

# NLC – Power Generation Project (Lignite Based) TPS –II 2<sup>nd</sup> Expansion. 2 x 500 MW at Mudanai – Proposed TOR

2016

Power Generation Project (Lignite Based) Standard TOR under EIA category A,  
1 (d) (TPS II 2<sup>nd</sup> Expansion. Mudanai)

1(d):STANDARD TERMS OF REFERENCE FOR CONDUCTING  
ENVIRONMENT IMPACT ASSESSMENT STUDY FOR THERMAL POWER  
PLANTS PROJECTS AND INFORMATION TO BE INCLUDED IN  
EIA/EMP REPORT

- 1) The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference.

NLC - Thermal Power Station – II, 2<sup>nd</sup> Expansion. ( Annexure 1 – Site layout Map, Annexure -2 –Survey Numbers, Annexure 3 –Cadastral Map pertaining to Kunankurichi, Mudanai, Uthangal, Annexure 4&5, Google 5th and 10 km Map.

- 2) Vision document specifying prospective long term plan of the project shall be formulated and submitted.

Vision to emerge as a leading Mining and Power Company, continue to be a socially responsible company and strive for operational excellence in Mining and Exploration.

#### MISSION :

- Strive towards greater cost competitiveness and work towards continued financial strength.
  - Continually imbibe best practices from the best Indian and International Organizations engaged in Power Generation and Mining.
  - Be a preferred employer by offering attractive avenues of career growth and excellent work environment and by developing human resources to match international standards.
  - Play an active role in society and be sensitive to emerging environmental issues.
- 3) Latest compliance report duly certified by the Regional Office of MoEF&CC for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted.

# NLC – Power Generation Project (Lignite Based) TPS –II 2<sup>nd</sup> Expansion. 2 x 500 MW at Mudanai – Proposed TOR

2016

Enclosed as NLC Environmental Policy ( Quarterly Compliance to CPCB). – NLC Annexure – 8 - Environmental Policy

- 4) The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted.
- Site near the village Kolliruppu adjacent to NNTPS
  - Site near Marungur village west of the proposed mine III project
  - The site analysis would be a part of the EIA study.
- 5) Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.

## PROJECT HIGHLIGHTS

Sl. No	Details	Description
1	Project	2 x 500 MW at Mudanai
2	Promoters	Neyveli Lignite Corporation Limited
3	Plant Capacity	2 x 500 MW
4	Location	Detailed as below:
	Village	Mudanai
	District	Cuddalore
	State	Tamilnadu
5	Lattitude	11.0.34' N to 11.0. 35' N

NLC – Power Generation Project (Lignite Based)  
 TPS –II 2<sup>nd</sup> Expansion. 2 x 500 MW at Mudanai –  
 Proposed TOR

2016

	Longitude	79.0. 26' E to 79.0. 27' E
6	Nearest Location	NH 532 is 3 Km away
7	Nearest Railway Station	<ul style="list-style-type: none"> <li>• Uthangal Mangalam – 1.5 km</li> <li>• Neyveli = 4 km</li> </ul>
8	Nearest Airport	<ul style="list-style-type: none"> <li>• Trichy : 150 Km</li> <li>• Chennai : 200 km</li> </ul>
9	Site Elevation	+ 50m to + 57m MSL
10	Source of Water	Mine III and storm water from Mine III
11	Water Requirement	2814 m <sup>3</sup> /hr
12	Seismic Zone	Zone II as per IS : 1893 : 2002
13	Plant Cooling System	Closed cycle cooling system using Natural Draft Cooling Tower.
14	Primary Fuel & Source	Lignite will be sourced from NLC's Lignite Mine III
15	Support Fuel & Source	: HSD/LDO from nearest refinery/oil depots.
16	Lignite Fuel GCV	2720 Kcal/kg 14
17	Lignite Fuel Requirement with Gross Station Heat Rate at 85% PLF	7.44 Million Tones Per annum
18	Support fuel (LDO/HSD)	11,564 KL/year supplied by Road Tankers / Indian Railway System
19	Lignite Fuel	7.44 MMTPA Lignite will be transported from NLC's mines by belt conveyor system ii. Support fuel : By Road Tankers / Indian Railway System
20	Steam Generator	Steam Generator will be of sub-critical type, single pass design, balanced draft furnace, once through, single reheat, radiant, suitable for outdoor installation designed for firing Lignite as main fuel.
21	Steam Turbine Generator	The Steam Turbine will be single shaft, multi-cylinders, tandem compound single reheat, regenerative, condensing unit directly coupled to AC Generator giving a continuous rated output at generator terminals.
22	Control System	Distributed Digital Control & Management Information System

