MINUTES OF THE 1st MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS

The 1st Meeting of the reconstituted EAC (Thermal Power) was held on 28th December, 2016 in the Ministry of Environment, Forest& Climate Change at Indus Meeting Hall, Jal Wing, Ground Floor, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi under the Chairmanship of Dr. Navin Chandra. The following members were present:

1.	Dr. Navin Chandra	-	Chairman
2.	Dr. Narmada Prasad Shukla	-	Member
3.	Dr. N. Mohan Karnat	-	Member
4.	Shri P.D. Siwal & Shri N.S. Mondal	-	Member (Representative of CEA)
5.	Dr. R.K. Giri	-	Member (Representative of IMD)
6.	Dr. S.K. Paliwal	-	Member (Representative of CPCB)
7.	Prof. S.K. Sinha	-	Member (Representative of ISM Dhanbad)
8.	Dr. S. Kerketta	-	Member Secretary

Dr. Rajesh P. Gunaga and Dr. Sharachchandra Lele could not be present.

ITEM NO. 1: WELCOME NOTE BY MEMBER SECRETARY AND ADDRESS BY CHAIRMAN, EAC.

The Member Secretary welcomed the Chairman and all the Experts Members of the newly constituted Expert Appraisal Committee for Thermal and Coal Mine Projects and briefed the Committee about the salient features of the provisions of the EIA Notification, 2006 and its amendments thereof and the procedures adopted for appraisal of project proposals. He made a brief presentation to Committee regarding various policy decisions taken by the Ministry and issued through various Office Memorandums w.r.t Thermal Power Projects time to time.

The Member Secretary also expressed gratitude to the earlier EAC on behalf of the Ministry as the tenure of that EAC was ended on 01.09.2016.

The Chairman in his address highlighted the requirement of maintaining true spirit of neutrality while appraising a project proposal placed before the Committee and felt that in doing so, merit of the case shall be the sole criteria for recommendations by the Committee.

The detailed deliberations held among the Functional Experts on the individual project and the decisions taken are as under:

Item No. 2: CONSIDERATION OF PROJECTS

2.1 Proposed expansion of 3x660 MW, Phase-II, Coal based Thermal Power Plant Villages, Mirchwara & Buraugaon Tehsil Mahroni, District Lalitpur, Uttar Pradesh by M/s Lalitpur Power Generation Company Limited - reg. ToR

(2.1.1) The Project Proponent (PP) along with their environmental consultant, M/s Vimta Labs, Hyderabad has made a presentation and inter-alia provided the following information:

i. The present expansion proposal of 3x660 MW Super Critical Power Project will be set up in the existing premises of Phase-I (3x660 MW) Power Plant which is under operation.

Environmental clearance existing for Phase-I unit and its amendments for change in source of coal from imported to domestic for have been granted by the Ministry vide letters dated 31.03.2011, 20.05.2014 and 30.05.2016. Unit 1, 2 & 3 of Phase-I have been commissioned on 01.10.2015, 14.10.2016 and 23.12.2016, respectively.

ii. Total land in possession for the existing and proposed project is 1473 acres. Additionally, 240 acres of land would be required for ash disposal which consists of single crop agricultural/ barren land and to be acquired adjacent to the existing plant. There is no forest land involved for the proposed power project and additional facilities like transmission lines, pipelines, rail lines, etc. The project site does not fall in the critically polluted area. There are no protected areas within 10 km radius of the project. Power evacuation will be done through 765 kV transmission line to UPPTCL grid. The cost of project is Rs. 13,900 crores.

iii. The proposed plant co-ordinates are as below:

24^{0}47'25.85"N, 78^{0}38'04.56"E
24^{0}48'03.08"N, 78^{0}38'02.54"E
24^{0}48'21.42"N, 78^{0}38'15.07"E
24^{0}48'26.76"N, 78^{0}38'03.62"E
24^{0}48'20.89"N, 78^{0}38'53.84"E
24^{0}48'16.75"N, 78^{0}39'29.32"E
24^{0}47'34.55"N, 78^{0}39'29.71"E
24^{0}47'10.90"N, 78^{0}39'37.22"E
24^{0}47'23.09"N, 78^{0}38'47.83"E
24^{0}47'05.00"N, 78^{0}38'58.00"E

iv. Proposed Phase –II (3x660 MW) is Super Critical Technology with pulverized Coal Boiler of 2080 TPH Steaming Capacity. Tri-flue single RCC Stack of 275 m height will be set up. ESP will be installed in compliance with new emission norms dated 07.12.2015 of the Ministry. The Power will be generated at around 24 KV and will be stepped up to 765 KV.

v. The total water requirement including the proposed expansion is 100 cusec. Water allocation for 80 cusec from U.P. Irrigation Department is already available. Permission for 20 cusec of additional water from Kachnoda Dam/Shahzad Dam/Bhaoni Dam/Rajghat Dam for the proposed project will be obtained from U.P. Irrigation Department.

vi. Coal requirement is 10 MTPA and will be sourced from M/s Coal India Limited (CIL), preferably from Northern Coal Fields Ltd. or Central Coal Fields Ltd or South Eastern Coal Fields Ltd. In case of shortfall of domestic coal, imported coal is proposed for makeup. Sulphur and Ash Content wil be 0.5 % (maximum) and <34%, respectively. Calorific value of Coal is estimated to be as 3300 Kcal/kg. Plant heat rate is 2250 Kcal/KWh. Total ash generated would be 3.4 MTPA.

vii. The project for Units # 1, 2&3 will be commissioned in 42, 46 and 50 months time, respectively from the zero date.

viii. PP proposed that baseline study has been initiated from October-December, 2016 for collection of data on meteorology at1 location, AAQ at 8 locations, Water Quality at 8 locations for Ground Water quality and 4 locations for surface Water Quality, Soil at 8 locations, Noise Level at8 locations, Ecology for identification of endangered species and diversity index, Hydro-geological study, etc.

(2.1.2) *After detailed deliberations, the* ***Committee recommended*** *the following ToR in addition to the standard TORs (as applicable) at* ***Annexure-A1*** *for undertaking detailed EIA study and preparation of EMP.*

i. *PP shall submit a request letter to DG-CSIR for facilitating the alternate new technologies available for utilizing of dry flyash to enhance its utilisation level.*
ii. *PP shall submit the complete project layout along with existing plant on google map and furnish as kml file.*
iii. *In addition to proposed 8 AAQ locations, 4 more stations to be setup in the downwind direction & at villages (Udayapura)/sensitive receptors. Surface Water Samples to be analysed at the upstream and downstream of Sajnam nadi and Utai Nadi.*
iv. *Carbon Footprint Study shall be carried out from a reputed institute for the existing plant as well as for the proposed project. An attempt to strive towards achieving a status of a Carbon Neutral Power Plant may be explored by initiating carbon capture/sink measures in plant and its close proximity.*
v. *The PP will ensure adherence to the new norms for thermal power plants notified by the MoEF&CC 0n 07.12.2015.*
vi. *Need based assessment study/ Skill mapping shall be conducted for all the villages located in and around 10 km radius from the project site. Accordingly, a long term CSR plan shall be drawn with separate financial budget. The CSR activities shall specifically include improving and providing modern methods of irrigation, Organic farming, Skill development for the local people.*
vii. *Submit the details of Court cases pending/ disposed of, if any for existing power plant/ proposed project including Public Representations, etc.*

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2.2 Proposed 15 MW Imported coal based co-generation captive power plant at Villages Sarigam & Angam, Tehsil Umbergaon, District Valsad, Gujarat by M/s. NR Agarwal Industries Ltd.- reg. ToR

(2.2.1) PP did not attend the meeting. **Thus, project is deferred.**

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2.3 2x660MW (Stage-III) Super Thermal Power Project, Singrauli, Sonebhadra, Uttar Pradesh, by M/s NTPC Limited – reg. ToR

(2.3.1) The Project Proponent (PP) has made a presentation, *inter-alia* provided the following information.

i. Expansion of 2x660 MW (Stage-III) Thermal Power Project is proposed within the existing premises of Singrauli Power Plant (Stage-I & II) at Village Shaktinagar, Sonebhadra Dist. in U.P. Power plants with capacity of 5x200MW (Stage-I) and 2x500MW (Stage-II) are in operation along with 15MW Solar Power Plant under operation and 8 MW Hydro Project which is under commissioning. The present proposal includes decommissioning of Stage-I (5x200MW) after Stage-III project is commissioned.
ii. The project is located on North-Western Bank of Rihand Resevoir. Nearest Railway station is Renukoot located at 60 km from the project site. Coordinates of the proposed plant is $23^0$05'53" N to $24^0$05'56" N and $82^0$41'15" E to $82^0$43'17" E. The ash dyke area of 350 acres is proposed in the state of Madhya Pradesh and is located at the existing township of Singrauli STPS. The township will be relocated to accommodate ash pond. New land requirement for Power Project is 42 acres within the existing Singrauli STPS. The new Township proposed in 40 acres at Vindhyachal STPS. Coal requirement is 6.5 MTPA at 90% PLF which will be met from Jayant Mine of Northern Coalfields Limited located at 17 km from the project site. Ministry of Coal shall be approached for transfer of coal linkage under Coal Linkage Transfer Policy. Flyash and bottom ash generation

would be 2.08 MTPA and 0.52 MTPA, respectively. Water requirement is 33 cusecs which will be sourced from Condensate Water (CW) of existing power plants.

iii. The proposed Project is a pulverised coal fired power plant based on Super Critical Boiler parameters. Main components of the project include coal handling system with dust extraction and suppression system, steam generator, turbine generator, Closed Cycle Cooling System with Cooling Towers, Water & ETP, ESPs, NOx Control and Flue Gas Desulphurisation System, Chimney with Continuous Emission Monitoring System, Automatic AQQ monitoring System, Limestone and Gypsum Storage and Handling System, Ash handling system with dry ash extraction and storage system, high concentration slurry disposal system and electric systems.

iv. Project is located in Singrauli critically polluted area. However, the re-imposition of moratorium is kept in abeyance vide Ministry's OM dated 10.05.2014. Project site is located in Earthquake Zone–II. Gobind Ballabh Pant Sagar (known as Rihand Reservoir) is located at 1 km from the project site. Dudhichua and Mehrauli Protected Forests are located at 3.5 km North and 4.6 km North West from the project site, respectively. State Boundary between Uttar Pradesh and Madhya Pradesh States exists adjacent to the project site.

v. Information regarding NABET Accredited Consultants for carrying out EIA Studies is yet to be disclosed.

