

**TNPCB REPORT IN O.A.NO.08 OF 2016 WITH**  
**OA.NO.152 OF 2016 WITH OA.NO.198 OF 2016 BASED**  
**ON THE HON'BLE NATIONAL GREEN TRIBUNAL(SZ),**  
**CHENNAI ORDER DATED 30/11/2021**

**Submitted to**  
**Hon'ble National Green Tribunal (SZ)**  
**Chennai**

**April 2022**



## **1. Preamble**

M/s North Chennai Thermal Power Station Stage-I is a coal based power plant located at SF.No.44, 45 etc., Puzhudevakkam Village, Ponneri Taluk, Thiruvallur District (13°15'09.3"N 80°19'36.8"E) with total installed capacity of 630 MW in a total area of 220 hectares.

M/s North Chennai Thermal Power Station was established in a phased manner and stages of expansion is briefed below:

Stage	Unit Number	Installed capacity		Date of commissioning	Status
Stage-I	Unit-I	210 MW	630 MW	25.10.1994	Operational
	Unit-II	210 MW		27.03.1995	
	Unit-III	210 MW		24.02.1996	
Stage-II	Unit-I	600 MW	1200 MW	20.03.2014	Operational
	Unit-II	600 MW		08.05.2014	

The cooling water for the Thermal Power Plant is being drawn from the sea and condenser outlet (once through cooling water) is discharged in to the Ennore Creek. Both Indigenous and imported coal is being blended and utilized.

The fly ash (60%) collected in the ESP is evacuated and disposed to the Silos (3 Nos x 1000 T capacity) located outside the plant boundary through Pressurized Dense-Phase Fly Ash Conveying System (PDFACS) and from the Silos the fly ash is utilised for further beneficial use through closed trucks. The heavier particles called the Bottom Ash(40%) which comprises traces of combustibles embedded in forming clinkers is collected at the Bottom of the furnace quenched, cooled to manageable temperature and disposed in the form of slurry to Ash Pond located at about 5.2 kms from the Power Plant.

The Ash Slurry Disposal System envisages identical streams (3series) of Ash Slurry Pumps of 930 M3/Hr capacity connected to 5 Nos , disposal pipe lines (M.S Cast Basalt lined pipes). Out of the five Nos of Slurry Disposal Lines, 3 Nos are in continuous service during 100 % plant availability and 2 Lines will be kept as stand by for maintenance reserve. The Decanted water is collected in the concrete lined Recovery water sump of capacity 4500 M3 and Basin capacity of 650 M3 and pumped back to the power plant for reuse in Ash Handling System through 4

Nos Recovery water Pumps( 2 Nos service and 2 Nos Stand by) and 3 Nos Recovery water lines . The Ash Slurry Disposal Lines are running to a stretch of about 5.2 kms from the Power Plant up to Ash Dyke.

The ash pond is sprawling at an area of about 115 Hectares. The total height of the earthen bund of the ash pond is 7 metre of which 3 metre free board is available now. The total quantity of ash deposited was 65 Lakh cu.m, out of which 22 Lakh cu.m has been already removed and disposed. Hence 43 Lakh cu.m of ash is present in the ash dyke.

The pipelines of Stage-I were commissioned during 1994-95 and hence more than 25 years old. They have become rustic, corroded and brittle with numerous cracks. There are total 8 Nos. of series of pipelines of which 5 Nos. carry ash slurry and 3 Nos. being used for recycling the filtered water. The pipelines of both NCTPS stage I & II starts near the Stage-2 Entrance Gate outside, cross the adjoining Buckingham Canal, and Kosasthalaiyar river Backwaters by supporting bridges to reach ash dyke. Pipelines laid for NCTPS stage-II are in good condition.



Out of 5 Nos. of ash slurry pipelines, Line 1 & 5 were replaced with old used Cast Basalt-lined pipelines (having an outer diameter of 406 mm and Inner diameter of 356mm) brought from Ennore Thermal Power Station (ETPS) during August 2020. Replacement of Line 2 is in progress with new Cast Basalt pipes, Line 3 is replaced with new pipeline, but for Line 4, the unit is yet to procure new pipes. Currently, the unit is having only one new pipeline, when ash slurry is

transferred through the old pipelines, it is leaking into Buckingham Canal, Kosathalaiyar River back water and land near Seppakkam hamlet.

Whenever leaks are detected, the unit is taking actions to stop leakage. TANGEDCO is operating a patrol team round the clock to check for pipeline leakages. Soon after leakages are noticed, pumps are stopped immediately, the left over ash slurry in the pipeline is flushed outside, fresh water is transported through pipelines, leaks are repaired and pipes are put back into operation. Though unit is taking measures to monitor & repair the leakages but the ash slurry that has leaked into the environment is not cleaned. Due to incidences of repeated leaks from the pipelines, the area surrounding the pipelines such as Buckingham Canal, Kosathalaiyar River and land near Seppakkam hamlet are deposited with ash.

During the year 2016 in O.A.No.08/2016 & O.A.No.152/2016 & O.A.No.198/2016, R.Ravimaran Vs Union of India and Meenava Thanthai Vs The Chief Secretary, Govt. of Tamil Nadu & Ors and Meenava Thanthai Vs The State of Tamil Nadu & Ors, the applicant has brought to the notice of the Hon'ble National Green Tribunal (SZ) that M/s. North Chennai Thermal Power Station, Stage-I (NCTPS), Puzhuthivakkam Village, Ponneri Taluk, Thiruvallur District is dumping ash slurry into Buckingham canal and back waters for several years due to which the entire area is polluted. According to the applicant, the ash generated by Thermal Power Plant (fly ash and bottom ash) are serious pollutants apart from containing metals like Nickel, Cadmium, Antimony, Arsenic, Chromium, Lead, Mercury etc. Considering the application, the Hon'ble NGT constituted an expert committee to study the area. The report submitted by the expert committee during December, 2017 identified deficiencies in handling the fly ash by M/s NCTPS, hence Hon'ble NGT directed M/S NCTPS to take steps to remediate the area as per the findings in the report.

Further, the applicant again brought to the notice of Hon'ble NGT that M/s NCTPS has not taken any measures to remediate the area. Under these circumstances, Hon'ble NGT constituted an another committee vide its order dated 20.05.2019 comprising of Central Pollution Control Board, IIT Madras, Chennai and Tamil Nadu Pollution Control Board to get the present status, the manner in which the fly ash is being disposed by the TANGEDCO and assessment of the

damage caused to the environment in that area & its surrounding area and remedial measures to be taken for restoring the damage caused to the environment.

The Joint committee has submitted the action taken reports as and when directed by the Hon'ble National Green Tribunal (SZ) in its various orders.

## **2. Orders of the Hon'ble Tribunal**

It is respectfully submitted that the Hon'ble National Green Tribunal (SZ) in its order dated 30.11.2021 in O.A.No.08/2016, O.A.No.152/2016 & O.A.No.198/2016 noted and directed the following vide para

“4. It is seen from the undertaking that they have undertaken to replace the damaged pipes with new pipes, instead of replacing the same with the old pipes available from their decommissioned unit, as mentioned by them in the earlier report.

5. So, we make it clear that all the pipes which are damaged have to be replaced by new pipes within the time line mentioned by them in the present undertaking, at the most by June-2022 and they will have to file a periodical compliance report before this Tribunal regarding the same.

6. While the work of replacing the damaged pipelines, the TANGEDCO is directed to use only the fully completed replaced pipeline alone (ASDL3) for carrying the fly ash slurry to the ash pond till the other pipeline work is completed.

