fair copies

Powering Tamil Nadu's Progress...

From
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To
The Director,
Impact Assessment and HSM Division,
Ministry of Environment, Forests & Climate Change
Indira Parayavaran Bhavan,
Jor Bagh Road,
New Delhi – 110 003

Kind attention; Dr. Ms. Sanchita Jindal, Director

Lr.No.SE/C/P&E/EE/EMC/AEE/C/F.NCTPS Stage III TPP/D. 182 /15, dt. 06.06.15

Sir,

Sub: TANGEDCO – North Chennai Thermal Power Station (NCTPS) Stage III (1X800 MW) – Environmental Clearance – Certified copy of compliance of existing phases of NCTPS stage I &II – Submitted - Reg.

Ref: 1. Lr.No.SE/C/P&E/EE/EMC-2/AEE/C/F.NCTPS.Stage-III.TPP/D.160/15, dt. 23.05.15

2. Lr.No.SE/C/P&E/EE/EMC/AEE/C/F.NCTPS.Stage-III.TPP/D.164/15, dt. 26.05.15

*****

Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO - A subsidiary of TNEB Ltd)) has proposed to establish a Supercritical Thermal Power Project with a single unit of 800 MW Capacity within existing North Chennai Thermal Power Station complex located in Ponneri Taluk, Thiruvallur District.

Necessary application for obtaining final Environmental Clearance has been filed online on 26.05.2015 with all requisite documents except the Certified copy of compliance of EC of both existing phases of NCTPS stage I and stage II.

Now, the certified copy of the compliance report of NCTPS Stage I and II has been received from the Regional office of MoEF, Chennai on 05.06.2015. Hence as assured in the reference (2) above, the same is uploaded as required.

Hence it is requested that the proposal of TANGEDCO (A subsidiary of TNEB Ltd) for establishing the proposed NCTPS Stage III TPP (1x800 MW) may be considered for issue of Environmental clearance in order to offset the power demand of State of Tamilnadu.

Yours faithfully,

Chief Engineer/Projects 6/6½

File: MoEF clearance

EP/12.1/ROCHN/01/2015
Government of India
Ministry of Environment, Forests and Climate Change
(Regional Office - Chennai)

1st and 2nd floor, HEPC Building,
No.34, Cathedral Garden Road,
Nungambakkam,
Chennai – 600034
E-mail:roefccc@gmail.com
Tel: 044-28222325

Dated: 5th June, 2015

To

Chief Engineer (Projects),
TANGEDCO (A Subsidary of TNEB Ltd.)
5th Floor, Western Wing, NPKRR Maaligai,
144, Anna Salai, Chennai-600002
Email: cepr@tnebnet.org

Subject: **Monitoring Report of North Chennai Thermal Power Station.**

Reference: **Your Letter.No.SE/C/P&E/EE/EMC/AEE/C/F.NCTPS Stage III TTP/D-132 dated 5.5.2015**

Sir,

With reference to the project cited above, we are pleased to inform that the Monitoring Report of the projects with the following EC has been uploaded in the Website of Ministry of Environment, Forests and Climate Change.

1. MOEF/GOI .No.14/13 /81 – Env.2, dt.6.1.83 for 5X210 MW
2. Lr.No.14/13/81/DN.2/IA, dt.30.4.1987 for 3X210 MW
3. MoEF Memo No. : J.1011/11/95-IA.II(T) dated 10.05.1996 for 2X525 MW.
4. MoEF Memo No. : J.13011/11/95-IA.II(T) dated 27.11.2012 for 2X600 MW

Yours faithfully,

(Dr. S.V. Reddy)
Scientist 'F'

Government of India
Ministry of Environment, Forests and Climate Change (MoEF&CC)
Regional Office – South Eastern Zone
Nungambakkam, Chennai – 600034.

