#### **TANGEDCO**

From

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2. The District Environmental Engineer,
Tamil Nadu Pollution Control Board,
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## <u>Lr.No.CE/E/SE/C/NCTPP Stage III/EE/C3/F.MOEF/D.499/23, dt.18.11.2023</u> Sir,

Sub: TANGEDCO – North Chennai Thermal Power Project (1x 800 MW Supercritical) – Six monthly report on the status of compliance of the EC conditions – For the period April'23 to September' 23 - reg.

Ref:

- 1. MoEF& CC Letter No. J-13012/14/2012-IAI (T) dated 20/01/2016 and 13/04/2017
- 2. E-mail from Regional office(SEZ) of MOEF & CC, dt.19.09.19

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With reference to the above, half-yearly report on the status of compliance of the stipulated Environmental Clearance conditions for the period from April'23 to September' 23 in respect of NCTPP Stage-III (1x 800 MW Supercritical) of TANGEDCO is sent herewith.

Yours faithfully

Encl: Compliance Status Report - (7 sheets)

Chief Engineer/Electrical, NCTPP Stage – III. /

Buran 18/4/2

Copy submitted to the Director/Projects, Chennai - 2.

Copy to the Chief Engineer/Projects-II, Chennai-2-

Copy to the Superintending Engineer/Projects & Environment, Chennai-2.

Copy to the Superintending Engineer/Civil/NCTPP III.

Copy to the Superintending Engineer/Mech./Elec./ Mech& Elec.,(Commissioning)/NCTPP- III for further action to comply relevant conditions coming under their jurisdiction.

Copy to the Executive Engineer/Civil/Division I, II, III & IV/NCTPP III for necessary action.

# NORTH CHENNAI THERMAL POWER PROJECT – STAGE III (1 X 800 MW Super-critical)

### DESCRIPTIVE REPORT ON STATUS OF COMPLIANCE TO THE CONDITIONS OF THE ENVIRONMENTAL CLEARANCE AND ENVIRONMENTAL MANAGEMENT

Subject: 1x800 MW North Chennai TPP (Stage-III) at villages Ennore and Puzhudivakkam,

Ponneri Taluk, Tiruvallur District, Tamil Nadu by M/s. Tamil Nadu Generation &

Distribution Corporation Ltd (TANGEDCO).

Reference: MoEF & CC letter no. J-13012/14/2012-IAI(T) dt.20/01/2016 and 13/04/2017.

### A. **Specific Conditions:**

S.No	Conditions	Compliance Status for the month of April'23 to Sep' 23
i.	Explore the feasibility of multiple distributing points for the discharge of cooling water into pre-cooling channel and also the widening of the pre-cooling channel.	Single discharge point is only possible. Widening of pre-cooling channel is also being explored. Moreover, Natural Draught Cooling Tower (NDCT) is provided for this project.  Agreed to Comply
ii.	PP shall endeavor to enter into MoUs with NHAI, Associations of Cement Industries and Municipal Authorities for ensuring full ash utilization.	MoU signed with M/s Dalmia Cements Ltd., for utilization of fly ash generated in this plant.  Agreed to Comply
iii.	As committed, FGD shall be installed to ensure emission below threshold limits.	LOA for FGD EPC contract awarded to BHEL dated 22/02/2021. Construction work for establishing FGD system is in progress.  Agreed to Comply
iv.	Coal conveyance shall take place in closed conveyor and that there shall be no open stacking of the coal in the CRZ area.	Agreed to Comply
V	The intake water pipeline shall be laid as per provisions of CRZ Notification, 2011.	Agreed to Comply
vi	Disposal of hot water shall meet Tamil Nadu Pollution Control Board (TNPCB) norms.	Agreed to Comply

