



REGD.POST WITH ACK.DUE

CONSENT ORDER FOR ESTABLISHMENT

Order No.177/PCB/CFE/RO-NLR/HO/2009 433

Dt.15.05.2010

Sub: PCB - CFE - M/s. Thermal Powertech Corporation (India) Ltd., Painampuram (V), Nelatur (V), Muthukur (M), SPSR Nellore District - Consent for Establishment of the Board under Sec.25 of Water (P & C of P) Act, 1974 and Under Sec.21 of Air (P&C of P) Act, 1981 - Issued - Reg.

- Ref:
- 1) Public hearing conducted on 7.8.2009 at MPP School, Painampuram (V), Muthukur (M), SPSR Nellore District.
 - 2) Environmental Clearance dt. 4.11.2009 issued by MOE&F, GOI.
 - 3) Industry's application received through SWCC on 14.12.2009
 - 4) R.O's inspection report dt. 22.12.2009
 - 5) CFE Committee meeting held 10.3.2010 & 8.4.2010
 - 6) Industry's Ir.dt. 5.4.2010
 - 7) CFE Committee meeting held on 17.4.2010
 - 8) Industry's Ir.dt. 28.4.2010
 - 9) CFE Committee meeting held on 01.05.2010
 - 10) Industry's Ir.dt. 3.5.2010

1. In the reference 3rd cited, an application was submitted to the Board seeking Consent for Establishment (CFE) to establish Super Critical Coal Based thermal power plant with installed capacities as mentioned below, with a project cost of Rs. 10874.00 crores

Sl. No.	Product / Activity	Capacity
1	Generation of Electrical Power Fuel - Blended coal (70% indigenous coal and 30% imported coal)	1980 MW (Stage - I - 2 x 660 MW + Stage - II - 1 x 660 MW)

2. As per the application, the above activity is to be located at Sy. Nos Painampuram village : 282, 290,278/1,279/1,280/1,281, 283 to 289, 291, 292, 293, 327, etc. Nelatur Village :247,258,273A &B, 308, 244/2, 245/2, 254/1/2,255/1/2/4/5/6/7, 256/2/3/5, 257/1/2, etc. of Muthukur (M), SPSR Nellore District in an area of 1367.0 Acres
3. The above site was inspected by the Environmental Engineer, Regional office, Nellore, A.P Pollution Control Board on 22.12.2009 and found that the site is surrounded by

North : Part of proposed site of M/s. Nelcast Energy Corpn, Ltd. and dry lands.

South : Creek followed by part of proposed site of M/s. Coastal Andhra Power Corpn. Ltd.,

East : Vacant land (CRZ area) followed by sea

West : CRZ area followed by Buckingham canal.

4. The Board, after careful scrutiny of the application and verification report of Regional Officer, hereby issues CONSENT FOR ESTABLISHMENT to your unit Under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. This order is issued to manufacture the products as mentioned at para (1) only.
5. This Consent Order now issued is subject to the conditions mentioned in Schedule 'A' and Schedule 'B'.
6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.

Encl: Schedule 'A'
Schedule 'B'

Sd/-
MEMBER SECRETARY

✓To
M/s. Thermal Powertech Corporation (India) Ltd.,
6-3-1090, TSR Towers, Somajiguda,
Hyderabad – 500 082.

/// T.C.F.B.O ///


JOINT CHIEF ENVIRONMENTAL ENGINEER (CFE)

17/3/10

SCHEDULE - A

1. Progress on implementation of the project shall be reported to the concerned Regional Office, A.P. Pollution Control Board once in six months.
2. Separate energy meters shall be provided for Effluent Treatment Plant (ETP) and Air pollution Control equipments to record energy consumed.
3. The proponent shall obtain Consents for Operation (CFO) from APPCB, as required Under Sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the activity.
4. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec.27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and to make such alternation as deemed fit and stipulate any additional conditions by the Board.
5. The consent of the Board shall be exhibited in the factory premises at a conspicuous place for the information of the inspecting officers of different departments.
6. Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.
7. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas. The industry shall maintain a good housekeeping. All pipe valves, sewers, drains shall be leak proof. Dyke walls shall constructed around storage of chemicals.
8. Rain Water Harvesting (RWH) structure (s) shall be established on the plant site. The proponent shall ensure that effluent shall not enter the Rain Water harvesting structure.
9. The rules and regulations notified by Ministry of Law and Justice, GOI, regarding the Public Liability Insurance Act, 1991 shall be followed.
10. This order is valid for period of 5 years from the date of issue.