(2.3.2) *After detailed deliberations, the* ***Committee recommended*** *the following ToR in addition to the standard TORs (as applicable) at* ***Annexure-A1*** *for undertaking detailed EIA study and preparation of EMP.*

i. Alternate locations for flyash pond may be explored as the proposed location is located near Rihand Reservoir.

ii. As the proposed power project is located in Uttar Pradesh and the ash disposal area is located in Madhya Pradesh, two separate public hearings (in two different districts) shall be conducted, one at proximity to Power Project and another at proximity to ash disposal area.

iii. Detailed Sustainability Study about the project in general and a specific study about the carrying capacity for Rihand Dam/Reservoir shall be carried out by reputed institute/agency to know the load bearing capacity of the Rihand Dam.

iv. Detailed and time bound action plan for phasing out of the existing units along with waste management plan shall be submitted and shall be inline with Construction and Demolition Waste Management Rules, 2016.

v. PP shall submit a request letter to DG-CSIR for facilitating the alternate new technologies available for utilizing of dry flyash to enhance its utilisation level.

vi. As there is a vegetation to be cleared within the project site, species-wise and girth-wise tree enumeration to be carried out in consultation with local Divisional Forest Officer (DFO). If need be, proposal be made to transplant some of the local tree species also.

vii. At least 15 monitoring stations each for analysing groundwater quality and soil samples be taken in and around the flyash disposal area and the nearby villages to know the baseline status and the impact due to project activities, if any. AAQ monitoring shall be carried out at minimum 12 of locations covering sensitive receptors/villages and downwind locations. All other baseline monitoring as proposed shall be carried out, viz. Meteorology at1 location, Surface Water Quality at 10 locations, Noise Level at 20 locations, Terrestrial Ecology at 4 locations and Aquatic Ecology at 4 locations.

viii. *Identification of villages around the proposed flyash disposal area and the impact study on local people to be carried out specifically w.r.t. impact on groundwater and its regime.*

ix. *Since, the protected forests areas are located at less than 10 km, impact on forest due to proposed project activities to be identified and action plan for mitigation of pollution to be drawn in consultation with local Forest Department.*

x. *A study of the flora and fauna diversity and assessing the carrying capacity of the adjoining ecosystem shall be studied by a reputed institute working in this area.*

xi. *Cumulative impact assessment study is to be conducted, considering the other industries including mining in the study area.*

xii. *Carbon Footprint Study shall be carried out from a reputed institute for the existing plant as well as proposed project.*

xiii. *Greenbelt plant may be prepared in consultation with the local Divisional Forest Officer (DFO), preferably local and indigenous species shall be planned.*

xiv. *Need based assessment study/ Skill mapping shall be conducted for all the villages located in and around 10 km radius from the project site. Accordingly, a long term CSR plan shall be drawn with separate financial budget. The CSR activities shall specifically include improving and providing modern methods of irrigation, Organic farming, Skill development for the local people surrounded within 10 km radius of the project.*

xv. *Information regarding NABET Accredited Consultants for carrying out EIA Studies shall be submitted to this Ministry immediately before starting Baseline Environment Monitoring.*

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2.4 Sipat STPP, Stage-I (3x660 MW) at Dist. Bilaspur in Chaattisgarh by M/s NTPC Ltd. - reg. amendment of EC

(2.4.1)The proposal was appraised by the EAC earlier in its 54th Meeting held on 31st March, 2016 and 57th Meeting held on 16-17th June, 2016, the minutes of which are as under:

Quote "(2.7.1) The PP made a presentation and inter-alia, provided the following information:

i. MoEF accorded EC for Sipat STPP Stage-I on 22.02.1999 for a total capacity of 2,000 MW (4x500 MW). However, due to change in configuration of project from 4x500 MW to 3x660 MW, MoEF issued an amendment to EC on 30.04.2002. The EC stipulates that coal should be transported by captive MGR in closed wagons to avoid dust pollution. Further, due to change in source of coal & coal quality and for waiver of condition of coal transportation in closed wagons, NTPC approached to MoEF&CC vide letter dtd. 22.05.2013 for amendment in EC.

ii. Based on above submission of NTPC, the EAC in its meeting held on 09.01.2014 had recommended transportation of coal in open wagons with suitable measures instead of closed wagons, depending on the availability. MoEF&CC issued an amendment to EC vide its letter dated 08.09.2014 which stipulates that transportation of coal by open wagons with suitable measures instead of closed wagons, depending upon the availability. However, permission for transportation of coal by open wagons is accorded only for one year with the stipulation that within one year, NTPC shall come out with a plan of carrying coal in a cleaner way. This was communicated to NTPC vide Ministry's letter dated 08.09.2014.

iii. In compliance to the above said conditions, an Action *Plan for Cleaner Way of Transportation of Coal by Rail* was submitted to MoEF&CC vide letter dated14.03.2016. Coal is transported in line with the Action Plan with regular monitoring. The Action Plan specifies methods to control fugitive dust emissions and the responsibilities of parties involved in the coal transportation system, environmental control measures, monitoring parameters and corrective actions proposed to be taken in the event of any failures.

iv. It is general practice in India to transport the coal in open wagons (BOBRN/BOXN) with suitable measures for control of fugitive dust emissions. The same has been envisaged in Sipat STPP also. Further, coal is loaded into open BOBR/BOXN moving wagons from overhead coal silos at mine end. At the power plant end, when BOBR wagon is unloaded in underground track hoppers, the bottom of wagon opens up to empty the coal into underground hoppers. While in BOXN wagon, the coal is unloaded by wagon tippler. Therefore, there are technological constraints in loading & unloading of coal in closed wagons. Coal transportation from mine pit to plant (about 42 km distance) takes about an hour and adequate sprinkling of water is ensured on top surface of coal.

v. NTPC is already working on the said action plan for carrying coal in a cleaner way. MoEF&CC is requested to permit the transportation of coal in open wagons adopting the measures to counter dust problem in line with the action plan submitted. "Press Release dated: 01.03.2016 by Ministry of Railways" with respect to transportation of coal by Indian Railways inter-alia, states that, transportation of coal is predominantly done in BOXN and BOBR type of wagons.

vi. The PP showed a video recording of the water spraying system on the open railway wagons carrying coal over a distance of about 40 km from the source to TPP of NTPC.

(2.7.2)After detailed deliberations and discussion, the Committee:-

(a) noted that the EC condition for carrying coal in closed wagons had been stipulated as far back as in April, 2002. NTPC, however, had been carrying coal all these years, and was continuing to carry coal even now, in open wagons. This was thus a violation of the EC condition of April, 2002.

(b) noted that NTPC had been asked (vide the Ministry's letter dated 08.9.2014) to submit the action plan referred to in para 2.7.1 (ii) above within one year (i.e. within September, 2015), but NTPC had done so only in March 2016, thus again being in violation of the EC condition of September, 2014. In addition, the action plan for carrying coal in a cleaner way, submitted by NTPC, lists out only standard measures, and does not refer to anything out of the ordinary.

(2.7.3) The Committee was unable to appreciate why the condition of coal transportation in closed wagons had been stipulated in the 2002 EC, if according to NTPC, this was not the "general practice". The Committee was also unable to appreciate why the matter had not been taken up by NTPC with the MoEF&CC in 2002 itself. The Committee was therefore of the view that before it could consider NTPC's present request for transportation of coal in open wagons instead of closed wagons, it would be necessary to look at why this condition had been stipulated. The Committee, therefore, requested the Ministry to examine the earlier records so that some light could be shed on this. Member Secretary EAC was requested

to inform the Committee of the outcome of such an examination when this agenda item was next taken up for EAC's consideration.

(2.7.4) Similarly, the Member Secretary, EAC was requested to examine the EAC minutes of 09.01.14, as well as the subsequent processing till the issue of EC amendment vide the Ministry's letter of 08.9.2014, so that it could be better understood why the EAC had recommended NTPC's request for transportation of coal in open wagons, but this recommendation was only for a limited period of one year. Member Secretary EAC was requested to inform the Committee of the outcome of such an examination when this agenda item was next taken up for EAC's consideration.

(2.7.5) The Committee requested NTPC to check up its earlier records also. The proposal was accordingly **deferred** till the earlier position is clarified.

(2.7.6) Regarding the water spraying system on the open railway wagons carrying coal over a distance of about 40 km from the source to TPP of NTPC, the PP was advised that since, water shortage in the area is acute, particularly in dry months and is just not available even for irrigation in adequate amounts, PP should study alternative methodologies/ technologies being utilized including abroad, to prevent coal dust blow from moving open wagons carrying coal, if any. The results of this study should be submitted within one year.

(2.7.7) Further, to study the impact due to coal transportation, the PP shall carry out AAQ monitoring as well as short & long term health survey of people in villages/habitation within one km on either side of the railway track starting from coal source to TPP. Such studies should be carried out every six months, and the reports should thereafter be submitted to MoEF&CC.

(2.7.8) Detailed reply to the issues raised by the ERC in their letter dated 30.03.2016**"** **Unquote.**

Quote "(2.2.2) The reply to above information sought by EAC, was submitted by the PP to MoEF&CC and accordingly, the proposal is again placed before the EAC in its 57th meeting held on 16.06.2016, wherein the PP presented their reply.

(2.2.3) The EAC noted that the PP has agreed to carry out the studies recommended in paras (2.7.6) and (2.7.7) of the previous minutes, reproduced above.

(2.2.4) *Regarding the EAC's attempt (reference Para 2.7.3 and 2.7.4 of the previous minutes, reproduced above) to make a more informed decision on the PP's present request for coal transportation in open wagons on a continuous basis instead of for only one year, both the PP, as well as the Member Secretary EAC intimated that the previous available records did not reveal why the coal transportation decision had been taken in the manner as recorded in the EC. The EAC therefore recommended that the Ministry may take decision on the PP's present request as the EAC had already earlier recommended coal transportation in open wagons with suitable measures instead of closed wagons.*

(2.2.5) In this connection, the EAC noted that the EC condition of 08.09.2014 asking NTPC to submit an action for carrying coal in a cleaner way (reference earlier minutes

Para 2.7.1 (ii), read with Para 2.7.2 (b), both reproduced above) still remained to be complied with, and was pending.

(2.2.6) The EAC recommended that the Ministry may take a decision on the appropriate action that needs to be taken on the two violations noted in Para 2.7.2 (a) and (b) of the previous minutes, reproduced above." **Unquote.**

(2.4.2) PP submitted the response to issues raised in EAC Meetings held on 31.03.2016 and 16.06.2016 and inter-alia are as under-

i. NTPC expressed the technical constraints in implementation of closed wagons re-iterating non-availability of these wagons in India for loading/unloading/transport.
ii. NTPC is operating 26 coal based power plants and 17 nos. of coal based power projects are under construction. All EC's of these plants/projects were stipulated coal transportation with open wagons/closed conveyors only.
iii. NTPC requested for amendment of EC condition for change in transportation of coal from closed wagons to open wagons and the communication was submitted to Ministry on 02.06.2016. As no further clarification was sought by the Ministry, the issue was considered closed and the condition which was deemed to be complied.
iv. NTPC requested that non-compliance of the said EC condition should not be treated as violation.
v. NTPC requests that the Action plan "for cleaner way of coal transportation by rail submitted vide letter dated 14.03.2016" to be accepted. The action plan contains water sprinkling at loading and unloading points, water sprinkling on top surface of coal in the wagon at loading points, preventive maintenance of water sprinkling systems.
vi. Basis for stipulation of the said EC condition vide EC dated 22.02.1999 could not be traced in NTPC's record. It is difficult for NTPC to establish inclusion of such stipulation.
vii. Coal transported by open wagons with size of (-) 250 mm would not result in fugitive emissions.
viii. Water is being sprayed on top layer of coal in open wagons to mitigate fugitive emissions. At mines near loading point, water is pumped from opencast mines, at plant near unloading point, recycled water from AWRS system is utilised for spraying in wagons/track hopper and at mid point (at approx. 20km), fresh water is used for water spraying in wagons.
ix. Study of alternative methodologies / technologies being utilised including abroad to prevent coal dust blow from moving open wagons carrying coal, if any is not to be insisted upon.
x. Most of the points raised by ERC are not relevant to Indian conditions and related to pollution from other mode of coal transportation and the point-wise reply to ERC queries has been submitted to Ministry vide letter dated 02.06.2016.
xi. AAQ monitoring commenced on 01.10.2016 within 1 km of track, through M/s Visiontek Constancy Ltd., Bhubaneswar and the study is in progress. So far the results of AAQ have been found within permissible limits.
xii. Health Survey Study has been awarded to Chhattisgarh Institute of Medical Science (CIMS) and will commence in January, 2017 and expected to be completed by October, 2017.

(2.4.3) Member Secretary informed the Committee that the Monitoring Reports of Ministry's Regional Office dated 06.12.2005reveal the presence of heavy fugitive dust at the project site as well as nearby Villages. Also, the Committee noted that the condition was stipulated probably because the rail line passes through sensitive areas such as dense forest, villages and agricultural fields. Committee also noted that the details of water sprinkling at mid point (approx.20km) is not clear w.r.t from where the water is taken, how it is transported and how spraying arrangement is done as the rail line passes through agricultural fields and forests.Committee noted earlier Committees observations that water shortage in the area is acute, particularly in dry months and is just not available even for irrigation in adequate amounts. Committee also noted that NTPC in its 6 monthly compliance report dated 23.08.2012 submitted that the coal will be transported through closed wagon MGR system.