7. In the meantime, if they have replaced any of the lines by new pipeline, then the TANGEDCO is at liberty to approach this Tribunal for modification of this order to use that pipeline as well for that purpose.

11. The Joint Expert Committee is directed to look into the issues namely, a. whether any damage has been caused to the soil, water and associated flora and fauna on account of deposit of fly ash in the Kosasthalaiyar River Basin in Ennore Back water complex, b. If there is any damage caused to the soil, what is the nature of remediation to be undertaken by the TANGEDCO to restore the damage caused to the environment, c. Assess environmental compensation payable for such damage caused and its impact on the marine biology, d. Suggest the possibility of providing green belt of such nature which can be possible to protect

the riverine ecology in that area, so as to avoid further encroachment and further deterioration being caused on account of such unauthorized activities.

12. Mrs. Santha Sheela Nair, I.A.S (Retd.) will be the Chairperson and the Director, Department of Environment, State of Tamil Nadu will be the Member Secretary for the Joint Expert Committee and the Director, Department of Environment is directed to co-ordinate and provide necessary logistics for inspection and submission of the report. After finalizing the remediation methods, the Director, Department of Environment is directed to prepare the Detailed Project Report (DPR) for carrying out the remediation process with time lines.

14. The Joint Expert Committee is directed to prepare the report including the preparation of Detailed Project Report (DPR) for remediation process within a period of 4 (Four) months and submit the same before this Tribunal on or before 18.04.2022”.

**The copy of the order is enclosed as Annexure-I.**

### **3. Status of consent orders issued by TNPCB.**

#### **3.1 M/s North Chennai Thermal Power Station I**

TNPCB has issued first consent for operation under section 25 of the Water (Prevention & Control of Pollution) Act, 1974 as amended and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 as amended to M/s.NCTPS Stage-I vide Board’s Proc. Dated: 07.12.1993 for the following.

Electricity	400 Million Units/Month	
Sewage	1200 KLD	On industry Own Land
Trade Effluent I (DM Plant waste, Boiler Blow Down & Ash pond slurry)	55,800 KLD	To be recycled.
Trade Effluent II (Cooling Water)	2,37,6000 KLD	Into Sea
Boiler (690TPH) – 3 Nos.	Individual ESP, with individual flue with a common stack of 275m height.	
DG Sets (500 KVA) – 3 Nos.	Individual stacks of 15m height each	

Latest consent was renewed vide Board’s Proc. dated 25.06.2014 with validity up to 31.03.2015 and not renewed further due to non compliance of consent order conditions.

Compliance of conditions imposed in the latest consent orders issued vide Board's Proc. dated.25.06.2014 to the unit of M/s. North Chennai Thermal Power Station Stage-I under section 25 of the Water (Prevention & Control of Pollution) Act, 1974 as amended and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 is submitted below.

Sl. No	Conditions	Compliance status
<b><u>Under Air Act:</u></b>		
1.	The unit shall maintain the coal handling conveyer system and junction towers and ensure that no coal dust shall be accumulated in the adjacent area of coal handling conveyor and junction towers.	<b>Complied.</b> The unit has maintained the coal handling conveyer system and junction towers and ensures that no coal dust is accumulated in the adjacent area of coal handling conveyor and junction towers.
2.	The unit shall operate and maintain water sprinkling and cyclone separators provided at junction towers to control the dust emission.	<b>Complied.</b> The unit has operated and maintained water sprinkling and cyclone separators provided at junction towers to control the dust emission.
3.	The unit shall ensure the APC measures provided in the coal crushing area shall be under working condition so as to control the dust emission.	<b>Complied.</b> The unit has ensured the APC measures provided in the coal crushing area is under working condition so as to control the dust emission.
4.	The unit shall install On line Stack monitoring system for SO <sub>2</sub> , NO <sub>x</sub> and PM and to connect the same to Care Air Centre, TNPCB, Chennai within three months.	<b>Partially Complied.</b> The unit has installed Online Continuous Emission Monitoring System (OCEMS) for unit I, II & III of three stacks to monitor the parameters PM, SO <sub>x</sub> , NO <sub>x</sub> and the same is connected with CAC, TNPCB, Guindy and CPCB server.
5.	The Unit shall provide continuous ambient air quality monitoring station and the same shall be connected to Care Air Centre TNPCB, Chennai within three.	<b>Not Complied.</b> The existing Continuous Ambient Air Quality Station (2Nos) provided were not in operable condition and it was reported that the TANGEDCO has

		planned to install new 4 stations covering the units Stage-I, Stage-II, Stage-III (Proposed) and Ennore SEZ-IV (Proposed).
6.	The unit shall operate the Air Pollution Control measures efficiently and continuously to achieve the National Ambient Air Quality Standards as per MOEF Notification.	<b>Not Complied.</b> The unit has provided the air pollution control measures such as Electrostatic Precipitator for Boiler, Dust Extraction and Dust Suppression for coal handling area which are being operated and maintained by the unit regularly. However, the unit is not meeting the particulate matter standards of 100 mg/Nm <sup>3</sup> in all 3 boiler stacks as prescribed by MoEF&CC Notification dated 07.12.2015 for TPPs installed before 31 <sup>st</sup> December 2003 hence, the unit shall augment the ESPs provided in all 3 boilers and also to provide Flue Gas Desulphurisation (FGDs) to achieve SOx emission standards before 31.12.2022 as per the timelines permitted for TPPs (Category A) by MoEF&CC Notification dated 31.03.2021.
7.	The unit shall conduct AAQ/SM survey through TNPC Board and furnish the survey report to Board within 3 months.	<b>Complied.</b> The unit is conducting the AAQ/SM survey through TNPC Board yearly once.
8.	The unit shall develop green belt in and around the unit premises at the rate of 400 trees/hectare.	<b>Not Complied.</b> The total area of the unit is 549.10 Acres and it was reported that the unit has planted tree sapling to an extent of 130 Acres. The green belt to be developed by the unit is 181 Acres (33% of the total area), hence, the unit shall further develop green belt of remaining 51 Acres.
<b><u>Under Water Act:</u></b>		
1.	The unit shall complete and commission the common sewage treatment plant for Stage-I & Stage-II within a month time.	<b>Complied.</b> STP provided at Stage-I is under operation.

2.	The unit shall ensure that no water shall be discharged from the Ash pond or through the canal linking the pump house and ash pond to Ennore creek either directly or indirectly under any circumstances.	<b>Partially Complied.</b> Ash pond recovery water is being utilized for bottom ash slurry preparation. However, the unit has to improve the complete recovery water collection and reuse for ash slurry preparation.
3.	The unit shall reconstruct/revamp the existing spillway structure to ensure uniform distribution of water from the cooling water canal in to Ennore creek to preserve the marine eco system within 6 months time.	<b>Not Complied.</b> Tender has been awarded by Stage II for widening of Hot water channel. Proposal to reconstruct the existing spillway structure to ensure uniform distribution of water has been evolved by stage II which is under progress.
4.	The unit shall reconstruct/revamp the pipe line carrying the ash slurry to the ash pond and to ensure that no ash slurry shall be discharged in to creek area under any circumstance.	<b>Partially Complied.</b> The TANDGECO has replaced old pipes with new pipes for line no 3 fully, whereas it has to complete the replacement of old pipes (1, 2, 4 & 5) with new pipes on or before 30.06.2022 as committed and accepted by the Hon'ble NGT in O.A. No. 08 of 2016.
5.	The unit shall take immediate action for the removal of fly ash accumulated over the roads and around the ash dyke area.	<b>Not Complied.</b> The unit has to remove the fly ash accumulated as per the Joint Committee findings.
6.	The unit shall conduct Marine Impact Study at where the cooling water is being discharged in to creek/sea and furnish the report within three months.	<b>Not Complied.</b> Marine Impact Study not yet conducted.
7.	The unit shall maintain the coal handling conveyer system and junction towers and ensure that no coal dust shall be accumulated in the adjacent area of coal handling conveyer and junction towers.	<b>Complied.</b> The coal accumulation in the adjacent areas of coal handling conveyor and junction towers of ICHS are being cleared then and there on regular basis.
8.	The unit shall obtain renewal of authorization under the Hazardous Waste (MH&T) Rules 2008.	<b>Not Complied.</b> Authorization for Hazardous waste obtained is valid up to April' 2020, renewal application is yet to file.

