

(NTECL)

(VTPP)

**Compliance status of EC Conditions (dt 03.06.2009) for Stage-I, Phase-II (1 x 500 MW) of  
NTECL (Vallur Thermal Power Project)**

Sl. N	Stipulation	Present Status (as on 30.09.2023)
(3)	The proposal has been considered and Ministry of Environment & Forests hereby accords environmental clearance to the said project under the provisions of Environmental Impact Assessment Notification, 2006 subject to implementation of the following terms and conditions:-	
(i)	Boundary of the proposed power project shall be outside the CRZ boundary. No activity shall be taken up except permissible activity with due clearance in the CRZ area.	Complied The boundary of the project is outside the CRZ area. CRZ clearance has been accorded by MOEF&CC vide letter dated 14.07.2009 for the permissible activities. Only the permitted construction works were taken up in the CRZ area.
(ii)	Prior CRZ clearance for the activities / facilities to be located in the CRZ area shall be obtained before start of the work on the project.	Complied The requisite CRZ clearance has been obtained vide MOEF&CC letter dated 14.07.2009 before start of the work on the project.
(iii)	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.34% & 34% respectively at any given time. In case of variation of coal quality at the time of issue of LOA, a fresh reference shall be made to MOEF&CC for suitable amendments to environmental clearance conditions wherever necessary.	As per MoEF&CC notification dt 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. In order to mitigate SO <sub>2</sub> emission and to comply with MoEF&CC new emission notification for TPP dated 07.12.2015, contract for installation of FGD system is awarded in April 2020 and construction works are under progress.
(iv)	A single stack of 275 m height shall be provided with continuous online monitoring equipments for SO <sub>x</sub> , NO <sub>x</sub> and Particulate & Hg emissions. Exit velocity of flue gases shall not be less than 22.2 m/sec.	Complied A single stack of 275 m height has been constructed. Continuous online stack monitoring facilities for measurement of Particulate, SO <sub>2</sub> and NO <sub>x</sub> are provided. The exit velocity is above 22.2 m/sec.
(v)	High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup> .	The high efficiency electrostatic precipitators 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.

**Compliance status of EC Conditions for Stage-I, Phase-II (1 x 500 MW)**

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(vi)	Space for FGD installation should be provided whenever the need arises for its installation, i.e. if emission level exceeds the AAQ standards.	Complied Station is having adequate space for installation of Flue Gas Desulphurization unit. Contract for supply and installation of FGD is awarded in April 2020 and works are in progress.
(vii)	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.	NTECL has installed water spray system (Dry Fog Dust Suppression System) 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. Erection of Dust Extraction System in crusher house of Coal Handling was completed in April 2022.
(viii)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Fly ash shall be used in 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, fully fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond.	An ash management & disposal system is implemented that consists of dry ash extraction system (DAES) with adequate storage facility (Silos) for collection of dry fly ash, supply of ash to entrepreneurs, promoting ash utilization to maximum extent and safe disposal of unutilized ash in the ash pond in the form of slurry. Ash utilization for the financial year 2019-20 and 2020-21 were 121.96% and 122.80 %. 2022-23 ash utilization is 69.58 % , 2023-24 till Oct'23 is 92.42%. Periodic monitoring for mercury & heavy metals in the bottom ash and water emanating from ash pond is being done as per stipulation.
(ix)	Ash pond shall be lined with impervious lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	The Phase II ash dyke is not constructed. The ash slurry from phase II unit is dumped in the available space in phase I ash dyke which is constructed as per phase I EC.