MONITORING REPORT OF NCTPS STAGE – I (3X210 MW)

PART I

DATA SHEET

1		Project Type River valley / Mining / Industry / Thermal / Nuclear / Other Specify	:	Thermal power project
2		Name of the project	:	North Chennai Thermal Power Station stage I
3		Clearance letter(s)/OM No. and dated	:	1. MOEF/GOI .No.14/13 /81 – Env.2, dt.6.1.83 for 5X210 MW 2. Lr.No.14/13/81/DN.2/IA, dt.30.4.1987 for 3X210 MW
4		Locations	:	
	a.	Taluk(s) District	:	Ponneri Taluk Thiruvallur District
	b.	State (s)	:	Tamil Nadu
	c.	Latitudes / Longitudes	:	13° 13' to 13°18'N & 80° 19' to 80°20' E
5		Address of correspondence		
	a.	Address of concerned project Chief Engineer (with Pin Code & telephone / telex / fax numbers		Chief Engineer, North Chennai Thermal Power Station, stage I, Chennai-120.
	b.	Address of Executive Project Engineer/ Manager (with Pin Code/fax numbers)	:	Superintending Engineer / Operation, North Chennai Thermal Power Station, stage I, Chennai-120.
6		Salient features:		
	a.	Salient features of the project	:	3 x 210 MW, Coal based thermal power plant in which fuel is burnt and energy available in the fuel converted to electrical energy through steam – water cycle for which raw water is processed through a RO – DM Plant. Open cycle seawater system is used as a cooling medium.
	b.	of the environmental management plans	:	Chimney of height-275 m Green Belt development by Tree plantation Dust Extraction & Dust Suppression system in Coal handling area. ESP of 99.5% efficiency.
7		Breakup of the project area:		
	a	Project area	:	1067.10 acres (inclusive of Stage II - 180 acres & Stage III - 190 acres area)

8		Break up of project affected population with enumeration of those losing houses / dwelling units only, agricultural land only, both dwelling units and agricultural land and landless labourers / artisans		999 persons were given job assistance in l of land acquisition for power plant and other allied works. In addition job assistance have been given to 466 fishermen of nearby villages considering the dredging activities in Ennore creek.
	a	SC,ST/Adivasis	:	Nil
	b	Others	:	Nil
9		Financial Details:		
	a	Project cost as originally planned and subsequent revised estimates and the years of price reference	:	Rs.1,79,200 Lakhs (in 1995)
	b	Allocations made for environmental management plans, with item wise and year wise breakup	:	Rs. 14,300 Lakhs for implementing environmental protection and management measures as indicated in item 6(b).
	c	Benefit cost ratio / internal rate of return and the years of assessment	:	———
	d	Whether (c) includes the cost of environmental management as shown in (b) above	:	———
	e	Total expenditure on the Project so far	:	Rs.1,80,000 Lakhs
	f	Actual expenditure incurred on the environmental management plans so far	:	The power plant was commissioned in the year 1996 and about 2500 Lakhs have been incurred so far for the environmental management.
10		Forest land requirement:	:	NA
	a	The status of approval for a diversion of forest land for non-forestry use	:	NA
	b	The status of compensatory afforestation, if any	:	NA
	c	The status of clear felling	:	NA
	d	Comments on the viability and sustainability of compensatory afforestation programme in the light of actual field experience so far	:	NA
11		The status of clear felling in non-forest area (such as submergence area of reservoir, approach road), if any, with quantitative information	:	NA
12		Status of construction:		
	a	Date of commencement	:	1990
		Date of completion (actual and / or planned)	:	1996
13		Reasons for the delay if the project is yet to start.	:	NA
14		Date of site visit:		

	a	The dates on which the project was monitored by the Regional Office on previous occasions, if any	:	----------
	b	Date of site visit for this monitoring report		30.04.2015
15		Details of correspondence with project authorities for obtaining action plans, information and status of compliance to safeguards	:	--------

PRESENT STATUS OF THE PROJECT

North Chennai Thermal Power Station Stage I (3X210 MW) was commissioned in 1996 and the plant is in operation for nearly 20 years after obtaining Consent to Operate the power plant from TNPCB.