9.	The unit shall remit the balance water cess immediately.	The unit has not remitted the balance water cess.
10	The unit shall develop green belt in and around the unit premises at the rate of 400 trees/hectare.	<b>Not Complied.</b> The total area of the unit is 549.10 Acres and it was reported that the unit has planted tree sapling to an extent of 130 Acres. The green belt to be developed by the unit is 181 Acres (33% of the total area), hence, the unit shall further develop green belt of remaining 51 Acres.

### 3.2 M/s North Chennai Thermal Power Station - II

TNPCB has issued first consent for operation under section 25 of the Water (Prevention & Control of Pollution) Act, 1974 as amended and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 as amended to **M/s.NCTPS Stage-II** vide Board's Proc. Dated: 19.03.2013 for the following.

Power Generation	2 X 600 MW	
Sewage	48 KLD	On industry Own Land
Trade Effluent I (Effluent from Plant Operation )	13,824 KLD	Partly on land and partly in to sea through Ennore creek.
Trade Effluent II (Reverse osmosis plant rejects)	22176.0 KLD	In to sea through Ennore creek
Trade Effluent III (Once through cooling water)	4896000.0 KLD	In to sea through Ennore creek
Boiler 2 nos. 2000T/hr each.	Individual ESP, with a common stack of 275m height.	

Latest consent was renewed vide Board's Proc. dated 18.12.2018 with validity up to 31.03.2019 and not renewed further due to non compliance of consent order conditions.

Compliance of conditions imposed in the latest consent orders issued vide Board's Proc. dated.18.12.2018 to the unit of M/s. North Chennai Thermal Power Station Stage-II under section 25 of the Water (Prevention & Control of Pollution) Act, 1974 as amended and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 is submitted below.

Sl. No	Conditions	Compliance status
<b><u>Under Air Act:</u></b>		
1.	The unit shall operate and maintain the existing air pollution control measures efficiently and continuously so as to achieve the standards as prescribed by the Board.	<b>Not Complied.</b> The unit has provided the air pollution control measures such as Electrostatic Precipitator for Boiler, Dust Extraction and Dust Suppression for coal handling area which are being operated and maintained by the unit regularly. However, the unit is not meeting the particulate matter standards of 50 mg/Nm <sup>3</sup> in all two boiler stacks as prescribed by MoEF&CC Notification dated 07.12.2015 for TPPs installed before 31 <sup>st</sup> December 2003 hence, the unit shall augment the ESPs provided in all 2 boilers and also to provide Flue Gas Desulphurisation (FGDs) to achieve SOx emission standards before 31.12.2022 as per the timelines permitted for TPPs (Category A) by MoEF&CC Notification dated 31.03.2021.
2.	The unit shall complete the commissioning of the Dust Extraction System comprising of bag Filters, and put the same in to operation, before 31.12.2018 as reported and operate the same efficiently and continuously..	<b>Not complied.</b> The unit authority reported that the OEM of the Project M/s. BHEL had failed to establish the DE system in complete shape. Hence, a separate proposal has been evolved by TANGEDCO to complete the left out part of the system and tendering process is in progress
3.	The unit shall complete the installation of dust suppression system, and put in to operation before 31.12.2018 as reported and operate the same efficiently and continuously.	<b>Not complied.</b> The unit authority reported that the OEM of the Project M/s. BHEL had failed to establish the DE system in complete shape. Hence, a separate proposal has been evolved by TANGEDCO to complete the left out part of the system and tendering process is in progress

4.	The unit shall continue to develop and maintain adequate green belt within the unit premises.	Partially Complied. The unit has reported that the total green belt to be developed is 67.65 acres out of 205 Acres and it was reported so for 51.39 acres of green belt has been developed. As on date, a balance of 16.26 acres of green belt has to be developed.
5.	The unit shall furnish action plan for the installation of FGD system .	<b>Not complied.</b> The unit has reported that FGD installation will be completed within 24-26 months from the date of tender awarded and tendering process is in progress
6.	The unit shall ensure that the installation of FGD system shall be completed before the stipulated time as assured by the unit.	<b>Not complied.</b> The unit has reported that FGD installation will be completed within 24-26 months from the date of tender awarded and tendering process is in progress
<b>Under Water Act:</b>		
1.	The unit shall operate and maintain the Sewage Treatment Plant efficiently and continuously so as to achieve the standards prescribed by the Board.	<b>Complied.</b> The unit has reported that the Sewage Treatment Plant is operated efficiently and continuously so as to achieve the standards prescribed by the Board.
2.	The unit shall operate and maintain the ETP efficiently and continuously so as to bring the quality of the treated effluent to satisfy the standards prescribed by the Board.	Complied. Combined treated trade effluent from ETP at Stage II is partly disposed through once through cooling water in to Sea through Ennore creek with an EMFM & remaining quantity of trade effluent is being utilized in Stage-II for gardening without an EMFM. The unit has installed continuous effluent monitoring sensors for the parameters PH & Temperature at the outlet of ETP which has been connected to "Water Quality Watch" TNPCB, Guindy & CPCB server.

#### **4. Assessment of air pollution control measures provided by the units of NCTPS Stage-I & NCTPS Stage-II.**

The TANGEDCO has installed Electrostatic Precipitators in each boiler to control PM value but are not effective and often received complaints for the emission generated from the boiler stacks. TANGEDCO has also installed Online Continuous Emission Monitoring Sensors (OCEMS) for the parameters SO<sub>2</sub>, NO<sub>2</sub> & PM in each boiler stacks and connected to Care Air Centre (CAC), TNPCB, Chennai and CPCB.

The prevailing stack emission standards as per the MoEF Notification dated 07.12.2015 are as follows:

##### **M/s.North Chennai Thermal Power Station, Stage-I (Thermal power plant established before 31<sup>st</sup> December 2003)**

Sl. No	Thermal power plant capacity	Height of stack	Standards in mg/Nm <sup>3</sup>		
			PM	SO <sub>2</sub>	NOx
1	Boiler unit-1 210 MW	275m	100	200	300
2	Boiler unit -2 210 MW	275m	100	200	300
3	Boiler unit-3 210 MW	275m	100	200	300

##### **M/s.North Chennai Thermal Power Station, Stage – II (Thermal power plant established after 1<sup>st</sup> January 2003, up to 31<sup>st</sup> December 2016 & capacity of 500MW and above)**

Sl. No	Thermal power plant capacity	Height of stack	Standards in mg/Nm <sup>3</sup>		
			PM	SO <sub>2</sub>	NOx
1	Boiler 2 nos. 2000T/hr each	275m	50	200	300

##### **M/s North Chennai Thermal Power Station I**

The stack emission survey was conducted by the TNPCB in coordination with the CPCB on 02.02.2022 and the results are furnished below which are not complying with standards prescribed by MoEF Notification dated 07.12.2015.