NLC – Power Generation Project (Lignite Based)  
 TPS –II 2<sup>nd</sup> Expansion. 2 x 500 MW at Mudanai –  
 Proposed TOR

2016

23	Chimney	One (1) no. of Twin Flue RCC Stack of 270 meter high																				
24	Power Evacuation	400 kV through PGCIL																				
25	Project Completion Schedule	50 Months for both the units from Zero Date																				
26	Land Requirement	<p>608 Acres</p> <table border="1"> <tr> <td>Main Power Block &amp; Auxiliaries</td> <td>33</td> </tr> <tr> <td>Switchyard</td> <td>21.5</td> </tr> <tr> <td>Water Storage &amp; Facilities, Cooling Tower etc.</td> <td>87.5</td> </tr> <tr> <td>Cold storage and handling facilities</td> <td>50.0</td> </tr> <tr> <td>Ash Dump Area</td> <td>154.0</td> </tr> <tr> <td>Staff Colony</td> <td></td> </tr> <tr> <td>Green Belt</td> <td>82.0</td> </tr> <tr> <td>FGD System</td> <td>4.0</td> </tr> <tr> <td>Miscellaneous</td> <td>345.0</td> </tr> <tr> <td>Total</td> <td>608 Acres</td> </tr> </table>	Main Power Block & Auxiliaries	33	Switchyard	21.5	Water Storage & Facilities, Cooling Tower etc.	87.5	Cold storage and handling facilities	50.0	Ash Dump Area	154.0	Staff Colony		Green Belt	82.0	FGD System	4.0	Miscellaneous	345.0	Total	608 Acres
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- 6) Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted.

Renewable Energy Alternatives : NLC is generating solar power on its premises . Site visited and the installations are visible inside the NLC campus.

- Wind Power – 50 MW plants
- Solar Power - 10MW

Annexure 8 (NLC Environmental Policy)

SOLAR POWER PLANT Installed	10 MW
Solar Power NLC Projections	310 MW

- 7) The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them.
- Latitude 11°34' N to 11°35' N , Longitude 79°26' E to 79°27' E – Annexure 1
  - Maps to scale shall be enclosed in EIA indicating elevation of Plant site and Ash Pond with respect HFL of water body/Nallah/River by the EIA consultant.
  - Topo- sheet enclosed as Annexure No. 6
  - IRS Satellite Map enclosed as Annexure 4 & 5 (Google 5 and 10 km maps )
- 8) Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided.

# NLC – Power Generation Project (Lignite Based) TPS –II 2<sup>nd</sup> Expansion. 2 x 500 MW at Mudanai – Proposed TOR

2016

Layout plan indicates the TPS II 2<sup>nd</sup> Expansion Layout, Pond Ash area, Highways and Railway links to the proposed site. ( **PFR – Key Plan indicating the infrastructure of TPS) – Sheet 4**

- 9) Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided.

Sl. No	Land requirement for plants	Acres
1	Main Power Block and auxillaries	33
2	Water storage and cooling tower	21.5
3	Coal Storage and handling	87.5
4	Ash Dump Area	150.0
5	Staff colony	-
6	Green Belt	82.0
7	FGD System	4.0
8	Miscellaneous	348.5
	Sub Total	608.0

- 10) Present land use (including land classism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.

- **Location Map ( Annexure 1 )**
- **Survey Nos pertaining to Kunankurichi, Mudunai and Uthangal (Annexure -2)**
- Cadastral map provided. ( **Annexure 3** )
- Land is owned and possessed by NLC

# NLC – Power Generation Project (Lignite Based) TPS –II 2<sup>nd</sup> Expansion. 2 x 500 MW at Mudanai – Proposed TOR

2016

- 11) If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant .
  - No Forest Land involved in the project.
- 12) The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.
  - Land is in possession of NLC.
  - No Relocation and rehabilitation.
- 13) Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
  - Satellite Imagery enclosed as Annexure 4 and 5 ( Google 5 and 10 km Maps)
  - GSI – Topo Map– Map Enclosed as Annexure 6.
- 14) Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him.
  - EIA would record a list of Flora , Fauna seen on site.
  - No National park located inside the study area.
- 15) Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted.

