MINUTES OF THE 18th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS HELD DURING 27th JUNE, 2018.

The 18th Meeting of the re-constituted EAC (Thermal Power) was held on 27th June, 2018 in the Ministry of Environment, Forest & Climate Change at Teesta Meeting Hall, Vayu Wing, First Floor, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi under the Chairmanship of Dr. Navin Chandra. The following members were present:

1. Dr. Navin Chandra - Chairman
2. Dr. N.P. Shukla - Member
3. Shri S.D. Vora - Member
4. Dr. Jai Krishna Pandey - Member
5. Shri Gururaj P. Kundargi - Member
6. Prof. S.K. Gupta - Member (Rep. of ISM/IIT, Dhanbad)
7. Shri N.S. Mondal - Member (Rep. of CEA)
8. Dr. S. Kerketta - Member Secretary

Dr. Sharachchandra Lele, Dr. S.K. Paliwal, Representative of CPCB, Shri N. Mohan Karnat, Dr. Manjari Srivastava and Dr. R.K. Giri (Representative of IMD) could not be present.

Item No.18.0: CONFIRMATION OF THE MINUTES OF THE 17th EAC MEETING.

The Minutes of the 17th EAC (Thermal Power) Meeting held on 25th May, 2018 were confirmed.

18.1 2x660 MW Super Critical Imported Coal Based Thermal Power Plant at villages Painampuram & Sivarampuram, in Muthukur Mandal, in Nellore District, in Andhra Pradesh by M/s Sembcorp Gayatri Power Ltd.- Reg. amendment in EC- internal discussion on site visit report.
(File No: J-13012/76/2009-IA.II(T) & Online no: IA/AP/THE/26415/2010)

(18.1.1) Environmental Clearance (EC) for establishing 2x660 MW Super Critical Imported Coal Based Thermal Power Plant at Villages Painampuram & Sivarampuram in Muthukur Mandal of Nellore District in Andhra Pradesh has been issued in favour of M/s Nelcast Energy Corporation Ltd. vide Ministry's letter dated 30.09.2010 which was valid for five years, i.e. 29.09.2015. Coal requirement is 5.48 MTPA and imported coal shall be used. Validity of the EC dated 30.09.2010 has been extended till 29.9.2017 (total of seven years) vide Ministry's letter dated 04.03.2016. Unit-1: 1x660 MW and Unit-2: 1x660 MW have been made operational since 15.11.2016 and 18.02.2017, respectively.

(18.1.2)M/s Sembcorp Gayatri Power Ltd. (Project Proponent) submitted an application for removing the condition Nos.v and vi in the EC. Project Proponent mentioned that these conditions might not be applicable to their industry as there are no such fishing communities dwelling in their area. Project Proponent has also mentioned that they approached Fisheries Department, Govt. of Andhra Pradesh

for guiding on implementation of these EC conditions. PP stated that Assistant Director, Fisheries Department had inspected the project area & the surroundings region and informed that there are no inland and marine fishing activities in the region. The letter from the Asst. Director, Dept. of Fisheries vide dated is enclosed. Project Proponent stated that they conducted the survey in the nearby areas and found no integrated fishing activities in the region. It was further mentioned that the power plant is located at 7 km from Krishna Patnam Port and marine fishing activities are not allowed in this region.

(18.1.3) The proposal was placed before Expert Appraisal Committee (EAC-Thermal Power Projects) during its 8th meeting held on 24.07.2017 and suggested for a site visit by the Sub-committee comprising of three members to ascertain the presence of villages/ fishermen communities within 10 km radius of the plant site.

(18.1.4) MoEF&CC, Regional Office, Chennai has conducted site visit during 23rd-24th January, 2017 and submitted certified compliance report on 14.03.2017 wherein non-compliance against 26 conditions stipulated in the EC have been reported.

(18.1.5) The sub-committee visited the site during 10th-11th June, 2018. Sub-committee visited the power plant and interacted representatives of the Power Plant (Site visit report is enclosed as **Annexure-A3**). Three power plants (Sr. Nos. i, ii & iii) are on the north side of the port and remaining two power plants are on the southern side of the Krishna Patnam Port. In their opinion, the villages on the southern side have to be taken care by the other power plants. Sub-committee interacted with the Head of the College of Fisheries, Srivenkateswara Veterinary University located in Muthukuru Village, Villagers of Nelaturi Palem, Chairman of the State Federation, A.P. Fishermen Co-operative Society and the District Collector of Nellore District. Sub-committee after discussion arrived at the conclusion that there are about 10-15 fishermen hamlets within the 10 km radius of the power plant. Sub-committee opined that a regional committee may be constituted by involving district administration, Pollution Control Board, Fisheries Department, Fishermen representative, Regional Office, MoEF & CC and involve the five power plants and Krishna Patnam port to implement and monitor the welfare activities of the fishermen periodically.

(18.1.6) Following are the recommendations of the sub-committee:

i. The claim of not having fishermen villages by the Project Authorities and the letter of Asst. Director, Dept. of Fisheries is not accepted. A clarification may be sought from the Fisheries Department in this regard. The presence of fishermen hamlets has been substantiated by discussions held with the District Collector and Head of the Fisheries College, Muthukur Mandal. Accordingly, the request of deleting the conditions stipulated in the Environmental Clearance regarding fishermen communities is not agreed upon.

ii. The socio economic study and need based assessment study to identify the presence of fishermen communities and their needs within the 10 km radius of the Power Plants of Sembcorp Gayatri Power Ltd. and Thermal Powertech as both the power plants belong to the owner and sharing the common boundary.

iii. An additional condition regarding conducting of socio economic and need based assessment study shall be stipulated in the Environmental Clearance. The expenses towards the studies shall be borne M/s Sembcorp Gayatri Power Ltd.

(18.1.7) **The sub-committee report has been placed before the EAC (Thermal Power) meeting held on 27.06.2018 and in-principally agreed with the recommendations of the sub-committee. EAC also mentioned that action may be taken on project proponent for non-compliances and for misleading the Ministry by submitting the wrong information. Further, a clarification may also be sought from Fisheries Department. EAC didn't recommend to delete the conditions as requested by PP and recommended to stipulate the additional condition to conduct Socio economic study within 6 months and the report shall be submitted to the Ministry for appraisal before the EAC for further course of action.**

(18.2) 1050 MW (2 x 525 MW) Combined Cycle Power Project at Villages Kattupalli and Kalanji, Ponneri Taluk, Thiruvallur District, Tamil Nadu by M/s Chennai Power Generation Limited-reg. ToR. (F.No. J-13012/08/2018-IA. I(T) & Proposal No: IA/TN/THE/75375/2018)

18.2.1 The proposal was earlier considered by the EAC (Thermal Power) in its 17th meeting held on 25.05.2018. Committee has recommended to return the proposal with a suggestion that PP should submit the revised proposal by quoting the file number along with alternate site analysis and application for CRZ recommendations from TNSCZMA. PP submitted the application on 11.06.2018. PP attended the meeting and made the presentation *inter-alia* submitted the following information:

i. The proposed 1,050 MW (2x525 MW) Power plant located in Kattupalli and Kalanji village at Ponneri Taluk, Thiruvallur district, Tamil Nadu state. The proposed project is based on RLNG as fuel which will be sourced from Indian Oil Corporation Limited (IOCL) to the site from their proposed RLNG terminal at Ennore Port (6 km). The RLNG shall be brought from the proposed RLNG terminal of IOCL at Ennore Port up to the proposed power plant through pipelines to be constructed by IOCL.
ii. Out of 175.08 acres of land, 153.08 acres is proposed for the Main Plant and 22 acres (Part of land falls in CRZ, Zone III area) is proposed for laying Pipe Corridor. The site is located 6 km north of Ennore Port, which is 22 km north of Chennai. Chennai Airport is about 40 km from the site. Athipattu is the nearest railhead.
iii. The location was selected by TNEB and the Project conceived by TNEB as a 1,050 MW Gas based project was allotted through the MOU route and was signed with TNEB by the Company in the year 1998. The PPA was also negotiated with RLNG as Fuel and initialed by TNEB.
iv. There are no declared biospheres, wildlife sanctuaries, or tiger sanctuary or migrating corridor or Coastal zone in the core zone and 10 km buffer zone. Pulicat Sanctuary is located at 12 km, North of the project.
v. Land is reserved vide GO No 47 dated 05.02.1998 for setting up of this power plant.

vi. Environmental Clearance from MoEF&CC was obtained vide letter No. J 13011/11/96-1A11 (T) dated 19.03.1997 proposing naphtha as fuel.

vii. TIDCO dropped the proposal to establish the RLNG Terminal. Then the Company had approached MoEF&CC to give amendment for change of fuel from Naphtha to Imported coal.

viii. MoEF&CC asked for revised EIA/EMP report vide dated 18.01.2008 for the proposed coal based thermal power plant using imported coal.

ix. Subsequent to submission of fresh application to get Environmental Clearance from MoEF & CC for the project during January 2009, TOR was issued for the project vide letter No. J-1301/11/96 IA II (T) dated 03.06.2009.

x. During the presentation by the CPGL to the Expert Committee, it was informed that there is overlapping of lands between our project site and the North Chennai Power Company Project site and CPGL requested the Committee to impress upon North Chennai power company to spare 70 acres of land for the proposed project so that both the projects can come up in the same area.

xi. M/s North Chennai Power Company refused to spare the land and MoEF&CC gave Environmental Clearance to North Chennai Power Company ignoring CPGL request and also imposed two special conditions in the Terms of Reference namely Clear ownership of the lands belonging to the company free of all encumbrances and there should not be any overlapping of the lands belonging to any other company and CPGL have to get a certificate from Revenue Authorities for the above two conditions.

xii. Even though CPGL had completed studies as per TOR, but could not proceed further as Pollution Control Board, Tamil Nadu refused to conduct Public Hearing stating that overlapping of land issue has not been resolved.

xiii. Further, TOR was obtained for imported coal based power plant for 2x660 MW Super critical power plant vide letter No. J-13012/16/2015- 1A-I(T) dated 10.06.2016. However, the company could not proceed further in the project as it could not tie up for imported coal and tariff was also too high.

xiv. Company has decided to change the fuel from coal based of 2x660 MW Supercritical plant to 1,050 MW gas based combined cycle plant due to availability of RLNG from IOCL terminal coming up at Ennore which is about 6 km from selected plant site. CPGL has signed heads of agreement with IOC for supply of RLNG.

xv. The project configuration is Two modules of CCPP (Combined Cycle Power Plant) each comprising 1 GTG of 359 MW capacity (Gas Turbine Generator) +1 HRSG (Heat Recovery Steam Generator) + 1 STG of 166 MW capacity (Steam Turbine Generator) totalling 2x525 MW.

xvi. The fuel requirement is 4.8 Million Metric Standard Cubic Meter Per Day (MMSCMD) considering Gross Calorific Value of gas as 8000 kcal/SCM and plant heat rate of 1600 kcal/kWh. The daily gas consumption at 85% PLF is estimated to be around 4.0 MMSCMD.

xvii. Approx. 48 MCM (1,30,800 m^3/ day or 5,450 m^3/hr) water per annum is required for the cooling water system and other consumptive purposes which will be sourced from Sea (Bay of Bengal) through intake well construction of offshore booster pump house and intake pipeline.

xviii. One alternate site is examined. The said alternate site is located about 11 km from the Ennore RLNG terminal and about 7.3 km from the sea. About 350 acres of contiguous land in Katoor and Vayalur is available. Since, there is a proposal from TIDCO for alienating the above lands for establishing a heavy industries park in that area, Government of Tamil Nadu is not in a position to allocate the lands identified. Besides, Pulicat Sanctuary is at a distance of 12 km from the site and hence it was not pursued.

xix. The sea water pipe line from the sea will pass through this proposed pipe line corridor and will be connected to the main plant through buried pipe line in the intervening road side of Government land after obtaining necessary permission. The entire land is private lands.

xx. Necessary CRZ Studies will be conducted through authorized agency and authenticated CRZ map will be obtained. Necessary application will be submitted to TNSCZMA and their recommendation will be obtained before conducting public hearing and submitted to MoEF & CC.

xxi. There will not be any ash disposal as the proposed project is based on RLNG. Liquid Waste will be mainly from the effluents generated from the combined cycle power plant would be from Cooling Tower Blow Down, DM plant Regeneration plant, Heat recovery steam generator drum blow down, Sanitary waste, Water from Oil water Separator. About 4127 m^3/ hr of waste is expected to be generated from this plant of which 4,045 m^3/hr will be from Cooling tower blow down, RO reject and 82 m^3/hr is expected to be from other sources.

xxii. Further, 50 m wide green belt around the plant site will be developed.

xxiii. The estimated project cost is Rs.5,363.53 Crores.