5/6/2015

(Dr. S.V. Reddy)
Scientist 'F'

Part-II

Subject: North Chennai Thermal Power Station Stage I

Reference: Environmental Clearance issued by MOEF/GOI for 5 x 210 MW No.14/13/81 – Env.2, dt.6.1.83

A. SPECIFIC CONDITONS: NIL

B. GENERAL CONDTIONS:

S.N.	Conditions	Compliance Status
i.	Adequate control equipments would be installed	Complied
ii.	Suitable monitoring systems will be set up	Complied
iii.	Adequate measures would be taken to protect the health of the workers	Complied
iv.	Liquid effluents coming out of the power plants would be treated	Complied
v.	Use of fly ash As mentioned in the Environmental Impact Statement,.	Complied

Subject: Additional Conditions stipulated by MOEF/GOI for 3 x 210 MW North Chennai TPS

Reference: Lr.No.14/13/81/DN.2/IA, dt.30.4.1987

A. SPECIFIC CONDITONS: NIL

B. GENERAL CONDTIONS:

S.N.	Conditions	Compliance Status
i.	ESPs of operational efficiency of over 99.5% should be provided	Complied
ii.	Adequate space for FGD plant	Complied
iii.	No heavy structure within 500m zone	Complied
iv.	Stack height of 220m should be provided	Complied

v.	Online stack monitoring equipment should be provided	Complied
vi.	At least 3-4 air quality monitoring stations should be provided	Complied
vii.	Liquid effluents should be treated	Complied
viii.	The temperature of the condenser water should not be more than 5° C	Complied
ix.	Efforts should be made to conserve the water	Refer Part-III
x.	No fly ash / bottom ash should be disposed off	Complied
xi.	Proper ash dykes / ponds should be built	Complied
xii.	Efforts should be made to utilise the fly ash / bottom ash	Complied
xiii.	Green belt should be raised all around the power plant.	Complied

5/6/2015

(Dr. S.V. Reddy)
Scientist 'F'

PART III

Subject: North Chennai Thermal Power Station Stage I

Reference: Environmental Clearance issued by MOEF/GOI for 5 x 210 MW No.14/13/81 – Env.2, dt.6.1.83

A. SPECIFIC CONDITONS: NIL

B. GENERAL CONDTIONS:

S.No.	Conditions	Compliance Status
i.	Adequate control equipments would be installed so that concentration of SO_2 and particulate matters in the ambient air remains within the limits of 60 µg/cu.m and 150 µg/cu.m respectively	Control equipments have been installed to keep the concentration of SO_2 and particulate matters in the ambient air within the limits .The control equipment for the above purpose include the following: Electrostatic Precipitators of 99.5% efficiency; 275 metres height stack; Dust suppression system
ii.	Suitable monitoring systems will be set up to collect and analyse samples of SO_2 and particulate matter regularly. This will help in ascertaining the effectiveness of the control equipments installed for checking the pollutants.	High Volume Samplers have been installed to collect and analyse samples of SO_2 and Particulate Matter regularly, to determine the effectiveness of the control equipments installed for checking the pollutants.
iii.	Adequate measures would be taken to protect the health of the workers engaged in the industry operations like wagon tippling area, conveyor transfer points, crushing and ball mills, etc.	Adequate measures are being taken to protect the health of the workers engaged in the industry in the stipulated areas.
iv.	Liquid effluents coming out of the power plants would be treated as per ISI standards before the final discharge.	Liquid effluents coming out of the power plants are being treated as per ISI (BIS) standards before the final discharge.
v.	As mentioned in the Environmental Impact Statement, use of fly ash in the manufacture of building materials, cellular concrete, bricks, cement, etc., should receive utmost attention.	Fly ash generated is supplied mostly to cement and brick manufacturing industries.