**Compliance status of EC Conditions for Stage-I, Phase-II (1 x 500 MW)**

Sl. N	Stipulation	Present Status (as on 30.09.2023)
(x)	Closed cycle cooling system with natural draft cooling tower shall be provided and the effluents shall be treated as per the prescribed norms.	Closed cycle cooling system with Induced draft cooling tower is in operation. NTECL had approached MoEF&CC vide letters dated 23/07/2009, 04/01/2009 and 14/05/2010 and had requested MOEF&CC for change in cooling system from NDCT to IDCT as the same water temperature requirements is being met by IDCT. The effluents are treated as per the prescribed TNPCB norms.
(xi)	The Treated effluents conforming to the prescribed standards only shall be discharged. The temperature of the discharged effluents shall not exceed 5 deg. C over and above the ambient water temperature of Creek water /receiving water body. The temperature of the discharged water shall be monitored continuously and records maintained.	The effluent is being treated adequately conforming to the prescribed standards of TNPCB and is finally discharged through CMB into sea through NCTPS lagoon as per the EC condition. The temperature of the discharged effluent is being ensured not to exceed 5 <sup>0</sup> C above ambient water temperature of receiving water body. The temperature of the discharged water is monitored continuously and values are transmitted online to TNPCB.
(xii)	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt / plantation	Sewage treatment plant is operational for treatment of all domestic sewage emanating from plant and township. The treated sewage, conforming to prescribed TNPCB standards is utilized for raising green belt /plantation and other horticultural purposes.
(xiii)	Rain water harvesting should be adopted. Central Ground Water Authority/Board shall be consulted for finalization of appropriate rain water harvesting technology within a period of three months from the date of clearance and details shall be furnished.	Initial scheme was prepared by Chennai Metro Water Supply and Sewerage Board (CMWSSB). TWAD (Tamil Nadu Water And Drainage Board) declined to carry out the work after award of contract. The alternate scheme prepared in consultation with WAPCOs was approved by CMWSSB. Rain water harvesting system is implemented at NTECL.
(xiv)	Adequate safety measures shall be provided in the plant area to check / minimize spontaneous fires in coal yard, 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 at Bangalore.	Adequate no. of fire Spray & Hydrant system covering the entire power station including all the auxiliaries and buildings in the plant area provided as per fire safety requirements. The system is adequately equipped with piping, hydrants, valves, instrumentation, hoses, nozzles, hose boxes/stations etc.

**Compliance status of EC Conditions for Stage-I, Phase-II (1 x 500 MW)**

Sl. N	Stipulation	Present Status (as on 30.09.2023)
(xv)	Storage facilities for auxiliary liquid fuel such as LDO and/HFO/LSHS shall be made in the plant area where risk is minimum to the storage facilities. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in the DMP. Sulphur content in the liquid fuel will not exceed 0.5%.	Separate Storage facilities of auxiliary fuel LDO/HFO is available in plant area where fire risk to storage facility is minimum. Approved Disaster Management Plan is available. Mock drills are being conducted periodically. Modifications, if any will be incorporated in the DMP. Sulphur content in the fuel oil is less than 0.5%.
(xvi)	Regular monitoring of groundwater in and around the ash pond area including heavy metals (Hg, Cr, As, Pb) shall be carried out, records maintained and six monthly reports shall be furnished to the Regional Office of this Ministry.	Complied Monitoring of ground water in and around ash pond areas including heavy metals are being carried out regularly and reports are being submitted to Regional Office (SEZ) of MOEF&CC at Chennai.
(xvii)	A green belt of adequate width and density shall be developed around the plant periphery covering at least 25% area preferably with local species.	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.
(xviii)	Budgetary allocation for taking up activities under CSR should be at least Rs. 3.0 crores under capital expenditure and Rs. 50.0 lakh / annum under recurring expenditure.	NTECL has spent Rs 3.84 crores in the financial year 2020-21, 6.31 crores in the year 2021-22 and 13.03 crores in the year 2022-23 for CSR activities.
(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.

**Compliance status of EC Conditions for Stage-I, Phase-II (1 x 500 MW)**

Sl. N	Stipulation	Present Status (as on 30.09.2023)
(xx)	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dB (A). 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.	Individual equipments have been designed with 75 dB (A) noise limits. 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.
(xxi)	Regular monitoring of ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , Hg, SPM and RSPM 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.	Regular monitoring of concentration of SO <sub>2</sub> , NO <sub>x</sub> , SPM and RSPM is being carried out at four locations of AAQMS recommended by TNPCB and records are maintained. Monitoring Reports is being submitted to TNPCB and Regional Office (SEZ) of MOEF&CC at Chennai every month. The ambient air monitoring data are being uploaded on website of the company.
(xxii)	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.	Complied. Provision have been made available for housing (temporary nature) 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. during construction phase
(xxiii)	The project proponent shall 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 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 <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-II (1 x 500 MW) has been published on 15.06.2009 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.