(18.2.2) Committee noted that the project is surrounded by Bay Bengal on Eastern side and Buckingham Canal on Western Side. 70% of the proposed project boundary is surrounded by CRZ areas. Committee noted that there is land overlapping between proposed project and M/s North Chennai Power Co. Ltd. However, PP stated that 153 acres has been demarcated for the proposed project which is in no way interferes with the proposed power project of North Chennai Power Company. Further, the boundary of the project is about 100 m from the Buckingham Canal which is also a tidal influenced water body. Further, the proposed location has some salt pans and aqua culture ponds. Committee noted that PP presented an alternate site which was already allocated for heavy industries by Govt. of Tamil Nadu. Committee further noted that since the ToR for the said site had already been issued in the past, the present proposal can be considered provided main power plant area is not falling in the CRZ area. Further, considering the small area of 150 acres, Committee expressed doubt whether 50 m wide greenbelt around the periphery of the proposed project area can be developed or not.

(18.2.3) **Committee after detailed deliberations, recommended for grant of following ToRs** in addition to the standard ToR for Thermal Power Plants:

i. Recommendations of TNSCZMA shall be obtained for permissible activities such as intake and outfall pipelines and connected facilities. TNSCZMA shall categorically verify whether main plant area is falling within the CRZ area or not in accordance with the approved Coastal Zone Management Plans.

Further, presence of mangroves in the proposed project area including pipeline corridor shall be ascertained. CRZ maps in 1:5,000 scale shall be submitted.

ii. A certificate from the concerned District Collector should be obtained clearly confirming that the proposed site does not overlap with the site of M/s Chennai Power Generation Ltd. and that the proposed site (total land required for the project) is free of all encumbrances.

iii. As many salt pans and aquaculture ponds are falling within the proposed project area, the alternate livelihood plan for the villagers who are doing salt farming or aquaculture shall be prepared along with budgetary provisions.

iv. A project layout map showing power plant facilities along with 50 m wide greenbelt and Desalination Plant shall be submitted.

v. EIA report shall cover marine aspects such as impact on marine ecology. The impact of the intake / outfall structure on marine life during construction and operation phases shall be studied. Studies pertaining to Bathymetry Sediment transportation, Thermal Dispersion and Salinity dispersion shall be conducted. Design of intake and outfall points shall be based on the studies.

18.3 2x800 MW Power Generation Ennore SEZ coal based Thermal Power Project, Village Vayalur, Ponneri Taluk, Tiruvallur District, Tamil Nadu by M/s TANGEDCO. reg. EC amendment (F.No. J-13012/36/2010-IA II (T) & Proposal No: IA/TN/THE/10506/2010)

(18.3.1) Project Proponent submitted online application on 08.06.2018 for reducing the size of the units from 2x800 MW to 2x660 MW. Project Proponent attended the meeting inter-alia submitted the following information:

i. Environmental Clearance has been issued for 2x800 MW Ennore Supercritical Imported Coal based Thermal Power Plant vide Ministry's letter dated 07.01.2014.

ii. CRZ Clearance was also obtained for the proposed foreshore facilities (Coal conveyor and cooling /coolant water pipe lines) of the proposed project vide Ministry's F.No.11-80/2011-IA.III, dated 01.01.2014.

iii. To have uniformity in unit size and spare management, TANGEDCO has adopted the capacity of units as 2x660 MW instead of 2x800 MW for the captioned power project while calling tenders. In order to establish the Project under single EPC (Engineering-Procurement-Construction) cum Debt Financing Basis, TANGEDCO floated International Competitive Bidding.

iv. Further the project was awarded to the lowest Bidder M/s BHEL on 27.09.2014, and the work was commenced on 09.10.2014. Subsequently a competitive firm of EPC tender has filed a case in the Hon'ble High court of Madras to cancel the award to M/s BHEL and requested to award the EPC contract to them. After hearing the case a single judge issued judgment in favour of TANGEDCO on 07.04.2015.

v. The bidder again appealed in the Hon'ble High court of Madras and a Division Bench after hearing issued the judgment in favour of the bidder on 07.09.2015. Hence an SLP was filed by TANGEDCO in the Hon'ble Supreme Court on 23.09.2015 to modify the orders of Division Bench of

the Hon'ble High court of Madras. The final verdict came in favour of TANGEDCO on 18.10.2016.

vi. Hence till such time, the work by M/s BHEL was held up for more than 2 years. On receipt of final verdict from the Hon'ble Supreme court, M/s BHEL again commenced the work on 19.10.2016 and works in various fronts are under progress.

vii. The reduction in unit size of the proposed project involves reduction in both consumption of resources and pollution level from the proposed power plant. A Comparative statement of 2x800 MW and 2x660 MW details the same as follows:

S.No.	Description	Requirement for 2x800 MW	Requirement for 2x660 MW	Change
1	Land	500 acres	408 acres	Reduction in area of 92 acres
2	Water	17180 m^3/h	12,950 m^3/h	Reduction of water requirement 4230 m^3/hr
3	Coal @ 85% PLF	4.549 MTPA	3.79 MTPA	Reduction in coal requirement 0.759 MTPA
4	Ash generation	0.364 MTPA	0.303 MTPA	Reduction in ash generation 0.061 MTPA
5	Project Cost	11,153 Crores	9,799.02 Crores	Reduction in project cost Rs.1354.11 Crores.
6	Gross Energy Generation @85% PLF	11,913.6 MU	9828.72 MU	Reduction in gross power generation 2084.88 MU

viii. The time schedule for completion of power project is 42 months from LOI and expected to achieve COD by 2019-20.

(18.3.3) Committee noted that there is a reduction in land of about 92 acres which shall be utilised for developing greenbelt in addition to the greenbelt stipulated earlier. Further, committee noted that the reduction in the configuration of the units is proposed as administrative arrangement and ease of working. Committee noted that all the raw materials & resources requirement and emissions will proportionately reduce when compared with the requirement of 2x800 MW. However, 2x800 MW is Ultra Super critical Unit whereas 2x660 are Super critical units. The efficiency of Ultra Super critical units is higher than Super critical units.

(18.3.4) **Committee after detailed deliberations, recommended for reduction in unit configuration from 2x800 MW to 2x660 MW** subject to the following additional conditions:

i. An area of 92 acres which shall be available after reduction in size of the units shall be utilised for raising greenbelt in addition to the greenbelt stipulated earlier.
ii. Revised emission standards issued vide dated 07.12.2015 shall be achieved at the time of commissioning of the plant.

18.4 Proposed 25 MW Municipal Solid Waste based Thermal Power Plant (Waste to Energy) at Tehkhand, Okhla, South East Delhi, New Delhi by M/s Tehkhand Waste to Electricity Project Limited-reg. EC. (F.No. J-13012/03/2018-IA.I(T) & Proposal No: IA/DL/THE/71979/2017, Consultant: M/s Yes Enviro Solutions, Noida)

(18.4.1) Terms of Reference for the 25 MW Waste to Energy Power Project were issued on 13.3.2018. Public Hearing for the proposed project was held on 21.5.2018. Project Proponent submitted application for grant of Environmental Clearance on 1.6.2018. Project proponent along with EIA consultants have made the presentation and provided the following information:

i. The project site is located near Okhla Landfill Site and is at 1.45 km Tughlakabad Railway station. Tughlakabad Metro Station is at 1.45 km from the proposed project location.
ii. The municipal solid waste generated in Delhi is about 9,400 MT with per capita waste generation is 0.5 kg/capita/day. Out of this, almost 3,500 MT of waste remains untreated and is being dumped at the landfill sites. The existing landfill sites have already exceeded the prescribed limit of height. These dumps have attained 40 m as against permissible limit of 20 m.
iii. SDMC has engaged IIT, Delhi for suggesting process of remediation/scientific capping/closure of existing dumpsite of sanitary landfill at Okhla. Accordingly, stabilization of dumpsite and subsequent bringing the stabilized dump site under green cover; arresting fugitive dust emission and treatment of leachate generated from dumpsite is being taken up by SDMC. Stabilization of the dumpsite has already been initiated.
iv. South Delhi Municipal Corporation (SDMC) is currently collecting about 3,250 t/d of waste and is managing the waste disposal through:
    a. Supply of 1,400 TPD to the TOWML WtE Project
    b. Supply of 150 TPD to the Okhla composting plant and
    c. Balance 1,700 TPD to landfill.
v. The proposed project is located at 4.95 km from the Okhla Bird Sanctuary, 1.65 km from Asola Wildlife Sanctuary, 3.30 km from Jahapanha Reserve Forest and 2.75 km from Suraj Khund Lake.
vi. The terrain of Delhi is flat in general except for a low North- northeast to South-southwest trending ridge that is considered an extension of the Aravali hills of Rajasthan. The terrain of the site is undulating where rocks are generally exposed with soil at places. Contour level of the site varies from 181 msl to 191 msl. The top part of the land is characterized by highly

weathered quartzite rock. The whole land has a characteristic red colour because of high weathered rock with quartz crystal. This characteristic extends upto a depth of 12 m. Below 12 m depth, moderately weathered quartzite grey coloured rocks with reddish tint are found.

vii. Tughlakabad Village is located at 0.7 km from West, Hamdard Nagar is at 2.25 km SW, Premnagar Colony is at 0.3 km South, PulPrahladur is at 1 km SE, Railway colony is 0.8 km East, Okhla Phase-I Pocket-F is at 0.6 km North.

viii. Industries within the study area are Badarpur Power Plant (NTPC) at 2.18 km E, Concor ICD at 0.35 km E, CCI Building at 0.24 km E, Okhla Industrial Area at 0.6 km N, Mohan Industrial area at 2.25 Km SE, Faridabad Industrial area at 3.09 km SE.

ix. Archaeological sites are Adilabad Fort at 1.15 km WSW, Tughlakabad Fort 2.02 km WNW, Surajkund reservoir at 2.51 km SSE, Zafar Khan Tomb at 1.76 km WNW, Tomb of Ghiyasuddin at 1.75 km WNW, Humayun's Tomb at 9.7 km, Qutub minar at 7.5 km, Deer Park Lake at 9.95 km, Qila Rai Pithora at 8.65 km WNW, Tomb of Nizzamuddin Aulia at 9.80 km NNW, Bagh- I- Alam ka Gumbad at 9.55 WNW, Arab Sarai at 9.55 km NNW, Lakhar wal Gumbad at 9.55 km NNW, Lotus Temple is at 5.28 km, Tomb of Mohammed shah at 9.8 km, Biran ka Gumbad at 9.13 km, Choti Gunti at 9.14 km, IDGAH of Kharehra at 8.54 km, Nili masjid at 8.68 km, Khirkee Masjid at 6.43 km, Satpula at 6.10 km, Tomb Of Yusuf-Qattal at 6.6 km, Garden of Five senses at 8.7 km and Iskon Temple at 5.7 km NW.

x. SDMC has proposed to setup 25 MW WtE Power Plant at Tehkhand in 15 acres of land (out of 50.431 acres of land allotted by DDA). The break up of the land requirement is as follows:

Sl.No.	Particulars	Area in Acres
1	Plant and Machinery	7.5 acres
2	Greenbelt (30 m width)	5.5 acres
3	Road area and drainage	2.0 acres
Total Area		15 acres

xi. The project site has been examined for environmental consideration and cleared by Central Empowered Committee (CEC), Ridge Management Board and Hon'ble Supreme Court.

xii. The proposed power plant will be able to process 2000 ± 20% TPD of MSW

xiii. Waste to electricity processes for conversion of dry non-recyclable combustible fraction of waste into energy or supply as feedstock to solid waste or refused derived fuel based power plants.

xiv. Refuse derived fuel is a segregated combustible fraction of solid waste other than chlorinated plastics in the form of pellets or fluff produced by drying, shredding, dehydrating. High calorific value waste shall either be directly utilized for energy production or by preparing refuse derived fuel for energy production or give away as feed stock for preparing refuse derived fuel. Chlorinated plastics shall not be incinerated. The CO2 concentration in tail gas shall not be less than 7%.

xv. Incineration plants shall be operated (combustion chambers) with such temperature, retention time and turbulence, as to achieve total Organic Carbon (TOC) content in the slag and bottom ashes less than 3%, or their loss on ignition is less than 5% of the dry weight.