SVReddy 5/6/2015

(Dr. S.V. Reddy)
Scientist 'F'

Subject: Additional Conditions stipulated by MOEF/GOI for 3 x 210 MW North Chennai TPS

Reference: Lr.No.14/13/81/DN.2/IA, dt.30.4.1987

A. SPECIFIC CONDITONS: NIL

B. GENERAL CONDTIONS:

S.N.	Conditions	Compliance Status
i.	ESPs of operational efficiency of over 99.5% should be provided so as to keep the emissions of particulates below 150 mg/m^3	ESPs of operational efficiency of over 99.5% is in place so as to keep the emissions of particulates below 150 mg/m^3
ii.	Adequate space for FGD plant should be provided	Adequate space for FGD plant has been provided
iii.	No heavy structure within 500m zone of High Tide Line	No heavy structure is constructed within 500 M from HTL
iv.	Stack height of 220m should be provided. If single chimney for all the 3 units is being made, the height of the stack should not be less than 275m	Single stack of 275 m height with 3 flues for all three units of 210 MW of Stage-I has been provided.
v.	Online stack monitoring equipment should be provided for measuring SO_2, NO_x and particulates.	Online stack monitoring equipment has been provided for measuring SO_2 , NO_x and Particulates.
vi.	At least 3-4 air quality monitoring stations should be provided	4 Ambient Air Quality stations have been provided.
vii.	Liquid effluents emanating from the different plants of the power station should be treated as per the standards prescribed by TNPCB	Liquid effluents emanating from the different plants of the power station are treated as per the standards prescribed by TNPCB
viii.	The temperature of the condenser water at the point of confluence in sea should not be more than 5° C over and above the ambient temperature of sea water	The temperature of the condenser water at the point of confluence in sea is not be more than 5° C over and above the ambient temperature of sea water
ix.	Efforts should be made to conserve the water to the extent possible by way of recycling / reuse.	Efforts have been made to conserve the water to the extent possible by way of recycling / reuse by way of (i) recycling of supernant water from Ash pond for mixing with bottom ash for disposal to ash pond, (ii) Treated sewage water is being utilised

		for green belt development.
x.	No fly ash / bottom ash should be disposed off into the sea or estuary	No fly ash/bottom ash is disposed off into the sea or estuary.
xi.	Proper ash dykes / ponds should be built and the effluent should meet the standards prescribed by TNPCB	Requisite ash pond has been constructed to meets the standards prescribed by TNPCB.
xii.	Efforts should be made to utilise the fly ash / bottom ash for construction purposes to the extent possible.	Fly ash generated is supplied to cement industries. The bottom ash is supplied to brick manufacturers. The leftover ash is sent to ash dyke in slurry form.
xiii.	Green belt should be raised all around the power plant.	Green belt has been raised all around the power plant.

5/6/2015

(Dr. S.V. Reddy)
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Government of India
Ministry of Environment, Forests and Climate Change (MoEF&CC)
Regional Office – South Eastern Zone
Nungambakkam, Chennai – 600034.

MONITORING REPORT OF NCTPS STAGE – II (2X600 MW)

