



REGD.POST WITH ACK.DUE

Order No.182 /PCB/CFE/RO-NLR/HO/2010

787

Dt.16.06.2011

Sub: PCB – CFE – M/s. NCC Power Projects Ltd., (formerly M/s. Nelcast Energy Corporation Ltd.,) Near Painampuram, Varakavipudi and Sivarampuram Villages, Muthukur (M), SPSR Nellore District – Amendment to CFE order - Issued - Reg.

- Ref: 1) CFE Order No. 182 /PCB/CFE/RO-NLR/HO/2010, dt. 23.3.2011
2) Industry's Ir.dt. 18.5.2011 along with Amendment to E.C vide Office order dt. 18.5.2011 issued by MOE&F, GOI
3) CFE Committee meeting held on 03.06.2011

The Board vide reference 1st cited, issued CFE to the industry for setting up of coal based Thermal Power plant with installed capacities as mentioned below, stipulating certain conditions.

Sl. No	Product	Capacity
1	Electric Power Generation Fuel – Imported coal from Indonesia having ash content less than 11% and Sulphur content less than 0.6% respectively. The coal consumption shall be less than 5.48 million TPA as reported in the E.C.	1320 MW (2 x 660 MW)

The industry vide reference 2nd cited requested to transfer of CFE obtained from the Board and change in fuel from imported coal to blended coal with 70% Domestic Coal and 30% imported coal.

The issue was placed in the CFE Committee meeting held on 03.06.2011. After detailed discussions, the committee recommended for the grant of CFE for Change of name and change of fuel source as per Office order dated dt. 18.5.2011 issued MOE&F, GOI.

Hence, the Board, after careful examination of the industry's request and CFE Committee recommendations hereby accords amendment under Sec.25/26 of the Water (Prevention and Control of Pollution) Act, 1974 and under Sec.21 of the Air (Prevention and Control of Pollution) Act, 1981 and amendments thereof with following conditions to CFE issued vide reference 1st cited for change of project name from M/s. Nelcast Energy Corporation Ltd., to M/s. NCC Power Projects Ltd., and to substitute word "imported coal" with "blended coal i.e. Domestic Coal and Imported coal in the ratio of 70:30" to use as fuel subject to condition that there shall be no change in the scope of work as proposed in the original application submitted.

Specific Conditions:

1. The proponent to ensure that greenbelt area shall be developed and maintained in an extent of not less than 150 Acres for 2 to 3 years old out of the total greenbelt area of 315 acres, by the time of applying for CFO of the Board.
2. The proponent shall under take requisite measures to start disposal of the fly ash to the maximum extent from 1st year of operation onwards to cement plants, brick kilns and other disposal modes as committed by the proponent before the CFE committee. Other-wise, the Board will impose bank guarantee for suitable amount on the proponent to ensure compliance of the same.
3. The proponent shall furnish the letter of assurance on the ash and Sulphur content in the domestic coal proposed to use.
4. The proponent to ensure that the ratio of domestic and imported coal shall be 70:30 as per Office Order dt. 18.05.2011 issued by MOE&F, GOI. Any changes in the composition and proportion in the coal supply/ use shall not be under taken without prior approval from MoEF, Gol and APPCB.
5. The proponent to ensure that the emissions of SPM in the flue gases from the power plant shall be **less than 50 mg/Nm³** after change of fuel from imported coal to blended coal (domestic coal: imported coal :: 70:30).
6. The proponent shall increase COC from 1.25 to 1.3 in the cooling tower as presented before the CFE Committee.
7. The proponent shall achieve and maintain compliance of the standards for discharge or emission of pollutants and other enactments as applicable and notified for thermal power plants under the Environmental (Protection) Rules, 1986 and amendments thereof.
8. The proponent to ensure that the quality check & confirmation on assured ash & sulphur content in the domestic coal at mine site itself. No such coal in excess of ash and sulphur content than the prescribed shall be brought to the site.
9. The proponent shall ensure that there shall not be any change in the process technology and scope of working without prior approval from the Board.

10. The industry shall install continuous online monitoring system for stack emissions & ambient air quality in the premises and in the surrounding area for monitoring of prescribed pollutant parameters. Further they shall provide networking of the online monitoring data to APPCB, H.O for website display.
11. The proponent shall comply with all the directions issued by the Board from time to time.
12. Concealing the factual data or submission of false information / fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant Pollution Control Acts.
13. The Board reserves its right to modify above conditions or stipulate any additional conditions in the interest of environment protection.
14. The order is issued without prejudice to the rights and contentions of this Board in any court of law.