S.No	Conditions	Compliance Status for the month of April'23 to Sep' 23
vii	Water temperature shall be monitored at outlets of each of the unit (3 phases) and also at pre-cooling channel joining Ennore creek.	Will be taken up after commissioning.  Agreed to Comply
viii.	All the recommendations and conditions specified by Tamil Nadu Coastal Zone Management Authority (TNCZMA) vide letter No. 10173/EC.3/2015-1 dated 16.06.2015, shall be complied with.	These conditions are fully related with the operation phase of the power plant and will be complied.  Agreed to Comply
ix.	Explore to develop Green belt along the conveyor	Possibility of development of green belt along the conveyor will be explored.  Agreed to Comply
X.	Periodical monitoring of the sea water at the discharge point shall be done and report be submitted along with the six monthly monitoring reports.	Will be taken up after commissioning.  Agreed to Comply
xi.	Construction activity shall be carried out strictly as per the provisions of CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.	Obtaining amendment to the existing EC & CRZ clearance for laying of Ash slurry pipe lines is in process- district level CRZ committee has forwarded the proposal to TNCZMA (State Level) and is in process.  State Level Committee has recommended to MoEF & CC N.Delhi. The subject was listed in the EAC of MoEF held on 04.09.2023 and MOM is awaited.  Being Complied
xii.	Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within six months.	There is no expansion envisaged after this NCTPS Stage-III project within the NCTPS Complex.  Being Complied
xiii.	Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.	Provision for harnessing of solar power has been made in the project scope.  Agreed to Comply

S.No	Conditions	Compliance Status for the month of April'23 to Sep' 23
xiv.	The sulphur and ash content of coal shall not exceed 0.8% and 8% respectively. In case of variation of quality at any point of time, fresh reference shall be made to the Ministry for	Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning.
	suitable amendments to the environmental clearance.	Agreed to Comply
XV.	A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analyzed every ten year and reported along with monitoring reports Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning.  Agreed to Comply
xvi.	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 30 mg/Nm³, 100 mg/Nm³. 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 along with an environment friendly sludge disposal system	ESP is fully completed as on date.  "Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."  Agreed to Comply
xvii.	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.	Included in the project profile, will be complied.  Agreed to Comply
xviii.	The SO <sub>2</sub> , NO <sub>x</sub> and Hg emissions shall not exceed 100 mg/Nm <sup>3</sup> , 100 mg/Nm <sup>3</sup> and 0.03 mg/Nm <sup>3</sup> respectively.	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."  Agreed to Comply
xix.	The specific water consumption shall not exceed 2.5m <sup>3</sup> /MWh and zero waste water discharge shall be achieved.	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."

S.No	Conditions	Compliance Status for the month of April'23 to Sep' 23
		As per the draft notification issued on 16.10.2017 by MoEF&CC, the coastal power plants are exempted from the purview of MoEF notification dated 07.12.2015 in respect of zero discharge. Gazette notification and further amendment of EC from MoEF&CC is awaited.
		Agreed to Comply
xx.	COC of at least 1.3 shall be adopted.	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."
		Agreed to Comply
xxi.	Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.	discharge. As there is no effluent discharge during construction, regular surface water monitoring has not been carried out.
xxii.	A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.	Rain water harvesting system as per the guidelines of state PWD is being arranged.  Agreed to Comply.
xxiii.	No water bodies including natural drainage system in the area shall be disturbed due to activities association with the setting up/operation of the power plant.	Being complied.

S.No	Conditions	Compliance Status for the month of April'23 to Sep' 23
xxiv.	Wastewater generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB.	Agreed to Comply
XXV.	Explore the commercial utilization of brine instead of discharging into sea.	Not feasible.
xxvi.	Disposal of solid/liquid from Desalination plant shall comply with the prescribed standards and if need be, environmental safeguard measures by providing balancing/ neutralizing tank may be set up and operated regularly & efficiently.	Will be taken up after commissioning.  Neutralization Pit is being provided.  Agreed to Comply
xxvii.	Sea water quality shall be continuously monitored for salinity, turbidity and temperature at selective sites across the impacted zone including estuarine waters. Mitigative measures shall be undertaken through institutes such as Annamalai University for continuous preservation of	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."
	mangroves and their ecology. The monitoring data shall be uploaded on the company's website and also submit to Regional Office of the Ministry every six months.	Agreed to Comply
xxviii.	To minimize entrapment of even small marine flora and fauna, state of the art low aperture intake screens with high effectiveness for impingement and entrainment and fishnet around intake shall be installed.	Since intake provision is from existing forebay of NCTPS-II, this does not arise.  Complied
xxix.	Fish catch along the impacted zone of sea should be monitored periodically by the Department of Fisheries, Government of Tamil Nadu. The Project proponent shall accordingly take up the matter with the Fishery Dept., Govt. of Tamil Nadu from time to time.	"Condition pertains to the operation phase of power plant. Will be taken up after commissioning."  Agreed to Comply
xxx.	The project proponent shall upload environmental quality monitored data on a regular basis on its website.	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."
		Agreed to Comply