SCHEDULE - B

Water:

1. The source of water is Sea Water from Bay of Bengal and the maximum permitted water consumption is 3,34.464KLD

S. No.	Source	Quantity
1.	Cooling Water Make up (Saline water)	282384.0 KLD
2.	Non-cooling water	
	RO First Pass	
	i. Ash handling Sealing	3360.0 KLD
	ii. Coal Handling Plant dust suppression	7152.0 KLD
	iii. High Vacuum AC makeup	2640.0 KLD
	iv. Misc. Services (for fire fighting, etc)	768.0 KLD

v.	R.O Rejects	33336.0 KLD
vi.	Clarifier bow down	1584.0 KLD
	RO Second pass	
i.	DM Plant	3120.0 KLD
ii.	Domestic (Plant)	48.0 KLD
iii.	Domestic (Colony)	72.0 KLD
	Total	334464.0 KLD

2. The maximum Waste Water Generation (KLD) shall not exceed the following:

S. No.	Source	Quantity
1.	Cooling tower blow down	174000.0 KLD
2.	Ash pond outlet	10000.0 KLD
3.	Clarifier blow down	1584.0 KLD
4.	First pass RO reject	33336.0 KLD
5.	DM plant regeneration	168.0 KLD
6.	Boiler blow down	120.0 KLD
7.	Domestic (plant)	38.4 KLD
8.	Domestic (colony)	57.6 KLD
9.	Misc. service water (Floor wash)	120.0 KLD
	Total	219424.0 KLD

Treatment & disposal:

	Source of Effluent	Treatment	Mode of final disposal
1	◦ DM Plant Back wash (168 KLD)	Neutralization followed by dilution at Common Monitoring Basin (CMB)	384 KLD for greenbelt development.
	◦ Boiler blow down (120 KLD)	Common Monitoring Basin (CMB)	
	◦ Domestic plant & colony (96 KLD)	Sewage treatment plant	
	◦ Misc. service water (120 KLD)	Oil & Grease trap fol. by CMB	120 KLD for horticulture
	◦ Clarifier blow down (1584 KLD)	-	To Ash pond
2	Cooling tower blow down (174000 KLD)	-	217336.0 KLD of waste water shall be discharged into sea marine outfall facility.
	First pass RO reject (33336 KLD)	-	
	Ash Pond outlet (10000 KLD)	-	

3. The Effluent Treatment Plant (ETP) and Sewage Treatment Plant (STP) shall be constructed and commissioned along with the commissioning of the activity. All the units of the ETP & STP shall be impervious to prevent ground water pollution.

4. The effluents shall be treated to the onland for irrigation / marine water standards as applicable, stipulated under Environment (Protection) Rules, 1986, notified and published by Ministry of Environment and Forests, Government of India as specified in Schedule VI vide G.S.R.422 (E), dt.19.05.1993 and its amendments thereof, and additional standards / conditions stipulated by APPCB.
5. Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned below.
 - a) Industrial cooling, boiler feed.
 - b) Domestic purposes.
 - c) Processing, whereby water gets polluted and pollutants are easily bio-degradable.
 - d) Processing, whereby water gets polluted and the pollutants are not easily bio-degradable.
6. The treated effluents conforming to the prescribed standards only shall be discharged from cold water side in the sea. The temperature of the discharge effluents shall not exceed 5°C over and above the ambient water temperature of the sea.
7. On line monitoring to marine discharge water temperature shall be provided at the point of entry into the marine outfall and records shall be maintained.

Air:

8. The Air pollution Control equipment shall be installed along with the commissioning of the activity and shall comply with the following for controlling air pollution.

Sl. No	Details of stack	Stack 01	Stack 2
a)	Attached to	Super critical boilers.	Super critical boiler.
b)	Capacity	2 x 2016 TPH	1 x 2016 TPH
c)	Fuel	Coal	Coal
d)	Fuel quantity	2x308.84 TPH	1x308.84 TPH
e)	Stack height (above GL)	275 m Bi-flue stack	275 m
f)	Diameter	5.5 m dia	5.5 m dia
g)	Control equipment.	2 ESPs followed by bag filters designed for outlet concentration of 50 mg/NM ³	ESP followed by bag filters for outlet concentration of 50 mg/NM ³

9. The industry shall install stacks of 275 m height with online continuous monitoring equipment for Sox, NOx, Particulate matter and Hg. Exit velocity of the gases shall not be less than 24 m/sec.
10. The industry shall install high efficiency Electrostatic Precipitators (ESP) to ensure that the SPM in the stack does not exceed 50 mg/Nm³ and shall provide additional chamber (s) as spare to meet emergency requirement.