All other conditions mentioned in the CFE order issued vide reference 1st cited remain the same.

Sd/-
MEMBER SECRETARY

To
M/s. NCC Power Projects Ltd.,
(formerly M/s. Nelcast Energy Corporation Ltd.,)
8-2-698, 4th floor, M.J. Towers,
Road No.12, Banjara Hills, Hyderabad – 500 034.

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

JOINT CHIEF ENVIRONMENTAL ENGINEER(CFE)

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ANDHRA PRADESH POLLUTION CONTROL BOARD
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REGD.POST WITH ACK.DUE
CONSENT ORDER FOR ESTABLISHMENT

Order No.182 /PCB/CFE/RO-NLR/HO/2010

Dt.23 .03.2011

Sub: PCB - CFE - M/s. Nelcast Energy Corporation Ltd., Near Painampuram, Varakavipudi and Sivarampuram Villages, 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) Environmental Clearance dt. 30.9.2010 issued by MOE&F, GOI.
 - 2) Industry's application received through SWCC on 6.11.2010 & Addl.information on 15.11.2010.
 - 3) R.O's inspection report dt. 15.11.2010
 - 4) CFE Committee meeting held on 18.12.2010
 - 5) T.O. Lr.dt. 24.12.2010
 - 6) Industry's lr.dt. 17.1.2011
 - 7) CFE Committee meeting held on 9.2.2011
 - 8) T.O. Lr.dt. 22.2.2011
 - 9) Industry's lr.dt. 24.2.2011
 - 10) CFE Committee meeting held on 18.3.2011
 - 11) Industry's lr.dt. 23.3.2011

1. In the reference 1st cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for coal based thermal power plant to produce the following with installed capacities as mentioned below, with a project cost of Rs. 6822.0 Crores

Sl. No	Product	Capacity
1	Electric Power Generation Fuel - Imported coal from Indonesia having ash content less than 11% and Sulphur content less than 0.6% respectively. The coal consumption shall be less than 5.48 million TPA as reported in the E.C.	1320 MW (2 x 660 MW)

2. As per the application, the above activity is to be located at the following survey numbers in an area of 865 Acres. Details of land acquired as furnished by the proponent vide lr.dt. 23.3.2011.

Ananthavaram village (Sy.No): 1/1,1/2,1/3,2,3,5,6,7,8,9,10/1,10/2,10/3, 1 to 10, 12/2A1, 12/2A,13/1,14/1,15/1,25,12/1 & 16/1,

Pinampuram Village (Sy.No): 321,322/1,307/1,308/1,310/2-1, 311/1, 312/1, 313/1, 314/1,315 to 320,321/1, 323/1.

Varakavipudi Village (Sy.No): 16/2,17/A,17/B,18/A,19/A,19/B, 22/A, 22/B, 23, 24, 26/A, 26/B, 27/A, 29, 30/A,30/B,30/C,30/D,31/A,31/B, 32/A, 32/B, 34/A, 34/B, 34/C, 34/D, 36/C, 37/3, 39/1,39/3,40,1494/A, 1513 A & B

Sivaramapuram Village (Sy.No) : 82,83,84,85,86-2 &86-3

Eduuru Bit -2 (Sy.No):

1493-1, 1506-1,1508-2,1509-2,1511,1513 A & B, 1494/1, 1494/2,1494/A &1502.

3. The above site was inspected by the Environmental Engineer, Regional office, Nellore, A.P Pollution Control Board on 10.11.2010 and found that the site is surrounded by

North : Fish ponds, casurina plantation and Edurupadu Fishermen habitation.

South : Proposed site of M/s.Thermal Power Tech.

East : Bay of Bengal

West : Buckingham canal followed by vacant lands.

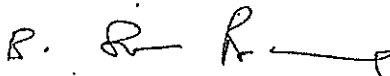
4. The Board, after careful scrutiny of the application and verification report of Regional Officer, hereby issues **CONSENT FOR ESTABLISHMENT** to your unit y Under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and 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. Nelcast Energy Corporation Ltd.,
(2x 660 MW Power Plant),
159, TTK Road, Alwarpet,
Chennai - 600 018.