(2.4.4) Committee suggested that the Ministry may take appropriate action on non-compliances viz. Non compliance of EC condition since the NTPC has been transporting the coal in open wagons as against closed wagons and NTPC has not submitted the plan of cleaner way of transportation within one year as per temporary permission granted by the Ministry dated 08.09.2014.

(2.4.5) *After detailed deliberations, the **EAC recommended to extend the temporary permission for one year** to transport the coal in the wagons covered with tarpaulin sheet covers and subject to following conditions.*

i. *Top surface of the Coal Wagons shall be completed covered with tarpaulin sheet/cloth so that coal will not get exposed to atmosphere and becomes secondary emissions. This will avoid fugitive dust emissions during the transport. Water sprinkling shall be done on the top surface of coal at loading point before covering with tarpaulin sheet. Due safety procedures shall be followed so that the covered sheet doesn't open up and flyaway during transport which will endanger safety of nearby people, agricultural fields, etc. Water sprinkling measures as proposed at loading and unloading point shall be continued. Progress report of implementation shall be submitted to this Ministry and concerned Regional Office every 3 months.*
ii. *AAQ monitoring within 1 km on either side of track,close proximity to nearby habitation, shall be continued as stipulated earlier and the progress report shall be submitted.*
iii. *Land use study shall be carried out by using latest IRS satellite map on 500 m either side along the railline from loading point to unloading point.*
iv. *Health Survey Study of the local people shall be carried out. The report should clearly bring out the impact on surrounding forests, agriculture/crop pattern, percentage of yield, public health due to open wagon Coal transportation, etc.*
v. *As stipulated by the earlier EAC on 31.03.2016, PP should study alternative methodologies/ technologies being utilized including abroad, to prevent coal dust blow from moving open wagons carrying coal, if any. The results of this study should be submitted within one year.*

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2.5 2x520 MW Coal based Thermal Power Plant at Village Palavalasa, Taluk Pedagntyada, District Vishkhapatnam, Andhra Pradesh by M/s Hinduja National Power Corporation Ltd. – reg. amendment of Environmental Clearance.

(2.5.1) The proposal was earlier placed before the EAC in its 63rd meeting held during 29th& 30th August, 2016, the minutes of which are as under:

Quote“ The PP along with their environmental consultant, B S Envitech Pvt. Ltd., Secunderabad made a presentation and inter-alia, provided the following information:

(i) EC was accorded by MoEF&CC for the above TPP in September, 1996 and amendments to the same were accorded subsequently. Consent to Operate (CTO) were accorded by AP State Pollution Control Board for Unit I & II in October, 2015 and March, 2016, respectively. The Unit I & II were commissioned in March & July, 2016 respectively. To meet the requirement of Coal for Power Plant, M/s Hinduja National Power Corporation Ltd has tied up the supply of coal with Mahanadi Coalfields Ltd (MCL). Coal from Talcher Coalfields of MCL will be transported by Indian Railways using its existing railway system as per the EIA. The proposed railway siding of HNPCL is under progress. Hence HNPCL is seeking temporary permission for transportation of coal by road.

(ii) The NTPC Simhadri Power Plant has a dedicated Railway line from Jaggayapalem. The distance from Jaggayapalem to Devada Railway crossing is about 20 km. From Dasarpeta Railway crossing to NTPC Simhadri plant is about 4.4 km. This railway line is now operational and catering to the requirement of NTPC. It is now proposed by HNPCL to lay the dedicated railway line from Dasarpeta Railway crossing to HNPCL plant covering a distance of 4.8 km. The land belonging to HNPCL is available for laying the railway siding adjacent to the by-pass road. The following is the progress of the railway work.

Till now, 40% of civil work has been completed. 15% of Permanent Way works completed. Contract awarded for Overhead Electric traction work. Contract awarded for Signalling and Telecom work. It is expected that the works will be completed in about two year’s time. HNPCL has obtained the permission from the East Coast Railway to unload 2 rakes a day in NTPC Simhadri railway siding. HNPCL has also obtained the permission from NTPC Simhadri for movement of about 4 rakes per day from Jaggayapalem to Duvvada section & also for HNPCL siding taking off from NTPC siding at Chainage after 19.0 km to HNPCL plant premises.

(iii) The present proposal is to seek permission of MoEF&CC to transport the coal by road from Bayyavaram Railway siding (45 km to TPP), Kantakapally Railway siding (63 km to TPP) and NTPC Ltd Simhadri, Railway siding (8.5 km to TPP) for a period of three years until the private railway siding of HNPCL is commissioned. The Traffic Impact Assessment Study due to the movement of HNPCL coal trucks was studied and it is observed that there is no significant impact with the addition of HNPCL trucks on the traffic of the studied roads.

(2.4.2) The EAC, in this meeting on 29-30thAug 2016 noted that:-

(i) as intimated by the PP {ref para 2.4.1 (i) above}, one unit each had already been commissioned, in March 2016, and in July 2016. However, permission for road movement of coal was being sought only now after commissioning of the units, rather than before commissioning.

(ii) the PP was asked to provide data regarding quality of the coal being used/ to be used so that the environmental impact of coal movement could be considered.

(iii) PP was asked to inform steps proposed to be taken to comply with the MoEFCC notification regarding supply and use of coal with ash content < 34% in view of the

high ash content of proposed coal sources and distance from the coalfield to the project site, and

(iv) the PP was asked to provide concurrence of the Railways for use of their sidings mentioned in para 2.4.1 (iii) above.

(2.4.3) The proposal was ***accordingly deferred*** *for want of the above information. The EAC also recommended that the Ministry may look into the aspect of commissioning/ trial operations of the TPP by transporting coal through road before obtaining prior permission for the same.* **"Unquote**

(2.5.2) PP submitted the reply to queries raised by EAC in its meeting held on 29.08.2016 vide their letter dated 27.10.2016. PP along with consultant B S Envitech Pvt. Ltd. made a presentation and *inter-alia* submitted the following.

i. Unit-1 and Unit-2 were commissioned in January, 2016 and July, 2016, respectively. Commissioning was necessitated due to the pressure from the newly formed Andhra Pradesh state, lenders and other statutory agencies to commission the plant earliest after the Hud Hud Super Cyclone in 2014 which has adversely affected commissioning of the plant. Application for road transportation has been submitted in August, 2016, the delay was not intentional and requested to condone the delay and permit temporary road transportation till 2 years.
ii. Construction of 5 km railway siding to take off from NTPC Siding at 19 km to HNPCL's plant is in advanced stage of construction. All the land has been acquired and about 30% work had already completed. The completion of railway siding will take another 2 years.
iii. Till the completion of 5 km railway siding, HNPCL requests for permission to transport coal on road from NTPC Simhadri sick line (8.5 km) for domestic coal, Bayyavaram Railway siding (45 km) for imported coal and Kantakapalli Railway siding (63 km) for imported coal.
iv. Calorific value and ash content of domestic Coal from MCL, Talcher is estimated in the range of 4482-2470 Kcal/kg and 31.27%-52.3%, respectively. Calorific value and ash content of imported Coal from Indonesia is estimated in the range of 5659-5297 Kcal/kg and 5.03%-6.91%. Blending of indigenous coal (70%) and imported coal (30%) is done to maintain the ash content less than 34%.
v. MCL vide their letter dated 21.09.2016 communicated the washeries planned at Hingula, Jagannath, Basundhara and Ib Valley of 10 MT capacity are scheduled to become operational by end of FY 2018-19. Till MCL supplies beneficiated coal, HNPCL proposes to blend the domestic and imported coal to maintain ash content less than 34%.
vi. PP submitted Ministry of Railways Circular dated 12.03.2013 wherein Kantakpally Bayyavaram Railway sidings are open for inward traffic of one full rake for all commodities except POL. PP also submitted concurrence from Ministry of Railways to use 2 rakes/day at NTPC Siding.
vii. PP has shown roads to be used for coal transportation during the presentation. Bye-pass road built by HNPCL is black topped road and reportedly the road conforms to the IRC, LOS is "B" category road which is acceptable.

(2.5.3) Committee suggested that the Ministry may take a call on non-compliances of EC Conditions viz. Transportation of coal on roads without prior permission from Ministry and delay in filing the application.

(2.5.4) *After detailed deliberations, the **EAC recommended for grant of temporary permission for two years** for transportation of coal on road subject to the following conditions:*

i. Traffic density study shall be conducted and submitted to the Ministry.

ii. As per MoEF vide Notification S.O. 3305(E) dated 07.12.2015, emission standards will be complied with.

iii. Plantation of local/indigenous species to be taken up along the road in consultation with Forest Department and progress report shall be submitted to this Ministry as well as Regional Office.

iv. *The bye-pass road which was built by HNPCL to be handed over to PWD after 2 years.*

2.6 2x660 MW Super Critical Buxar Thermal Power Plant (BTPP) at Village Chausa, District Buxar, Bihar by M/s. SJVN Thermal Pvt. Ltd. – reg. Environmental Clearance

(2.6.1) The Project Proponent (PP) along with their environmental consultant, Cholamandalam MS Risk Services Limited made a presentation and inter-alia provided the following information.

i. 2x660 MW Super Critical Thermal Power Plant has been proposed at Village Chausa, Dist. Buxar, Bihar. Land requirement for the proposed project is 1,065 acres. Additional land of 225 acres is required for laying Railway siding and water pipelines.About 95% of land has been acquired. No displacement involved.No forest land is involved for the project activities including pipelines and associated facilities. There are no protected areas within 10 km radius of project.

ii. Coal requirement is 6.7 MTPA (Indian Coal, Ash- 41% and S- 0.6%) will be sourced from Deocha-Pachami Dewanganj-Harisingha coal block, Birbhum Dist., West Bengal and the allocation from Ministry of Coal has been made vide MoC Letter dated 06.09.2013. It is proposed to use Imported Coal (Ash-12% and S-0.8%) of 3.9 MTPA for initial 4 year and the MoU between M/s MMTCL and SJVNL has been made vide MoU dated 24.02.2016. Imported coal will be received at Haldia Port. Both imported and domestic coal will be transported through rail. Eastern Central Railways provided in-principle approval for railway siding vide letter dated 29.09.2015.

iii. The total water requirement is 3,265 m^3/hr (32 cusec) and will be met from River (Ganges) through pipeline which is very near to the proposed project site. Necessary water allocation has been granted by Government of Bihar vide MoU dated 29thAugust, 2016. CWC also conveyed the approval for withdrawal in lean season vide letter dated 24.09.2010.The specific water consumption is 2.5 m^3 per MWh as against 4 m^3 per MWh.

iv. Wastewater of about 751 m^3/hr will be generated from cooling tower blowdown, DM Plant and clarifiers and the same will be reused within plant after treatment. About 66 m^3/hr treated water will be used for greenbelt/horticulture and no treated water will be discharged into surface water bodies. Zero discharge wastewater will be adopted.

v. The flyash of about 2.7 MTPA will be generated from the use of Indian coal. It is estimated that flyash of 2.30 MTPA and Bottom Ash of 0.40 MTPA will be generated. The Fly ash generated will be utilized in cement production by the nearby Cement Industries. The Bottom ash and un-utilized Fly ash will be sent to the Ash pond having an area of about 282 acres. PP obtained EOI/MoU for utilization of fly ash viz., Rural works Dept., Govt. of Bihar -0.48 MTPA, Road Construction Department -0.24 MTPA, M/s R.K Mishra Enterprises -0.5 MTPA,

Lafarge Cement Plant -0.8 MTPA, Dalmiya Cement -0.7 MTPA and Global Infra Ltd -0.5 MTPA.

vi. Estimated project cost is Rs. 10,520 Crores and Budget allocated for EMP is Rs.1,311.32 Crores. CSR budget of Rs.61 Crores has been allocated and shall be spent in 10 years.

vii. ToR was issued on 07.06.2016 and EAC agreed to utilise existing baseline collected during April-June, 2008 & March-June, 2015 and to supplement with one month fresh baseline data (non-monsoon).

viii. Baseline data for AAQ collected during May-June, 2016 and the values for PM_{10}, $PM_{2.5}$, SO_2 and NOx range between 36.32-47.26 µg/m^3, 18.35-27.01µg/m^3, 11.13-16.68 µg/m^3 and 13.22-18.70 µg/m^3, respectively.

ix. Maximum predicted GLCs for PM, SO_2 and NO_2 are 0.37 µg/m^3 at 1.4 km, 0.96 µg/m^3 at 1.4 km and 0.99 µg/m^3 at 6.8 km, respectively.

x. Stack of 275 m height for effective dispersion of flue gas, FGD, ESPs, Low NOx burners are proposed. Bag filters and water sprinklers have been proposed at coal handling areas to control fugitive dust.

xi. Public Hearing was held on 04.10.2016 at Buxar Town 10 km away from project site.