PART I

DATA SHEET

1		Project Type River valley / Mining / Industry / Thermal / Nuclear / Other Specify	:	Thermal power project
2		Name of the project	:	North Chennai Thermal Power Station stage – II (2X600)
3		Clearance letter(s) / OM No. and dated	:	1. MoEF Memo No. : J.1011/11/95-IA.II(T) dated 10.05.1996 for 2X525 MW. 2. MoEF Memo No. : J.13011/11/95-IA.II(T) dated 27.11.2012 for 2X600 MW.
4		Locations	:	
	d.	Taluk(s) District	:	Ponneri Taluk Thiruvallur District
	e.	State (s)	:	Tamil Nadu
	f.	Latitudes / Longitudes	:	13° 13' to 13°18'N & 80° 19' to 80°20' E
5		Address of correspondence		
	a.	Address of concerned project Chief Engineer (with Pin Code & telephone / telex / fax numbers		Chief Engineer, NCTPS – II, Chennai – 120.
	b.	Address of Executive Project Engineer/ Manager (with Pin Code/fax numbers)	:	Superintending Engineer / Operation, NCTPS – II, Chennai – 120.
6		Salient features:		
	a.	Salient features of the project	:	Coal based thermal power plant in which fuel is burnt and energy available in the fuel converted to electrical energy through steam – water cycle for which raw water is processed through a RO – DM Plant. Open cycle seawater system is used as a cooling medium.

	b.	of the environmental management plans	:	• Coal is conveyed only through closed conveyor system. • High efficiency (99.937%) ESPs have been provided. • Dry fly ash from the ESP is collected and transported to the storage silo through pneumatic vacuum conveying system. • Green belt • Dust suppression system • Dust extraction system
7		Breakup of the project area:		
	a	Project area	:	Out of the total 1067 acres of land of NCTPS Complex, 180 Acres have been allotted to NCTPS Stage – II (2 X 600 MW)
8		Break up of project affected population with enumeration of those losing houses / dwelling units only, agricultural land only, both dwelling units and agricultural land and landless labourers / artisans		Not applicable since no R&R issue.
	a	SC,ST/Adivasis	:	Nil
	b	Others	:	Nil
9		Financial Details:		
	a	Project cost as originally planned and subsequent revised estimates and the years of price reference	:	Rs. 5,15,003 Lakhs. (Based on the Detailed Project Report)
	b	Allocations made for environmental management plans, with item wise and year wise breakup	:	Rs.41,200 lakhs
	c	Benefit cost ratio / internal rate of return and the years of assessment	:	--
	d	Whether (c) includes the cost of environmental management as shown in (b) above	:	--
	e	Total expenditure on the Project so far	:	Rs. 6,10,000 Lakhs
	f	Actual expenditure incurred on the environmental management plans so far	:	Rs.41,200 lakhs for implementing environmental protection / management measures as indicated in item 6(b).
10		Forest land requirement:	:	Nil
	a	The status of approval for a diversion of forest land for non-forestry use	:	Not Applicable
	b	The status of compensatory afforestation, if any	:	Not Applicable

	c	The status of clear felling	:	Not Applicable
	d	Comments on the viability and sustainability of compensatory afforestation programme in the light of actual field experience so far	:	Not Applicable
11		The status of clear felling in non-forest area (such as submergence area of reservoir, approach road), if any, with quantitative information	:	Nil
12		Status of construction:		
	a	Date of commencement	:	2008
		Date of completion (actual and / or planned)	:	20.03.2014
13		Reasons for the delay if the project is yet to start.	:	Not Applicable
14		Date of site visit:		
	a	The dates on which the project was monitored by the Regional Office on previous occasions, if any	:	30.06.2007 and 14.06.2011
	b	Date of site visit for this monitoring report		30.04.2015
15		Details of correspondence with project authorities for obtaining action plans, information and status of compliance to safeguards	:	The Chief Engineer/Civil NCTPP- Stage-I &II North Chennai Thermal Power Station Chennai-600120

PRESENT STATUS OF THE PROJECT

Both the units of NCTPS – II (2 X 600MW) are in operation after obtaining necessary Consent to Operate for the power plant from TNPCB.

