

**NTPC TAMILNADU ENERGY COMPANY LTD
(A JV of NTPC & TNEB)**

Ref: NTECL/EMG/EC-CRZ/2020

Date:05.11.2020

To

Additional Chief Conservator of Forests
Ministry of Environment Forest and climate Change
Regional office at Chennai
HEPC building
34, Cathedral Garden road
Nungambakkam
Chennai 600034

Sir,

Subject: EC and CRZ clearance compliance status as on 30.09.2020-Reg

Please find enclosed the compliance status report as on 30.09.2020 on Environmental Clearance Phase I (MoEF L No J-13011/33/2006/1A-II(T) Dt 18/04/2007), Phase II (No J-13011/62/2008-IA.II(T)Dt 03/06/2009) and CRZ clearance(MoEF L No 11-22/2009-IA.III Dt 14/07/2009) issued to NTPC Tamilnadu Energy Company Ltd .

Sincerely,



V Balakumar

Deputy General Manager(EMG)

Copies to:

- 1.Chairman,CPCB,Parivesh Bhavan,East Arjun Nagar,Delhi 110032
- 2.The Joint Chief Environmental Engineer(M), TNPCB, 951/1, Poonamalle High Road, Arumbakkam, Chennai -106

Vallur Thermal Power Project Site Office : Vellivoyal Chavadi Post, Ponneri TalukThiruvallur Dist., Chennai – 600 103. Fax: 044-2796 6033, Email emgntecl@gmail.com,vbalakumar@ntpc.co.in, Office no. 044 27900591,044 27966011, Mob 9445002444

(NTECL)

(VTPP)

Compliance status of CRZ clearance (by MoEF dt 14.07.2009) of NTECL (Vallur Thermal Power Project) (2x500MW + 1x500MW)

A) Specific conditions:

Sl. No.	Specific Conditions	Present Status (as on 30.09.2020)
(i)	Sufficient passage distance shall be maintained below the proposed bridge across the creek on the basis of navigational norms.	Complied Sufficient passage with adequate width (30 m) is being maintained below the bridge constructed across the creek in compliance to the stipulated navigational norms.
(ii)	Necessary measures shall be taken in the ash storage pond to prevent the leachate / overflows during rainy season.	Complied 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 measures to prevent leachate / overflow in the ash pond even during rainy season.
(iii)	An impervious tank for treatment of leachate from coal yard shall be in the proposal	Complied Leachate from coal yard is collected and treated in Coal Slurry Settling Pit made of impervious concrete tank and the effluent is pumped to Central Monitoring Basin (CMB).
(iv)	All the conditions as stipulated by the Principal Secretary Environment and Forest (EC.3) Dept, Govt. of T.N. vide letter 1154/ EC3 / 2009-1, dated 24.02.2009 shall be strictly complied.	All the stipulated conditions as per T.N. Govt. Letter 1154/ EC3 / 2009-1, dated 24.02.2009 is being complied with.
(v)	No construction work other than permitted in CRZ notification shall be carried out in CRZ area.	Complied Only the permitted construction works were taken up in the CRZ area.
(vi)	Washing from paved area / Sewage shall be treated and the treatment facility shall be provided in accordance with CRZ notification 1991. The disposal of treated water shall conform to the regulation of TNSPCB.	The separate Effluent Treatment Plant (Liquid Waste water treatment plant) for treatment of plant waste water is available. An independent plant effluent drainage system is being constructed to ensure that plant effluents do not mix with storm water drainage. Sewage treatment plant is operational for treatment of all domestic sewage emanating from plant and township. The treated sewage water, conforming to prescribed TNPCB standards is being utilized for raising green belt /plantation and other horticultural purposes.
(vii)	Oil spills if any shall be properly collected and disposed as per rules.	Oil spills is being properly collected using oil separators and disposed or reused as per condition.