(2.6.2) *After detailed deliberations, the EAC **recommended** the proposal for grant of Environmental Clearance after submission of the following additional information:*

i. Township is proposed in 95 acres. The conceptual plan and other details like built up area, open area, greenbelt, water and energy consumption, waste water treatment and environment management plan is to be provided. A separate Environmental Clearance shall be obtained for Township Project from MoEFCC/SEIAA as applicable under EIA Notification, 2006.

ii. Response to public hearing is generic. Time bound action plan with financial allocation for queries raised in the Public Hearing are to be provided. Compensation for land acquisition details need to be furnished.

iii. Proposed Greenbelt plan is not adequate. Greenbelt plan covering of 33% of total land shall be provided. As proposed Rs.5 Crores is not sufficient for maintaining 33% of greenbelt. As per proposal, native species are not listed. EMP cost for Environment Lab and equipment also requires to be revised.

iv. 9 million tons of soil would be used for back-filling the site. As proposed, river bed silt material is used for filling along with other alternatives. The details of soil used for filling, its impact on environment and the permission for mining river bed silt material shall be provided. The road connectivity to bring borrow materials to the project site is also to be provided, along with necessary permission, if any

v. A seasonal nallah (Budhanala)/natural stream passes through the proposed project site. PP proposed for diversion of the nallah. Details of change in drainage pattern and hydrology in case of diversion have to be submitted. PP has not submitted enough justification why this natural stream has to be diverted. Whether any possibility of keeping the stream untouched is to be explored. IIT, Roorkee has conducted the Hydrology of this nallah, its report and recommendations to be submitted. PP submitted application to Flood Control Division, Water Resources Department for diversion. Comments and Recommendations of the same may be obtained.

vi. Design details of structures in compatibility to withstand the earthquake are to be presented.

vii. Validity of the EIA consultant is up to Nov, 2016 which is to be clarified.

viii. *As part of CSR, water supply provision shall be made for all the toilets which have already been constructed and also to be constructed in future under Swatchha Bharat Abhiyan.*

ix. *Environment Policy, details of Environment Cell with commitments of top management towards environment protection shall be submitted.*

x. *Details of court cases regarding land acquisition, if any, may be provided.*

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2.7 5x800 MW Super Critical Coal Based Yadadri Thermal Power Station at Village Veerlapalem, District Nalgonda, Telangana by M/s. Telangana State Power Generation Corporation Ltd. (TSGENCO) - reg. Reconsideration of EC.

(2.7.1) The proposal was earlier placed before the EAC in its 59th, 60th& 63rd meetings held during 14th& 15thJuly, 2016, 27th July, 2016 and 29th&30th August, 2016, respectively the minutes of which are as under:

Quote" The EAC noted that the background documents had not been received by some of the members, and where received, had been received only one day before or on the same day of EAC meeting, thus not giving an opportunity even to such Members to fully study the documents. As such, the EAC was not in a position to consider the case. The proposal was, therefore, **deferred.** However, to save time for this proposal's consideration in the next EAC meeting, the PP was provided a copy each of the two representations received by the EAC for a detailed reply to be submitted by the PP to the Ministry well before the next EAC meeting, for action in line with the decision recorded under Agenda item 3.1 of this meeting.

Accordingly, the proposal was placed before the EAC in the 60th meeting held on 27th July, 2016. *However, the EAC was informed that vide letter dt 26th July 2016 addressed to the Member Secretary, the PP has requested for* ***deferment*** *in view of preparations required to be made for the PMs visit to Telangana.*

(2.5.2) The EAC inter-alia observed/recommended the following:

1. Plagiarism, Irrelevant content, and absence of crucial site and plant specific analysis:

EAC received several complaints about issues such as plagiarism and 'copy-paste' sections of the EIA. On examination, EAC found several such instances. Some examples are reproduced in below table.

Extracts from Final EIA report (July 2016 – Submitted to EAC)	**Extracts from Original Document**
Final EIA Report - Section 7.6 Risk assessment	Hazards Identification and Risk Assessment in Thermal Power Plant. by Ruchi Shrivastava and Praveen Patel published in International Journal of Engineering Research & Technology (IJERT) Volume 3, Issue 4, April 2014
Introduction "*The thermal power plant is a large electricity generation industry. It consist a number of process to generate*	Abstract "*The thermal power plant is a large electricity generation industry. It consist a number of process by mean to generate*

electricity by use of fossil fuel. It also consist several major equipment and operations involve in its process. The purpose of hazard identification and risk assessment in thermal power plant is to identify physical, chemical, biological and environmental hazards in the plant, analyse the event sequences leading to those hazards and calculate the frequency and consequences of hazardous events. Then risk level is assigned to each hazard for identifying required corrective action to minimize the risk or eliminate the Hazard."	*electricity by use of fossil fuel. It also consist several major equipment and operations involve in its process. The purpose of hazard identification and risk assessment in thermal power plant is to identify physical, chemical, biological and environmental hazards in the plant, analyse the event sequences leading to those hazards and calculate the frequency and consequences of hazardous events. Then risk level is assigned to each hazard for identifying required corrective action to minimize the risk or eliminate the Hazard."*
"7.6.1 Plant Description *Thermal power plant is electricity generation plant which converts the fossil fuel stored energy to electrical energy by means of generating electricity. In other words, it is merely a chain of Energy conversion as follow:* • *Chemical energy in the fuel is converted to Heat energy of steam.* • *Heat energy of steam is converted to Mechanical or rotating energy of a rotating wheel called Turbine.* • *The mechanical energy of Turbine is converted as Electrical Energy in a Generator."*	"III. PLANT DISCRIPTION *Thermal power plant is electricity generation plant which converts the fossil fuel stored energy to electrical energy by means of generating electricity. In other words, it is merely a chain of Energy conversion as follow:* • *Chemical energy in the fuel is converted to Heat energy of steam.* • *Heat energy of steam is converted to Mechanical or rotating energy of a rotating wheel called Turbine.* • *The mechanical energy of Turbine is converted as Electrical Energy in a Generator."*
The plant description section mentions no project specific details at all.	
"***A. Coal Handling Plant*** *Coal transported to the plant by the rail line and carrier trucks. This coal is transfer from the underground bunker to crusher by series of conveyer belt. In coal crusher coal size reduced up to ¾" after that coal transfer to the boiler's coal bunker or coal yard. In the case of emergency the coal is fetch from coal yard. Coal feeder control the quantity of coal from coal bunker and send it to the ball mill or roll mill for pulverization process. Where coal crushed to the fine powder and mixed with preheated air come through the air from preheater. This process use for drying the coal and sends*	"***A. Coal Handling Plant*** *Coal transported to the plant by the rail line and carrier trucks. This coal is transfer from the underground bunker to crusher by series of conveyer belt. In coal crusher coal size reduced up to ¾" after that coal transfer to the boiler's coal bunker or coal yard. In the case of emergency the coal is fetch from coal yard. Coal feeder control the quantity of coal from coal bunker and send it to the ball mill or roll mill for pulverization process. Where coal crushed to the fine powder and mixed with preheated air come through the air from preheater. This process use for drying the coal and sends*

coal powder up to the burner of furnace. The rest of impure coal and rocks pass out to the bottom of mill and transfer to the clinker grinder then to the storage."	*coal powder up to the burner of furnace. The rest of impure coal and rocks pass out to the bottom of mill and transfer to the clinker grinder then to the storage.*"
"***D. Turbine and Generator*** *The generated steam is passing through the super heater to the high pressure turbine. After driving the turbine a part of this steam sends to the H.P. heater 2 and left pass through the reheater then secondary super heater and regain its pressure to drive Intermediate turbine. Then the steam transfer to the H.P.H 2 and low pressure turbine. Then steam from low pressure turbine transfer to L.P.H 4-5-6 and condenser. In condenser steam is cooled by cooling water and then deaerator circulates it for steam generation. The three turbines used to drive one shaft which drives the rotor of the generator by mean to generate electricity. The various auxiliaries of turbine and generator is cooled by hydrogen gas and cooling oil.*"	"***D. Turbine and Generator*** *The generated steam is passing through the super heater to the high pressure turbine. After driving the turbine a part of this steam sends to the H.P. heater 2 and left pass through the reheater then secondary super heater and regain its pressure to drive Intermediate turbine. Then the steam transfer to the H.P.H 2 and low pressure turbine. Then steam from low pressure turbine transfer to L.P.H 4-5-6 and condenser. In condenser steam is cooled by cooling water and then deaerator circulates it for steam generation. The three turbines used to drive one shaft which drives the rotor of the generator by mean to generate electricity. The various auxiliaries of turbine and generator is cooled by hydrogen gas and cooling oil.*"
The text from the original paper refers to the acronyms (H.P.H 2 etc.) used in a diagram in the paper, which are absent / not relevant in the EIA report diagrams. Also sections B. D.M. Plant, C. Boiler, E. Switch Yard are also exact copy but have not been reproduced here for brevity.	
Section 7.6.3 HAZID *"Risk initiating event likelihood and consequences are assumed by taken reference of visited plant real activities. Risk Classification screening table is given below"*	IV RISK ASSESSMENT *"Risk initiating event likelihood and consequences are assumed by taken reference of visited plant real activities. Risk Classification screening table is given below"*
Table 7.80 :Risk Classification Screening	TABLE I: RISK CLASSIFICATION SCREENING TABLE
Table 7.81: Risk Classification	TABLE II: RISK CLASSIFICATION ASSOCIATED WITH TABLE I
Above tables are exact copy-paste of the same source cited above. They are not reproduced for brevity.	

In addition to above 'copy-paste' exercise, EAC also observed several **incorrect or irrelevant statements** in the Final EIA report. For example,

- Section 7.8, Occupational Health and Safety - "*As a **small business owner** one has certain rights and responsibilities regarding health and safety in the workplace.*" (a project of 4000 MW cannot be called 'small business').

- Section 7.6.3.1 subheading Handling of heavy bags -"***Handling of heavy bags of the final products*** *may lead to occupational injuries like strains, sprains and cramps. This can be avoided by going for mechanical handling of the product or minimising the weight for manual handling.*" (in case of this project final product is electricity !).

Further it is also observed that two important Sections of the EIA Report, namely 7.6 "Risk Assessment" and 7.7 "Disaster Management Plan" are almost entirely generic and contain hardly any site or project specific aspects. For example, though Tungapadu Vagu passes through the project site and EAC has directed specific measures for the protection of the same, there is no mention of Tungapadu Vagu in either section 7.6 or section 7.7. Instances such as possible effects of its flooding and /or embankment breach on the plant or impact of a disaster at plant on the Vagu and its environment / downstream, which should have been properly assessed in these two section, are completely missing.

Based on above observations, it is amply clear that several parts of the EIA/EMP have been prepared simply based on 'copy-paste' approach, without application of mind and considerations of site specific factors for crucial aspects such as Risk Assessment and Disaster Management. Above is a representative and not exhaustive list, indicating a casual approach towards the preparation of the EIA report on the Project Proponent's part. *So, in light of the allegations of significant plagiarism and above mentioned observations, the MoEFCC may take necessary action on the relevant stakeholders.*

2. Absence of FGD in plant layout, and consequent processes:

PP has contended that the plant will comply with MOEFCC notification dt. 7th December 2015 regarding stack emission, and that FGD will be installed. EAC asked PP about the location of FGD in the plant layout. In response to this query, PP admitted that FGD has not been included in the plant layout yet. Similarly, FGD and associated processes are also not covered in water balance, process flow and mass balance calculations.