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JOINT CHIEF ENVIRONMENTAL ENGINEER(CFE)

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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 be constructed around storage of chemicals.
8. Rain Water Harvesting (RWH) structure (s) shall be established on the plant site. The proponent shall be 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 (Bay of Bengal) and the maximum permitted water consumption is 3,13,440.0 KLD.

Sl. No.	Purpose	Quantity (KLD)
1)	Process, washings & Boiler feed	1008.0
2)	Cooling Tower make up(Saline Water)	273728.0
3)	Domestic	22.0
4)	Others	38682.0
	Total	3,13,440.0 KLD

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

Sl. No.	Source	Quantity (KLD)
1)	Cooling tower blow down	210560.0
2)	Clarifier Blow down	15712.0
3)	Filter backwash	2328.0
4)	First RO Pass reject	14120.0
5)	Miscellaneous services	100.0
6)	DM Regeneration	32.0
7)	Domestic effluents	17.0
	Total	2,42,869.0

Treatment & Disposal:

S. No	Effluent source	Treatment	Mode of final disposal
1.	Cooling tower blow down	Polishing pond	To sea through marine outfall after treatment and compliance of marine discharge standards.
2.	De-Salination plant reject	Polishing pond	
3.	Plant wash	Oil & Grease removal	
4.	Clarifier blow down	Polishing pond	
5.	Mixed Bed wash effluents	Polishing pond	
6.	Boiler Blow down & D.M plant regeneration.	Neutralization	Green belt development / recycling after treatment and compliance of onland for irrigation standards.
7.	Domestic effluents	STP	

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 from Stream No. 1 to 5 shall be treated to the marine discharge water standards and effluents from stream No. 6 & 7 shall be treated to the onland for irrigation standards as stipulated under Environment. (Protection) Rules, 1986, notified by MoEF, Govt as specified in Schedule VI vide G.S.R.422 (E), dt.19.05.1993 and its amendments thereof.
5. The industry shall not discharge effluents into canal systems, back water, marshy areas and the sea without treatment as per E.C. dt. 30.9.2010. The discharges into sea shall be done only after treatment and meeting the discharge standards into marine coastal area. Arrangements shall be made that effluents & storm water do not get mixed.
6. The proponent shall regularly monitor the ground water quality for mercury and other heavy metals (Hg, Cr, As, Pb., etc) around the ash handling area including surface water bodies in the vicinity. The monitoring data shall be compared with baseline data and requisite measures shall be implemented to prevent any kind of direct/ indirect contamination of water resources in the project surroundings.
7. The proponent shall adopt COC 1.25 in closed circuit cooling system with natural draft cooling system. The effluents from cooling tower shall be treated as per prescribed norms.

8. The proponent shall install flow meters for the purpose of measuring the hydraulic load of treated effluents recycled/ reused and discharged into sea after treatment through marine outfall.
9. 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.

Air:

10. 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
a)	Attached to	Boilers (2 nos)
b)	Capacity	2 x 2120 TPH Boilers with two flues (2 x 660 MW Steam Turbine)
c)	Fuel quantity	Imported Coal - 5.48 Million TPA @ 85% PLF (Indonesia coal; sulphur 0.6%; Ash content 11% as per E.C. order dt. 30.9.2010)
d)	Stack height :	275 mtrs. Bi-flue Stack
e)	Control equipment.	Electrostatic Precipitators (ESP)
f)	Concentration of particulate matter	< 50 mg/Nm ³

11. As per coal linkage agreements with imported coal suppliers furnished and supplementary information furnished by the proponent, the ash and sulphur content in the imported coal shall not exceed 11 % and 0.60% respectively. The proponent shall ensure to maintain the above quality as committed and confirmation on the above shall be submitted regularly to R.O., APPCB for each consignment before importing at port itself.
12. The industry shall install high efficiency Electrostatic Precipitators (ESP) to the boilers to achieve emissions of Particulate Matter less than 50 mg/Nm³ in the stack emissions as per E.C. dated. 30.9.2010.
13. The industry shall provide adequate space for installation of flue gas desulphurization (FGD), if required at later stage, as stipulated by MoE&F, Gol.