xvi. The technology proposed to be employed for this project is RDF Combustion based Reciprocating Grate Technology The power plant constitutes Material Recovery Facility, RDF fuel Pit, Incinerators, Boilers, and Steam Turbine Generators with power generation capacity of 25 MW±15%. The in-house consumption will be approx 15% of the generated power. Air cooled condensers are to be used in lieu of WCC. The generated Bottom ash to be processed in the bottom ash processing plant which is approx similar to C&D plant. After the processing materials which are not recyclable for further processing will be sent to Sanitary Landfill. Fly ash will be utilized in bricks manufacturing within the site or be sent to nearest bricks manufacturers.

xvii. The requirement of input waste parameters for combustion technology is Moisture: <30%, Volatile Organic Carbon: >40%, Total inert: < 20%, GCV: > 1200 kcal/kg.

xviii. SDMC has carried out sampling test& waste analysis for 20 sites, average calorific varies between 640 kcal/kg to 2,810 kcal/kg.

xix. Drying pit will be designed to accommodate the 2,000 t/d material and size of the pit will be 30 m x 22.5m x 5 m. These drying pits and tipping floor equipped with EOT crane and grab bucket for MSW aeration and feeding to the hoppers for further segregation / processing. Tipping bay will be in the front side and MSW will be retained in the bay for one day, hence maximum leachate will be collected here. There will be 8 nos. drying pits to reduce moisture from the waste. This area would be covered. There will be 8 days' retention time for natural drying and moisture reduction

xx. Magnetic separator is installed to remove the ferrous scrap before feeding. Fines below 10 mm Size contain digested organic matter and will be sent to compost section for further curing and completion of composting process. Material above 80-100 mm retained on top screen and is sent to shredder for size reduction. Middle fraction (10 to 100mm) is feed for the boiler which is transported to boiler feed storage. EOT crane with grab will make separate heap and also feed the stored material in to feed hoppers of boilers. Heavy inert material is separated by gravity/inertia separation and is fed to inert material conveyor for disposal

xxi. Prepared RDF will be stored in the RDF storage area. Capacity of RDF storage will be for buffer storage only. This area will be covered with roof and equipped with 2 EOT (Electric Overhead Travel) cranes and cactus grab to feed RDF into boiler.

xxii. Boiler combustion system would be designed to operate on RDF of GCV range 1,500-2,500 kcal/kg. This would ensure operation sustainability even under uneven drying conditions, fire safety of the RDF plant and storage bin and safety of technology selected. Incinerator/Steam generator is considered for proposed plant.

xxiii. Boiler combustion system would be designed to operate on RDF of GCV range 1,500-2,500 kcal/kg. This would ensure operation sustainability even under uneven drying conditions, fire safety of the RDF plant and

storage bin and safety of technology selected. Incinerator/Steam generator is considered for proposed plant.

xxiv. Incineration is a thermal process for waste treatment where raw (unprocessed waste) and processed waste (RDF) can be used as boiler feedstock. Incineration is the most popular waste treatment method that transforms waste materials into useful energy. Fuel is combusted in the temperature above 850°C and is converted in to flue gas and non-combustible materials with solid residue state called bottom ash. Incinerators reduce the solid mass of the original waste by 80–85% and the volume by 90-95%, depending on composition and degree of recovery of materials such as metals from the ash for recycling.

xxv. There shall be a dedicated oil firing system for each boiler, these burner system comprises set of start-up and auxiliary burners. Air cooled condensers will be used for condensing steam exhaust from the turbine. It is proposed to use the sewage water for the power generation. It has been studied by DESL in past projects that treatment cost of the sewage water for use in the cooling tower becomes non-techno viable.

xxvi. The total water requirement for the project during operation will be approx. 490 KLD. The source of water is Okhla Sewage Treatment Plant, located at about 8 km from the site. The treated sewage water will be transported to the site through pipeline. Various options for routing the pipeline are being examined with a view to minimizing cost and complexity of the system.

xxvii. Baseline environmental data generation for environmental attributes was carried out from December, 2017 to February, 2018.

xxviii. Predominant wind direction is West followed by North West. Noise levels were measured at 12 locations near residential areas, high way, commercial areas and other settlements located within 10 km radius in and around the proposed plant area. The measured, Leq values ranged from 55.32 dB(A) to 69.6 dB(A), Lday values ranged from 55.43 dB(A) to 65.8 dB(A) and Lnight values ranged from 46.41 dB(A) to 55.27 dB(A). Noise levels at Dayalbagh colony, Tughlaqabad village, Badarpur village, Sukhdev vihar and Tilpat village etc are exceeding the limits for residential areas. Noise levels at silence Zone i.e Asola Wildlife Sanctuary are also exceeding the limits.

xxix. Water sampling was carried at 12 location, six each for Ground water and Surface water, respectively.

xxx. The pH values of ground water range from 6.74 to 7.45. Turbidity of all ground water meets the permissible limits of 10 NTU. TDS value was found ranged between 536 mg/l (Tughlaqabad) to 1044 mg/l (Existing landfill). The chloride value of all the samples were recorded between 98 mg/l (Okhla phaseI) and 240 mg/l (Badarpur Village). Sulphate content in the ground water sample ranged from 42.2 mg/l (Okhla Phase) to 74.8 mg/l (Sahpur Govardhanpur Bangar) all were well within the desirable permissible limit. Fluoride content was found to be within desirable limit (from 0.74 mg/l to 0.98 mg/l) in all the water samples. Zinc content in the ground water samples were found within the desirable limit (i.e. 5 mg/l). Iron content in all the sampling locations was found from 0.14 mg/l (Shahpur Govardhanpur Bangar) to 0.28 mg/l (near project site) is well

within the desired limit. Other parameters like heavy metals were found are given below:- Hg at all location founds to be <0.05 mg/l.

xxxi. Surface Water samples were collected from nallahs (Bhuriya and others), canal and Yamuna river. The characteristics are pH: 7.29-7.89, DO: <0.1-3.6 mg/l, COD: 212.5-475 mg/l, BOD: 92.4-288 mg/l, TDS: 704-1147 mg/l, MPN: 70,000-3,48,000.

xxxii. The monitoring of air quality has been carried out in the winter season when dispersion of pollution is poor. It is well documented that air quality of Delhi become worst during winter due to emission from high traffic, fugitive emission from civil construction works, industrial activities, burning of organic agricultural and horticultural waste.

xxxiii. As per the monitoring data of air quality, 98 percentile value shows that SO_2, NOx and CO of all locations are well within the norms and Hg is not detectable at all locations. However, $PM_{2.5}$ and PM_{10} are exceeding the standard values at all the locations.

xxxiv. 10 samples of Soil were collected from different locations in the study area to assess the existing soil conditions. Results of analysis show that the texture of soil at all locations is Sandy Clay Loam. The value of pH ranges from 7.3 to 8.3 indicating that few samples are little alkaline. The average concentration of Nitrogen, Phosphorus and Potassium in the soil samples varies from 356 to 742.5 kg/ha, 29.8 to 65.2kg/ha & 7.75 to 112.8 kg/ha. Soil having EC (µmhos/cm) from 400 to 800 are considered to have very slight saline nature.

xxxv. Okhla Bird Sanctuary is spread in an area of 4km more than 320 bird species have been reported in the sanctuary. These birds comprises of common resident water birds and woodland species; and Migratory water birds and woodland bird species. Asola Bhatti Wildlife Sanctuary is a manmade sanctuary which represents flat topped hill of Aravali ridge area in Delhi. The Asola and Bhatti areas were declared by the Govt. of Delhi as wildlife sanctuary in the year 1986 and 1991, respectively under Wildlife (Protection) Act, 1972. This forest is located at about 3.30 km (WNW) from the project site. It is surrounded by thickly populated areas and is presently paradise for joggers. Natural trails make up a good part of the forest. The forest is about 7 km in length and is home for a variety of birds including peacocks.

xxxvi. Boiler emission inputs are taken as Stack height: 60 m, Stack Dia: 2.8 m, Exit temperature: 140-150 ^{0}C, Exit velocity: 20.3 m/sec, SPM: 2.3 kg/h, SO_2: 11.5 kg/hr, NOx: 46 kg/hr.

xxxvii. The maximum incremental Ground level concentration (24 hourly) of PM_{10}, $PM_{2.5}$, SO_2, NOx and 0.068, 0.0518, 0.466, 1.741 and 1.029 µg/m^3 occurring at 1 km, respectively. The incremental ground level concentration of pollutants due to operation of proposed project are negligible. The resulted concentration level SO_2, NOx and CO pollutants are well within the NAAQS except resultant concentration of Particulate matters exceed at all receptors locations as the baseline conditions are always worst.

xxxviii. In the absence of effective controls on handling of Municipal Solid Waste the harmful pollutants like dioxins may get released into the air, land and water, which adversely affect the human health and environment. Dioxin is a highly toxic compound which causes cancer and neurological damage,

and disrupts reproductive systems, thyroid systems, respiratory systems, etc.

xxxix. Air pollution control system will consist of Flue Gas Treatment System which includes Adsorption of acidic components and other pollutants by lime and Activated carbon in turbo reactor and filtration of dust particles through bag filters.

xl. Main air pollution equipment are SNCR for NOx removal, dry reactor/semi-dry reactor for removal of gaseous contaminants, activated carbon for removal of dioxins and mercury, bag filters for removal of particulate emissions.

xli. The permeability of top layer rock varies from 1 to 3 Lugeon, indicating impervious nature of geological formation. Because of presence of massive weathered exposed rock system, the infiltration of liquid towards ground water from proposed project is unlikely.

xlii. It is proposed to use Air Cooled Condenser to meet the specific water consumption up to maximum of 2.5 m^3/MWh and achieve Zero discharge.

xliii. The proposed Cycle of Concentration (COC) for the project is 4.0 in spite of using sewage water for minimizing water requirement.

xliv. Leachate Generated from the WtE plant will be treated in the Leachate Treatment Plant and other waste water will be treated in E.T.P. The treated waste water will be used for green belt development. The green belt will be developed around the plant which act as pollutants sink and thereby restore & revitalize the environment on a long term basis.

xlv. Leachate characteristics are pH: 6.82, TDS: 14,075 mg/l, BOD: 13,671 mg/l, Oil and grease: 227 mg/l, Ammonia: 546 mg/l, TKN: 2152 mg/l, TSS: 1690 mg/l and presence of Heavy metals such as Cadmium, Lead, Copper, Zinc, Fluoride, Chromium, Cobalt, Nickel, etc.

xlvi. Other effluents generated from DM plant, boiler blowdown, cooling system blowdown etc. will be brought to centralized effluent collecting pit. After neutralization, the effluent will be used as service water for floor washing, horticulture, sprinkling on road and other general purposes. The condensed water from Leachate treatment plant will be recycled for quenching of bottom ash. Thus, no effluent is proposed to be discharged.

xlvii. The average ash content in the RDF would be 20%. The total ash generation would be approx. 300 TPD (fly ash 25 Ton, Bottom ash 275 Tons).

xlviii. Bottom ash will be used in construction such as foundation material in road construction or in brick making or stability works in landfills. The fly ash shall be collected in silos and most of it will be utilized in brick making marketed in dry form. Construction & Demolition (C&D) waste and the inert waste needs to be segregated during the pre-processing of municipal solid waste. Only the inert material or waste from C&D treatment plants will be send to the landfills. Further, any inert material or non-recyclable material obtained during segregation, size reduction and screening process, will be sent to sanitary landfill.

xlix. Risk assessment for boiler explosion, steam pipelines and hazardous material storage tank have been carried out for various failure scenarios. Maximum effect distance for boiler failure is 180 m (at 0.03 bar over pressure) and LDO storage tank is 585 m (Catastrophic vapor cloud). Risk control measures suggested in the additional risk control measures need

to be ensured to bring down the risk level to ALARP region. Nearly, 230 people attended the public hearing.

l. Public hearing has been conducted by Delhi Pollution Control Committee (DPCC) under the supervision of Additional District Magistrate at project site near existing Tehkhand Landfill Site/Bus depot, Tehkhand, Maa Anandmai Marg, Okhla, New Delhi on 21.05.2018. Salient points raised by public are release of H_2S gas from the existing landfill, leachate processing, employment to locals, air pollution control and equipment, odour management and disease control, tree cutting, etc.

li. The total cost of the project is Rs. 375 Crore which includes the land cost as well as the development cost. The cost of Environmental Management Plan is Rs.27.05 Crores (capital) and Rs. 6.7 Crores (recurring).

lii. The proposed WtE project will provide direct employment to about 20 – 25 persons and indirect employment to about 250 individuals.