<b>Stack emission results</b>			
<b>Sampling Location</b>	<b>PM mg/m<sup>3</sup></b>	<b>SO<sub>2</sub> mg/m<sup>3</sup></b>	<b>NO<sub>2</sub> mg/m<sup>3</sup></b>
Thermal Power Plant-Unit-I	Not in operation during the survey		
Thermal Power Plant-Unit-II	182.2	788	472

Thermal Power Plant-Unit-III	157.8	832	537
Stack Emission standards for TPPs installed before 31 <sup>st</sup> December, 2003	<b>100</b>	<b>600</b>	<b>600</b>

### M/s North Chennai Thermal Power Station II

The stack emission survey was not conducted by the TNPCB in coordination with the CPCB on 02.02.2022. However, TNPCB has conducted stack emission survey on 20.08.2021 through NABL accreditation laboratory and the results are furnished below which are not complying with standards prescribed by MoEF Notification dated 07.12.2015.

<b>Stack emission results</b>			
<b>Sampling Location</b>	<b>PM mg/m<sup>3</sup></b>	<b>SO<sub>2</sub> mg/m<sup>3</sup></b>	<b>NO<sub>2</sub> mg/m<sup>3</sup></b>
Boiler – 1- 2000T/hr	866	1330	497
Boiler – 2- 2000T/hr	1254	1123	488
Stack Emission standards for TPPs installed after 1 <sup>st</sup> January 2003, up to 31st December 2016 & capacity of 500MW and above	<b>50</b>	<b>200</b>	<b>300</b>

### M/s North Chennai Thermal Power Station – I {Exceedance of the pollutant parameters (stack emission)}

Further, the Online Continuous Emission Monitoring Sensors (OCEMS) for the parameters SO<sub>2</sub>, NO<sub>2</sub> & PM monitored data for the period from 01.04.2019 to 26.12.2020 along with the number of exceedance for the same period were obtained from Care Air Centre (CAC) of TNPCB. From the data obtained as above, the details of exceedance of the pollutant parameters are ascertained as below.

<b>Sl. No</b>	<b>Stack Monitored Parameter</b>	<b>No. of Exceedance for the period from 01.04.2019 to 26.12.2020</b>		
		<b>PM</b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>
1	NCTPS UNIT1	14265	930	399
2	NCTPS UNIT2	16937	6748	7706
3	NCTPS UNIT3	10112	13079	2757

Hence, Environmental Compensation has been assessed based on the above OCEMS data for the above period for the exceedance for the pollutant parameter PM. From the data, it was ascertained that the number of days of exceedance of the pollutant particulate matter for the period from 01.04.2019 to 26.12.2020 is calculated as 273 days and the EC has been assessed as **Rs.1,22,85,000/-** and Show cause Notice under Section 5 of the Environment Protection Act, 1986 had also been issued to the unit vide Board's Proc. Dated 25.08.2021 (**Copy attached as Annexure-II**) as to why Environmental

compensation computed as mentioned in the Board's Proc above should not be imposed against the unit as per the guidelines issued by the Hon'ble NGT & CPCB for the violations caused by the unit as mentioned above.

Also, the Online Continuous Emission Monitoring Sensors (OCEMS) for the parameters SO<sub>2</sub>, NO<sub>2</sub> & PM monitored data for the period from 27.12.2020 to 07.03.2022 along with the number of exceedance for that period were also obtained from Care Air Centre of TNPCB.

From the data obtained as above, the details of exceedance of the pollutant parameters are ascertained as below.

Sl. No	Stack Monitored Parameter	No. of Exceedance for the period from 27.12.2020 to 07.03.2022		
		PM	SO <sub>2</sub>	NO <sub>x</sub>
1	NCTPS UNIT1	6522	15172	478
2	NCTPS UNIT2	4029	4602	-
3	NCTPS UNIT3	3467	3942	9

Hence, Environmental Compensation has been assessed based on the above OCEMS data for the above period for the exceedance for the pollutant parameter PM. From the data, it was ascertained that the number of days of exceedance of the pollutant particulate matter for the period from 27.12.2020 to 07.03.2022 is calculated as 208 days and the EC has been assessed as **Rs.1,87,20,000/-** and recommended to Board to issue show cause notice under Section 5 of the Environment Protection Act, 1986 as to why Environmental compensation computed above should not be imposed against the unit as per the guidelines issued by the CPCB for the violations caused by the unit as mentioned above.

The parameter PM only has been taken for assessing the Environmental Compensation as the timeline for the installation of FGD & Low NO<sub>x</sub> burner to achieve SO<sub>x</sub> & NO<sub>x</sub> extended till 31.12.2022 as well as vide MoEF&CC Notification dated 31.03.2021 (**Copy attached as Annexure-III**) mentioned (Paragraph 2 sub-paragraph-iii) that there shall be levied environment compensation on the non-retiring thermal power plant, after the date as specified in column (4) of Table-I, as per the rates specified in the Table-II.

**M/s North Chennai Thermal Power Station II {Exceedance of the pollutant parameters (stack emission)}**

Further, the Online Continuous Emission Monitoring Sensors (OCEMS) for the parameters SO<sub>2</sub>, NO<sub>2</sub> & PM monitored data for the period from 01.04.2019 to 07.03.2022 along with the number of exceedance for the same period were

obtained from Care Air Centre (CAC) of TNPCB. From the data obtained as above, the details of exceedance of the pollutant parameters are ascertained as below.

Sl. No	Stack Monitored Parameter	No. of Exceedance for the period from 01.04.2019 to 07.03.2022		
		PM	SO <sub>2</sub>	NO <sub>x</sub>
1	NCTPS –II (Boiler-I)	19586	--	--
2	NCTPS –II (Boiler-II)	15279	29138	14659

Hence, Environmental Compensation has been assessed based on the above OCEMS data for the above period for the exceedance for the pollutant parameter PM. From the data, it was ascertained that the number of days of exceedance of the pollutant particulate matter for the period from 01.04.2019 to 07.03.2022 is calculated as **791 days** and the Environmental Compensation has been assessed as **Rs.3,55,95,000/-** and recommended for issue of Show cause Notice under Section 5 of the Environment Protection Act, 1986 as to why Environmental compensation computed as mentioned above should not be imposed against the unit as per the guidelines issued by the Hon'ble NGT & CPCB for the violations caused by the unit as mentioned above.

The parameter PM only has been taken for assessing the Environmental Compensation as the timeline for the installation of FGD & Low NOx burner to achieve SOx & NOx extended till 31.12.2022 as well as vide MoEF&CC Notification dated 31.03.2021 (**Copy attached as Annexure-III**) mentioned (Paragraph 2 sub-paragraph-iii) that there shall be levied environment compensation on the non-retiring thermal power plant, after the date as specified in column (4) of Table-I, as per the rates specified in the Table-II.

### **5. Action taken by TNPCB**

Based on the routine inspections carried out by the TNPCB officials, the unit of M/s NCTPS Stage-I has been frequently instructed to completely arrest the leakages from ash pipe lines in to water bodies by replacing with new pipes, remove the ash deposited in water bodies through PWD and maintain the ash ponds properly so as to improve the quality of surrounding environment. The Board has issued latest directions to the unit of M/s.North Chennai Thermal Power Station Stage-I under section 33A of the Water Act and under section 31A of the Air Act vide Board's Proc. dated 12.10.2021 (**Copies attached as Annexure-IV**). The details of compliance of directions issued by the Board is furnished below.