5/6/2015

(Dr. S.V. Reddy)
Scientist 'F'

Part-II

Subject: Compliance of Conditions Stipulated in Environmental Clearance issued by MOEF/GOI to M/s. Videocon Power Ltd

Reference: Office Memo No.J.1011/11/95-IA.II (T), dt.10.5.1996

A. SPECIFIC CONDITONS: NIL

B. GENERAL CONDTIONS:

S.N	Conditions	Compliance Status
i.	All project related activities should be duly approved by State authorities.	Complied
ii.	TNPCB conditions should be strictly implemented.	Complied
iii.	Stacks of 275m height should be provided for the boilers	Complied
iv.	Adequate space should be earmarked	Complied
v.	A greenbelt should be created all along the plant	Complied
vi.	Closed Cycle Circulating Water System should be incorporated and no ground water should be used	Refer Part-III
vii.	Noise levels should be controlled	Complied
viii.	Dust suppression system to be installed to control fugitive emissions	Complied
ix.	All the plant effluents should be brought to Central Guard Pond	Complied
x.	Continuous monitoring of ambient air quality should be carried out	Agreed to comply
xi.	Ash pond for Stage – I should only be used for ash disposal.	Complied
xii.	Easy access should be provided by way of overhead bridge or small road	Refer Part-III
xiii.	High concentration slurry disposal method should be practiced as per MOU	Refer Part-III
xiv.	Only beneficiated coal with ash content not exceeding 30% should be used	Complied
xv.	Suitable afforestation programme should be ensured	Refer Part-III

xvi.	The project authorities should extend full cooperation during monitoring	Complied
xvii.	Adequate financial provision should be made in the project estimate	Complied
xviii.	Monitoring Committee should be constituted	Not Complied

Subject: Compliance of Additional Conditions Stipulated in Transfer of EC issued by MOEF/GOI to TANGEDCO

Reference: Office Memo No.J.13011/11/1995-IA.II(T), dt.27.11.2012

A. SPECIFIC CONDITONS: NIL

B. GENERAL CONDTIONS:

S.No	Conditions Stipulated	Compliance Status
xix	High Efficiency Electrostatic Precipitators (ESPs) shall be installed	Complied
xx	Adequate dust extraction system shall be provided.	Complied
xxi	Upload the status of compliance of conditions stipulated in the EC	Agreed to comply
xxii	Pollutants levels shall be regularly monitored and results displayed	Agreed to comply
xxiii	Regular monitoring of ground water level shall be carried out	Complied
xxiv	A long term study on radio activity and heavy metals contents shall be carried	Agreed to comply
xxv	Rehabilitation of abandoned Ash Pond shall be ensured	Refer Part-III

5/6/2015

(Dr. S.V. Reddy)
Scientist 'F'

Part- III

Subject: Compliance of Conditions Stipulated in Environmental Clearance issued by MOEF/GOI to M/s. Videocon Power Ltd

Reference: Office Memo No.J.1011/11/95-IA.II(T), dt.10.5.1996

A. SPECIFIC CONDITONS: NIL

B. GENERAL CONDTIONS:

S. N	Conditions Stipulated	Compliance Report
i.	All the designs of the plant and other project related activities should be duly approved by the competent State authorities.	Necessary approvals as required and as applicable have been obtained.
ii.	The conditions stipulated by the Tamil Nadu State Pollution Control Board vide their letter No.TII/TNPCB/TNSEC/242/ CMN/95 dated 16th August 1995 should be strictly implemented.	Compliance is agreed upon
iii.	For ensuring dispersal of sulphur dioxide stacks of 275m height should be provided for the boilers and gaseous emissions from the plant should conform to the Air Quality Standards prescribed by the Tamilnadu Pollution Control Board	275m high stack has been provided and gaseous emissions from the plant conform to the Air Quality Standards prescribed by the Tamilnadu Pollution Control Board as per reports.
iv.	Adequate space should be earmarked for installation of flue gas desulphurisation plant in future for control of sulphur dioxide.	Adequate space has been provided for installation of flue gas desulphurisation plant.
v.	A greenbelt should be created all along the plant between the cooling water channel and boundaries of the existing plant, around the ash disposal area, etc. A norm of 1500 – 2000 trees/hectare should be adopted and requisite infrastructure such as nursery, manpower, funds, etc., should be ensured. For filling up of vacant spaces in the existing plant area, a phased joint programme involving the Tamil nadu Electricity Board should be worked out and submitted to the Ministry within three months, i.e., by June 1996	A greenbelt has been created all along the Plant between the cooling water channel and boundaries of the existing plant, around the ash disposal area, etc. Green belt has been developed and spread in about 30% land of the total Power Plant Complex after consistent plantations. Requisite infrastructure such as manpower, funds are provided.
vi.	As proposed, Closed Cycle Circulating Water System with cooling towers should be incorporated in the project and only make up water to be drawn from the existing cooling water channel. The process water requirements of 2.9	Open Cycle Condenser Cooling System is implemented instead of Closed Cycle System. The same has also been included in the Minutes of the EAC meeting. *The Committee in the said meeting had deliberated the issues involved and had agreed to the requested change in*