(18.4.2) Committee noted that the wastes generated from the process such as inert waste during segregation and unutilised ash generated during the combustion will be disposed in the sanitary landfill. Further, Committee noted that the quantification and treatment method of leachate is not provided in detail. The treatment method which is provided in the EIA mentions removal of Oil & Grease, BOD/COD only. In addition to the BOD & COD, there should be treatment facility for Nitrogen (Ammonia Nitrogen & Kjeldal Nitrogen) removal, heavy metals removal which is not available. Further, committee noted that public hearing proceedings have been appended as annexure. However, there is no separate chapter in the main EIA report for preparing action plan along with budgetary provisions for meeting the commitments given during public hearing. The details of CSR/CER activities along with year-wise breakup and budgetary provision in the surrounding villages are to be provided.

(18.4.3) **Committee after detailed deliberations, recommended for grant of Environmental Clearance subject to submission of the following additional information:**

i. Quantification of leachate generation. Detailed leachate treatment method for removal of various pollutants.

ii. Detailed action plan to be prepared for CSR/CER activities along with budgetary provisions in line with the Ministry's guidelines dated 01.05.2018.

iii. A time bound Action Plan be made for compliance of the commitments made during public hearing.

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18.5 2x660 MW (Stage-III, Expansion) Talcher Thermal Power Project, Tehsil Talcher Sadar, Angul District, Odisha by M/s NTPC Ltd-reg. reconsideration of EC. (F.No: J-13012/31/2009-IA.II (T) & Proposal No: IA/OR/THE/66791/2014)

(18.5.1) The proposal for grant of Environmental Clearance has been considered in EAC (Thermal Power) in its 16th meeting held on 19.04.2018 and EAC sought the following additional information:

i. One-month summer season baseline data is to be collected for verification of baseline status of the project. Baseline data is to be collected at 4 monitoring locations (two locations from sampling locations mentioned in the EIA report & two locations from Continuous Air Quality Monitoring Station and all four locations should be in the downwind direction). The results shall be compared with data from the 4 OSPCB Air Quality Monitoring Stations in Talcher.
ii. Certified point-wise compliance report for Consent to Operate for the existing power plant by RO, OSPCB, as the site visit report submitted by the RO, OSPCB is incomplete.
iii. Details of firm coal linkage.
iv. Action plan for meeting ash content in coal up to 34%. Action plan for setting up of a coal washery, if any.
v. Details of capital budget for CSR activities and implementing Public Hearing commitments.
vi. Action plan for achieving new thermal emission standards vide dated 7.12.2015 for power plants under operation.
vii. Implementation of decision taken by the Ministry of Power vide letter No. 19/3/2018-OM (E)-Part (1) dated 01.03.2018 regarding transportation of coal through closed Pipe conveyor for Power plants with in 20 km of coal source and shall use MGR system for TPS within 20 to 40 km from coal source.
viii. Cumulative prediction of air quality for the worst case scenario considering all the stacks which are under operation for both the stack heights 150 m/ 275 m.
ix. Status of forest clearance for 2.337 acres.
x. Decommissioning plan for existing power plant, if any.
xi. Details and copy of directions issued by CPCB/SPCB, if any.
xii. Water requirement of the existing and proposed power plants vis-à-vis availability of water in the Brahmani river considering the potential users in the upstream and downstream.

(18.5.2) Project Proponent submitted the additional information on 8.6.2018. Accordingly, the proposal has been re-considered in the present EAC meeting. Project Proponent made the presentation inter-alia submitted the following information:

i. One month baseline ambient air quality data has been collected from 2.5.2018 to 29.5.2018 from four locations (two locations from the stations mentioned in the EIA report and two from continuous AAQ Stations at Talcher TPS.
ii. The data has been compared with the Odisha SPCB values. The SO_2 and NO_2 values are well within the National Ambient Air Quality Standards (NAAQS). However, the PM_{10} & $PM_{2.5}$ are slightly higher than the NAAQS in downwind direction. The values are slightly higher due to domestic coal burning, Brick Kiln, poor road conditions, and other industrial activities in the area. Although the values recorded by consultant hired by NTPC are on higher side but in most of the locations, it is at par with the Odisha SPCB.
iii. NTPC Talcher Thermal Power Plant (460 MW) was inspected on 23.05.2018 and monitoring was carried out on 23.05.2018 & 24.05.2018 by SPCB, Odisha to verify the status of compliance of Consent to Operate. Point-wise compliance and monitoring report of Odisha SPCB vide letter dated

29.05.2018 for Consent to Operate dated 31.03.2018 for existing Talcher Thermal Power Plant for Phase-I: 4x60 MW and Phase-II: 2x110 MW.

iv. Standing Linkage Committee (Long-Term) for Power Sector, Ministry of Coal, Government of India has recommended the long term coal linkage with subsidiary(ies) of CIL to the proposed Talcher TPP StageIII (2x660 MW) at its meeting held on 10.04.2018. Ministry of Coal has issued Minutes of Meeting dated 15.05.2018.

v. Ministry of Coal has issued Minutes of Meeting of SLC (LT) dated 15.05.2018 stating that coal for Talcher TPP will be supplied from CIL. The linked mine/Subsidiary for Talcher TPP Stage-III (2x660 MW) project has not been identified by Coal India Limited (CIL) as yet. In order to meet ash content up to 34%, coal from CIL fields can be suitably blended to achieve ash content of coal less than 34%. Further setting up of a coal washery and its operation requires huge volume of water and land which NTPC may not be in a position to do so. However, NTPC will put all its efforts to impress upon CIL to supply the required quality of coal.

vi. The CD initiatives of Talcher TPS are broadly planned in the area of Education, Health, Infrastructure/asset Creation, Water supply, women empowerment, Capacity building and other Welfare activities for bringing positive changes in Educational standard, living standard, Health awareness, and provide skill for their livelihood, and also contribute for their cultural and social development of the local community. The proposed draft Community Development Plan for CD activities and implementing Public Hearing commitments for Talcher Stage-III (2x660 MW) has been prepared. The Capital budget is envisaged around Rs 19.50 Crs.

vii. In order to meet prescribed norm of 100 mg/Nm^3 on sustainable basis, Retrofitting work of ESPs were undertaken in all units of Talcher TPS Stage-I, (4x60 MW) and Stage-II (2x110 MW). As a long-term measure, the Retrofitting/ Augmentation of ESPs have been undertaken through M/s. BHEL. The work of Retrofitting / Augmentation of ESP of Unit-V was completed in July 2015. Moreover, for ensuring more consistency & reliability, PLC based Ammonia Flue Gas Conditioning system has been installed. ESP performance is monitored round the clock and healthiness of the equipment and systems are ensured and maintained on priority to keep the SPM level within the prescribed norm. Existing Talcher TPS plant is complying the PM emissions norms of below 100 mg/Nm^3.

viii. As the project is very old and compact, there is space constraints to install the FGD Systems. However, for control of SO_2, Talcher TPS has taken up a pilot project of Dry Sorbent Injection Technology. The Dry Injection technology basically injects pure (@90-95%) hydrated lime before ESP. The reactions depending upon the residence time, flue gas temperature etc. helps in desulphurization and control of SO_2 emissions. The project is being planned in a time bound manner with In-house Engineering. The project is likely to be completed in March, 2019 for the 1st Unit. With the implementation of Dry Sorbent Injection, the stack SO_2 emissions are expected to be well within the prescribed standard of 600 mg/Nm3. Talcher TPS will adopt proper Operation & Maintenance practices to keep Stack NOx within new norm of 600 mg/Nm^3 in operating units.

ix. The project was implemented by erstwhile Orissa State Electricity Board (OSEB) and subsequently taken over by NTPC on 03.06.1995.

x. NTPC already has provision of MGR System at existing Talcher TPS, which is around 3 kms from MCL mines siding, it has conveyor system for transportation of coal. Talcher TPS stage-III (2x660 MW), NTPC shall take care of the norms laid down by Ministry of Power for transportation of coal by closed pipe conveyor system/MGR system, whichever is applicable.

xi. The emissions from operating stacks of all projects in study area have already been covered in Baseline Concentration of Air quality. Cumulative prediction of air quality for the worst case scenario considering for stack height 150 /275 m for Talcher TPS Stage-III (2x660 MW) is enclosed.

xii. For the stack height of 275 m, the maximum ground level concentrations (98 percentile) for PM, SO_2 and NOx was observed 91.57, 35.98 and 39.68 $\mu g/m^3$ including the resultant incremental value of 2.57, 8.58 and 8.58 for respectively at the distance of 1600, 1300 and 1300 m in E and ESE direction. Whereas, for the stack height of 150 m, the maximum ground level concentrations (98 percentile) for PM, SO_2 and NOx was observed to be 91.74, 36.50 and 40.20 $\mu g/m^3$ including the resultant incremental value of 2.74, 9.10 and 9.10, respectively at the distance of 1600, 1300 and 1300 m in E and ESE direction.

xiii. Proposed Land for Make-up Water Pump House involves 2.377 acres. Revenue Forest land nearby Samal Barrage (30 km from project site) at bank of Brhamani River. Application for diversion of the same was submitted on 08.05.2015. Proposal has been approved by Government of Odisha on 27.09.2017 and forwarded to Addl. PCCF, Regional. Office, MOEF&CC Government of India, Bhubaneswar. Stage-I Forest Clearance has been recently issued.

xiv. NTPC vide letter Ref. No. 01/CP/SP/CEA dated 14.06.2017 to CEA, have indicated phasing out/retiring of the Talcher Thermal Power Plant 460 MW (4x60 MW and 2x 110 MW) by 31.12.2023.

xv. CPCB vide letter dated 06.04.2018 has issued directions to the existing Talcher TPS (460 MW), under Section-5 of Environmental Protection Act, 1986, for installation of pollution control equipment's (FGD, Low NOx burners, providing Over Fire Air (OFA), retrofit of ESP) to comply New Emission norms of MoEF&CC by 31.12.2020. It is also directed by CPCB that plant shall not operate beyond 31.12.2020, if it fails to comply with new/revised emission limits for SO_2, NOx and PM.

xvi. WRD, Government of Odisha vide letter dated 04.06.2018 has allocated 16.49 cusecs of water for existing plant and 39 cusecs of water in phased manner for operation of proposed Talcher Thermal Power Project Stage-III (2x660 MW).

xvii. Executive Engineer, Head works Division, Samal vide letter dated 24.05.2018 has provided the details of Upstream of Samal Barrage. It has informed that provision of drawl of water from Upstream of Samal Barrage is 9.909 m^3/sec. and there currently are no proposed/upcoming power plants in this area. The availability of water after considering the existing project at Upstream of Samal Barrage is 1.808 m^3/sec (63.85 Cusecs) which is more than the water requirement (39 Cusecs) for proposed Talcher TPP Stage-III (2x660 MW). Executive Engineer, Angul Irrigation Division, Hakimpada, Angul vide letter dated 29.05.2018 has provided the

details of downstream of Samal Barrage. Further, it is also informed that Department of Water Resources, Govt. of Odisha has allocated 35.81 Cusecs of water from downstream of Samal Barrage to M/s NSL Nagapatnam Power & Infratech Limited. But currently construction of said project not started and not withdrawing the water from Brahmani River.

(18.5.3) Committee noted that though linkage document from Ministry of Coal is available, exact source of coal is not known. Standing Committee stated that CIL shall have consultations with Ministry of Shipping and Ministry of Railways so that linkages are allocated from sources based on coal availability and transportability. Further, committee noted that Project Proponent is currently sending the ash to South Balanda mines located nearby for its disposal. Committee noted that the ash shall not be directly disposed in the mines. In such cases, there is a high chance of rupturing groundwater aquifer and heavy metals transport into groundwater. Committee felt that the ash should be mixed with either overburden or lime. Further, committee noted that PP is constructing two new ash ponds at Jhadiamba and Santhapada. During Public Hearing, people raised an objection of constructing ash pond at Santhapada as it is located near to Brahmani River. Committee felt that there should not be any necessity of ash pond at all. All the ash generated from the power plant shall be used for various construction purposes, cement and brick manufacturing. The unutilised ash may be sent to South Balanda mines. Further committee noted that PP could not present the weather classes which were taken for predicting the ground level concentrations for both scenarios of stack heights (150 m/275 m) as the increase in the GLC is only 0.2-0.5 $\mu g/m^3$ by decreasing the stack height from 275 m to 150 m. Further, the maximum Ground Level Concentrations in both the cases are occurring at the same distance (1.6 km for PM and 1.3 km for SO_2 & NO_X). PP informed that Stage-I forest clearance for 2.377 acres has been obtained. However, a copy of the same needs to be submitted to the Ministry.

