> <p>In the year 2020-21 The dyke design and stability was checked by IIT Hyderabad and certified that it is as per standard.</p>
(xv)	Rain water harvesting shall be practiced. A detailed scheme for rain water harvesting to recharge the ground water aquifer shall be prepared in consultation with Central Ground Water Authority/ State Ground Water Board and a copy of the same shall be submitted within three months to the Ministry.	Initial scheme was prepared by Chennai Metro Water Supply and Sewerage Board (CMWSSB). TWAD (Tamilnadu Water & Drainage Board) declined to carry out the work after award of contract. An alternate scheme was prepared by WAPCOS, Government of India and approved by CMWSSB. Rain water harvesting system as per this scheme is implemented at NTECL.

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(xvi)	The treated effluents conforming to the prescribed standards shall be discharged in the lagoon along with circulating water of existing North Chennai TPS. The temperature of the discharge effluents shall not exceed 5°C over and above the ambient water temperature of lagoon/sea.	The treated effluent conforming to the prescribed standards of TNSPCB is being discharged into the sea through NCTPS lagoon.  The temperature of the discharged effluent is being ensured not to exceed 5°C above ambient water temperature of receiving water body.
(xvii)	Regular monitoring of groundwater in and around the ash pond areas shall be carried out, records maintained and periodic reports shall be furnished to the Regional Office of the Ministry.	Complied  Monitoring of ground water in and around ash pond areas is being carried out regularly and report is being submitted to Regional Office (SEZ) of MOEF&CC at Chennai.
(xviii)	Greenbelt shall be developed all around the plant area, other utilities and ash pond covering at least 25% of the area.	Till Now, NTECL has planted 29870 trees within the plant boundary and 24000 nos. of trees are planted outside the plant premises through Forest Department, Govt of Tamilnadu. NTECL has carried out Mangrove plantation in 14.97 hectares land through M/s MSSRF. In addition, An Eco park is developed by Forest Department in 10 hectares area within 32 hectares of NTECL's island area. Contract for planting 10,000 trees was awarded in April 2022 to Tamilnadu Forest Department in which 5000 are planted in 2023-24.
(xix)	First aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Complied  First aid centre and sanitation arrangements have been made for the drivers and other contract workers during construction phase.
(xx)	Leq of Noise level should be limited to 75 dBA and regular maintenance of equipment be undertaken. For people working in high noise areas, personal protection devices should be provided.	Individual equipments have been designed with 75 dB (A) noise limit. Regular maintenance of equipment is undertaken to keep noise levels within limits during operation of the project. People working in high noise area are being provided with adequate and appropriate PPE's. Moreover, Periodic examination of workers also being done regularly.

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(xxi)	Regular monitoring of the ambient air quality shall be carried out in and around the power plant and records maintained. 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.	Regular monitoring of AAQ is being done at four locations selected in consultation with TNPCB and records are maintained. Monitoring Reports are being submitted to TNPCB and Regional Office (SEZ) of MOEF&CC at Chennai every month.
(xxii)	The project proponent should advertise in at least two local newspapers widely circulated in the region around the project, one of which should be in the vernacular language of the locality concerned, informing that the project has been accorded environmental clearance and copies of clearance letter is available with the State Pollution control Board/ Committee and may also be seen at website of the Ministry of Environment and Forests at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a> .	Advertisement regarding Environmental Clearance (EC) of NTECL-Vallur for Stage-I, Phase-I (2 x 500 MW) has been published on 27.04.2007 in two local newspapers widely circulated in Tamil Nadu: <ul style="list-style-type: none"> <li>• The Hindu (English daily) newspaper and</li> <li>• Dhinakaran (Tamil daily) newspaper</li> </ul> Copies of the advertisements have already been forwarded to Regional Office Bangalore.
(xxiii)	A separate environment monitoring cell with suitable qualified staff should be set up for implementation of the stipulated environmental safeguards.	Separate environment cell with sufficient trained manpower is functional at the project site.
(xxiv)	A half yearly report on the status of implementation of the stipulated conditions and environmental safeguards should be submitted to this Ministry, it's Regional Office at Bangalore, CPCB and SPCB.	Six monthly compliance status reports of EC conditions is regularly being submitted to the Regional Office (SEZ) of MOEF&CC at Chennai, CPCB & TNPCB and being uploaded on the website, which is periodically being replaced with updated report.  The latest half yearly progress report for the period of April 2023 to Sept 2023 is being submitted herewith.
(xxv)	Regional Office of the Ministry of Environment & forests located at Bangalore will monitor the implementation of the stipulated conditions. A completed 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.	EIA report and EMP have been submitted to Regional Office of MOEF&CC, Bangalore on 25.04.2007.  Later, a copy of same report was again submitted to Regional Office (SEZ) of MOEF&CC at Chennai, on 13.12.2018.

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(xxvi)	Separate funds should be allocated for implementation of environmental protection measures along with item-wise break-up. This cost should be included as part of the project cost. The funds earmarked for the environment protection measures should not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Separate funds have been allocated for implementation of Environmental protection measures along with item wise break-up. The funds earmarked for environmental protection will be used for the same purpose and shall not be diverted for any other purpose.
(xxvii)	Full cooperation should be extended to the Scientists / Officers from the Ministry / Regional Office of the ministry at Bangalore / the CPCB / the SPCB who would be monitoring the compliance of environmental status.	Full cooperation will be extended to the Scientists and officers of Regional Office of MOEF&CC at Chennai/CPCB/SPCB during their visit for monitoring the EC compliance status.
(4)	The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry.	All the stipulated conditions will be complied with.
(5)	The environmental clearance accorded shall be valid for a period of 5 years to the start of production operations by the power plant.	Both the units of phase-I have been commissioned. The plant (Unit-1) has been commissioned on 28.03.2012 and (Unit-2) commissioned on 28.02.2013. Commercial operation of Unit-1 was declared on 29.11.2012 and Unit-2 was declared on 25.08.2013.
(6)	In case of any deviation or alteration in the proposed project from that 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 incorporate additional environmental protection measures required, if any.	In case of any deviation in the proposed project a fresh reference will be made to the ministry.
(7)	The above stipulations shall be enforced among others under the Water (prevention and Control Pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act. 1981, the Environment (Protection) Act, 1986, the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, the public Liability Insurance Act, 1991 and rules there under and the EIA Notification, 2006 and the amendments made therein from time to time.	All the applicable stipulations under different acts and their amendments from time to time are being complied.