In light of this, the plant layout needs to be revised to include FGD and allied equipment / processes, and various plant processes need due consideration of issues like disposal of sludge in solid waste management, sulphur balance, water balance etc.

3. Absence of crucial details and data regarding water withdrawal and availability:

In response to a query regarding specific water withdrawal point, PP informed that specific water withdrawal point has not been specified / considered in the EIA. In the absence of specific water withdrawal point, it would not be feasible to assess issues such as sustainability of water even in lean period, ecological impacts arising out of withdrawal of water, downstream uses and impact thereon etc. Further, the committee also observed that crucial data regarding water availability is quite dated and recent data, which is most relevant, has not been considered. For example, in Table 7 regarding monthly observed discharge at Pondugala G & D site, data only upto year 1999 – 2000 has been considered. *These deficiencies need to be addressed and adequate study of downstream impact of water withdrawal and water availability during lean period need to be included in the EIA.*

4. *Need for firm commitment from Irrigation Department to maintain minimum ecological flows in Tungapadu Vagu*

   Additional ToR#7 states that "To sustain the downstream ecology of the Tungapadu Vagu, the **Irrigation Department should release** minimum ecological flows from the reservoirs constructed in the upstream. (emphasis added). In response, the PP has merely stated that *"Irrigation Department will be informed ….. and will be requested to take necessary action…."* (Sld. 126 of the presentation). This clearly shows that as yet there is no firm commitment of the irrigation department to release minimum ecological flows. *Hence, a firm commitment from irrigation department needs to be obtained and the same should be included in the revised EIA.*

5. *Explore the feasibility of ACC instead of WCC.*

6. *Cumulative impact study of various industries in buffer zone has not been made with details on emission data, stack heights and distances from plant site.*

7. *The impact of fugitive emissions on ambient air quality, with prediction of PM_{10} and $PM_{2.5}$ has not been made from the sources such as Coal Handling Plant, Coal Storage yard, Ash Pond, lime handling and storage including gypsum that will be generated from FGD unit. Impact of fugitive emission due to transportation of material is also required to be assessed.*

8. *The coal linkage documents for imported and domestic coal cannot be considered as firm c*oal linkage. *Imported coal MoU says non-enforceable and also doesn't specify the quality of coal and source of coal is also not specified. The MoC allocation/approval for domestic coal is required.*

9. *Coal analysis report from BHEL regarding use of blended coal.*

10. *EIA report as well as subsequent responses by PP indicate substantial confusion and lack of details regarding actual coal unloading and transportation arrangements. Some places it is mentioned that coal will be transported from two ports and some other places four ports are mentioned. Hence, complete and specific details regarding coal import ports and coal transportation routes need to be provided. Clear permissions from Railways and Port Authorities for imported coal should be obtained.*

11. *ToR 17, details of the mineralogical map from the State Geology Dept. Accordingly, MoC permission.*

12. *The PP submitted a detailed response to all the recommendations made by the Sub-Committee in its report on the Site Visit in the 50th EAC (T&C) meeting held during 28–29 January, 2016. The PP should provide action plans on the recommendations relating to restoration of degraded forest areas in the project area and creation of a permanent corpus fund for tribal welfare and adequate compensation for land loosers irrespective of their status besides best possible R&R package and extending social welfare schemes and healthcare systems for local communities.*

13. *As per the EIA report, the soil characteristics suggest that the land in the study area is a fertile land. Therefore, provision should be made to collect the top soil from the project area and preserve for raising plantation, etc.*

14. *Approximately, 75% and 25% areas are having under the category of forest and non-forest land, respectively. The forest land (including degraded) proposed to be included in the minimum 33% green belt should be made as a part of rejuvenation of forestland, instead otherwise may be.*

15. *The PP should give proper & detailed response along with an Action Plan in respect of queries raised during the Public Hearing along with CSR budgetary details provided during the stage of commissioning of the Project.*

16. *In light of the major shortcomings as noted above, EIA/EMP needs to be redone (though currently used baseline data can be used) which needs to address above mentioned points, and public hearing is also to be conducted again based on the redone EIA/EMP.*

(2.5.3)The proposal was accordingly, ***deferred.*** **"Unquote**

(2.7.2) PP vide their letter dated 08.10.2016 and during the presentation along with their Environmental Consultant, viz.,M/s B.S. Envi-Tech Pvt. Ltd., Secunderabad inter-alia stated following:

i. Requests for exemption of re-conducting the Public Hearing as the Public Hearing was conducted recently on 31.05.2016 which was attended by 3,500 people from surrounding villages of which 54 persons spoke regarding environmental and social issues and a total 16 written representations received from the villagers.
ii. As EAC observed certain shortcomings in final EIA/EMP report prepared by M/s Bhagavathi Ana Labs Pvt. Ltd (a Bureau Veritas Group Company), PP terminated the contract of Bhagavathi Ana Labs Pvt Ltd. and appointed M/s B.S. Envi-Tech (P) Ltd for revising the EIA/EMP inline with EAC observations.
iii. Revised EIA/EMP report has been prepared incorporating the issues raised by EAC in its 63rd meeting held during 29th-30th August, 2016.
iv. Re-conducting of public hearing will cause substantial delay in project schedule and will have major impact on power starved new state of Telangana as it is now facing acute power problem.
v. Similar projects in the past were asked to upload the revised EIA/EMP report on website to seek the public comments and were subsequently considered for appraisal for grant of Environmental Clearance.
vi. In case of Odisha Thermal Power Corporation Ltd (3x 800 MW) in Denkanal Dist., Odisha, Committee held the validity of PH is same as validity of ToR. In case of KU Thermal Power Pvt. Ltd. (2x660 MW) in Thoothukudi Dist., Tamil Nadu, EAC recommended for grant of EC based on revised EIA/EMP after seeking Public Comments. In case of Chettinad Power Corp. Pvt. Ltd. (2x600MW) in Nagapattinam Dist., Tamil Nadu, Hon'ble NGT upheld the Public Hearing and asked the PP to revise and upload the EIA/EMP report.
vii. No change in location, capacity, extent of land and survey numbers of the project area, re-conducting of Public Hearing may be exempted.

(2.7.3) Committee noted that the Ministry has written to NABET to initiate necessary action against the M/. Bhagavathi Ana Labs Pvt. Ltd and inform the same in light of plagiarism/'copy-paste' approach in preparation of EIA/EMP.

(2.7.4) *Committee after detailed deliberations,* ***exempted M/s TSGENCO Ltd. for re-conducting the Public Hearing*** *subject to the following conditions:*

i. New EIA consultant B.S. Envi-Tech Pvt. Ltd. should own the baseline data collected by the earlier consultant and revise the final EIA as per EAC observations. In this regards, a written commitment should be submitted to the Ministry.

ii. Revised EIA/EMP shall be submitted to Telangana State Pollution Control Board for puploading the revised EIA/EMP on their website for seeking public comments. Notice shall be published in two newspapers preferably one in vernacular language of the locality concerned and another one in English newspapers to seek the public comments/suggestions within 3 weeks from the date of notice.

iii. PP should address all the public comments received within 3 weeks, incorporate the issues & action plan in the revised EIA and submit the final EIA/EMP to the Ministry for further consideration.

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2.8 Enhancement of Captive Power Plant by installing Turbine (20 MW) at Birlasagar, Village Chhaya, District & Tehsil Porbandar, Gujarat by M/s Saurashtra Chemicals Division of Nirma Ltd. - reg. ToR

(2.8.1)Project Proponent (PP) vide their application and during the presentation provided the following information:

i. Proposal is for addition of 20 MW Power by installing a Turbine to the existing 20 MW Captive Power Plant.

ii. 20 MW Captive Power Plant located at Birlasagar, Village: Chhaya, Taluka & District: Porbandar, Gujarat which has been in operation since 1959 is catering to the manufacturing facility of Soda Ash (Light: 28,000 MT/month & Dense: 6,000 MT/ month), Sodium Bicarbonate (1100 MT/month), Caustic Lye (620 MT/month) and Liquid Bromine (20 MT/month).

iii. Co-ordinates of the plant are as below:
   a. 21^{0}37'38.70"N, 69^{0}37'35.20"E,
   b. 21^{0}37'39.00"N, 39^{0}37'36.00"E,
   c. 21^{0}37'36.50"N, 69^{0}37'36.00"E and
   d. 21^{0}37'36.50"N, 69^{0}37'37.20"E.

iv. Porbandar City is at 3.5 km and the Arabian sea is at 1.5 km. Project site boundary is well beyond minimum distance of 500 m from CRZ boundary. However, water intake pipeline of 1.2 km from Sea falls within CRZ area.

v. Since, the Unit has been in operations since 1959, Environment Clearance was not available. However, the Unit has valid Consent to Operate (CTO) from Gujarat Pollution Control Board (GPCB) vide Order No.AWH-66634 dated 02.12.2014 which is valid up to 08.09.2019.

vi. The proposal attracts General Condition of EIA Notification, 2006 as it is located at 1.1 km from Porbandar Bird Sanctuary notified under Wildlife (Protection) Act, 1972.

vii. Present proposal of enhancement of 20 MW will be done by installing additional Turbine and generator only.

viii. Present steam requirement is catered from the two CFBC boilers having steam generation capacity 120 TPH each. Power requirement of plant and residential township of the plant is catered from captive power plant with two turbines and power generation capacity of 20 MW.

ix. The total steam generation is 240 TPH from the existing two boilers, out of which about 90 TPH additional high pressure steam is proposed to utilize in power generation by installing one more turbine of 20 MW, which will fulfill present shortage of power requirement both in the plant and township. No additional boiler will be required.

x. No additional fuel will be required. At present, the fuel consumption for the plant is Coal- 801.6 TPD, Lignite- 1572.9 TPD and Pet coke- 1200 TPD. The fuel is imported from Bahamas, South Africa & Indonesia as per the requirement.

xi. No additional water will be required. At present, 1,76,100 KLD of fresh water is used and is met from Sea water. Cost of expansion is Rs.25 Crores.

xii. EIA Consultant is yet to be appointed.

(2.8.2) *After detailed deliberations, the Committee **recommende**d the following ToR in addition to the standard TORs (as applicable) at **Annexure-A1** for undertaking detailed EIA study and preparation of EMP:*

i. Information regarding EIA Consultant and the status of NABET accreditation to be submitted to the Ministry before initiating any baseline environment studies.

ii. The existing plant does not have Environmental Clearance, therefore, cumulative Environment Impact Assessment shall be carried out which includes existing Manufacturing Plant & Captive Power Plant and proposed enhancement of Captive Power Plant.

iii. A map be submitted showing the project location and Porbandar Bird Sanctuary along with it's Eco-sensitive Zone (if notified) duly authenticated by Chief Wildlife Warden and the recommendations or comments of Chief Wildlife Warden, if any.

iv. Recommendations of Standing Committee of National Board for Wildlife (NBWL) shall be submitted as the project is located at 1.1 km from Porbandar Bird Sanctuary. Location and impact with respect to ESZ shall be clearly indicated.

v. As the project is located at 1.5 km from CRZ, a map showing project location with respect to CRZ boundaries on Approved Coastal Zone Management Plan duly authenticated by Gujarat State Coastal Zone Management Authority (GCZMA) shall be submitted. Though project is not located in CRZ area, however sea water intake systems required for the plant falls in CRZ area. Recommendations from GCZMA as per CRZ Notification, 2011 shall be submitted.

vi. Study on migratory birds and biodiversity shall be carried out for one season.

vii. Flyash utilisation plan and MoUs with other companies for utilising flyash shall be submitted.

viii. As the Environmental Clearance is not available for the plant under operation, certified RO compliance report on Consent to Operate (CTO) & Hazardous Waste Authorisation shall be submitted. Concerned Regional Office of MoEFCC along with Regional Officer of GSPCB may visit the site and review the compliance status.