(18.5.4) **Committee after detailed deliberations, recommended for grant of Environmental Clearances** subject to following conditions in addition to the standard conditions for Thermal Power Plants.

i. The Ash content and Sulphur contents in the Coal shall not exceed 34% and 0.55%, respectively. In case of change in coal characteristics, a fresh reference is to be made to Ministry for reviewing the incremental impact, if any and adequacy of the conditions.
ii. The capital CSR/CER budget shall be in line with Ministry's OM dated 1.5.2018 or Rs.19.5 crores which ever is higher. The amount shall be implemented during project construction in the surrounding villages.
iii. As the coal source is determined, the details regarding characteristics of coal along with transport mode shall be submitted to Ministry. Coal transportation shall be done by rail only. In any event, coal shall not be transported by road.
iv. The ash which is sent to South Balanda mines shall be mixed with 8% lime before disposing into the mines.
v. The new emission standards shall be achieved for existing units as per the extended timelines given by CPCB. Further, the proposed units shall achieve new emissions standards from the date of commissioning of the plant.

vi. Considering the proposed project is located in the Talcher Critically Polluted Area, the stack height of 275 m shall be erected to achieve maximum dispersion.

vii. The ash pond near Santhapada shall not be used as it is near to Brahmani River and high chances of breaching and contaminating the water body.

18.6 2x600 MW Coal Based Singareni Thermal Power Plant at Pegadapalli Village, Jaipur mandal, District Adilabad, Telangana by M/s Singareni Collieries Company Ltd.- reg extension of permission for road transportation. (F.No. J-13012/88/2008-IA.II (T) & Proposal No: IA/TG/THE/27854/2009)

(18.6.1) Project Proponent applied online on 15.6.2018 for seeking extension of temporary permission granted for transportation of coal by road for another one year. Project Proponent attended the meeting inter-alia submitted the following information:

i. Environmental Clearance for 2x600 MW Coal based Thermal Power Plant has been issued vide Ministry's letter dated 27.12.2010.

ii. A temporary permission for transportation of coal by road for a period of two years (i.e. till 9.8.2018) was issued vide Ministry's letter dated 10.8.2016 subject to conditions.

iii. 20.675 km out of 21.175 km railway track has been completed Srirampur CHP with power plant. The remaining 0.4 km is held up due to land acquisition issues and evacuation of 21 houses which is being monitored by the District Collector.

(18.6.2) Committee noted that project proponent has not submitted the traffic impact assessment study to understand the impact of proposed additional traffic. The traffic impact study which was conducted more than two years back may not be accepted. Further, there are additional conditions stipulated in the temporary permission which includes avenue plantation and achieving new emission norms. The status of compliance of these additional conditions is not made available.

(18.6.3) **Committee after deliberations, deferred the project** for want of following additional information:

i. Traffic Impact Assessment study which includes impact on traffic load, ambient air quality and noise levels. Line source modelling is to be conducted for estimating the incremental concentrations and impact area along the road. Area source modelling is to be conducted for loading and unloading points for predicting the environmental impacts. Baseline data of AAQ along the roads shall be collected.

ii. The status of compliance of additional conditions stipulated in the temporary permission dated 10.8.2016 shall be submitted.

18.7 Expansion of cogeneration power plant from 6 MW to 18 MW at Sy. Nos. 250, 259, 260, 262, 471, 263 and 473, Village & Taluk Gokak, District Belagavi, Karnataka by M/s. Roquette Riddhi Siddhi Pvt. Ltd.-reg. EC. (F.No. J-13012/06/2016-IA.I (T) & Proposal No: IA/KA/THE/53776/2016).

(18.7.1) Project Proponent submitted the online application for grant of Environmental Clearance on 21.5.2018. Project Proponent along with M/s Pioneer Enviro Laboratories & Consultants Pvt. Ltd. made the presentation inter-alia submitted the following information:

i. There is a Maize Processing Plant with capacity of 1200 TPD which produces Liquid Glucose, Dextrose powder and Syrup, Monohydrate, Maltodextrine, Germ etc. which is under operation. The co-generation power plant of 6 MW is also under operation to cater to the needs of Maize Processing Plant. Now, the capacity of co-generation power plant is proposed to be expanded from 6 MW to 18 MW (Incremental capacity is 12 MW).

ii. The existing plant was not under the purview of Environmental Clearance. Necessary Consents from Karnataka Pollution Control Board have been obtained prior to issue of EIA Notification dated 14.09.2006.

iii. Terms of Reference (ToR) has been issued vide Ministry's letter dated 26.7.2016.

iv. Ghata prabha Bird Sanctuary is at 0.42 km from the proposed project. The total land available for Existing plant is 97 Acres.

v. The baseline data has been collected from October 2016 to December 2016 for the parameters of PM_{10}, $PM_{2.5}$, SO_2, NOx, CO and Hg.

vi. Karnataka State Pollution Control Board (KSPCB) has conducted Public Hearing on 23.10.2017 which was presided by the Additional District Commissioner for proposed expansion of coal based co-generation power plant from 6 MW to 18 MW.

vii. Final EIA/EMP report has been submitted to Ministry on 21.5.2018.

viii. The fuel for the proposed project is Coal/Bio-mass. MOU has been entered with M/s. The Regency Corporation for supply of 3,00,000 TPA of imported coal which will be imported from Indonesia. The maximum ash content in the imported coal is 8% which is in accordance with Ministry's Notification dated 02.01.2014. Sulphur content in the imported coal is 0.5%. Approximate quantity of 99,000 TPA Bagasse from Sugar Plants will be used as fuel in addition to the coal.

ix. Water required for the proposed Expansion of power plant will be sourced from Ghataprabha river. Water required for the expansion project will be 720 KLD which will be sourced from Ghataprabha River. The water drawl permission for the expansion is at an advanced stage. The Managing Director, M/s Karnataka Neeravari Nigam Limited Bengaluru has recommended to allocate 1.6 cusecs (1 cusec for existing plant and 0.6

cusec for proposed project) to Principle Secretary, Water resources Department, Govt. of Karnataka vide letter dated 05.03.2018.

x. As the proposed CFBC technology is a Clean technology, while burning the coal, fuel gas such as Sulphur Dioxide will be released. At the same time, Sulphur absorbing limestone will be used to mix with the fuel particles in the fluidization phase, which will absorb almost 95% of the sulphur. However, a space provision for Flue Gas Desulphurization (FGD) units is kept in the layout of the plant.

(18.7.2) Committee noted that the existing units did not have environmental clearance. Committee noted that permission to withdraw water from Ghata Prabha river is yet to be granted. Further, committee noted that application for authentication of map by Chief Wildlife Warden regarding distance between proposed project & existing unit and Bird Sanctuary along with specific comments has been submitted. As submitted by PP, since the proximity of Bird Sanctuary from the project (0.42 km), specific comments of Chief Wildlife Warden are required. Further, Regional Officer certified compliance report on Consent Conditions (CTO) has not been submitted. Committee further noted that air quality modelling which was done only for the emissions generated from the proposed power plant. While prediction of maximum incremental ground level concentrations, emissions from all the process stacks of existing (6 MW power plant and Maize processing plant) and proposed unit (12 MW Power Project) shall be considered so that cumulative impact can be assessed. Cumulative impacts like waste water generation, solid waste and hazardous waste generation and it treatement & disposal mechanism shall be assessed. Committee noted that though the existing unit does not require Environmental Clearance, it is necessary to assess the cumulative impacts while appraising for proposed project. Further, committee noted that Project Proponent has to submit the 104 readings for baseline air quality for the existing units. However, Project Proponent has submitted only 12 readings month-wise from April, 2016- March, 2017. Further, project proponent has proposed imported coal, domestic coal and biomass. However, no specific linkages available w.r.t. domestic coal and biomass.

(18.7.3) **Committee after deliberations deferred the project** for want of following additional information:

i. Legible copy of MoU for imported coal vide dated 19.4.2016 is to be submitted.

ii. Authenticated map by Chief Wildlife Warden showing distance between Ghata Prabha Bird Sanctuary & its Eco-sensitive Zone vis-à-vis Project along with specific comments shall be submitted.

iii. Permission for water withdrawal from Ghata Prabha river shall be submitted.

iv. 104 readings for baseline data of Ambient Air Quality of the existing unit during last one year as per ToR No.xlix. Soft copy of Project file of the air quality modelling is to be submitted for verification by IMD Expert.

v. Cumulative impact of all sources of emissions including handling and transportation of existing and proposed projects shall be assessed as per ToR No.li.

vi. Cumulative impacts in terms of generation of wastewater, solid waste and hazardous waste and treatment & disposal mechanism shall be assessed for both existing and proposed units.

vii. Certified Compliance report by RO, SPCB on Consent (CTO) conditions shall be submitted.

viii. Details of minimum distance to be maintained from HFL of Markandeya River and Ghata Prabha River.

18.8 Modernization & Expansion in Power Plant from 125.3 MW to 141 MW at Tehsil - Ladpura, District - Kota, Rajasthan by M/s DCM LTD. reg. EC. (F.No.J-13012/07/2017-IA.I(T) & Proposal no. IA/RJ/THE/64601/2017)

(18.8.1) Project Proponent submitted the online application for grant of Environmental Clearance on 12.6.2018. Project Proponent along with EIA consultants M/s Kadam Environmental Consultants have made the presentation inter alia submitted the following information:

i. ToR for the proposed project has been issued vide Ministry's letter dated 3.7.2017.

ii. Total capacity of captive power plants at site is 125.3 MW. This entire capacity was established in stages, between the years 1968 to 2005 and did not entail securing Environmental Clearance based on regulations in place during that time. Proposed project is for development of modernization & expansion in Power Plant from 125.3 MW to 141 MW.

iii. Excluding common greenbelt and future expansion, this proposed expansion project along with the existing project will be coving an area of ~ 51 Acres for 141 MW Power Plant.

iv. Coal requirement is 2,532 TPD. The fuel mix of Domestic Coal to Imported Coal shall be maintained to 80:20.

v. Coal linkages have been granted to various units as per NCDP (New Coal Distribution Policy) issued by Ministry of Coal in 2007 by a Standing Linkage Committee consisting of MoC, Ministry of Power & Railways. FSA were signed with respective subsidiary of CIL as per norms of NCDP from 2008 onwards.

vi. Coal linkages have been granted to various units as per NCDP (New Coal Distribution Policy) issued by Ministry of Coal in 2007 by a Standing Linkage Committee consisting of MoC, Ministry of Power & Railways. FSA were signed with respective subsidiary of CIL as per norms of NCDP from

2008 onwards. The proposed 66 MW Power Plant the annual quantity of G11 Grade comes to 3,20,602 MT. Domestic coal will be sourced mainly from different coal fields of SECL (South Eastern Coalfields Limited) having aerial distance of ~550 - 800 Km from the project site via train transport.

vii. In the event of non-availability / low availability of coal through linkage auction process, DCM Shriram Ltd. will procure coal from open market for which LOA. The Ash and Sulphur content is up to 40% and 1.2% respectively.

viii. Water requirement of DCM Shriram integrated complex, for various industrial & domestic purposes, is fulfilled through water supplied by RMC Division of Command Area Development (CAD) through the Right Main Canal (RMC) of Chambal River which is at ~1.0 Km from the project site.

ix. There will not be any additional water requirement for the expansion project. Due to various recycle and reuse schemes like higher COC operations of cooling towers, dry fly ash collection, installation of RO etc., fresh water requirement will be reduced from 12,894 KLD to 12,469 KLD for the proposed modernization & expansion units.

x. Baseline monitoring study and surveys of the study area has been carried out in Summer Season, 2017 from 10.3.2017 to 29.6.2017.

xi. Traffic survey was not carried out as the traffic load on the nearby road will decrease because 7 trucks per day is decreasing as compared to the present scenario which will not create any impact.

xii. By having Sulphur reduction efficiency of 97.65% (Lime dosing in CFBC boilers) & ESP Efficiency of 99.95%, the prescribed norms will be met.

xiii. Public hearing was conducted by RSPCB, Kota on 13th April, 2018 at Buddha Singh Bafna Community House, Shrinathapuram, Tehsil Ladpura, Kota.

xiv. Due to proposed units, fly ash and bottom ash generation from burning of fuel in boilers will decrease from 2,90,811 TPA to 2,10,011 TPA. It will be stored in closed storage silos and used in Shriram Cement works (in same complex) or sold to other cement factories & Brick Manufactures. 5 MTPA generated used oil will be sold to authorized recyclers. No other hazardous waste will be generated from proposed power plant.

xv. Estimated project cost is Rs.124 Crores. During the construction phase around 250 workers will be required. Existing manpower is sufficient to operate proposed expansion units. Local skilled and semi-skilled workers will be engaged during construction phase.