Sl. No	Directions issued vide Board Proc. dated 12.10.2021		Compliance Status
I	The TANGEDCO shall comply with the findings of the committee constituted by the Hon'ble National Green Tribunal order dated 20.05.2019 in O.A.No.8 of 2016, O.A.No.152 of 2016 & O.A.No.198 of 2016, communicated and agreed by the Hon'ble NGT within the time limit, as reported.		The details of compliance is submitted below
	Sl. No	Findings of the committee	Report filed by the TANGEDCO before the NGT & included in the order dated 30.11.2021 and time schedule earlier given to NGT.
	1.	The unit shall remove the fly ash deposited on the land in and around the ash carrying pipeline and ash disposed inside the premises for quantity of 395979 Tonnes and shall store in temporary storage area and/ or sent directly for beneficial purposes	<p>As deposits of about <b>2,42,040m<sup>3</sup></b> on the land in and around the ash carrying pipeline has been desilted.</p> <p><b>September 2022</b></p> <p><b>Partially Complied.</b> The unit committed to comply before September 2022. In addition to the quantity arrived by the committee as on 31.03.2019 (395979 Tonnes), the unit has further disposed the ash on the land in and around the ash carrying pipeline in view of frequent bursting of aging pipes.</p>
	2.	The unit shall completely remove the ash deposited in Buckingham canal for a quantity of 93096 m3 Tonnes and shall store in temporary storage area and/ or sent directly for beneficial purposes	<p>Ash deposits of about <b>134 Lakh Cum</b> in the Buckingham Canal for a length of 2.4 Kms NCTPS main Gate to KPL main Gate has been desilted at a cost of Rs. 66.23 Lakhs through PWD during the period from June to Dec' 2020.</p> <p>As per the direction of District Collector Thiruvallur, Ash deposits of about 8813 Cum in the Buckingham Canal on the northern and southern sides of the Ash Slurry Pipelines of NCTPS-I &amp; II has been desilted for a length of about 200 mtrs at an expenditure of 17.7 Lakhs during the</p> <p><b>Partially Complied.</b> The unit committed to comply before July 2022. In addition to the quantity arrived by the committee as on 31.03.2019 (93096m3 Tonnes), the unit has further disposed the ash in Buckingham Canal in view of frequent bursting of aging pipes.</p>

		period from 24.10.2021 to 15.11.2021.	
		<b>July 2022</b>	
3.	The unit shall completely remove the ash deposited in Kosathaliyar river for a quantity of 325000 Tonnes from NCTPS main gate to KPL main gate for a length of 2.4Kms for a average width of 130m and depth of 1m and shall store in temporary storage area and/ or sent directly for beneficial purposes.	Ash deposits of about <b>4.35 Lakh Cum</b> in the Kosasthalaiyar River for a length of 2.4 kms from NCTPS main Gate to KPL main Gate has been desilted at a cost of Rs. 28.5 Crore through PWD during the period from June to Dec' 2020.	<b>Partially Complied.</b> The unit committed to comply before June 2022. In addition to the quantity arrived by the committee as on 31.03.2019 (325000 Tonnes), the unit has further disposed the ash in Kosasthaliyar river in view of frequent bursting of aging pipes.
		<b>June 2022</b>	
4.	The unit shall completely remove the ash deposited in Kosathaliyar river for a quantity of 468000 Tonnes form Ennore creek to NCTPS-I main gate for a distance of 1.7Km and from KPL Main gate to Kattupalli downstream for a distance of 1.9 Km for a average width of 130m and depth 1m and shall store in temporary storage area and/ or sent directly for beneficial purposes.	-	<b>Not Complied.</b> The unit committed to comply before December 2022. In addition to the quantity arrived by the committee as on 31.03.2019 (468000 Tonnes), the unit has further disposed the ash in Kosasthaliyar river in view of frequent bursting of aging pipes.
		<b>December 2022</b>	
5.	The unit shall replace the existing Ash Slurry pipe lines No. 1,2,3&4 with new Cast Basalt Lined pipe lines for a total length of 20523m length.	ASDL No.1& 5 - (5129 mtrs each) - Administrative approval is under process and the replacement of entire length of both pipelines will be completed by June 2022. Meanwhile both the above pipelines have been replaced by using the released pipes from ETPS and it disposes Ash slurry	<b>Partially Complied.</b> The TANDGECO has replaced old pipes with new pipes for line no 3 fully, whereas it has to complete the replacement of old pipes (1, 2, 4 & 5) with new pipes on or before 30.06.2022 as committed and accepted by the Hon'ble NGT in O.A. No. 08 of 2016.

		<p>reasonably.  ASDL No. 2 - (5511 mtrs ) - 1728 meters of new cast basalt pipe lines have already been replaced with available 3498 metres pipes and work is being carried out on emergency basis and will be completed by December 2021.  ASDL No.3 - (4942 mtrs) - New cast basalt pipe has been replaced successfully from ash dyke to NCTPS gate and there are no leaks developed in this pipeline.  ASDL No.4 - (4942 mtrs) - Tender for procurement of 4942m of new cast basalt Pipes is under process and will be completed by May 2022.</p>	
		<b>June 2022</b>	
6.	The unit shall provide impervious Toe drain around the Ash dyke for a length of 6000m for the collection of seepage water and to be connected to the existing Recovery Water sump and reuse for Ash slurry making	The study report from IITM received on 13.10.2021 and estimate is under preparation by TANGEDCO.	<b>Not Complied.</b> The unit committed to comply before June 2023.
		<b>June 2023</b>	
7.	The unit shall provide 6000 Nos. of trees in and around the ash dykes and grow it well so as to prevent the dust emission from the ash dyke.	Quotation has been called from Annamalai University and the District Forest Officer.	<b>Not Complied.</b> The unit committed to comply before December 2023.
		<b>December 2023</b>	
8.	The unit shall make existing ash ponds impervious so as to prevent the seepages as per the technical consultancy	The study report from IITM received on 13.10.2021 and estimate is under preparation by	<b>Not Complied.</b> The unit committed to comply before December 2023.

	of IITM, Chennai	TANGEDCO.	
		<b>December 2023</b>	
9.	The unit shall obtain technical study report from IITM Chennai for the remedial measures such as strengthening of Ash Dyke and other related works in Ash dyke and implement the recommendations	The study report from IITM received on 13.10.2021 and estimate is under preparation by TANGEDCO.	<b>Not Complied.</b> The unit committed to comply before December 2023.
		<b>December 2023</b>	
10.	The unit shall provide sufficient number of piezometric wells/monitoring wells around the dykes and upstream of the industry to monitor the ground water quality	Work fully completed on 09.12.2019.	<b>Complied.</b> The TANGEDCO has provided 12 nos. of piezometric wells/monitoring wells around the dykes to monitor the ground water quality periodically.
		<b>31.12.2019</b>	
11.	The unit shall bring back Recovery water Pump No.3 in to service and to replace the existing worn-out Recover water pipe Line No.1 for a entire length of 2815 m	Works are in progress	<b>Partially Complied.</b> Works are in progress and the unit committed to comply before June 2022.
		<b>June 2022</b>	
12.	The unit shall modify existing three Electrostatic precipitator attached to the 3 No. boilers so as to achieve revised norms of particulate matter emission 100 mg/m <sup>3</sup> as per MOEF & CC notification dated 07.12.2015.	Administrative Approval accorded for Renovation & Modernization (R&M) of Electro Static Precipitators (ESP) in Units I, II & III to achieve the desired PM level below 100 mg/Nm <sup>3</sup> , so as to achieve the norms as per MOEF&CC.	<b>Not complied.</b> The unit is not meeting the particulate matter standards of 100 mg/Nm <sup>3</sup> in all 3 boiler stacks as prescribed by MoEF&CC Notification dated 07.12.2015 for TPPs installed before 31 <sup>st</sup> December 2003.
		<b>December 2022</b>	
13.	The unit shall replace the worn-out boiler roof tubes in Unit-II and Unit-III so as to arrest the discharge of fugitive emission.	Works fully completed	<b>Complied.</b> The unit has replaced the worn-out boiler roof tubes in Unit-II and Unit-III boilers and there is no fugitive emission at present in all 3 units.
		<b>30.09.2019</b>	