11. The industry shall provide adequate space for installation of flue gas desulphurization (FGD) with Mercury removal system now itself, if required at later stage, as stipulated by MOE&F, GOI.
12. Regular monitoring of ground level concentration of SO₂; NO_x, Hg, SPM and RSPM shall be carried out in the impact zone and records shall be maintained. If at any state these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation of the Board. Periodic reports shall be submitted to the concerned Regional Officer.
13. A sampling port with removable dummy of not less than 15 cm diameter shall be provided in the stack at a distance of 8 times the diameter of the stack from the nearest constraint such as bends etc. A platform with suitable ladder shall be provided below 1 meter of sampling port to accommodate three persons with instruments. A 15 AMP 250 V plug point shall be provided on the platform.
14. The generator and turbines shall be installed in a closed area with suitable noise absorption systems. The ambient noise level shall not exceed 75 dB(A) during day time and 70 dB(A) during night time.

Solid Waste:

15. The proponent shall comply with the following:

	Blend Coal (70% indigenous coal and 30% Imported Coal)
Total Coal Consumption	6.90 MTPA
Total Ash	1.79
Fly Ash (@ (80%))	1.43
Bottom Ash (@20%)	0.36

16. Dry bottom ash collection system shall be adopted to the maximum extent possible and shall be sent to cement manufacturing units and brick manufacturing units etc. For unutilized bottom ash, as ash slurry system is to be provided for disposing ash to ash ponds in slurry mode.
17. Mercury and other heavy metals (Hg, Cr, As, Pb) shall be monitored in the bottom ash and also in the effluents emanating from the ash pond.
18. The ash slurry is to be conveyed to the ash pond by ash slurry pumps & pipes. The ash pond is to be constructed in compartments such that the dyke is formed to contain the ash slurry.
19. Ash pond shall be lined with impervious lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached. After settlement of slurry, the overflow shall be collected in settling tank form where the treated wastewater shall be pumped back to the plant for reuse.
20. Regular monitoring of ground water in and around the ash pond area including heavy metals (Hg, Cr, As, Pb) shall be carried out, records maintained and six monthly reported shall be furnished to the concerned Regional Officer. The data obtained shall be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.

21. The industry shall install appropriate and adequate dust extraction system and water spray system in coal handling areas, ash handling points, transfer areas and other dusty areas to control dust emissions.
22. The industry shall implement 100% dry fly ash collection and the entire dry fly ash shall be utilized for cement manufacturing & brick manufacturing.
23. Adequate safety measures shall be provided in the plant area to check / minimize spontaneous fires in coal yard, especially during summer season.
24. Storage facilities for auxiliary liquid fuel such as LDO /HFO/LSHS shall be made in the plant area where risk is minimum to the storage facilities. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place. Mock drills shall be conducted regularly and based on the same, modifications required, if any shall be incorporated in the Disaster Management Plan. Sulphur content in the liquid fuel shall not exceed 0.5 %.
25. The industry shall utilize bottom ash to the maximum extent possible for cement manufacturing, brick manufacturing etc. The unutilized bottom ash shall be disposed off in the ash pond in the form of slurry mode.
26. The following rules and regulations notified by the MOE&F, GOI shall be implemented.
 - a) Hazardous waste (Management, Handling and Transboundary Movement), Rules,2008.
 - b) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.
 - c) Fly Ash Notification,1999 & amendments thereof.
 - d) Coastal Regulatory Zone (CRZ) Notification, 1991.

Other Conditions:

27. Green belt of width 25 m shall be developed along the boundary of the industry. Green belt development shall be started along with the construction activity. As committed, Greenbelt shall be developed in minimum of 396 acres.
28. The recommendations / commitments made during the Public Hearing held on 7.8.2009 at Painampuram (V) & Nelaturu (V), Muthukur (M), SPSR Nellore District shall explicitly be followed from pollution control point of view.
29. The Board will constitute External Technical Committee to monitor the pollution problems during the construction and also post monitoring for a period of 3 years as 8 Nos. of Thermal Power Plants are coming up within 20 km radius of Krishnapatnam Port. Depending upon the outcome of the monitoring results, necessary directions will be issued from time to time for taking additional pollution control measures to meet the norms prescribed by the Board.
30. The industry shall strictly implement all the recommendations made in CREP for Thermal Power plants.

31. The industry shall comply with the relevant standards stipulated for Thermal Power Plants under Schedule I of E (P) Rules, 1986, amended from time to time.
32. The industry shall comply with all the conditions stipulated in the Environmental Clearance issued vide order dt. 4.11.2009 issued by MOE&F, GOI.

Sd/-
MEMBER SECRETARY

To
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6-3-1090, TSR Towers, Somajiguda,
Hyderabad – 500 082.

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