(18.8.2) Committee mentioned that only a forwarding letter by RSPCB to Project Proponent is provided regarding compliance report. Further, PP submitted a self-compliance report. A certified compliance report on against conditions stipulated in the Consent (CTO) is required. Further, from the Letter of Intent (LoI), it is mentioned that Sulphur content in the imported coal is 3.04% and ash content is 40%. As per the Ministry's OM dated 5.2.2013, the Ash and Sulphur content

in the imported coal shall not exceed 12% and 0.8% respectively. Committee noted that no alternate sites were considered in the EIA report, since the power and steam requirement are envisaged for in house use, within Kota complex. Further, committee noted that there are dense habitations located on north and North West side just adjacent to the proposed project location. Only separation is the road in between the project and habitation which is a sensitive issued. Incremental air quality concentrations are also falling in the habitation area. Project Proponent may search for alternate location on the Southern side or Eastern side of the existing unit so that it will not be proximity to habitation. Project Proponent has carried out the air quality modelling studies considering the wind direction and speed during the summer season (March-June, 2017). In addition to the weather data during summer, there is a need to carry out the air quality modelling considering the weather conditions prevailing throughout the year.

(18.8.3) **Committee after deliberations, deferred the project** for want of following additional information:

i. Certified Compliance report by the Regional Office, SPCB on the conditions stipulated in the Consent to Operate.
ii. Justification to meet the Ash content and Sulphur content in the imported coal up to 12% and 0.8%, respectively as per Ministry's OM vide dated 5.2.2013.
iii. Sulphur balance diagram.
iv. Impact on the habitation (on North and North-West) adjacent to the proposed project location and its mitigative measures.
v. Air quality prediction shall be carried out considering the annual average data of climatic conditions to assess whether there is any impact on habitation adjacent to the proposed project.

Item No. 18.9 Any other items with the permission of the Chair

As there being no agenda item left, the meeting ended with a vote of thanks to the Chair.

ANNEXURE- A1

Terms of Reference (TOR):

i) 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.

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

iii) 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.

iv) 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.

v) 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.

vi) 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.

vii) 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.

viii) Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided.

ix) 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.

x) Present land use (including land class/kisam) 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.

xi) 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 documents.

xii) The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.

xiii) 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.

xiv) 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.

xv) 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.

xvi) 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.

xvii) 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.

xviii) 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.

xix) 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.

xx) 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.

xxi) 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.

xxii) 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.

xxiii) 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.

xxiv) 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.

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

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

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

xxviii) Plan for recirculation of ash pond water and its implementation shall be submitted.

xxix) 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.

xxx) 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.

xxxi) 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.

xxxii) 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.

xxxiii) A detailed CSR plan along with activities wise break up of financial commitment shall be prepared. CSR component shall be identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified. Separate budget for community development activities and income generating programmes shall be specified.

xxxiv) 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 government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CSR details done in the past should be clearly spelt out in case of expansion projects.

xxxv) 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.

xxxvi) 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.

xxxvii) 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.

xxxviii) One complete season site specific meteorological and AAQ data (except monsoon season) as per latest MoEF Notification shall be collected and the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM_{10}, $PM_{2.5}$, SO_2, NO_x, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration of 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.

xxxix) 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).

xl) A list of industries existing and proposed in the study area shall be furnished.

xli) 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.

xlii) Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.

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

xliv) 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

xlv) 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.

xlvi) 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.

xlvii) 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.

xlviii) 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.

xlix) 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.

l) 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.

li) 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_2 and other gaseous pollutants and hence a stratified green belt should be developed.

lii) 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.

liii) <u>Corporate Environment Policy</u>

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.
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.
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.
d. Does the company has 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.

All the above details should be adequately brought out in the EIA report and in the presentation to the Committee.

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

ANNEXURE- A2

Specific Conditions related to Thermal Power Projects:

(i) Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.

(ii) Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.

(iii) A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year and reported along with monitoring reports. 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.

(iv) Online continuous monitoring system for stack emission, ambient air and effluent shall be installed.

(v) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 30 mg/Nm^3 or as would be notified by the Ministry, whichever is stringent. 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 along with an environment friendly sludge disposal system.

(vi) 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.

(vii) Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.

(viii) A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.

(ix) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.

(x) Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.

(xi) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) shall be monitored in the bottom ash. No ash shall be disposed off in low lying area.

(xii) No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken

from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.

(xiii) Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.

(xiv) Green Belt consisting of three tiers of plantations of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 80 %.

(xv) Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.

(xvi) The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.

(xvii) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.

(xviii) For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.

Site Visit report of the Sub-Committee on "2x660 MW Super Critical Imported Coal Based Thermal Power Plant at villages Painampuram & Sivarampuram, Muthukur Mandal, SPSR Nellore District, Andhra Pradesh by M/s Sembcorp Gayatri Power Ltd." during 10th -11th June, 2018.

Introduction:

1.0 Environmental Clearance (EC) for establishing 2x660 MW Super Critical Imported Coal Based Thermal Power Plant at Villages Painampuram & Sivarampuram in Muthukur Mandal of Nellore District in Andhra Pradesh has been issued in favour of M/s Nelcast Energy Corporation Ltd. vide Ministry's letter dated 30.09.2010 which was valid for five years, i.e. 29.09.2015. Coal requirement is 5.48 MTPA and imported coal shall be used. Validity of the EC dated 30.9.2010 has been extended till 29.9.2017 (total of seven years) vide Ministry's letter dated 4.3.2016. Unit-1: 1x660 MW and Unit-2: 1x660 MW have been made operational since 15.11.2016 and 18.02.2017, respectively.

1.1 An amendment in EC for change in fuel source from imported coal to domestic and imported Coal (75%:25%) and change in name of the company from M/s Nelcast Energy Corporation Ltd. to M/s NCC Power Projects Ltd. has been issued vide Ministry's letter dated 18.5.2011.

1.2 MoEF&CC Regional Office, Chennai has conducted site visit during 23rd- 24th January, 2017 and submitted certified compliance report on 14.3.2017 wherein non-compliance against 26 conditions stipulated in the EC have been reported. The relevant non-compliances to the present site visit are as follows:

EC condition no.	Details of EC conditions	RO Compliance report
v.	The project proponent shall establish at its own costs a Fish Landing Platform, Ice Plant, etc. and shall accordingly submit to the Regional Office of the Ministry and the Fishery Department of the State Govt. a detailed plan and implementation schedule. The project proponent shall also prepare an action plan for implementation regarding sustainable fishing option for fishermen community in the area.	Project Proponent has not established fish land platform, ice plant as stipulated in the EC condition. Further, not submitted the action plan along with implementation schedule regarding sustainable fishing option for the fishermen community in the area to the Regional Office of the MoEF&CC and Fishery department of State Government.
vi	An endowment of Fishermen Welfare Fund shall be created	

	out of CSR component for specific activities to be finalised within three months for upliftment of the lives of fishing community in the region. Creation of facilities such as fish drying platforms/ ice plant as mentioned at above clause (v) above can form a part of the scheme.	Project proponent has not created fishermen welfare fund as stipulated in the EC condition.
vii.	The project proponent shall not hamper the vocation of the fishing community in the area and it shall be ensured that local fishing community be allowed to carry out their vocation.	

1.3 M/s Sembcorp Gayatri Power Ltd. (Project Proponent) submitted an application for removing the condition nos.v and vi in the EC. Project Proponent mentioned that these conditions might not be applicable to their industry as there are no such fishing communities dwelling in their area. Project Proponent has also mentioned that they approached Fisheries Department, Govt. of Andhra Pradesh for guiding on implementation of these EC conditions. PP stated that Assistant Director, Fisheries Department had inspected the project area & the surroundings region and informed that there are no inland and marine fishing activities in the region. The letter from the Asst. Director, Dept. of Fisheries vide dated 1.2.2011 is enclosed as (***Annexure-1***). Project Proponent stated that they conducted the survey in the nearby areas and found no integrated fishing activities in the region. It was further mentioned that the power plant is located at 7 km from Krishna Patnam Port and marine fishing activities are not allowed in this region.

1.4 The proposal was placed before Expert Appraisal Committee (EAC-Thermal Power Projects) during its 8th meeting held on 24.7.2017. Committee sought the Member Secretary-EAC that why this condition was stipulated if there are no fishermen communities in the surroundings as claimed by project proponent. Member Secretary briefed that EAC (Thermal Power) in its 67th meeting held during 19-20.3.2010 stipulated the condition "The villages bordering the sites may be predominantly inhabitated by fishermen and the TPS have impacts on their livelihood, although most of the fishing activity is confined to deep seas. An endowment of Fishermen Welfare Fund should be created out of CSR grants not only to enhance their quality of life through creation of facilities for fish landing platforms/ fishing harbour/cold storage, but also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc."

1.5 EAC in its meeting held on 24.7.2017 suggested for a site visit by the Sub-committee comprising of three members to ascertain the presence of villages/

fishermen communities within 10 km radius of the plant site. Meanwhile, EAC has also sought the following information from Project Proponent:

i. Details of villages, population, population of fishermen communities, details of fishing activities, etc within 10 km radius of the project site.
ii. Time bound action plan on non-compliances reported by the RO, MoEF&CC vide their report dated 14.3.2017.
iii. No Objection Certificate from previous company and an undertaking from the new company that they will comply to the conditions stipulated in the EC.

1.6 Ministry vide letter dated 1.9.2017 (***Annexure-2***) has constituted the sub-committee comprising of following members:

i.	Shri Suramya Vora (Member-EAC)	-	Chairman
ii.	Dr. S.K. Sinha/ Dr. Om Prakahs (Member-EAC) (Representative of ISM Dhanbad)	-	Member
iii.	Representative from Dept. of Fisheries, Govt. of A.P.	-	Member
iv.	Scientist, MoEF&CC, RO, Chennai Scecretary	-	Member

1.7 Subsequently, Ministry has nominated N. Subrahmanyam as additional member of the Sub-committee. Shri Sundar Ramanathan, Scientist 'D' has been nominated as Member Secretary by RO, MoEF&CC, Chennai. Further, Shri Sita Rama Raju, Additional Director has been nominated as member by Department of Fisheries, Govt. of A.P. Further, the representative of ISM Dhanbad could not be present.

2.0 Description:

2.1 The sub-committee visited the site during 10th-11th June, 2018. Sub-committee visited the power plant and interacted representatives of the Power Plant (***Annexure-3***). A presentation has been made by the project authorities and mentioned that there are no fishermen villages in the surrounding areas and requested to delete the said EC condition. Ministry vide letter dated 1.9.2017 (***Annexure-4***) sought the details of villages, population of fishermen communities, details of fishing activities, etc within 10 km radius of the project site. Project Proponent vide their online reply dated 3.4.2018 submitted the back dated letter (18.11.2017) wherein they have mentioned that there are no inland and marine fishing activities in the project vicinity (3km). It is pertinent to note that Project Proponent submitted a map showing villages only in the North side of the Power Plant. Project Proponent has not submitted the details of fishermen villages within 10 km radius as sought vide Ministry's letter dated 1.9.2017. Though Project Proponent initially mentioned that there are no fishermen villages in the surrounding, later they have accepted that there are several fishermen hamlets within 10 km radius. However, Project Authorities mentioned that there are five power plants and one port located in the coastal belt. Details are as below:

i. Power Plant of M/s Sembcorp Gayatri Power Limited,

ii. Power Plant of M/s Thermal Powertech Corporation Limited (Owner of M/s Sembcorp Gayatri and Thermal Powertech is same)

iii. Power Plant of M/s APGENCO

iv. Krishna Patnam Port

v. Power Plant of M/s Simhapuri Power Ltd.

vi. Power Plant of M/s Meenakshi Power Ltd.