14. Regular monitoring of ground level concentration of SO₂, NO_x, Hg, PM₁₀ & PM_{2.5} shall be carried out in the impact and buffer zone and records shall be maintained. If at any stage these levels are found to exceed the prescribed limits, requisite restorative measures shall be implemented immediately. The location of the monitoring stations shall be fixed in consultation with the Regional Officer of the Board. Consolidated daily reports shall be submitted to the concerned Regional Officer on monthly basis.
15. The proponent shall use only imported coal for 2 x 660 MW and electricity generation plant. The ash & sulphur content in the imported coal shall not be more than 11.0% and 0.6 % respectively as per E.C. dated. 30.9.2010.
16. The proponent shall ensure compliance of the National Ambient Air quality standards notified by MoEF, GoI vide notification No. GSR 826(E), dated. 16.11.2009 during construction and regular operational phase of the project.
17. Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as surroundings of coal stacking area, coal crushing, transfer lines and other coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided as per E.C. dated. 30.9.2010..
18. 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.
19. The generator shall be installed in a closed area with a silencer and 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:

20. The proponent shall comply with the following:

S. No.	Solid waste generated from	Quantity (in million TPA)	Method of disposal
1	Fly Ash	0.4752	Shall be disposed to cement / brick units
2	Bottom Ash	0.1248	To ash pond. Ash pond to be constructed in compartments such that the dyke is formed to contain the ash slurry. The overflow shall be collected into settling tank followed by re-use for ash handling.

21. Fly ash shall be collected in dry form and storage facility (silos) shall be provided. 100% fly ash utilization shall be ensured from 4th year onwards. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) shall be monitored in the bottom ash as also in the effluents emanating from existing ash pond. No ash shall be disposed off in low lying area as per E.C. dated. 30.9.2010.

22. 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.
23. Ash pond shall be lined with impervious lining. HDPE/LDPE or any other suitable impermeable lining materials such that at any instances no leachate takes place. 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.
24. Regular monitoring of ground water in and around the ash pond area including heavy metals (Hg, Cr, As, Pb etc.) shall be carried out. Records shall be maintained and half yearly reports 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 affected during implantation and operational phase of the project.
25. Adequate safety measures shall be provided in the plant area to check / minimize spontaneous fires in coal yard, especially during summer season.
26. 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 %.
27. The following rules and regulations notified by the MoE&F, GoI shall be implemented.
 - a) Hazardous waste (Management, Handling and Transboundary) Rules, 2008.
 - b) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.
 - c) Fly ash notification S.O.2804 (E), dt. 3.11.2009.
 - d) Batteries (Management & Handling) Rules, 2010.

Other Conditions:

28. In case, source of fuel supply is to be changed at a later stage, the proponent shall obtain concurrence from MOE&F, GOI as stipulated in the condition no. (ii) of E.C. and till that time the proponent shall not take up construction work connected with any components / activities associated with change of fuel source.
29. Greenbelt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted as per E.C. dt. 30.9.2010. Tree density shall not be less than 2500 per ha with survival rate not less than 75%. The industry shall ensure that the greenbelt shall be developed and maintained in an area of minimum 315.0 acres as committed vide Ir.dt. 17.1.2011.
30. The recommendations / commitments made during the Public Hearing held on 6.1.2010 for establishing of Thermal Power Plant of 2 x 660 MW shall be explicitly followed from pollution control point of view.

31. The proponent shall comply with all the conditions stipulated in the Environmental Clearance vide order dt. 30.9.2010 issued by MOE&F, GOI.
32. The proponent shall achieve 100% disposal of fly ash and bottom ash as per Fly Ash Notification issued by MOE&F, GOI vide S.O.2804 (E), dated 3.11.2009.
33. The proponent shall implement High Concentration Slurry Disposal System (HCSD) from Agitator Retention Tank (ART). The proponent shall make adequate provisions for collection of seepage from ash pond and to reuse for ash handling. The details shall be submitted regularly to the Board.
34. The proponent shall obtain CRZ clearance for the permissible activities in the CRZ area as per E.C. dt. 30.9.2010.
35. The proponent shall strictly implement all the recommendations made in CREP for Thermal Power plants.
36. The proponent shall implement adequate measures to ensure compliance with discharge standards for environment pollutants and guidelines for discharge point for condenser cooling water as notified at S.No.84 of Schedule -I of E(P), Rules, 1986 and amendments thereof.
37. The proponent shall comply with all the directions issued by the Board from time to time.
38. Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control Acts.
39. The Board reserves its right to modify above conditions or stipulate any additional conditions in the interest of environment protection.

Sd/-
MEMBER SECRETARY

To,
M/s. Nelcast Energy Corporation Ltd.,
159, TTK Road, Alwarpet,
Chennai - 600 018.

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


JOINT CHIEF ENVIRONMENTAL ENGINEER(CFE)