14.	The unit shall develop Mangroves plantations and other costal vegetation in both sides Kosasthaliyar river banks, Buckingham canal and nearby by affected coastal areas, in consultation with M.S.Swaminathan foundation (or) Annamalai University.	Quotation has been called for from Annamalai University and the District Forest Officer.	<b>Not Complied.</b> The unit committed to comply before June 2023.
		<b>June 2023</b>	
	15.	The unit shall ensure complete utilization of fly ash as per the Ministry of Environment, Forest & Climate Change fly ash notification of 2016.	Efforts are made to comply the fly ash notification to 100% in the coming years.
16.	The unit shall carry out ground water, surface water monitoring once in six months through any NABL accredited laboratory in the affected areas. Further detailed study may be carried out by Ground water department or any reputed institution on the status of ground water, surface water quality once in year.	Ground water and surface water analysis conducted once in six months through NABL accredited lab. Detailed study has been carried out for ground water through reputed institution once in year.	<b>Not Complied.</b> The unit is yet to furnish the report for the financial years 2020-21 & 2021-22.
		<b>Periodical work</b>	
17.	The unit shall adhere to the latest consent order conditions dated 25.06.2014 issued by Tamil Nadu Pollution Control Board.		
<b><u>Compliance status of latest consent order conditions issued vide Proc.dated:25.06.2014.</u></b>			
<b><u>Air Act:</u></b>			
1.	The unit shall maintain the coal handling conveyer system and junction towers and ensure that no coal dust shall be accumulated in the adjacent area of coal handling conveyor and junction towers.	<b>Complied.</b> The unit has maintained the coal handling conveyer system and junction towers and ensures that no coal dust is accumulated in the adjacent area of coal handling conveyor and junction towers.	
2.	The unit shall operate and maintain water sprinkling and cyclone separators provided at junction towers to control the dust emission.	<b>Complied.</b> The unit has operated and maintained water sprinkling and cyclone separators provided at junction towers to control the dust emission.	

3.	The unit shall ensure the APC measures provided in the coal crushing area shall be under working condition so as to control the dust emission.	<b>Complied.</b> The unit has ensured the APC measures provided in the coal crushing area is under working condition so as to control the dust emission.
4.	The unit shall install On line Stack monitoring system for SO <sub>2</sub> , NO <sub>x</sub> and PM and to connect the same to Care Air Centre, TNPCB, Chennai within three months.	<b>Partially Complied.</b> The unit has installed Online Continuous Emission Monitoring System (OCEMS) for unit I, II & III of three stacks to monitor the parameters PM, SO <sub>x</sub> , NO <sub>x</sub> and the same is connected with CAC, TNPCB, Guindy and CPCB server.
5.	The Unit shall provide continuous ambient air quality monitoring station and the same shall be connected to Care Air Centre TNPCB, Chennai within three.	<b>Not Complied.</b> The existing Continuous Ambient Air Quality Station (2Nos) provided were not in operable condition and it was reported that the TANGEDCO has planned to install new 4 stations covering the units Stage-I, Stage-II, Stage-III (Proposed) and Ennore SEZ-IV (Proposed).
6.	The unit shall operate the Air Pollution Control measures efficiently and continuously to achieve the National Ambient Air Quality Standards as per MOEF Notification.	<b>Not Complied.</b> The unit has provided the air pollution control measures such as Electrostatic Precipitator for Boiler, Dust Extraction and Dust Suppression for coal handling area which are being operated and maintained by the unit regularly. However, the unit is not meeting the particulate matter standards of 100 mg/Nm <sup>3</sup> in all 3 boiler stacks as prescribed by MoEF&CC Notification dated 07.12.2015 for TPPs installed before 31 <sup>st</sup> December 2003 hence, the unit shall augment the ESPs provided in all 3 boilers and also to provide Flue Gas Desulphorisation (FGDs) to achieve SO <sub>x</sub> emission standards before 31.12.2022 as per the timelines permitted for TPPs (Category A) by MoEF&CC Notification dated 31.03.2021.
7.	The unit shall conduct AAQ/SM survey through TNPC Board and furnish the survey report to Board within 3 months.	<b>Complied.</b> The unit is conducting the AAQ/SM survey through TNPC Board yearly once.

	8. The unit shall develop green belt in and around the unit premises at the rate of 400 trees/hectare.	<b>Not Complied.</b> The total area of the unit is 549.10 Acres and it was reported that the unit has planted tree sapling to an extent of 130 Acres. The green belt to be developed by the unit is 181 Acres (33% of the total area), hence, the unit shall further develop green belt of remaining 51 Acres.
<b><u>Water Act:</u></b>		
	1. The unit shall complete and commission the common sewage treatment plant for Stage-I & Stage-II within a month time.	<b>Complied.</b> STP provided at Stage-I is under operation.
	2. The unit shall ensure that no water shall be discharged from the Ash pond or through the canal linking the pump house and ash pond to Ennore creek either directly or indirectly under any circumstances.	<b>Partially Complied.</b> Ash pond recovery water is being utilized for bottom ash slurry preparation. However, the unit has to improve the complete recovery water collection and reuse for ash slurry preparation.
	3. The unit shall reconstruct/revamp the existing spillway structure to ensure uniform distribution of water from the cooling water canal in to Ennore creek to preserve the marine eco system within 6 months time.	<b>Not Complied.</b> Tender has been awarded by Stage II for widening of Hot water channel. Proposal to reconstruct the existing spillway structure to ensure uniform distribution of water has been evolved by stage II which is under progress.
	4. The unit shall reconstruct/revamp the pipe line carrying the ash slurry to the ash pond and to ensure that no ash slurry shall be discharged in to creek area under any circumstance.	<b>Partially Complied.</b> The TANDGECO has replaced old pipes with new pipes for line no 3 fully, whereas it has to complete the replacement of old pipes (1, 2, 4 & 5) with new pipes on or before 30.06.2022 as committed and accepted by the Hon'ble NGT in O.A. No. 08 of 2016.
	5. The unit shall take immediate action for the removal of fly ash accumulated over the roads and around the ash dyke area.	<b>Not Complied.</b> The unit has to remove the fly ash accumulated as per the Joint Committee findings.
	6. The unit shall conduct Marine Impact Study at where the cooling water is being discharged in to creek/sea and furnish the report within three months.	<b>Not Complied.</b> Marine Impact Study not yet conducted.
	7. The unit shall maintain the coal handling conveyer system and junction towers and ensure that no coal dust shall be accumulated in the adjacent area of coal	<b>Complied.</b> The coal accumulation in the adjacent areas of coal handling conveyor and junction towers of ICHS are being

	handling conveyor and junction towers.	cleared then and there on regular basis.
8.	The unit shall obtain renewal of authorization under the Hazardous Waste (MH&T) Rules 2008.	<b>Not Complied.</b> Authorization for Hazardous waste obtained is valid up to April' 2020, renewal application is yet to file.
9.	The unit shall remit the balance water cess immediately.	The unit has not remitted the balance water cess.
10	The unit shall develop green belt in and around the unit premises at the rate of 400 trees/hectare.	<b>Not Complied.</b> The total area of the unit is 549.10 Acres and it was reported that the unit has planted tree sapling to an extent of 130 Acres. The green belt to be developed by the unit is 181 Acres (33% of the total area), hence, the unit shall further develop green belt of remaining 51 Acres.
<b>II.</b>	The TANGEDCO shall replace the existing ash slurry pipe lines no. 1, 2, 3, 4 & 5 with new cast basalt lined pipes for entire length instead of using retrieved pipes from ETPS on or before 31.12.2021 as reported to comply with the above Hon'ble NGT direction so as to curtail the leakage from pipes permanently to avoid deposition of ash in Buckingham Canal, Kosasthalaiyar River and near Seppakkam hamlet.	<b>Not Complied.</b> The TANDGECO has replaced old pipes with new pipes for line no 3 fully, whereas it has to complete the replacement of old pipes (1, 2, 4 & 5) with new pipes on or before 30.06.2022 as committed and accepted by the Hon'ble NGT in O.A. No. 08 of 2016.
<b>III.</b>	The TANGEDCO shall carry out the removal of deposited ash near the Seppakkam hamlet on priority basis within 15 days.	<b>Not Complied.</b> The TANGEDCO has not yet removed the deposited ash near the Seppakkam hamlet.