S.No	Conditions	Compliance Status for the month of April'23 to Sep' 23
xxxi.	Marginalized section of society particularly traditional fishermen communities shall be identified based on 2011 population census	Impact on the livelihoods can be assessed only during the operation phase of the plant.
	data and Socio-economic study of the various strata of families such as those carrying out subsistence fishing, commercial fishing etc. shall be carried out and impact on their livelihoods shall be assessed separately. Accordingly, sustainable welfare scheme /measures shall be undertaken and status of implementation shall be submitted to the Regional Office of the Ministry within six months.	Hence, will be taken up after commissioning.  Agreed to Comply
xxxii.	A state-of-the-art environmental laboratory at the project site shall be established such that the laboratory has facilities for long term monitoring of sea water quality and sediment in the impacted zone over and above and ambient air, soil quality analysis of the area. The proponent shall undertake mitigative measures if there are any negative impacts.	"Condition pertains to the operation phase of the project and will be complied." Construction of RODM plant with necessary lab is under execution.  Agreed to Comply
xxxiii.	Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Additional soil for leveling of the proposed site is being met from within the NCTPS complex to the maximum extent possible.  Complied
xxxiv.	Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.	"Condition pertains to the operation phase of the project". Hence will be taken up after commissioning."
xxxv.	Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed	"Condition pertains to the operation phase of the project and will be complied."  Agreed to Comply

S.No	Conditions	Compliance Status for the month of April'23 to Sep' 23
	study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close coordination with the State Pollution Control Board.	
xxxvi.	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb etc.,) shall be monitored in the bottom ash. No ash shall be disposed off in low lying area.	Construction of silos is underway.  Monitoring of Hg and other heavy metals will be complied during operation phase.  Agreed to Comply
xxxvii.	Green Belt consisting of three tiers of plantations of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 80%.	Agreed to Comply
xxxviii.	Green belt shall also be developed around the Ash Pond and above the Green Belt around the plant boundary.	Agreed to Comply
xxxix.	An Environmental Cell comprising of at least one expert in environmental science / engineering, ecology, occupational health and social science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and	Environment Monitoring at site is being made.  Agreed to Comply
	qualification. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement / mitigation measures	

S.No	Conditions	Compliance Status for the month of April'23 to Sep' 23
xl.	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	Agreed to Comply
xli.	CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating program.	The Permanent Infrastructure works list received from the District Collector, Thiruvallur has been forwarded to TANGEDCO HQ and approved and fund allotment of Rs.755.84 Lakh towards CSR has been allotted vide Board Proceedings No. (per) FB TANGEDCO (TB) No.57 dt.21.09.2023.  Administrative approval from the District Collector, Thiruvallur for fund transfer is received and to be paid under CSR.  Agreed to Comply
xlii.	For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.	Will be formed under the guidance of the District Collector and will be complied.  Agreed to Comply

### B. **General Conditions:**

S.No	Conditions	Compliance Status for the month of April'23 to September'23
i.	The treated effluents conforming to the prescribed standards only shall be recirculated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	of the project and will be complied." (Effluent Treatment Plant is under

S.No	Conditions	Compliance Status for the month of April'23 to September'23
ii.	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation	STP construction is under progress and treated sewage will be used for raising greenbelt/plantation.
		Agreed to Comply
iii.	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.	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."  Agreed to Comply
iv.	Storage facilities for auxiliary liquid fuel such as LDO/HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%.	HSD and HFO tank constructed as per norms and necessary license obtained.  Disaster Management Plan (DMP)is in place. Recommendations mentioned in the DMP are being followed.
	Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Complied
V.	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction	Complied.
vi.	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dB(A) from source. For people working in the high noise area, requisite personal protective equipment like	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."
	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.	Personal Protective Equipment provided to the people working in the high noise area.  Agreed to Comply
Vii.	Regular monitoring of ambient air ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>2.5</sub> & PM <sub>10</sub> and Hg shall be carried out in the impact zone and records maintained. If at any stage these	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."