# NLC – Power Generation Project (Lignite Based) TPS –II 2<sup>nd</sup> Expansion. 2 x 500 MW at Mudanai – Proposed TOR

2016

- Topo map of scale to be provided by project proponent. (1: 50,000 scale of Survey of India along with a large scale map preferably of 1:25,000 scale. (Annexue -6)
  - Contour map would be provided as per scope of work. (EIA)
  - The land is flat, vacant , boundary marked and in possession of NLC. (Annexure – 2 Survey Nos and Annexure 3 Cadastral )
- 16) A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted.
- Detailed study will be carried out during Socio Impact Analysis report (HECS) in EIA
  - NLC's CSR enclosed as Annexure No. 9
- 17) A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted.
- PFR details Lignite quality, mineral reserve available. NLC 's operating units are certified to ISO 9001/ ISO 14001/ OHSAS 18000 standard.
- 18) Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash.
- Fly ash utilizaton will be as MoEF Guidelines and will be reused in cement, bricks and concrete block manufacturering.. Further bottom ash would be dispensed in Ash Ponds
  - Annexure 5.4, 5.5 of PFR has flow charts to indicate the fly ash handling system.
- 19) The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re- circulation of effluents.



- The proposed expansion plant water will have to be drawn from the reservoir presently used for TPS- II. The layout plan indicates the location of the reservoir.
  - Source of supply would be Mine III
  - Water required for Process would be approximately 2813 Cu.m/hour (KLD).
  - Composite Water Scheme – Annexure 5.0 ( PFR)
- 20) Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State.
- The boundary along the western boundary has a storm water drain .
  - No water body passing through site.
- 21) It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system/ streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways.
- Manimuthar River is 12 km away from site, Railway line is 1.5 km away, NH 532 is 3 km away from site.
- 22) Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted.
- Hydro –geological study will be conducted for EIA.
  - PFR describes land area
- 23) Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.

# NLC – Power Generation Project (Lignite Based) TPS –II 2<sup>nd</sup> Expansion. 2 x 500 MW at Mudanai – Proposed TOR

2016

- Water without treatment will not be released into a river or sea.
- PFR, 5.1,5.2, 5.3 describes pre-treatment, flow diagram of ETP.

24) Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.

- Source of supply of Mine III, would be the current source of construction water and process water.
- PFR – Annexure No.5 details the composite water balance. 2813 cu.m./hour.

GWC Pumping	5000 GPM
Seepage Well Pumping	2000 GPM
Storm Water Pumping	8000 GPM
Total	15000 GPM

25) Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.

PFR has a Key Plan indicating proposed construction, storm water drains and rainwater harvesting. .

26) Feasibility of near zero discharge concept shall be critically examined and its details submitted.

- Water balance and near ZLD reports would be provided. ( Annexure 5.0 of PFR )

27) Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified.

- Water Balance - Annexure 5.0 of PFR
  - Consumption and process requirement detailed in Annexure No. 5 .0 of PFR.
- 28) Plan for recirculation of ash pond water and its implementation shall be submitted.
- The FR consultants report has descriptions and flow charts for bottom ash and fly ash handling .
- Annexure No 5.4 - Flow Diagram for Bottom Ash Handling System
  - Annexure No 5.5.– Flow Diagram for Fly Ash Handling System
- 29) Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area.
- Provisions as per proposed TOR is attached for water quality . EIA ( Anneuxre – No 11)
- 30) Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities
- HEC SEA consultant will enclose a report in EIA.
  - NLC CSR Policy enclosed as Annexure No. 9
- 31) Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.
- CSR Policy enclosed as Annexure No. 9
  - NLC has 33 social infrastructure works
  - 10 drinking water projects
  - 4 educational
  - 2 Road projects

- Details enclosed as CSR SIA – Annexure No. 9

32) If the area has tribal population it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.

Not applicable

33) A detailed CSR plan along with activities wise break up of financial commitment shall be prepared.

- In 2013-2014 the CSR Expenditure of NLC was INR 26.30 Cr which is 1.80% of the profit after tax as against the norm.
- In 2014-15, the CSR spend of NLC was INR 47.49 crore or 2.29% of the average net profit in the 3 preceding years as against the norm of 2% as per section 135 of the Companies Act 2013.
- A brief annexure about NLC CSR enclosed – Annexure 09

34) While formulating CSR schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest

- NLC's CSR initiatives are aligned with sustainable development, Nation Building Code.
- A brief annexure about NLC CSR enclosed – Annexure 09

35) R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them.

No R&R.

- 36) Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared.
- Neyveli has a General Hospital within the Campus for emergencies.
  - OHS – NLC does assessments of endemic diseases of environmental origin in the study.
  - Accident Insurance for employees
  - Miners are examined once in 3 years and 5 years in accordance with guidelines of DGMS- OHSAS 18001
  - The OHS center has developed its own infrastructure facilities and technology to carry out thorough lab investigations, as x-ray chest as per ILO standards, ECF, Pulmonary Function Test and audiogram.
  - Doctors /specialists trained in occupational health through exposures to Associate Fellow in Industrial Health (AFIH) accredited by DGFASLI, carry out periodic medical examination of employees.
  - Annexure 10 – OHS provision.
- 37) Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required.
- Neyveli has a General Hospital within the Campus for emergencies.
  - Accident Insurance for employees
  - Miners are examined once in 3 years and 5 years in accordance with guidelines of DGMS- OHSAS 18001
  - OHS – NLC does assessments of endemic diseases of environmental origin in the study.
  - The OHS center has developed its own infrastructure facilities and technology to carry out thorough lab investigations, as x-ray chest as per ILO standards, ECF, Pulmonary Function Test and audiogram.