**Compliance status of EC Conditions for Stage-I, Phase-II (1 x 500 MW)**

Sl. N	Stipulation	Present Status (as on 30.09.2023)
(xxi v)	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad / 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.	Copy of the Environmental Clearance (EC) letter has been sent to all the concerned local authorities.  The clearance letter is uploaded on the website of the company.
(xxv )	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	Separate environment cell with sufficient trained manpower is functional at the project site.
(xxv i)	The proponent shall upload the status of compliance of the stipulated EC 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&CC, the respective Zonal Office of CPCB, and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	The compliance status of EC is being submitted to Regional office of MOEF&CC, CPCB and TNPCB.  The same is being uploaded on the company website which is periodically being replaced with updated report.  The stack emission levels SPM, SO <sub>2</sub> , NO <sub>x</sub> and ambient air quality details are being submitted to TNPCB and Regional Office (SEZ) of MOEF&CC at Chennai. The parameters are being displayed near the main gate.
(xxv ii)	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&CC, the respective Zonal Office of CPCB and SPCB.	Six monthly compliance status report 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 Mar 2023 to Sept 2023 is being submitted herewith.



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Sl. N	Stipulation	Present Status (as on 30.09.2023)
(xxv iii)	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 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 proponents will up-load the compliance status in their website and update the same from time to time at least six monthly basis. Criteria pollutants levels (Stack & ambient levels of NOx) will be displayed at the main gate of the power plant.	<p>Six monthly compliance status of stipulated Environmental Conditions is submitted to Regional Office (SEZ) of MOEF&amp;CC at Chennai, CPCB and SPCB.</p> <p>EIA report and EMP have been submitted to Regional Office of MOEF&amp;CC, Bangalore on 25.04.2007. Later, a copy of same report was again submitted to Regional Office (SEZ) of MOEF&amp;CC at Chennai, on 13.12.2018.</p> <p>The Six monthly compliance status report has been uploaded in the company website. The parameters are being displayed near the main gate.</p>
(xix)	Separate funds should 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.	Separate funds have been allocated for implementation of Environmental protection measures (item wise). The funds earmarked for environmental protection is used for the same purpose and shall not be diverted for any other purpose.
(xxx )	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	<p>Investment approval was obtained in July, 2009. Main plant civil works started in Aug, 2009.</p> <p>The plant (Unit-3) has been commissioned on 28/02/2014. Commercial operation was declared on 26/02/15.</p>
(xxx i)	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 from Regional Office of MOEF&CC at Chennai/CPCB/SPCB during their visit for monitoring the EC Compliance 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. MOEF&CC, may impose additional environmental conditions or modify the existing ones, if necessary.	All the stipulated conditions are being complied with.
(5)	The environmental clearance accorded shall be valid for a period of 5 years to the start operations by the power plant.	Commercial operation was declared on 26/02/15.

**Compliance status of EC Conditions for Stage-I, Phase-II (1 x 500 MW)**

Sl. N	Stipulation	Present Status (as on 30.09.2023)
(6)	In case of any deviation or alteration in the proposed project including coal transportation system 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 shall be made to the ministry.
(7)	The above stipulations shall be enforced among others under the Water (Prevention and Control Pollution) Act, 1947, 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 its amendments.	All the applicable stipulations under different acts and their amendments from time to time are being complied with.
(8)	Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.	<p>Court Cases:</p> <p>a) Case W.P no. 30135 of 2018 was filed by Mr Ravimaran against NTECL in HC of Madras alleging violations of EC by discharging fly ash and bottom ash into unlined ash pond. HC had given Interim stay restraining NTECL to discharge ash into the unlined lagoon. NTECL has countered the petition stating that the EC condition does not stipulate lining of ash dyke. NTECL filed SLP (642/2019) in Supreme Court and the operation of HC stay was suspended by SC. Presently WP and SLP are pending before HC of Madras and SC of India.</p> <p>b) A Court case W.P no. 30237 of 2018 was filed by Mr Saravanan against NTECL in HC of Madras. Petitioner alleged violation of CRZ and alleged destruction of mangroves by construction of lagoon-I of ash dyke. MoEF&amp;CC had given a showcause notice 09.01.2019 to stop the construction of lagoon 1 of ash dyke. MoEF&amp;CC withdrew the showcause notice on 01.08.2023. WP 30237 is pending at Madras High court.</p>