Further, it is respectfully submitted that the unit of M/s.North Chennai Thermal Power Station Stage-I, SF.No.44, 45 etc., Puzhuthivakkam Village, Ponneri Taluk, Tiruvallur District was inspected by the TNPCB officials on 24.03.2022 & 31.03.2022 and issued show cause notice under the provisions of section 25 of the Water (P&CP) Act, 1974 as amended to the unit vide Proc. dated 05.04.2022 **“as to why penal action for offence punishable under Section 44 of the water (P&CP) Act 1974 as amended should not be initiated against you as occupier for operating the unit without valid consent of the Board under Section 25 of the Water (P&CP) Act 1974 as amended and also why direction should not be issued under Section 33 A of the Act for closure of the unit, etc”** for the following violations observed.

1. The unit was under operation without valid consent of Board.
2. The unit has not fully complied the conditions stipulated in the latest renewal consent orders issued to the unit vide Board's Proc. dated 25.06.2014 under the Water Act.
3. The unit has not fully complied the latest directions issued to the unit under section 33A of the Water Act vide Board's Proc. dated 12.10.2021.
4. The unit has not complied the most of the directions of the Hon'ble NGT (SZ) issued then and there in various original application / review application.
5. The unit is using coal containing ash content more than 40%.
6. The unit is not able to achieve 100% utilization of fly ash and is not having adequate facility for storage of dry fly ash that is generated in one day.
7. Thus the unit is not complying the Fly Ash Notification 1999 (as amended) issued under the Environmental (Protection) Act 1986 for utilization of fly ash.
8. The unit has not replaced the existing ash slurry pipelines no.1, 2, 4 & 5 with new cast basalt lined pipes for entire length so as to curtail the leakages from aging pipes permanently to avoid deposition of ash in Buckingham Canal, Kosasthalaiyar River back water and on land adjacent to pipelines as well as near Seppakkam Village.
9. The unit has informed that there was a leak in the slurry pumping line No.5, within the NCTPS Stage-1 premises at 11.00 A.M on 23.03.2022 for 5 minutes and pumping was stopped immediately and necessary action was taken to arrest the leak in the pipe within half an hour and no ash slurry was discharged outside the premises.
10. On verifying the logbook at the time of inspection, it was ascertained that the last leak in the same 5th pipe line had occurred on 17.03.2022 and repair work had been attended by changing the O-ring.
11. The unit has not completely remove the fly ash deposited on the land in and around the ash carrying pipeline, in the Buckingham Canal and in the Kosasthalaiyar River back water.

12. The unit has not collected the entire quantity of recovered water from ash dyke and not fully utilized within the premises for making bottom ash slurry as recovery water from ash dyke is allowed to overflow into the earthen canal leading to Kosasthalaiyar River back water.

Also, it is respectfully submitted that the show cause notice under the provisions of section 21 of the Air (P&CP) Act, 1981 as amended was issued to the unit vide Proc. dated 05.04.2022 **“as to why penal action for offence punishable under Section 37 of the Air (P&CP) Act 1981 as amended should not be initiated against you as occupier for operating the unit without valid consent of the Board under Section 21 of the Air (P&CP) Act 1981 as amended and also why direction should not be issued under Section 31A of the Act for closure of the unit, etc”** for the following violations observed.

1. The unit was under operation without valid consent of Board.
2. From the data received from the Care Air Centre (CAC) of TNPCB, the Online Continuous Emission Monitoring Sensors (OCEMS) for the parameters PM monitored for the period from 01.04.2019 to 26.12.2020 and 27.12.2020 to 07.03.2022, it was ascertained that the number of days of exceedance of the pollutant particulate matter is 273 & 208 days respectively which shows that the air pollution control measures attached to the boilers were not in effective operation.
3. The unit has not fully complied the conditions stipulated in the latest renewal consent orders issued to the unit vide Board's Proc. dated 25.06.2014 under the Air Act.
4. The unit has not fully complied the latest directions issued to the unit under section under section 31A of the Air Act vide Board's Proc. dated 12.10.2021.
5. The unit has not complied the most of the directions of the Hon'ble NGT (SZ) issued then and there in various original application / review application.
6. The unit is using coal containing ash content more than 40%.
7. The unit is not able to achieve 100% utilization of fly ash and is not having adequate facility for storage of dry fly ash that is generated in one day.

8. Thus the unit is not complying the Fly Ash Notification 1999 (as amended) issued under the Environmental (Protection) Act 1986 for utilization of fly ash.
9. The unit has not completely remove the fly ash deposited on the land in and around the ash carrying pipeline, in the Buckingham Canal and in the Kosasthalaiyar River back water.
10. The Particulate Matter (PM) emission let out from each 3 boiler stacks are not meeting the standards of 100mg/ Nm<sup>3</sup> at all times (Power Plants smaller than 500MW installed before 31st December 2003) as per MoEF&CC's Notification S.O. 3305(E) dated: 07.12.2015.
11. The unit has not yet taken concrete action/furnished proposal for the installation of Flue Gas Desulphurisation (FGD) System based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO<sub>2</sub> emissions standard of 600mg/Nm<sup>3</sup> (Power Plants smaller than 500MW installed before 31st December 2003) prescribed in MoEF&CC's Notification S.O. 3305(E) dated: 07.12.2015 as the unit has to complete the same before 31.12.2022 as per MoEF&CC Notification dated 31.03.2021.
12. The unit has not calibrated the OCEMS for the emission parameters SPM, SO<sub>x</sub> & NO<sub>x</sub> provided to each three Boiler stacks and not ensuring the connectivity of sensors to CAC, TNPCB & CPCB server at all times.
13. The unit has not repaired the Continuous Ambient Air Quality Monitoring Stations (CAAQMS) for the parameters PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> & NO<sub>2</sub> installed within the unit premises and outside the premises.

The copy of the show cause notices issued to the unit vide TNPCB Proc. dated 05.04.2022 are attached as **Annexure-V**.

## **6. Assessment of Environmental Compensation by the TNPCB.**

As the unit of **M/s. North Chennai Thermal Power Station, Stage - I**, has not complied the consent order conditions and leakage of ash slurry pipelines is regular phenomena and causing damage to the water bodies, the TNPCB has levied the Environmental Compensation then and there for the violations noticed.

The details of Environmental Compensation levied so far by the TNPCB as per CPCB guidelines are furnished below.