Compliance status of CRZ clearance of NTECL (2x500MW + 1x500MW)

Sl. No.	Specific Conditions	Present Status (as on 30.09.2020)
(viii)	The project shall set up separate environment management cell for effective implementation of the stipulated environmental safeguards under the supervision of a senior executive.	Complied Separate environment cell with sufficient trained manpower is functional at the project site.
(ix)	The project shall take up mangrove plantation/green belt development in the project area wherever possible. Adequate budget shall be provided in EMP for such development.	Till Now, NTECL has planted 13260 trees within the plant boundary and since there is no space for more tree plantation 19,590 nos. of trees are planted outside the plant premises through Forest Department, Govt of Tamilnadu. In addition, 80 acres of own land is kept unutilized with natural vegetation including mangroves. An Eco park is being developed by Forest Department in this 80 acres of land owned by NTECL. For the year 2020-21 plantation of 10,000 trees is being carried out through Forest Department on depository basis.
(x)	The funds earmarked for Environment Management Plan shall be included in the budget and shall not be diverted to any other purposes.	Complied The requisite funds earmarked for Environment Management Plan are being used as per plan and is not being diverted to other purposes.

B) General Conditions:

Sl. no.	General Conditions	Present status (as on 30.09.2020)
(i)	The construction of structures should be undertaken as per the plans approved by the concerned local authorities / local administration meticulously conforming to the existing local and Central rules and regulations including the provisions of CRZ notification dated 19.02.1991, and the approved Coastal Zone Management Plan of Tamil Nadu.	Complied The constructions of structures were undertaken as per approved plans conforming to existing local and central rules and regulations including provisions of CRZ notification 1991 based on which CRZ clearance was issued to the plant.
(ii)	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 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
(iii)	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality	Complied Appropriate measures are taken in order to avoid degradation of the water quality due to digging activities.

Compliance status of CRZ clearance of NTECL (2x500MW + 1x500MW)

(iv)	<p>Borrow sites for each quarry sites for road construction material and dump sites must be identified keeping in view the following:</p> <p>a) No excavation or dumping on private property is carried out without written consent of the owner.</p> <p>b) No excavation or dumping on wet lands forest areas or other ecologically valuable or sensitive locations</p> <p>c) Excavation work shall be done in close consultation with the soil conservation and watershed development agencies working in the area</p> <p>d) Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such materials must be secured so that they shall not leach into the ground water.</p>	<p>No excavation or dumping activities were undertaken in the private property without consent of the owner.</p> <p>No excavation or dumping is done on wet lands forest areas or other ecologically valuable or sensitive locations</p> <p>No deep excavation work was done in CRZ area. Only shallow and pile foundation works were taken up.</p> <p>As such there is no construction spoils in the site. The scrap and waste materials were removed from site and stored in an identified, secured place by the concerned agencies to avoid contamination of water courses and ground water.</p>
(v)	<p>The construction materials shall be obtained only from approved quarries. In case new Quarries are to be opened, specific approvals from the competent authority shall be obtained in this regard.</p>	<p>The construction materials were obtained only from approved quarries. There is no quarry in the site area.</p>
(vi)	<p>Adequate precautions shall be taken during transportation of the construction material so that it does not affect the environment adversely.</p>	<p>Complied</p> <p>Adequate precautions were undertaken during transportation of construction material so that it did not affect the environment. Moreover regular water sprinkling was done in all the important approach roads of the site.</p>
(vii)	<p>Full support shall be extended to the officers of this Ministry/Regional Office at Bangalore by the project during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken report in respect of mitigation measures and other environmental protection activities.</p>	<p>Complied</p> <p>Full cooperation will be extended to officers of Ministry/Regional Office by the project during inspection of the project.</p>
(viii)	<p>MOEF or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.</p>	<p>The additional conditions, if any, stipulated by competent authority will be complied with.</p>
(ix)	<p>The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry</p>	<p>All the stipulated conditions are complied with.</p>

Compliance status of CRZ clearance of NTECL (2x500MW + 1x500MW)

(x)	In the event of a change in project profile or change in the implementation agency a fresh reference shall be made to the MOEF	A fresh reference will be made to MOEF&CC in case any change in the project profile or implementation agency.
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C) Other information/Conditions:

Sl.No.	Other Conditions	Present status (as on 30.09.2020)
(7)	The stipulations should be enforced among others under the provisions of Water Act 1974, Air Act 1981, The Environment Act 1986, The Public Liability Act 1991, and the EIA notification 1994 including amendments and rules made thereafter.	All other statutory stipulations and their amendments as applicable are being complied.
(8)	All other applicable statutory clearances such as for storage of fuel oil from Chief Controller of Explosives etc., should be obtained	Other required statutory clearances for the operation of station are obtained regularly and renewed periodically.
(9)	The project shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental clearance and the copies of clearance letters are available with TNPCB and may also be seen in the website of MOEF at www.envfor.nic.in . Copy of the advertisement should be forwarded to Regional office of MOEF at Bangalore	Complied Advertisement regarding Environmental Clearance has been published in two local news papers widely circulated in Tamil Nadu: <ul style="list-style-type: none"> • The Hindu (English daily) newspaper and • Dhinakaran (Tamil daily) newspaper on 27.04.2007 and 15.06.2009 for phase-I and phase-II respectively. Copies of the advertisements have already been forwarded to Regional Office Bangalore. Regarding CRZ clearance advertisement was given on 03.08.2009 in both the above mentioned Tamil and English newspapers.
(10)	Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation vs Union of India in writ petition no.460 of 2004 as may be applicable to this project	The said stipulation is being complied with.

Compliance status of CRZ clearance of NTECL (2x500MW + 1x500MW)

Sl.No.	Other Conditions	Present status (as on 30.09.2020)
(11)	Any appeal against this Environmental clearance shall lie with the National Environment Appellate Authority under section 11 of National Environment Appellate Act, 1997.	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. High court had given Interim stay restraining from dumping the soil in lagoon 1 construction area. The stay by the HC is expired on 14.02.2019. Meanwhile the construction of lagoon 1 is stopped as directed by MoEF&CC in the show cause notice dated 09.01.2019 to stop the construction till further orders. NTECL has replied to the show cause notice on 21.01.2019 along with the time bound action plan for the deviations to fill the gaps brought out in the show cause notice.
(12)	A copy of this clearance letter shall be sent by the project to concerned Panchayat, Zilla parishad, Muncipal Corporation Urban local body from whom suggestions / representations received while processing the proposal. The clearance shall also be put on the website of the company	Complied Copy of the clearance letter was sent to concerned local offices. Clearance letter was uploaded on the company website.
(13)	The project shall upload the status of compliance of stipulated EC conditions including results of monitored data on the website and shall update the same periodically. It shall be simultaneously sent to Regional office of MoEF, respective zonal office of CPCB and the SPCB. The criteria pollutant levels namely SPM, RPM, SO ₂ , NO _x (ambient levels as well as stack emission) 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 updated six monthly compliance status of EC is being periodically uploaded on the company website and the same is being also forwarded to MOEF&CC Regional Office (SEZ), Chennai, CPCB and TNPCB The stack emission levels SPM, SO ₂ , NO _x for all the 3 units and ambient air quality details are being sent to TNPCB and MOEF&CC Regional Office (SEZ), Chennai. The parameters are being displayed near the main gate of the company.
(14)	The project shall also submit six monthly reports on the status of compliance of stipulated EC conditions including results of monitored data (both in hard copies as well as e-mail) to the respective Regional office of MoEF, the respective Zonal office of CPCB,	The compliance status of EC is being sent to MOEF&CC Regional Office (SEZ), Chennai, CPCB and TNPCB twice in a year. The latest half yearly progress report for the period of April'2020 to Sept'2020 is being

Compliance status of CRZ clearance of NTECL (2x500MW + 1x500MW)

Sl.No.	Other Conditions	Present status (as on 30.09.2020)
	and the SPCB	submitted herewith.
(15)	The environmental statement for each financial year ending 31 st march in Form-V as is mandated to be submitted by the project to the concerned SPCB as prescribed under the Environment Rules 1986, as amended subsequently shall also to be put on the website of the company along with the status of compliance of EC conditions and shall also to be sent to the Regional office of MoEF by E-mail.	The environmental statement for the financial year 2019-20 in Form-V has been submitted to TNPCB and Regional Office (SEZ) of MOEF&CC at Chennai on 30.04.2019. It has been put up in the Company website.