	MLD should be drawn from the schemes which will be established by Madras Sewerage Renovation and Improvement Projects by June 1999. No ground water should be used for any project work.	*configuration from 2x525 MW to 2x600 MW.* ground water is tapped.
vii.	Noise levels should be controlled and persons working close to the sources should be provided with adequate protection against noise in the form of ear plugs, ear muffs, etc.	All machineries are provided with cladding / mufflers. All working personnel are provided with ear plugs / muffs to control noise pollution.
viii.	Dust suppression system to be installed at coal handling plant area to control fugitive emissions	Dust suppression system has been installed at coal handling plant area to control fugitive emissions.
ix.	All the plant effluents should be brought to Central Guard Pond for dilution and necessary treatment to bring the pollution load to specified standards before final discharge.	Complied with.
x.	Continuous monitoring of ambient air quality around project area should be carried out and results should be analysed and submitted every six months to the Regional Office of MOEF at Bangalore	The NCTPS Stage-II has been commissioned on 20.03.2014. For continuous monitoring of ambient air quality around project area, 4 nos. CAAQMS have been procured. Action is being taken to erect the equipment and link the data to TNPCB website as informed.
xi.	Ash pond constructed for Stage - I should only be used for ash disposal after properly treating the base to avoid leaching of chemicals to ground water and fresh water bodies in the vicinity. Continuous monitoring of ground water quality should be initiated for this purpose.	Ash pond constructed for stage-I is only being used for disposal of ash of Stage-II. Anna university/Chennai is continuously monitoring the quality of ground/surface water in and around the Ash pond to ensure there is no leaching of chemicals.
xii.	Since there are habitations on north and south side of ash pond area, easy access should be provided by way of overhead bridge or small road. A cremation place is getting affected in the ash pond area and as such a new one should be constructed as per the demands of the local people.	Rehabilitation and Resettlement measures had already been completed including providing the cremation ground at the time of establishing NCTPS Stage-I, ie., during 1995 itself. As the present NCTPP Stage - II is within the already established NCTPS Complex, R&R issues do not arise.
xiii.	High concentration slurry disposal method as proposed should be practiced for disposing ash. In first phase 2.50 lac tonnes (30%) and in second phase 3.50 lac tonnes (40%) of ash should be used as per MOU signed with Sreevikash, a Group Company of Nagarjuna Litecrete	This proposal and MOU was earlier submitted by M/s.Videocon Power Ltd. However, now the E.C has been got transferred in the name of TNEB during 2012. Presently TNEB (TANGEDCO) is collecting fly ash in dry form and disposing the same to Cement / Brick industries. The bottom ash is collected in semi wet form and