# NLC – Power Generation Project (Lignite Based) TPS –II 2<sup>nd</sup> Expansion. 2 x 500 MW at Mudanai – Proposed TOR

2016

- Doctors /specialists trained in occupational health through exposures to Associate Fellow in Industrial Health (AFIH) accredited by DGFASLI, carry out periodic medical examination of employees
  - Annexure 10 – OHS provision.
- 38) One complete season site specific meteorological and AAQ data (except monsoon season) as per latest MoEF&CC Notification shall be collected and the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM10, PM2.5, SO2, NOx, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur.
- Proposed TOR for AQ monitoring attached as Annexure .
  - Dustfall measurement and modeling will be enclosed in EIA as per proposed TOR.
  - Consultants EMP will provide suggestions post baseline air quality study and current monitoring.
  - Online monitoring and control measures will be a part of EMP.
- 39) In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs).
- Environmental Monitoring as per TOR for one season for EIA – Annexure – 11.
- 40) A list of industries existing and proposed in the study area shall be furnished.
- Enclosure TS I, TSII, Taqa Plant
  - Mine I, II, III - Annexure 1 (Layout Map)
  - Google Map 5 Km, 10 Km. – Annexure 4 & 5
- 41) Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail.

Details of the Model used and the input data used for modeling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also include impacts on water, soil and socio-economics.

- Risk Assessment of Particulate Pollution, distance travelled and exposure effect on receptors would be presented in EIA.
- AQI modeling reports would be provided as per TOR in EIA.

- 42) Radio activity and heavy metal contents of Lignite to be sourced shall be examined and submitted along with laboratory reports.

#### Annexure ( From PFR) – 2.2 Lignite Analyis

- 43) Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.

Heavy Fuel oil requirement of about 11564 KL per annum and Light Diesel of requirement of about 5000 to 8000 KL per annum will be met from the nearby IOCL department through tankers

- 44) Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted

Quantity of Mineral Reserve from Mine III . ( Minerological Analysis of Lignite in Annure 2.2)

- 45) Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.

- Pipe Conveyor System proposed for the plant
  - Trucks and tankers will be used
- 46) For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.
- PFR details the lignite handling facilities (External and internal)
- 47) Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.
- Infrastructure facilities will be provided as per factories act.
  - PFR details site plans as Annexures.
- 48) EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
- FR consultants report has a preliminary note on the various control technologies in place for air pollutants on Page No. 23
  - EIA would include the EMP with a cost wise details for implementation.
- 49) A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be carried out. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Mock drills shall be suitably carried out from time to time to check the efficiency of the plans drawn.
- Risk assessment for Particulate Matter by the consultant



- Risk assessment for any parameter exceeding permissible limits for industrial standards will be analyzed for disaster management by the consultant
- Disaster management Plan will be provided in EIA.

50) The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/ Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely.

- Natural risks and disaster management will be analyzed
- Seismic zone II is recorded for Projects site.
- Thane cyclone in 2005 caused damage to Trees.

51) Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary with tree density of 2000 to 2500 trees per ha with a good survival rate of around 80% shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO<sub>2</sub> and other gaseous pollutants and hence a stratified green belt should be developed.

- Layout with Green Belt provisions will be provided in EIA
- Endemic species of trees, shrub layer for carbon sink and % of space would be recorded as per guidelines.
- The program of the proponent will be provided year wise.
- Photographic evidence to be recorded in compliance reports.
- Annexure 8 - encloses the NLC Environmental Policy

52) Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months.

- Annexure – 8 encloses , N:LC's Environmental Policy.

53) Corporate Environment Policy

a. Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. :

- Yes , Enclosed as Annexure No. 8

b. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

- EIA to record observations.

c. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given.

- Annexure 8 details the Organization Chart, Environmental wing. Policy and decision making for environmental budget, Action Plan committee.

d. Does the company have compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders

or stakeholders at large? This reporting mechanism should be detailed in the EIA report.

- Corporate Environmental Policy - Annexure 08
- CSR Policy , Anneuxre 10
- OHS, Annexure 11

54) Details of litigation pending or otherwise with respect to project in any Court, Tribunal etc. shall invariably be furnished.

- No litigations pending for the chosen project site at Mudanai.