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 30.09.2020
(3)	The proposal has been considered and in accordance with para 12 of EIA notification dated 14 th 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. An independent plant effluent drainage system is constructed to ensure that plant effluents do not mix with storm water drainage.
(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.

**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 30.09.2020
(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.
(viii)	Ash and sulphur content in the coal to be used in the project shall not exceed 34% and 0.34% respectively.	Ash % limit was being achieved by blending of imported coal with domestic coal. However, due to restrictions on imported of coal by Govt. of India, the ash % has increased. At present as per the MoEFF&CC notification dated 21 st 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 ₂ emission and to comply with MoEF&CC new emission notification for TPP dated 07.12.2015, station has already taken action for installation of FGD system. Contract for supply and installation of FGD is awarded in April 2020 and the work is 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 has been constructed. Continuous online stack monitoring facility for measurement of Particulate Matter, SO ₂ and NO _x 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 ³ .	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 ³ 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 of area about 235 m x 65 m in front of the Chimneys identified for installation of Flue Gas Desulphurization unit. NTECL is in process of installing FGD. Contract for supply and installation of FGD was awarded in April 2020.

**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 30.09.2020
(xii)	Adequate dust extraction system such as bag filters and water spray system in dusty areas such as and ash handling areas, transfer areas and other vulnerable areas shall be provided.	<p>Complied</p> <p>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 equipment supplies are in progress and installation shall be completed by January 2021.</p>
(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 th 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>Ash utilization for the financial year 2019-20 (till Mar'20) was about 121.96%. For the year 20-21 till Sept'20 the ash utilization is 212.70%</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. Based on the recommendations of a study report of CEA, undertaken on the request of MoEF&CC, it was recommended that the choice of slurry system shall be left to the utility.</p> <p>NTECL requested for amendment to MoEF& 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>

**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 30.09.2020
(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 is implemented.
(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 13260 trees within the plant boundary and since there is no space for more tree plantation 19,590 nos. of trees are planted outside the plant premises through Forest Department, Govt of Tamilnadu. In addition, 80 acres of own land is kept unutilized with natural vegetation including mangroves. An Eco park is being developed by Forest Department in this 80 acre of land owned by NTECL. For the year 2020-21 plantation of 10,000 trees is being carried out through Forest Department on depository basis.
(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 (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 30.09.2020
(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.
(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 are 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. AAQMS values of PM ₁₀ , PM _{2.5} , SO _x and NO _x are transmitted online to TNPCB and CPCB.
(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 http://www.envfor.nic.in .	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"> • The Hindu (English daily) newspaper and • Dhinakaran (Tamil daily) newspaper 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 & TNSPCB 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 2020 to September 2020 is being submitted herewith.

**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 30.09.2020
(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.
(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.

(NTECL)

(VTPP)

**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 30.09.2020
(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.

(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 30.09.2020)
(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.	Ash % limit was being achieved by blending of imported coal with domestic coal. However, due to restrictions on imported of coal by Govt. of India, the ash % in coal has increased. NTECL's tender for import coal has not materialized. As per MoEF&CC notification dt 21 st 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 ₂ 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 works are under progress.
(iv)	A single stack of 275 m height shall be provided with continuous online monitoring equipments for SO _x , NO _x 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 facility for measurement of Particulate, SO ₂ and NO _x is provided. The exit velocity is above 22.2 m/sec.

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

Sl. N	Stipulation	Present Status (as on 30.09.2020)
(v)	High efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	The high efficiency electrostatic precipitators have been installed to ensure that particulate emission does not exceed 50 mg/Nm ³ in compliance to latest MoEF&CC emission norms for TPP dated 07.12.2015.
(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 of area about 235 m x 65 m in front of the Chimneys identified 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.	Complied 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. Dust Extraction System equipment supplies are in progress and installation work delayed due to covid-19 and shall be completed by January 2021.