	Limited.	disposed in ash dyke.
xiv.	Only beneficiated coal with ash content not exceeding 30% should be used as feed stock as all the predictions have been made on the basis of these values.	Complied
xv.	With a view to avoiding marginal dredging which is currently undertaken at the mouth of the intake water channel, suitable afforestation programme should be ensured. The dredged material should also be properly disposed to avoid its return flow into the creek	Earlier, water was drawn from Ennore Creek through an intake channel and dredging was necessary for free flow of water. Now the water is being drawn from Ennore Port Basin and no requirement of afforestation as mentioned in EC
xvi.	The above conditions will be monitored by the Regional Office of this Ministry at Bangalore from time to time. The project authorities should extend full cooperation during monitoring by providing necessary data and compliance report to officials of the regional office.	Complied
xvii.	Adequate financial provision should be made in the project estimate for ensuring implementation of the above conditions. Itemwise and yearwise requirements of funds should be submitted to the Ministry by June 1996.	Rs.41,200 lakhs has been spent for environmental protection / management measures as stated by the project authorities
xviii.	A Monitoring Committee should be constituted for reviewing the compliance to various safeguard measures by involving local recognized NGOs, Pollution Control Board, Institutions, Experts, etc	Action is being taken to constitute a monitoring committee as informed.

5/6/2015

(Dr. S.V. Reddy)
Scientist 'F'

Subject: Compliance of Additional Conditions Stipulated in Transfer of EC issued by MOEF/GOI to TANGEDCO

Reference: Office Memo No.J.13011/11/1995-IA.II(T), dt.27.11.2012

A. SPECIFIC CONDITONS: NIL

B. GENERAL CONDTIONS:

S.No	Conditions Stipulated	Compliance Report
xix	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission from the proposed plant does not exceed 50 mg/Nm^3	High Efficiency Electrostatic Precipitators (ESPs) have been installed.
xx	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.	Cyclone separators and sprinkling arrangements made in the said areas.
xxi	The project proponent shall upload the status of compliance of conditions stipulated in the environmental clearance issued vide this Ministry's letter of even no. dated 10.5.1996, in its website and updated periodically and also simultaneously send the same by e-mail to the Regional office of the Ministry of Environment And Forests.	As detailed in Sl.No.(i) and (x), the project was commissioned only in the year 2014. The details are being updated periodically.
xxii	Criteria pollutants levels including NOx, RSPM (PM_{10} & $PM_{2.5}$), SO_x (from Stack and Ambient Air) shall be regularly monitored and results displayed in your website and also at the main gate of the Power Plant.	Criteria pollutants levels including NOx, RSPM (PM_{10} & $PM_{2.5}$), SO_x (from Stack and Ambient Air) are being regularly monitored through HVS machines and online stack emission monitors. However in respect of measurement of $PM_{2.5}$, as indicated in Sl.No.(x) above, arrangement is being made to install the required equipment and to connect the display of results of criteria pollutants levels in TANGEDCO website and main gate of power plant
xxiii	Regular monitoring of ground water level shall be carried out by establishing a net work of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg,Cr,As,Pb) and records maintained and submitted to the regional office of this ministry. The data so obtained should be compared with the baseline data so as to ensure that ground water quality is not adversely affected due to the project.	Necessary heavy metal study in and around the existing Ash pond area is being carried out through the Anna university and the report is enclosed for kind reference. The report reveals that there is no adverse effect on the quality of ground water.

xxiv	A long term study on radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. 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.	As detailed in Sl.No.(i) and (x), the project was commissioned only in the year 2014. Report on radio activity and heavy metal contents on coal is being carried out through an approved Lab and the report will be submitted shortly.
xxv	Rehabilitation of abandoned Ash Pond shall be ensured such that ecological restoration is physically manifested within a period of three years and accordingly action plan formulated and details submitted to the Regional office of the Ministry and State Pollution Control Board.	TANGEDCO has obtained Environmental clearance from MoEF/New Delhi to set up Ennore SEZ Thermal Power Project of 2x800 MW capacity in the abandoned Ash pond of NCTPS (copies of CRZ Clearance and EC are annexed). The construction work has been commenced.

S Reddy
5/6/2015

(Dr. S.V. Reddy)
Scientist 'F'