2.2 Three power plants (Sr.no.i, ii & iii) are on the north side of the port and remaining two power plants are on the southern side of the krishna patnam port. In their opinion, the villages on the southern side have to be taken care by the other power plants. Project Authorities mentioned that they had already deposited Rs.25 Crores to the District Administration for rehabilitation of the Village Nelaturi Palem to Dhanalakshmi Puram (50% of the population) and Koduru near port (50% of the population). Some of the villagers would like to shift to Dhanalakshmi Puram which is close to the Nellore City will switch to occupations other than fishing. Remaining people will shift to Koduru which is along the coast on north side of the power plant who will continue to their traditional fishing activity. It was informed by project authorities that M/s APGENCO has also contributed Rs.25 Crores for rehabilitation of the village. In addition to this contribution, project authorities informed that they are doing many CSR activities in the villages such as providing RO treated drinking water, Self Help Groups (SHG), providing scholarships and providing employment to unskilled labour in the power plant, etc. It was informed that more than 150 local people were employed in the housekeeping labour. Project Authorities mentioned that the plant is presently running at 50% Plant Load Factor due to non-availability of Power Purchase Agreement.

2.3 Further, sub-committee visited the College of Fisheries, Srivenkateswara Veterinary University located in Muthukuru Village and interacted with the Principal/Head of the College Dr. P. Haribabu and Professor Dr. K. Dhanapal. The Principal mentioned that though there is no Socio Economic Study conducted in the region, there are approximately 10-15 fishermen hamlets exist in the 10 km area surrounded by the power plant and nearby coastal belt. He spelled out some villages in the surrounding areas viz. Mallipadu, Ganga Patnam, Ketepalli, Krishna Patnam, Nealaturi Palem, Gummaldibba, Varagali, etc. It was informed that by the Fisheries College that Krishna Patnam villages has approximately 1500 fishermen families and Nelaturi Palem has approximately 700-800 fishermen families. However, Principal of the Fisheries College emphasised the need for Socio Impact Assessment Study to identify the fishermen communities with respect to the power plant and their needs.

2.4 Further, Sub-committee interacted with the fishermen community at Nelaturi Palem along with the Chairman of the State Federation, A.P. Fishermen Co-operative Society. The hamlet has approximately 500 families within 3 km radius of the power plant. Villagers mentioned that there is a small landing centre for boats near their village and there are about 70 boats used for fishing. Villagers mentioned that fish catch has been reduced in comparison to the fish catch before these industries came up. Further, Villagers mentioned that wastewater is released by these industries into the Buckingham Canal as well as sea which has killed the fishes and the catch has been reduced. The release of wastewater into the Buckingham canal has been refuted by the Project Authorities. Further, villagers stated that their fishing nets are getting damaged due to pipelines laid by the power plant industries. Villagers perceived that

the noise generating from the closed conveyor belt is creating health problems such as migraine and headache, etc. People said that they have been residing in the village since many generations and would not like to shift to any other place. However, as their livelihood is disturbed due to industrial activities, they said they are willing to be rehabilitated with all amenities as soon as possible.

2.5 Villagers were requesting for constructing fish landing centre in the region. There is one fishing harbour constructed at village Juvvaladinne, Bogole Mandal, Nellore Dist. which is 35-40 km away from the Nelaturi Palem Village. However, it is far from the Nelaturi Village. There were proposals to construct either at Arket Palem (Open Sea) or Nelaturi Palem (backwaters). Member from the Fisheries Department mentioned that constructing fishing harbour at Nelaturi Palem would be more economically viable as constructing fishing landing centre on the open coast will involve huge expenditure. Further, it was mentioned that if the Nelaturi Palem village is shifted, then there would not be necessity of fishing harbour at all. Sub-committee felt that one Fish Landing Centre (Fish Landing Centre) should be developed at Nelaturu Palem with CSR funds of the Project Proponent. If shifting of the village is inevitable, an alternative site near Village Koduru Pattapupalem of T.P. Guduru Mandal should be considered for construction of FLC. Sub-committee noticed that prawn cultivation has become primary occupation of the villagers. One of the reasons for contamination of Buckingham Canal could be the wastewater from these prawn cultivation ponds. Further, Nelaturi Palem villagers were asked whether they also switched to prawn cultivation. It was mentioned that traditional fishermen community has not switched to prawn cultivation and are still dependent on deep water fishing.

2.6 Sub-committee interacted with Sri. Mutyala Raju Revu, IAS, District Collector, SPSR Nellore District. He stated that there are many fishermen hamlets exist in the coastal region of Muthukur Mandal. He has mentioned that there is a need to protect the livelihood of the traditional fishermen communities as they are unable to move to other occupations. He mentioned that lot of grievances are received from the fishermen and a meeting is scheduled on every Monday for attending these grievances. He expressed that if these industries can also contribute as part of their CSR activities for welfare of the fishermen villages, there would be sustainable development in the region. Sub-committee has also felt that Fishermen Welfare Fund is to be created for which all 06 industries (5 power plants and one Krishna Patnam Port) may contribute to the fund. Further, sub-committee opined that a regional committee may be constituted by involving district administration, Pollution Control Board, Fisheries Department, Fishermen representative, Ministry Regional Office and involve the five power plants and Krishna Patnam port to implement and monitor the welfare activities of the fishermen periodically. Further, Sub-committee recommended that RO, MoEF&CC should conduct site visits for remaining five thermal power plants and Krishnapatnam Port to review the EC conditions pertaining to fishermen communities for adequacy and compliance status of the remaining industries in the coastal area. Some of the photographs are enclosed at ***Annexure-5***.

2.7 Sub-committee made the following recommendations:

i. The claim of not having fishermen villages by the Project Authorities and the letter dated 1.2.2011 of Asst. Director, Dept. of Fisheries is not accepted. The presence of fishermen hamlets has been substantiated by discussions held with the District Collector and Head of the Fisheries College, Muthukur Mandal. Accordingly, the request of deleting the conditions stipulated in the Environmental Clearance regarding fishermen communities is not accepted.

ii. The socio economic study and need based assessment study to identify the presence of fishermen communities and their needs within the 10 km radius of the Power Plants of Sembcorp Gayatri Power Ltd. and Thermal Powertech as both the power plants belong to the owner and sharing the common boundary.

iii. The study shall be conducted the Fisheries College, Muthukuru within 6 months. The expenses towards the studies shall be given from the Endowment Fund by M/s Sembcorp Gayatri Power Ltd.

iv. An additional condition regarding conducting of socio economic and need based assessment study by Fisheries College, Muthukur shall be stipulated in the Environmental Clearance.

v. RO, MoEF&CC should conduct site visits for remaining thermal power plants (Thermal Powertech, APGENCO, Simhapuri and Meenakshi) and Krishnapatnam Port to review the conditions in their respective ECs pertaining to the fishermen communities for adequacy and compliance status by the remaining industries in the coastal area.

vi. Ministry may request APPCB to conduct site visits regarding release of effluents from aquaculture farms.

(K. Sita Rama Raju)
Add. Dir. Fisheries
Govt. of AP &
Member

(N. Subrahmanyam)
Member

(Sundar Ramanathan)
Member Secretary

(Suramya Vora)
Chairman

GOVERNMENT OF ANDHRA PRADESH
DEPARTMENT OF FISHERIES

FROM
Sri R.Lakshminaryana,M.Sc.,
Asst. Director of Fisheries,
SPSR Nellore District.

TO
The General Manager,
M/s.NELCAST Energy
Coporation Limited,
Chennai.

Lr.No.558/A/2010,dt. 1-2-2011.

Sir,

Sub:-Fisheries-SPSR Nellore District-demographic details of fishermen in the vicinity of NECL Thermal power Project- sought for-Regarding.

Ref-1.The General Manager,NELCAST Energy Corporation Limited,Chennai,dt.19/1/2011.

$$$

In response to your letter cited in the reference, I am to inform you that on the basis of the Field level enquiry and also on the basis of our departmental records, there is no Marine fishermen or Inland fishermen population in Pynapuram village of Muthukur Mandal and Ananthapuram,Sivarampuram, Eduru-II villages of T.P.Gudur Mandal.

Further certified that in the Varakavipudi village of T.P.GudurMandal is having 70 Inland Fishermen families. However these fishermen families are eking out there livelihood by resorting to non fishing activities.

Yours faithfully,

Asst. Director of Fisheries
NELLORE

Copy submitted to the Joint.Director of Fisheries,Nellore.

Representatives of M/s Sembcorp Gayatri Power Limited during the site visit

S. No	Name	Designation	Signature
1	Alluri Nageswara Rao	Head Opn & comml. Services	
2	Prabhakar Varma	CSR	
3	Pavan Kumar Rao V	Head-HSE	
4	Kishore Babu K	SM- Environment	
5	Kamal Basha S	Sr. Manager – HSE	
6	Rajashekhar M	Sr. G.M (Operations)	
7	Vamsi Krishna K	Dy. Manager-CSR	
8	Kameswara Rao	Manager CSR	
9	Vidhyadhar Reddy		
10	Hari Krishna	Dy. Manager – CHP	
11	Selva Kumar	Sr. Manager – Operation	
12	Gautam Nayana Upadrastha		
13	Prasad Chavare	Head - PMD	
14	Srinivas B	HEAD OPERATIONS	
15	Brahmanand Chandramani Pandey	Head Maintenance	
16			
17			
18			
19			
20			
21			

Representatives of M/s Sembcorp Gayatri Power Limited during the MoEF Closing Meeting - 11.06.18

S. No	Name	Designation	Signature
1	Raghav Trivedi	Business Head	
2	Ramesh Raman	Head O&M	
3	Pavan Kumar Rao V	Head HSE	
4	Alluri Nageswara Rao	Head O&C Secretary.	
5	Prabhakar Varma	HEAD, CSR	
6	Kamal Basha	Sr. Manager – HSE	

No. J-13012/76/2009-IA.II(T)
Government of India
Ministry of Environment, Forest and Climate Change

3rd Floor, Vayu Block,
Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi-110003

Dated: 01.09.2017

OFFICE ORDER

Sub: **2x660 MW Super Critical Imported Coal Based Thermal Power Plant at villages Painampuram & Sivarampuram, in Muthukur Mandal, in Nellore District, in Andhra Pradesh by M/s Sembcorp Gayatri Power Ltd.- reg. amendment in EC**

Sir,

This has reference to the M/s Sembcorp Gayatri Power Ltd online application dated 15.06.2017 and meeting of 8th Expert Appraisal Committee (Thermal Power) held on 24.7.2017 for grant of amendment in Environment Clearance for the above mentioned Project.

2. The EAC (Thermal) in its 8th Meeting held on 24.7.2017 recommended that a site visit to be carried out by three member committee for ascertaining the presence of villages/ fishermen communities within 10 km radius of the plant site.

3. The Ministry accepts the recommendations and hereby constitutes a sub-committee comprising of following members which would make site inspection and submit a report on findings with respect the concerned project of M/s Sembcorp Gayatri Power Ltd.

i. *Shri Suramya D. Vora (Member-EAC) - Chairman*
ii. *Dr. S.K. Sinha/ Dr. Om Prakash (Member-EAC) - Member*
(Representative of ISM/ IIT Dhanbad)
iii. *Representative from Department of Fisheries, Govt. of Andhra Pradesh - Member*
iv. *Scientist, MoEF&CC, R.O, Chennai - Member Secretary*

4. The Sub-committee shall make a site inspection in **September, 2017** and submit the report within 15 days to the Ministry for further consideration.

5. TA/DA of the Sub-committee nominated by the Ministry for undertaking site visit shall be met by the Ministry of Environment, Forest and Climate Change as per rules.

This issues with the approval of the Competent Authority.

Yours faithfully,

(Dr. S. Kerketta)
Director

Copy to:-

1. Shri Suramya D. Vora, Member-EAC (Thermal Power)
2. Dr. S. K. Sinha/ Dr. Om Prakash, Member- EAC (Thermal Power)
3. The Special Chief Secretary to the Govt., Department of Fisheries, Govt. of Andhra Pradesh, 4th Block, Ground floor, AP Secretariat , Velagapudi, Amaravathi, Guntur District, PIN-522238 – ***with a request to nominate a representative to the sub-committee from the department.***

4. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment Forests and Climate Change, Regional Office, (SEZ), Ist and IInd Floor, Handloom Export Promotion Council, 34 Cathedral Garden Road, Nungambakkam, Chennai-600034.- ***with a request to nominate a scientist to the sub-committee.***
5. The Principal Secretary Environment, Science and Technology, Government of Andhra Pradesh, Secretariat Office, 4th Block, Ground Floor, Room no.187, Velagapudi, Amaravathi-522238, Andhra Pradesh.
6. The Chairman, Andhra Pradesh State Pollution Control Board, Paryavarana Bhawan, A-3, Industrial Estate, Sanath Nagar, Hyderabad -500 018.
7. The District Collector, Nellore District, Govt. of Andhra Pradesh.
8. Guard file/Monitoring file.
9. Website of MoEF&CC.