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2.9 2x660 MW Super Critical Lignite based Thermal Power project at Neyveli by M/s. NLC India Ltd. – reg. ToR.

(2.9.1)The Project Proponent (PP) along with their environmental consultant, Hubert Enviro Care Pvt. Ltd. made a presentation and inter-alia provided the following information:

i. The proposal is for setting up of 2x660 MW Lignite based Super Critical Power Project at Villages Mudanai, Kunakurichi, Uthangal, Tehsil Vridhachalam, Dist. Cuddalore in Tamilnadu.Project Cost is Rs.9240 Crores.

ii. The proposal was earlier submitted for 2x500 MW Sub-critical technology and the same was returned to PP asking to revise the Project to Super Critical Technology or obtain approval from MoP for sub critical technology. Accordingly PP revised the project to Super Critical Technology from 2x500 MW to 2x660 MW Power Project.

iii. The proposed 2nd expansion TPS-II (2x660 MW) will be set up at 1.8 km from the existing TPS-II (7x210 MW) and 1st Expansion TPS-II (2x250 MW) which are under operation. Exact site co-ordinates will be firmed up. Also alternate sites analysis has been submitted by selecting 4 locations atKolliruppu, Mudanai, Kammapuram, Marungur. Location at Mudanai is finalised because the land required for proposed project is 608 acres which is already in possession of PP. No additional land to be acquired and there is nodisplacement involved. The water reservoir of existing TPS-II and the partially filled ash pond shall be used for the proposed project. The location at Mudanai requires land filling of about 2 metres and also vegetation to be cleared. No forest land involved in the project. No protected areas and sensitive areas are located within 10 km radius of the project site.

iv. Lignite requirement is 10 MTPA which will be sourced from NCL Mines including Mines–III. Water requirement is about 81,624 KLD and shall be sourced from water reservoir of existing TPS-II. Power will be evacuated through 2 nos. of 400 KV transmission lines up to the nearest 400 KV pooling Sub-station of Central Transmission Utility of Power Grid Corporation Limited.

v. The ash content in lignite is 5-8% and hence ash disposal burden is quite less as compared to coalfired power plants. Neyveli is surrounded by many cement industries and cottage industries who manufacture flyash bricks, paver blocks and window/door frames using flyash. In fact 100% flyash utilisation will be achieved within existing stations of Nevyeli. Emergency ash dyke of 125 acres developed at TPS-II is envisaged to be used for the ash generated from the proposed project.

(2.9.2) Committee appraised the project as an 'expansion project' as per the presentation made by PP. But as per online application, the Form-1 mentions the project as 'new'. Since there is an ambiguity in the project category, clarification from PP was sought. The PP submitted their reply on.02.01.2017 along with a google map and clarified that category of the project was indicated as 'new' since the software was not accepting the project type as Brownfield/Expansion of TPS-II. As indicated in the google map, the proposed second expansion of TPS-II is adjacent to the exissting TPS-II plant and is sharing some facilities like emergency ash pond and water reservoir of TPS-II. It is further stated that

the boundary wall of TPS-II would be modified at a later date so that the units of second expansion of TPS-II would be within the common boundary wall.

(2.9.3) Committee suggested that a sub-committee comprises of the following members shall visit the site to ascertain the status of the project.

i.	*Dr. Narmada Prasad Shukla*	-	*Chairman*
ii.	*Shri Mohan Karnat*	-	*Member*
iii.	*Shri N.S. Mondal, Representative of CEA*	-	*Member*
iv.	*Dr. S. Kerketta, Director*	-	*Member Secretary*

(2.9.4) *After detailed deliberations and considering all the facts of the PP, the* ***Committee recommended*** *the following ToR in addition to the standard TORs (as applicable) at* ***Annexure-A1*** *for undertaking detailed EIA study and preparation of EMP subject to the site visit report of the sub-committee:*

i. PP shall submit a request letter to DG-CSIR for facilitating the alternate new technologies available for utilizing of dry flyash to enhance its utilisation level.

ii. PP shall submit the complete project layout along with existing plants (TPS-I & II), common facilities (ash pond/ water reservoir etc.), mines from where lignite is sourced, lignite and water transportation facilities, power evacuation lines on toposheet, google map to be furnished in hard copies and as kml file.

iii. In addition to proposed AAQ locations, 4 more stations to be setup in the downwind direction & at villages / sensitive receptors.

iv. Carbon Footprint Study shall be carried out from a reputed institute for the existing plant as well as for the proposed project.

v. The existing CPP and the proposed shall ensure the adherence to the new norms for thermal power plants notified by the MoEF&CC on 07.12.2015.

vi. Need based assessment study/ Skill mapping shall be conducted for all the villages located in and around 10 km radius from the project site. Accordingly, a long term CSR plan shall be drawn with separate financial budget. The CSR activities shall specifically include improving and providing modern methods of irrigation, Organic farming, Skill development for the local people.

vii. Submit the details of Court cases pending/ disposed, if any for existing power plant/ proposed project.

viii. Detailed and timebound action plan for phasing out of the existing unit i.e. TPS-I along with waste management plan shall be submitted and shall be inline with Construction and Demolition Waste Management Rules, 2016.

ix. The selected location is a lowlying area and requires filling up upto 2 m depth with borrow materials. Details of borrow materials or filling materials viz., source, total quantity to be used, etc should be provided.

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2.10 1x660 MW Coal Based Supercritical Panki Extension Power Project at Panki, District Kanpur, Uttar Pradesh by M/s Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited- reg. Reconsideration for Environmental Clearance

(2.10.1) The proposal was earlier placed before the EAC in its 57th meeting held during 16th&17thJune, 2016, the minutes of which are as under:

Quote“ The EAC noted that Kanpur (includes Panki) is a critically polluted area, although moratorium has been lifted for consideration of projects for EC. EAC further

noted that since the establishment of Panki TPP, the area surrounding it has become heavily populated with several lakh populations residing near the plant site. It also noted that though existing units (2x105 MW = 210 MW) would be phased out, capacity of expansion unit (660 MW) will be nearly 3 times the capacity of units to be phased out. Considering the non-compliance of emission & effluent limits by the existing TPP, CPCB had issued directions on 15.09.2015 to UPPCB to direct the Panki TPP for submission of action plan to ensure compliance of emission & effluent standards. However, the EAC was informed by the representative of the CPCB that there was no response from UPPCB or the PP in this regard.

(2.7.2) It was also noted that the Ministry, CPCB and EAC have received several representations from the local population on the existing TPP and also requesting not to consider the proposed expansion in light of its proximity to the local population, the adverse environmental impacts already caused by the existing TPP, etc. The representations had also brought out that the area was heavily populated, and a population of more than six lakhs in the immediate vicinity would be adversely impacted. The EAC was also informed that Kanpur city itself was in close proximity, approximately only 15 kms away from the proposed project.

(2.7.3) The EAC also noted that during the Public Hearing, a large number of participants had repeatedly brought the harmful environmental impacts of the existing unit, particularly the ash problem. However, in response to these repeated complaints, the PP had merely stated to each participant that with the new technologies envisaged for the proposed units, the ash problem would be taken care of. The EAC took note of the fact that as yet there was no approval of the competent State Govt. Department to the proposed phasing out of the existing units on commissioning of the new units, and as such there was no definite time frame for the closure of the existing units. Considering that the new units would take a minimum of four years to commission, and with no definite time frame for closure of the existing units, it implied that the ash problem would continue for many more years. The EAC was therefore distressed to note the manner in which the PP had dealt with the ash issue during the Public Hearing.

(2.7.4) After detailed deliberations, despite the fact that the proposed expansion would have relatively lesser impacts in comparison to the existing old TPP, considering that Kanpur (including Panki) is existing critically polluted area and presence of dense population surrounding the plant site etc., the EAC is of the view that the PP may explore alternate electricity generation options (Gas based/Solar, etc.) in the proposed location. The EAC also advised the PP to explore alternative locations for the proposed coal based TPP as it would not be possible for it to consider the presently proposed location. In addition, the EAC recommended that the MoEF&CC should ask the CPCB and SPCB to take immediate action to ensure that the existing TPP is complying to the emission & effluent standards. **"Unquote**

(2.10.2) Government of U.P. requested for re-consideration of the project as proposed earlier and submitted the following in light of EAC recommendations in its 57th meeting held on 16th& 17th June, 2016 :

i. There is an acute shortage of availability of gas in the country and the imported LNG is very expensive leading to high cost of power. Lot of gas based power plants have been closed down due to shortage of gas.

ii. With respect to Solar power plant, about 4 acres of land per MW is required for solar power generation. Only 110 MW Solar Power Plant can be set up in

the available 440 acres of land which will be less than the present installed capacity of 210 MW and will not meet the gap between the power requirement and generation. In addition, land and the facilities for the proposed expansion area available on ground.

iii. The proposed unit is based on the Super Critical Technology which will comply with the latest environmental standards. Also to reduce SOx and NOx emissions, a provision will be made for FGD and SCR. If the EC is accorded for the proposed expansion, the existing old units will be closed down in the same location at an early date.

(2.10.3) The proposal has been accordingly placed before the Committee for constitution of a Sub-Committee comprising of two experts, representatives from SPCB, CPCB and Ministry's Regional Office Lucknow for specifically looking at issues submitted by Govt. of U.P vis-a-vis environmental impacts due to plant under operation and proposed expansion.

(2.10.4) Project Proponent (PP) made a brief presentation highlighting the submissions made by the Govt. of U.P.

(2.10.4)*After deliberations,* ***Committee recommended that the Sub-Committee the comprising of following members would inspect the site*** *to address the issues raised by Govt. of U.P, environmental impacts and issues related to de-commissioning of existing plant, environmental compliance and alternate locations.*

v.	*Dr. Navin Chandra*	-	*Chairman*
vi.	*Dr. S. K. Paliwal, Representative of CPCB*	-	*Member*
vii.	*Shri N.S. Mondal, Representative of CEA*	-	*Member*
viii.	*Representative of UP State Pollution Control Board*	-	*Member*
ix.	*Representative of MoEF&CC, RO, Lucknow*	-	*Member*
x.	*Dr. S. Kerketta, Director*	-	*Member Secretary*

Committee suggested that the Member Secretary would co-ordinate with the Ministry's Regional Office as well as UPPCB for nominating a member to the Sub-committee and he would be a nodal officer for the site inspection and submission of the recommendations.

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2.11 2x660 MW Coal based Super Critical Thermal Power Plant, Bulandshahar, Uttar Pradesh by M/s THDC Ltd - reg. Environmental Clearance.