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

Sl. N	Stipulation	Present Status (as on 30.09.2020)
(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 th 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.	<p>An ash management & disposal scheme being implemented consisting of dry ash extraction system (DAES) for dry collection of fly ash with adequate storage facility (silos), supply of ash to entrepreneurs for utilization and promoting ash utilization to maximum extent and safe disposal of un-utilized ash in the ash pond in the form of slurry.</p> <p>Fly ash utilization for the financial year 2019-20 (till Mar'20) was about 121.96%. For the year 20-21 the ash utilization till Sept'20 is 212.70 %</p> <p>The unused ash is disposed in ash pond. Periodic monitoring for mercury & heavy metals in the bottom ash and water emanating from ash pond is being done as per stipulation.</p>
(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.
(x)	Closed cycle cooling system with natural draft cooling tower shall be provided and the effluents shall be treated as per the prescribed norms.	<p>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.</p> <p>The effluents are treated as per the statutory PCB norms.</p>
(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.	<p>The effluent is being treated adequately conforming to the prescribed standards of TNPCB and being finally discharged through CMB into sea through NCTPS lagoon as per the EC condition.</p> <p>The temperature of the discharged effluent is being ensured not to exceed 5⁰C above ambient water temperature of receiving water body. The temperature of the discharged water is monitored continuously and values are transmitted online to TNPCB.</p>

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

Sl. N	Stipulation	Present Status (as on 30.09.2020)
(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 being 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.
(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 being provided as per fire safety requirements. The system is adequately equipped with piping, hydrants, valves, instrumentation, hoses, nozzles, hose boxes/stations etc.
(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 ca se 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 is being submitted to Regional Office (SEZ) of MOEF&CC at Chennai.

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

Sl. N	Stipulation	Present Status (as on 30.09.2020)
(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 13260 trees within the plant boundary and since there is no space for more tree plantation 19,590 nos. of trees are planted outside the plant premises through Forest Department, Govt of Tamilnadu. In addition, 80 acres of own land is kept unutilized with natural vegetation including mangroves. An Eco park is being developed by Forest Department in this 80 acre of land owned by NTECL. For the year 2020-21 plantation of 10,000 trees is being carried out through Forest Department on depository basis.
(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.	The station has spent Rs 133.66 lakhs on CSR in the financial year 2019-20.
(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)	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 ₂ , NO _x , 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 ₂ , NO _x , 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 intranet website of the company.

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

Sl. N	Stipulation	Present Status (as on 30.09.2020)
(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 http://www.envfor.nic.in	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"> • The Hindu (English daily) newspaper and • Dhinakaran (Tamil daily) newspaper Copies of the advertisements have already been forwarded to Regional Office Bangalore.
(xxiv)	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 was 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.
(xxvi)	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 ₂ , NO _x (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 ₂ , NO _x 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.

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

Sl. N	Stipulation	Present Status (as on 30.09.2020)
(xxvii)	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 April 2020 to September 2020 is being submitted herewith.
(xxvii i)	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.	Six monthly compliance status of stipulated Environmental Conditions is submitted to Regional Office (SEZ) of MOEF&CC at Chennai, CPCB and SPCB. 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. The Six monthly compliance status report has been uploaded up in the company website. The parameters are being displayed near the main gate.
(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.	Investment approval was obtained in July, 2009. Main plant civil works started in Aug, 2009. The plant (Unit-3) has been commissioned on 28/02/2014. Commercial operation was declared on 26/02/15.
(xxxi)	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

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

Sl. N	Stipulation	Present Status (as on 30.09.2020)
(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 will be 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.
(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 will be complied with.

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

Sl. N	Stipulation	Present Status (as on 30.09.2020)
(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) Case W.P no. 30237 of 2018 was filed by Mr Sarvanan against NTECL in HC of Madras. Petitioner alleged violation of CRZ and alleged destruction of mangroves by construction of lagoon-I. High court had given Interim stay restraining from dumping the soil in lagoon 1 construction area. The stay by the HC is expired on 14.02.2019. Meanwhile the construction of lagoon 1 is stopped as directed by MoEF&CC in the show cause notice dated 09.01.2019 to stop the construction till further orders. NTECL has replied to the show cause notice on 21.01.2019 along with the time bound action plan for the deviations to fill the gaps brought out in the show cause notice.</p>