(Dr. S. Kerketta)
Director

No. J-13012/76/2009-IA.II(T)
Government of India
Ministry of Environment, Forest and Climate Change

3rd Floor, Vayu Block,
Indira Paryavaran Bhawan,
Jor Bagh Road, Aliganj,
New Delhi-110003

Dated: 01.09.2017

M/s NCC Power Projects Ltd.
6-3-1090, Block-A, Level 5,
TSR Towers Rajbhavan Road,
Somajiguda, Hyderabad-500082.

Tel: 040 4904 8300; Fax: 0402337 0360

Sub: **2x660 MW Super Critical Imported Coal Based Thermal Power Plant at villages Painampuram & Sivarampuram, in Muthukur Mandal, in Nellore District, in Andhra Pradesh by M/s NCC Power Projecs Ltd.- reg. amendment in EC**

Sir,

This has reference to the M/s Sembcorp Gayatri Power Ltd. online application dated 15.06.2017 and meeting of 8th Expert Appraisal Committee (Thermal Power) held on 24.7.2017 for grant of amendment in Environment Clearance and for transfer of EC in the name of M/s Sembcorp Gayatri Power Ltd. for the above mentioned Project.

2. The EAC (Thermal) in its 8th Meeting held on 24.7.2017 recommended that a site visit to be carried out by three member committee for ascertaining the presence of villages/ fishermen communities within 10 km radius of the plant site.

3. The EAC (Thermal Power) in its 8th meeting held on 24.7.2017 also sought certain additional information. The committee also noted 26 non-compliances against the conditions of EC dated 30.9.2010.

4. In view of the above, you are requested to submit the following information for further necessary action:

i. Details of villages, population, population of fishermen communities, details of fishing activities, etc within 10 km radius of the project site.
ii. Time bound action plan on non-compliances reported by the RO, MoEF&CC vide their report dated 14.3.2017.
iii. No Objection Certificate from previous company and an undertaking from the new company that they will comply to the conditions stipulated in the EC.
iv. Action taken report on non-compliances observed vide MoEF&CC, RO, Chennai report vide dated 14.3.2017.

This issues with the approval of the Competent Authority.

Yours faithfully,

(Dr. S. Kerketta)
Director

Copy to:-

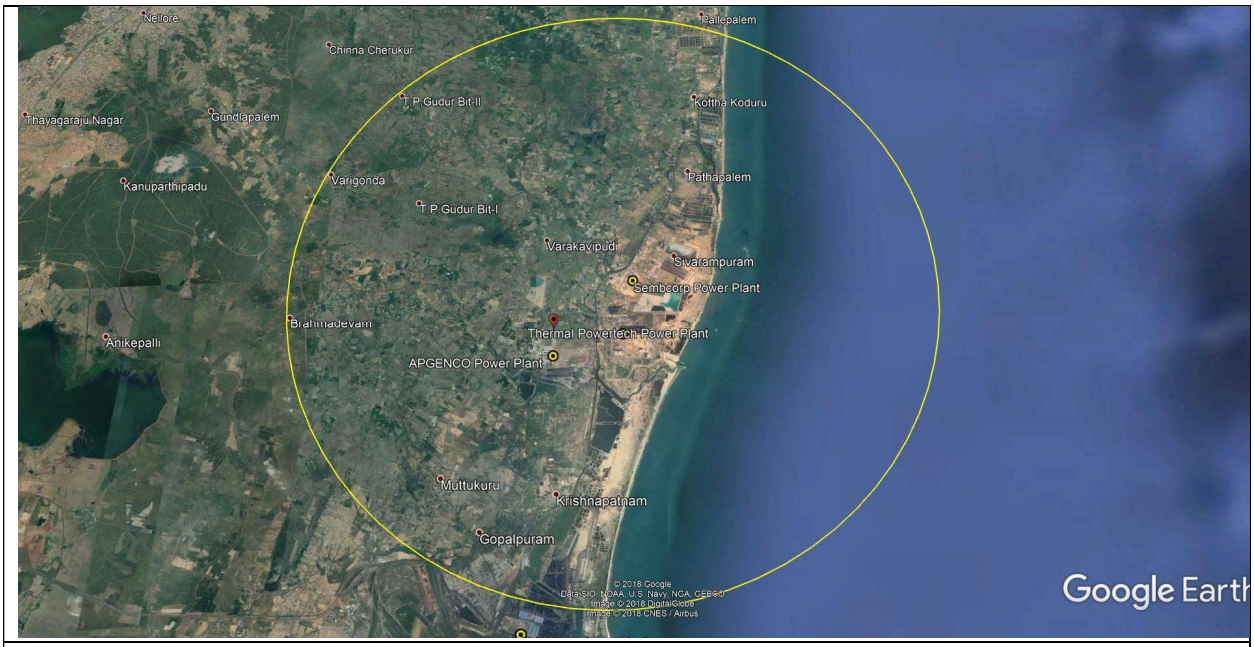
1. M/s Sembcorp Gayatri Power Ltd., Ananathavaram Village, Varakavipudi Panchayat, TP Gudur Mandal, SPSR Nellore Dist., Andhra Pradesh-524344.
2. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment Forests and Climate Change, Regional Office, (SEZ), Ist and IInd Floor, Handloom

Export Promotion Council, 34 Cathedral Garden Road, Nungambakkam, Chennai-600034.

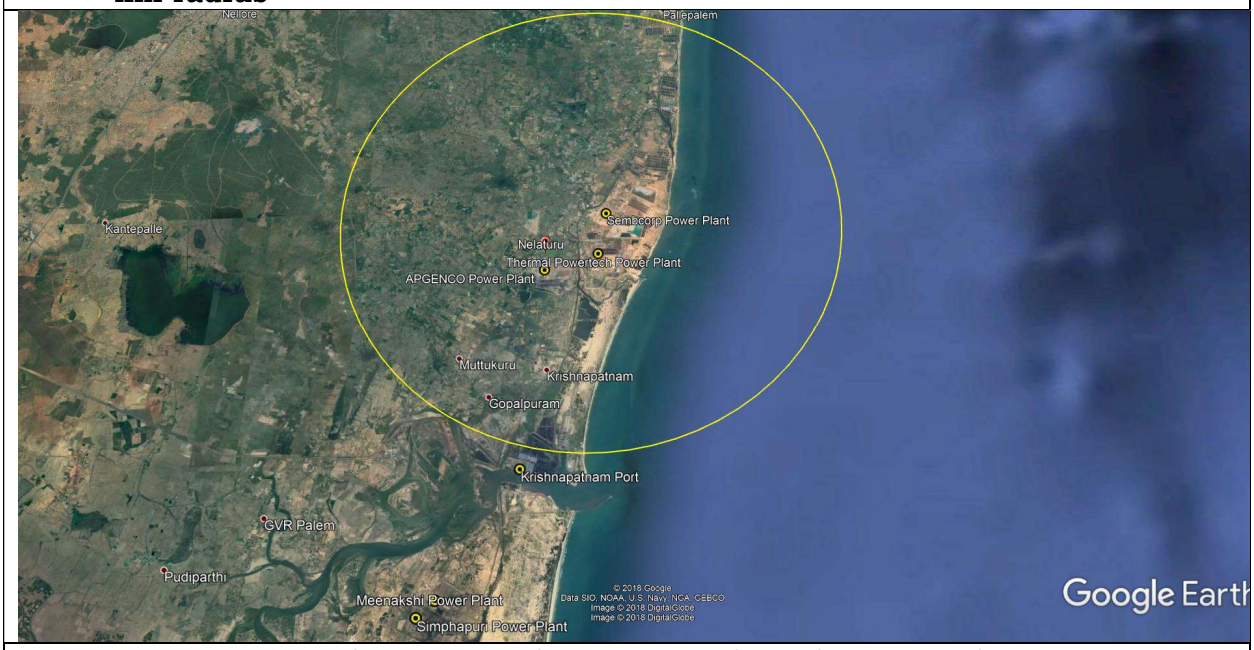
3. The Principal Secretary Environment, Science and Technology, Government of Andhra Pradesh, Secretariat Office, 4th Block, Ground Floor, Room no.187, Velagapudi, Amaravathi-522238, Andhra Pradesh.
4. The Chairman, Andhra Pradesh State Pollution Control Board, Paryavarana Bhawan, A-3, Industrial Estate, Sanath Nagar, Hyderabad -500 018.
5. Guard file/Monitoring file.
6. Website of MoEF&CC.

(Dr. S. Kerketta)
Director

Annexure- 5: Photographs of the Sembcorp Power Plant Site



1. **Location Map of Sembecorp Gayatri Power Plant and villages within 10 km radius**



2. **Location map showing Sembcorp TPP, Themal Powertech TPP, APGENCO TPP, Krishnappatnam Port, Meenakshi TPP, Simhapuri TPP**

Annexure- 5: Photographs of the Sembcorp Power Plant Site

3. RO treatment plan provided in Pinapuram Village by M/s Sembcorp Gayatri Power Ltd.

4. Landing centre at Village Nelaturi Palem which caters to approx.70 boats

Annexure- 5: Photographs of the Sembcorp Power Plant Site

5. **Photo showing the proximity of Village Nelaturi Palem near Power Plant of M/s Thermal Powertech**

6. **Closed conveyor belt for carrying coal from Krishnapatnam port to Power plants of Thermal Powertech and Sembcorp Gayatri.**

7. Interactions with Fishermen of Village Nelaturi Palem

8. Temple at Nelaturi Palem Village

9. Ashpond of Sembcorp Thermal Powe Plant.

Subject: **Re: Draft Minutes of 18th EAC meeting for Thermal Sector held on 27.06.2018 - regarding**
To: Dr S Kerketta <s.kerketta66@gov.in>

Date: 07/05/18 05:14 AM
From: navin chandra <navinchandrarrl@yahoo.com>

Finalized MoM (18th) Thermal_27.06.18.docx (84kB)

05/07/2018

Dear Dr. Kerketta Ji,

I have gone through the Minutes of the EAC meeting held on 27.06.2018 sent by you. There were some minor corrections. After incorporating the same, I am attaching the finalized minutes of the meeting. These may be uploaded on the web-site of the Ministry of Environment, Forest and Climate Change.
Regards,
yours sincerely,

(NAVIN CHANDRA)

Dr. Navin Chandra,
Director General
M P Council of Science and Technology (MPCST),
Vigyan Bhawan, Nehru Nagar, Bhopal - 462003 (M.P.) India
Phone : 91-755- 2671800 (Office)
e-mail : dg@mpcost.nic.in
navinchandrarrl@yahoo.com, navinchandraampri@gmail.com

On Thursday, 5 July, 2018, 10:50:50 AM IST, Dr S Kerketta <s.kerketta66@gov.in> wrote:

Sir,

Please find the attachment. It is to inform that after getting comments/suggestion from the EAC members, this revised draft is being sent with a request to kindly approve the draft Minutes of 18th EAC meeting for Thermal Sector held on 27.06.2018.

--
regards,

Dr. S. Kerketta
Director- IA (Thermal, River Valley & HEP)
MoEF&CC, New Delhi
Phone: 011-24695314 (O), 26113096 (R)

LIST OF MEMBERS (Attendance Sheet)

18th EXPERT APPRAISAL COMMITTEE MEETING (Thermal)

DATE & TIME : 27th June 2018, 10:00 AM
VENUE : Teesta Meeting Hall, Vayu Wing, Indira Paryavaran Bhawan, New Delhi

Sr.No.	Name of Member	Signature
1.	Dr. Navin Chandra Chairman	Navinchand
2.	Dr. Narmada Prasad Shukla Member	27.06.18
3.	Sh. N. Mohan Karnat, IFS Member	Absent
4.	Dr. Sharachchandra Lele Member	Absent
5.	Sh. N.S. Mondal Member	27/6/18
6.	Dr. R.K. Giri, Member	Absent
7.	Dr. S.K. Paliwal, Member	Absent
8.	Prof. S.K. Gupta (ISM Dhanbad) Member	27.6.18
9.	Dr. Jai Krishna Pandey, Member	
10.	Dr. Manjari Srivastava, Member	Absent
11.	Dr. Gururaj P Kundargi, Member	27/6/18
12.	Shri Suramya D. Vora, IFS (Retd.) Member	27/6/18
13.	Dr. S. Kerketta Member Secretary, MoEFCC	27/6/2018
14.	Sh. N. Subrahmanyam Scientist – C, IA-1 MoEFCC (Representative of Member Secretary)	N. Subrahmanyam 27/6/18