(2.11.1) The Project Proponent (PP) along with their environmental consultant, Mantec Consultants Pvt. Ltd. made a presentation and inter-alia provided the following information:

i. The proposal is for setting up of 2x660 MW Coal based Super Critical Thermal Power Project in Villages Dushhara-Kherli, Jahanpur, Naiphal and Rukunpur located at 11 km from Khurja Town in Bulandshahar Dist., Uttar Pradesh. Total land requirement is 1400 acres, out of which 1201 acres is in possession of the PP, 123 acres for railway and raw water corridors is under acquisition and 76 acres of land due to de-routing of NH-91.

ii. ToR has been granted by the Ministry vide letter dated 27.10.2011 for conducting EIA studies and Public Hearing. Validity of ToR was granted twice i.e. on 26.10.2014 and 26.10.2015 vide letters dated 03.12.2013 and 15.01.2015, respectively. Public Hearing was conducted at Khurja in District Bulandshahar on 01.08.2015. Final EIA/EMP was submitted to the Ministry on 06.10.2015. However, the proposal could not be considered for appraisal as the details of firm

coal linkage and Minutes of Public Hearing in English were submitted to the Ministry on 16.12.2016 was not authenticated from the Concerned Authority.

iii. Coal requirement is 5.4 MTPA and will be sourced from Amelia Coal Block in Singrauli where 42% of Coal reserve is Grade 'E' with ash content of 34.1%-40%. PP shall make necessary efforts to keep the ash content below 34%. Coal transportation is envisaged from the coal mines to power plant is by Indian Railways rakes. The rake shall be unloaded at the wagon tippler terminal. No road transportation is involved for Coal transportation from mine pit to the power plant.

iv. Raw water requirement is 3265 m^3/hr and will be met from Upper-Ganga Canal located at a distance of 8 km. A raw water reservoir with a storage capacity of 25 days is envisaged.

v. Ash management scheme shall be implemented consisting of dry collection of fly ash, supply of ash to entrepreneurs for utilization and promoting ash utilization to maximum extent and safe disposal of unused ash.

vi. Circulation of cooling water system will be optimized and operated at more than 5 cycles of concentration. The specific water consumption will be 2.47 m^3/KWH.

vii. NOC from Airport Authority of India has been obtained for construction of 275 m height chimney vide letter dated 18.07.2011.

viii. Baseline environment studies have been carried out during October-December, 2012. Air Quality monitoring carried out at 4 locations. Maximum SPM recorded is 198 µg/m^3at Jawal village. Average values of PM_{10}, $PM_{2.5}$, SO_2, NOx, O_3, Hg are in the range of 68.5-70.9µg/m^3, 34.3-35.6 µg/m^3, 11.5-12.71 µg/m^3, 24.3-26.8 µg/m3, 25.8-26.7 µg/m3 and BDL, respectively. Maximum Predicted Incremental concentrations for PM_{10}, SO_2, NOx are 1.51 µg/m^3, 5.06 µg/$m^3$and 5.06 µg/m^3, respectively.

ix. Proposed Air pollution control facilities shall include High efficiency ESPs, FGD system for control of SO_2, Low NOx Burner (LNB) and Selective Catalytic Reduction (SCR) System for NOx control, de-dusting system in Coal Handling Plant and twin flue stack of 275 m height.

x. Zero discharge will be implemented with RO capacity of 240 m^3/hr.

xi. Estimated Project Cost is Rs.9,747.5 Crores, cost of EMP is Rs.1783.5 Crores.

xii. Cost of CSR Budget of Rs.33.2 Crores has been earmarked for various CSR activities viz., Education, Health, Veterinary Care, Sanitation, Rural/Slum Development, Livelihood generation, environment protection initiatives, etc.

xiii. A total population of 4,171 will be affected from five villages due to project activities. 88 families will directly get affected comprising 452 people involving displacement. 88 families of Nagla village are not authorized land owners.

xiv. Public Hearing issues raised by people are related to fertility of agricultural land due to emissions from plant, pollution due to flyash and coal handling, non-payment of suitable compensation, adopting villages, effluent treatment, greenbelt, rehabilitation of affected people of Rukanpur and Nagla Villages etc. PP made response to the queries raised by public.

(2.11.2) *After detailed deliberations, Committee noted the following observations:*

i. The EIA prepared by Mantec Consultants (P) Ltd, is not comprehensive. PP could not provide the quantity of flyash generated and concrete disposal plan. All the maps and layouts provided in the EIA are not legible.

ii. A natural drain (Aligarh Nallah) is passing through the project site. Justification for diverting this nallah has not been provided. Hydrology report prepared by NIH, Roorkee and their recommendations have not been provided.

iii. It is observed that EIA which was submitted to the Ministry post public hearing and the EIA which has been circulated to EAC Members for meeting has some difference in baseline data. Baseline data for March-May, 2016 has also been collected in addition to October-December, 2012 and incorporated the same in the EIA. However, the same has not been clarified in the report, why additional base-line data has been provided.

iv. In the EIA, baseline data for NOx and SO_2 results have been shown in the Ozone values. The whole EIA report has been prepared in qualitative manner.

v. Details of Quantitative Risk Assessment and credible failure scenarios for Hazardous Chemical containers such as Fuel Oil, Transformer Oil, Chlorine, etc have not been provided in the EIA.

vi. Native and indegenious species have not been proposed in the EIA which shall be part of green belt development plan.

Committee noted that the proposal and can be re-considered after submission of additional information. Accordingly, the project has been ***deferred.***

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2.12 Expansion of 4x250 MW by addition of 4x600 MW Coal Based Thermal Power Plant at Tamnar, Tehsil Gharghoda, District Raigarh, Chhattisgarh by M/s Jindal Power Ltd. - reg. amendment of EC.

(2.12.1)The above proposal was last considered by the EAC in its63rd& 59thMeetings held during 29th& 30th August, 2016 and 14th -15th July, 2016 the minutes of which are as under:

Quote "(2.6.1) The proposal of PP requesting for amendment of EC for change in location of ash pond was considered earlier by the EAC in its 50th Meeting held during 28th-29th January, 2016, the minutes of which are as under:

(2.7.1) The PP made a presentation and *inter-alia*, provided the following information:

(i) EC Clearance for the above expansion project was accorded on18.03.2011 for Units #1 & 2 and 04.11.2011 for Units # 3 & 4. Subsequently, all four units of 2,400 MW have been synchronized and three units have achieved COD. The requested amendment is for change in ash dyke location.

(ii) Initially, ash dyke for 4x600 MW was proposed to be constructed on an area of 491 Ha, comprising of 250 ha land near Dolessara village and another 241 ha land near Rodapali village. Details of both patches were included in the Draft and Final EIA report and both the patches of land were part of Public Hearing. In order to optimize the land requirement, JPL requested MoEF to consider only 241 ha of land near Rodapali village for proposed ash dyke. Accordingly, MoEF while granting EC to the project has approved 241 ha of land near Rodapali village for locating the ash pond for the expansion project. However, land near Rodapali village could not be acquired for construction of ash dyke, as the same became part of Gare Pelma Sector-II coal block.

(iii) Due to delay in acquisition of land for ash dyke, JPL requested MOEF to permit use of existing ash dyke of 4x250 MW for expansion project of 4x600 MW. Same was permitted by MoEF for period of 3 years i.e. till 09.01.2017. Now, JPL proposes to construct the ash dyke near Dolesara village on an area of 239 ha. This land has already undergone Public Hearing as a part of EIA for 4x 600 MW.

(iv) Regarding the land acquisition status of proposed new dyke area, in-principal approval for land acquisition has been received from State Industrial Promotion Board. Compensation of Rs. 57.36 crores has already been deposited with Chhattisgarh State Industrial Development Corporation (CSIDC), Raipur. R & R plan for the land has been approved by CSIDC, Raipur vide letter dated 03.08.2015. Section 11 notification for land acquisition completed on 31.08.2015. Issue of section 12 for preliminary survey of land completed on 15.11.2015. Issue of Section 15 for hearing of objection of Section 11 completed on 18.01.2016.

(2.7.2) While the PP had not intimated about any court case, the Committee noted thatthe Ministry was informed by the representative of Appellant in Appeal No. 6/2012, Mehnatkash Majdoor Kisan Ekta Sangthan & Anr. Vs. UoI & Ors. that its appeal against the EC of 2011 is still under consideration of Hon'ble N.G.T. and any amendment in EC should not be considered by EAC. *In this regard, the Committee requested the Ministry to study the NGT Orders and clarify whether there is any direct or implied stay by NGT on the project in general and the requested amendment in particular.*

(2.7.3) *After detailed deliberations, the Committee sought the following and* ***deferred*** *the decision on the proposal.*

(i) *Hydro-geological study of the proposed ash pond area for a minimum one month.*

(ii) *Although the Public Hearing for land acquisition was held earlier, to make the public aware about the proposed new location of ash pond, public notices in the leading local newspapers, Gram Panchayats, Website of PP etc. should be published, along with the intimation that the public can send its comments if any to the PP and also MoEF & CC within one month after publication of the public notice.*

(2.6.2) In this 59th meeting on 14th -15th July, before taking up consideration of the PP's requests, the EAC, with reference to Para (2.7.2) above, inquired about the impact of the NGT's Orders. The PP and the Ministry clarified that the said Appeal was disposed off on 09.03.2016, and the Order does not stay the proposed amendments.

(2.6.3) For this 59th meeting on 14th -15th July, the PP vide letter dated 07.07.2016 circulated to the EAC Members, had requested the Ministry for change in source of coal for Units 3 & 4 from imported to domestic, and for change in location of the ash dyke near to the Dolesara village. Regarding the change in location of ash dyke, it was inter-alia stated that, as recommended by the EAC, hydro-geological study has been completed and report on the same will be submitted to MoEF and EAC shortly. However, in case the hydro-geological report is delayed, kindly consider request for change in source of coal from imported to domestic so that unit 3 & 4 are commercially viable to operate. Accordingly, the proposal was placed before the EAC. *The EAC pointed out that since the hydro-geological study report was not yet available, the proposal for only change in source of coal for Units 3 & 4 from imported to domestic can be taken up for consideration in this meeting.*

(2.6.4) Further, in connection with the request for change in location of the ash dyke near to the Dolesara village, the EAC took note of the e-mail representation dated 13.07.2016 received by the Ministry (i) alleging location of the proposed ash dyke falling within the coal mine area of Gare Palma Sector-I which presently stands allotted to the Gujarat State Electricity Corporation, and (ii) enclosing a resolution of the Dolesara Gram Sabha dated 07.10.2015 against the land acquisition for ash dyke, etc. *Notwithstanding that the ash dyke matter cannot be taken up for consideration in this meeting, the EAC, in order to save time for this proposal's consideration in the next EAC meeting, requested the Member Secretary to make available to the PP a copy of the representation for a detailed reply to be submitted by the PP to the Ministry well before the next EAC meeting, for action in line with the decision recorded under Agenda item 3.1 of this meeting.*

(2.6.5) Also in connection with the change in ash dyke location, the PP's attention was drawn to the Dolesara Gram Panchayat's "no objection" document dt. 22.8.2015 attached to the PP's letter dated 07.07.2016 circulated to the EAC Members. *The EAC was not clear why this document dt. 22/8/2015 had not been placed before the EAC, when the case was earlier taken up by the EAC in its January, 2016 meeting (i.e. five months after the "no objection"). The PP was also asked to clarify the discrepancy in the area for the ash dyke – while the Gram Panchayat mentioned a total of approximately 190.5 ha, the requirement indicated by the PP in the Jan., 2016 meeting of the EAC was 239 ha {as reproduced in para 2.7.1 (iii) above}.*

(2.6.6) Regarding the change in source of coal for Units 3 & 4 from imported to domestic, and its transportation to the project, the PP stated that they already had permission for transportation of coal by road, but were unable to switch to domestic coal because the EC stipulates usage of imported coal. Regarding environmental impact of change in source of coal, the following was stated in the PP's letter dated 07.07.2016 circulated to the EAC Members:- "Furthermore, we would like to supplement that in the EIA report, the air quality modelling was based upon the domestic coal and characteristics of imported coal considered for grant of Environmental Clearance were same as for domestic coal. Hence there will be no change in impact on environment, including air quality, due to change in source of coal". Similarly, in the presentation circulated during the meeting, in slide 11, it has again been reiterated that "Hence, due to change in source of coal from Mozambique to domestic, there will be no change in impact on environment, including air quality". Also, as stated in slide 9 of the presentation, domestic coal is proposed to be procured through the "special forward e-auction".

(2.6.7) As is very well known to all PPs in the thermal power sector, and as has been repeatedly brought out in the various O.Ms etc. issued by the MoEF&CC, one of the primary responsibilities of the EAC is to examine the impact on the environment of coal usage, and the impact on account of the mode and route of its transportation from the coal source to the project site. In this context, on its enquiry, the EAC was informed that the following condition had been stipulated in the EC amendment dt 27th March, 2015 issued to the PP:- *"The coal for the proposed expansion project will be crushed near MCL mines by installing coal crushers by its subsidiary Company Uttam Infralogix Ltd, and the crushed coal will be transported to the plant site at Tamnar through Close Circuit Pipe*

Conveyer (CCPC). However, as an interim arrangement, the domestic and imported coal may be transported by road from MCL /SECL mines and Raigarh, respectively for a limited period of two years by which time the CCPC will be put in place for coal transportation and crush the same within the plant site by installing coal crusher".