Sl. No	Reason for assessed interim Environmental Compensation	Period	Amount in Rs.	Remittance details
1.	Ash slurry disposal into Kosasthalaiyar river / Buckingham canal as reported by the earlier committee	01.11.2004 to 12.11.2019	16.461 Crores	Remitted to TNPCB
2.	Ash slurry disposal into Kosasthalaiyar river / Buckingham canal as reported by the committee	22.08.2020 to 06.01.2021	41.40 Lakhs	Not yet Remitted
3.	Ash slurry disposal on land near Seppakkam Village into Kosasthalaiyar river / Buckingham canal as reported by the committee.	07.01.2021 to 23.08.2021	4.122 Crores	Remitted to TNPCB

It is respectfully submitted that the Hon'ble NGT in OA.No.122 of 2021 & 162 of 2021 in respect of TANGEDCO NCTPS Stage-I (Existing), Stage-III (Proposed) & Ennore SEZ-IV (Proposed) vide its final order dated **31.01.2022** directed the TANGEDCO to comply the following and compliance of the same is submitted below.

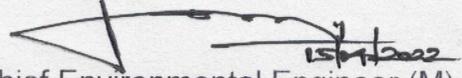
Sl. No	Directions issued by the Hon'ble NGT in OA.No.122 of 2021 & 162 of 2021	Status of the compliance as on 15.04.2022
1	The TANDGECO is directed not to proceed with the work of laying the pipeline through the CRZ zone and also in the other area in violation of the Environment Clearance and CRZ Clearance granted to them in 2016, without getting necessary further clearances in this respect by filing afresh application in accordance with law and the same will have to be considered by the authorities strictly in accordance with law and the direction given for this purpose cannot be treated as a	<b>Complied.</b> The TANGEDCO stopped the construction activity in CRZ area for not having EC under the CRZ Notification pertaining to Stage-III & Ennore SEZ-IV as directed. Amendment to be obtained by TANGEDCO in the EC already obtained under CRZ Notification for Stage-III & Ennore SEZ-IV.

	direction to the authorities to grant the permission, if it is not otherwise feasible or permissible under law. This must be strictly in compliance with the decision of Hon <sup>ble</sup> Supreme Court in Key stone realtors private limited vs. Anil V. Tharthare and ors.	
2	The TANDGECO is directed to pay an Environmental Compensation of Rs. 4,12,20,000/- fixed by the Joint Committee and approved by this Tribunal to Tamil Nadu Pollution Control Board for the damage caused to environment on account of the deposit of fly ash slurry in the Kosasthalaiyar River region, over and above the compensation already remitted by them as directed by the Pollution Control Board in O.A. No. 08 of 2016 and other connected cases.	<b>Complied.</b> The TANDGECO has remitted the Environmental Compensation of Rs. 4,12,20,000/- to the Board through NEFT Dated 27.12.2021.
3	The TANDGECO is also directed to pay an additional compensation of Rs. 50 lakhs with the Tamil Nadu Pollution Control Board for the violation committed i.e. preparation for constructing the pipeline and making some attempts for that purpose in violation of the Environmental Clearance and CRZ Clearance granted and this is in addition to the compensation already directed to be paid by them for damage caused to the environment on account of deposit of fly ash.	<b>Complied.</b> The CE/Electrical, NCTPP stage –III has reported vide their letter Lr.No.CE/NCTPP Stg-III/SE/Civil/EE/C2/F.NGT/D.141/22 dated 30.03.2022 received through mail stating that the unit has remitted an additional compensation of Rs. 50 lakhs to the Board through online to the TNPCB account vide UTR No.IOBAN222087324859 dated 28.03.2022.
4	The TANDGECO is directed to carry out the replacement of the old pipes as undertaken by them and as directed by this Tribunal in O.A. No. 08 of 2016 and other connected cases within the time line fixed by the Tribunal, on the basis of the	Works are in progress. The TANDGECO has replaced old pipes with new pipes for line no 3 fully, whereas it has to complete the replacement of old pipes (1, 2, 4 & 5) with new pipes on or before 30.06.2022 as committed and

	undertaking given by them to avoid future breaches.	accepted by the Hon'ble NGT in O.A. No. 08 of 2016.
5	The TANDGECO is directed to carry out recommendations made by the Joint Committee in both the cases in its letter and spirit to avoid future breaches of fly ash into the riverine area. The question regarding steps to be taken for remediation process of damage caused to the environment on account of deposit of fly ash in that area for longer period will be considered by this Tribunal including any further compensation to be paid on the basis of the recommendations to be made by Committee already appointed by this Tribunal in O.A. No. 08 of 2016 and other connected cases.	The Joint Expert Committee appointed by the Hon'ble NGT in O.A. No. 08 of 2016 filed their report.
6	The TANDGECO is also directed to take steps to remove the fly ash already deposited in that area, as directed by the Joint Committee as well as the Pollution Control Board at the earliest possible time to reduce the impact of damage to riverine environment any further.	Works are in progress. The TANDGECO has to complete the removal of fly ash as already deposited in Kosasthalaiyar river, Buckingham canal & on land adjacent to ash conveying pipe lines as committed to Hon'ble NGT.
7	The TANDGECO is also directed to take necessary steps to avoid leakage through pipes and they must hold vigil by regular inspection of the old pipe lines till such time their replacement is completed and take immediate steps to arrest breaches, if any, during the interregnum. The amount of compensation directed to be paid on two counts are to be deposited by TANDGECO with Tamil Nadu Pollution Control Board which they can utilise for the purpose of protecting Kosasthalaiyar River as	As per the review application no.14 of 2021 (SZ) in O.A.No. 08 of 2016, the unit shall utilize the pipe line no.3 (Replaced with new pipes) and pipe line no.1 & 5 (Replaced with retrieved pipes from ETPs) for conveying the ash slurry to ash ponds. The TANDGECO is taking necessary steps to avoid leakage through pipes by conducting regular inspection of the old pipes.

	well Ennore creek in that area to restore the damage caused to environment and also to provide necessary protection to prevent encroachments in that areas in future and avoid further environmental damage as well as riverine damage in that area.	
8	As regards the action to be taken for violations committed by TANDGECO in violation of Environmental Clearance and CRZ Clearance, the respective regulators, namely, MoEF&CC and State Coastal Zone Management Authority are directed to take necessary action against TANDGECO in accordance with law.	Not applicable for TNPCB.
9	As regards O.A.No.122 of 2021 is concerned, since it is filed by a private person in order to protect environment, we feel that TANDGECO can be directed to pay a cost of Rs. 25,000/- to the applicant in that case.	Not applicable for TNPCB.
10	If the above amounts including the compensations and costs are not paid within three months from today, then the Pollution Control Board and the applicant are entitled to initiate proceedings for recovery of the same under Section 25 of the National Green Tribunal Act, 2010 or through District Collector for recovery of the amount invoking Revenue Recovery Act, 1890 in accordance with law.	<p><b>Partially Complied.</b></p> <p>The TANDGECO has remitted the Environmental Compensation of Rs. 4,12,20,000/- to the Board through NEFT Dated 27.12.2021.</p> <p>The CE/Electrical, NCTPP stage –III has reported vide their letter Lr.No.CE/NCTPP Stg-III/SE/Civil/EE/C2/F.NGT/D.141/22 dated 30.03.2022 received through mail stating that the unit has remitted an additional compensation of Rs. 50 lakhs to the Board through online to the TNPCB account vide UTR No.IOBAN222087324859 dated 28.03.2022.</p> <p>The TANDGECO has to pay Rs.25,000/- to the applicant within three months from the date of order (31.01.2022) i.e. before 30.04.2022.</p>

By considering the above facts, the Hon'ble Tribunal may pass appropriate Order(s)/Directions(s) as deemed fit.

A handwritten signature in black ink, appearing to be 'S. S. Srinivasan', written over a horizontal line.

Joint Chief Environmental Engineer (M),  
Tamil Nadu Pollution Control Board,  
Chennai Zone.