S.No	Conditions	Compliance Status for the month of April'23 to September'23
	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	Agreed to Comply
viii.	Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."  Agreed to Comply
ix.	Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical healthcare, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	As both NCTPS Stage-I & II are operating plants, labourers are not allowed to stay inside the NCTPS complex. Labourers have been provided housing in the nearby villages by the EPC contractor with all facilities.  Complied
X.	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in.	Necessary advertisement published (on 03.02.2016).  Complied
xi.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParisad, Municipal Corporation, urban local Body and the Local NGO, if any, from whom	Complied. Copy of the clearance has been sent to District Collector / Tiruvallur, Revenue Divisional Officer/Ponneri, President/Athipattu Panchayat,

S.No	Conditions	Compliance Status for the month of April'23 to September'23
	suggestions/ representations, if any, were received while processing the proposal.	Thasildar/Ponneri taluk vide TANGEDCO's Lr.No.30 dated 04.02.2016.
	The clearance letter shall also be put on the website of the Company by the proponent.	Copy of the Environmental Clearance was uploaded in the TNEB website.
		Complied
xii.	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Being complied.
	The criteria pollutant levels namely; SPM, RSPM (PM <sub>2.5</sub> & PM <sub>10</sub> ), SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	Agreed to Comply
xiii.	The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."
	clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by email.	Agreed to Comply
xiv.	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board.	Being complied.
	The Project proponent shall upload the status of compliance of the environmental clearance	

S.No	Conditions	Compliance Status for the month of April'23 to September'23
	conditions on their website and update the same periodically and simultaneously send the same bye-mail to the Regional Office, Ministry of Environment and Forests.	Being complied.
xv.	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions.	Noted. R.O/Chennai inspected the project on 31.10.2022.
	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.	Environmental Impact Assessment and Environment Management Plan already submitted and will be complied in respect to additional information.
	Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six monthly basis.	Being complied.
	Criteria pollutants levels including NOx (from stack & ambient air) shall by displayed at the main gate of the power plant.	"Condition pertains to the operation phase of the project. Hence, will be taken up after commissioning."
xvi.	Separate funds shall be allocated for implementation of environmental protection	An amount of Rs.528 Crores is earmarked for environmental protection measures.
	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	(Capital cost: Rs.480 Crores and Recurring cost: Rs.48 Crores).
	diverted for other purposes and year wise expenditure should be reported to the Ministry	Complied
xvii.	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work and commissioning of plant.	Administrative approval accorded vide TANGEDCO Proceedings No.2, dt.21.01.2016 and revised vide TANGEDCO proceedings No.40 dt.27.09.2021.
		LOA issued to the BTG contractor on 29.01.2016.and BOP contractor 28.10.2016.

S.No	Conditions	Compliance Status for the month of April'23 to September'23
		Commissioning of the plant will be informed later.
		Agreed to Comply
xviii.	Full cooperation shall be extended to the Scientists /Officers from the Ministry / Regional Office of the Ministry / CPCS / SPCS who would	Full co-operation is being extended.
	be monitoring the Compliance of environmental status.	Being Complied
C.	An as built (or) as completed report on EMP to be submitted stating the scope/extent of work	Environment Management Plan already submitted.
	envisaged in the EIA along with estimated cost vis-à-vis the actual completed works and cost incurred.	Information regarding the actual completed works and cost incurred will be furnished after completion of the project.
	A certificate/ completion certificate accordingly, shall have to be submitted before commissioning of the TPP.	Certificate/ completion certificate will also be submitted after completion of the project.
		Agreed to Comply

Chief Engineer/Electrical,
NCTPP Stage- III