(2.6.8) As is clear from the above EC condition, the transportation route for the imported coal was stipulated from Raigarh. On enquiry, the PP stated that procurement of domestic coal through e-auction (as stated in their presentation) would have to be from MCL / SECL mines. Since these mines are in a completely different direction from Raigarh, it became clear on further enquiry from the PP that substitution of imported coal by domestic coal would necessarily also involve a change in the entire transportation route. In other words, the substitution of coal source for the 1200 MW of Units 3 & 4 would result in an additional movement of five-six MTPA coal on the road network from MCL / SECL mines to the project site. *The EAC was unable to appreciate how the PP had not brought out this basic and fundamental fact in its submissions, and the position had emerged only as a result of specific queries to the PP. It was also obvious that before the PP's request could be considered, due permissions would have to be obtained from the concerned Authorities for road usage, in addition to studies that may also require to be conducted regarding road carrying capacities etc. The EAC took a serious view of such suppression of vital information for appraisal of the proposal, especially by a company of its magnitude and cautioned the PP for non-repetition.*

(2.6.9) Since the March, 2015 EC amendment had clearly specified a limited time frame of two years for road transportation (viz, ".....as an interim arrangement, the domestic and imported coal may be transported by road from MCL /SECL mines and Raigarh, respectively for a limited period of two years by which time the CCPC will be put in place for coal transportation....."), the PP was asked to indicate the readiness of the CCPC. The PP indicated that the CCPC was currently only at the engineering stage. It thus becomes clear that operationalising the CCPC is very much behind schedule, and will take a few more years. *The EAC was unhappy to note that because of this, coal transportation by road would necessarily have to continue in future also. The EAC therefore desired that the PP should take immediate steps to commission the CCPC at the earliest so that road transportation could be avoided.*

(2.6.10) *In the light of the position given in the preceding paras, the PP was asked to respond to the issues mentioned above in paras 2.6.4, 2.6.5, 2.6.8 and 2.6.9. The proposal was accordingly* ***deferred***

(2.6.3) The reply to above information sought by EAC in both the meetings was submitted by the PP to MoEF&CC and accordingly, the proposal was again placed before the EAC in this 63rd meeting on 30.08.2016, wherein the PP along with their hydro-geological consultant, Volcons Solutions, Rourkela and environmental consultant, Min Mec Consultancy Pvt. Ltd., New Delhi made a presentation on the information sought.

(2.6.4) As per PP, MoEF vide letters dated 10.01.2014 and 27.03.2015, (PP presentation sld no 20) had granted temporary permission for coal transport by road and that CCPC shall be put in place by that time. This temporary permission is valid till 23.03.2017. PP has requested for extension of this temporary permission till 26.03.2020, i.e. by three more

years, by the time PP proposed to complete CCPC. This would imply permission for coal transportation by road for over 6 years from COD of first unit. PP has also sought permission to use domestic coal for Units 3 and 4, which would result in an additional movement of 5-6 MTPA coal on the road network from MCL / SECL mines to the project site. Regarding the coal transportation arrangement, PP stated that in EIA report it was proposed to transport coal from railway station to the project site through pipe conveyor. (PP presentation sld 19). Coal for Units 1 and 2 is already being transported through road from Raigarh railway station. PP further stated that total coal transportation requirement for Units 3 and 4 would be 13,187 Tonnes per day and it proposes to use 40 Tonnes dumpers, requiring hourly 28 to and fro dumper movements, which would be a 40 tonne dumper movement every 2 minutes. It further stated that the proposed road for coal transportation is undivided, two lane road, with minimum width of 5.6 mts., maximum width of 16.5 mts. and average width of 7.7 mts. Out of 21 points on the proposed road transport route, road width at 18 points is less than 7.2 meters, for 1 point it is 10.1 meters and for only two points it exceeds 16 meters. (Impact assessment due to transportation of coal study Aug. 2016, – table 1, pg. 4). Thus for most of the road length, road width is less than 7.2 meters.

In sum, though coal transportation by CCPC was proposed long ago in the EIA itself, temporary permission was granted for road transport till 23.03.2017, the construction for CCPC is way behind the schedule and is now proposed to be completed only in 2020. Also most of the road proposed for coal transportation for units 3 and 4 is of less than 7.2 meters wide. Considering all these factors and observations in para 2.6.8 and 2.6.9 above (i.e. MoM's of 59th meeting), EAC recommends that coal transportation for Units 3 and 4 may not be environmentally safe option and the PP may re-examine the issue.

Decision regarding extending temporary permission for coal transport by road beyond 23.03.2017, only for units 1 and 2, can be taken based on consideration of detailed action taken and progress made for CCPC, status of land acquisition, etc.

(2.6.5) After detailed deliberations, the EAC sought the following information/documents and accordingly, ***deferred*** *the proposal.*

(i) *The sampling & analysis of ground water & soil of the proposed ash dyke area and fly ash characterization & leachate studies by an accredited consultant and laboratory.*

(ii) *A copy of the Notification issued by the State Govt. for acquisition of land for construction of Ash Pond under Section 19.*

(iii) *The alignment of pipeline for ash slurry, etc.*

(iv) *Load bearing capacity of the existing roads for the proposed routes for Unit III & IV.*

(v) *Detailed action taken and progress made for CCPC, status of land acquisition, etc.*

(vi) *Detailed justification for use of the existing water reservoir.*

(vii) *Detailed justification for use of the existing ash dyke.****"Unquote.***

(2.12.1) Project Proponent (PP) has submitted reply to the queries raised by EAC vide letter dated 12.11.2016 inter-alia are as under:

i. Sampling and analysis of ground water, soil and ash including leachate test and TCLP have been carried out by NABL and MoEF recognised laboratory viz. Min Mec R&D Laboratory, New Delhi. Results indicate that the heavy metal concentration in ground water and ash is within limits. Under prevailing pH conditions of ash effluent, potential of leaching of heavy metals from the ash dyke will be remote. However, as precautionary measure, ash pond will be lined with HDPE/LDP at an estimated cost of about Rs.5 Crores.

ii. Chhattisgarh State Govt. notification vide dated 13th August, 2016 regarding land acquisition for ash dyke has been submitted.

iii. Map outlining the alignment of slurry pipeline from the power plant to ash dyke has been submitted. Pipeline corridor up to the existing ash dyke of 1000MW has already been laid along the ash pipeline corridor. Only 1.5 km ash pipeline is to be laid for the proposed ash dyke for 2400MW.

iv. Based on the certificate by empanelled consultant of Ministry of Road Transport and Highways for NHAI vide dated 18.10.2016, roads are capable of plying vehicle load capacity of 50 tonnes. This is also supported by the fact loaded vehicles 18 and 22 wheels are already plying on these roads.

v. Route survey, soil investigation and topographic survey for CCPC have been completed. 14 acres, out of 30 acres have already been acquired. Excavation work for transfer points inside the plant has already been started. Civil foundation work is under progress. About 1000 tonnes of 24 m structural galleries piers have been fabricated. Equipment such as gear boxes, couplings, pulleys & frames, idler rolls, motors, VVFD, Electric and instrumentation panel have been procured. CCPC is scheduled to commission by March, 2019.

vi. Effective capacity of existing reservoir is 8 lakh m^3 and is sufficient to cater 4x250 MW (requirement is 79,200 m^3/day) and 4x600 MW (requirement is 1,86,200 m^3/day) units for more than 3 days. Water problem was never faced since 2007-08 from Rabo Dam. Now with two sources of water supply, the possibility of water shortage is remote.

vii. The available storage capacity of existing ash dyke is 12.47 MCM and cumulative ash volume from 4x250 MW and 4x600 MW after utilisation is expected to be 0.412 MCM/month. Considering the generation of flyash, the existing ashdyke can accommodate for about 30 months at full load.

(2.12.3) Project Proponent (PP) has further submitted vide letter dated 18.11.2016 that the EAC is non-functional after 01.09.2016 and no meetings were held in September & October, 2016 and it is likely to be held in November, 2016. Consent to Operate (CTO) for all 4 units granted by Chhattisgarh Environment Conservation Board (CECB) is valid up to 09.01.2017 and an application for renewal has been submitted to CECB on 08.11.2016. If the temporary permissions are not extended by the Ministry by Mid-December, 2016, CECB may not renew CTOs which will lead to shut down of operations of all the 4 units. In this regard, it is requested to renew the temporary permissions granted through amendments in EC dated 10.02.2014 and 27.03.2015 may be extended for a period of six months.

(2.12.4) The matter has been examined by the Ministry and accordingly, temporary permissions granted vide letters dated 10.01.2014 and 27.03.2015 have been extended till 30.04.2017. Mean-time, the subject matter is to be placed before the EAC upon re-constitution.

(2.12.5) *Accordingly, the proposal has been placed before EAC. After deliberations, Committee has **recommended** for the following amendments subject to conditions:*

a. *use existing ash dyke for two more years,*
b. *transport coal by road and crushing facility located within the plant premises for thirty months,*
c. *use of existing water reservoir for expansion of 4x250 MW TPS and*
d. *change in coal source from imported to domestic for Units 3 & 4.*
e. *Change in location of ash dyke from Rodapalli to near Dolesara village.*
f. *Plantation along CCPC shall be carried out. Fruit bearing, neem and local indigenous species shall be planted.*
g. *100% provision should be made to use incremental ash generation due to change in coal source and in this effect, a written commitment be submitted within one month.*

viii. PP shall submit a request letter to DG-CSIR for facilitating the alternate new technologies available for utilizing of dry flyash to enhance its utilisation level.

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2.13 1980 MW (3x660MW) Imported Coal Based Thermal Power Plant and installation of water pipelines and Coal transportation system, near Vill. Thaminapatnam, Chilakul Mandal, Nellore Dist., Andhra Pradesh by M/s Kineta Power Pvt. Ltd.- amendment in EC

(2.13.1) Environmental Clearance for 3x660 MW Imported Coal based Thermal Power Plant has been issued to Project Proponent (PP) on 25.01.2012 which is valid up to 24.01.2017. Subsequently, an amendment was issued on 26.02.2013 for minor change in co-ordinates of the plant site with stipulation of additional conditions for conducting long term studies on coal composition and fly ash for radio activity contents etc. Later PP applied for change in configuration from 3x660 MW to 3x800 MW on 10.03.2014. While the amendment is under consideration, a compliant received for wilful suppression of the facts in EIA. PP was sought to furnish the reply in this regard. The same is awaited.

(2.13.2) The proposal also involves facilities in CRZ area and attracts CRZ Notification, 2011 which includes laying of sea water intake pipelines and Coal Transportation Systems involving trestle of 1250 m long for carrying 4 numbers of intake pipelines with 1250 mm dia and 2 numbers of Outfall pipelines with 1000 mm dia for 1980 MW Power Plant. PP obtained recommendations of Andhra Pradesh Coastal Zone Management Authority (APCZMA) vide their letter dated 29.11.2014.

(2.13.3) Subsequently, PP applied separately for CRZ clearance to the Ministry for setting of these marine facilities in CRZ area and the proposal was last appraised in 146th Meeting of EAC (CRZ/Infra) held during 9th-11th March, 2015. Accordingly, proposal was recommended with subject to following conditions:

a. Filters shall be provided at intake to prevent entry of marine life along with the sea water.
b. All the recommendations and conditions specified by State Coastal Zone Management Authority shall be complied with.
c. The outlet quality as well as the sea water near the outfall shall be monitored especially for temperature and salinity regularly. If the parameters are found to be of significant consequence, necessary remediation measures shall be taken. A report in this regard shall be submitted to Regional Officer, MoEFCC along with six monthly monitoring report.

d. The State Pollution Control Board shall device a mechanism by which they will keep watch on any adverse damage to marine life from temperature or salinity adverse effects.
e. Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.

(2.13.4) While considering the grant of CRZ clearance, Ministry observed that there is a delayed time lag between grant of EC and the application for CRZ clearance. Accordingly Ministry sought a report from Department of Environment, Forests, Science & Technology, Govt. of Andhra Pradesh on developmental activities undertaken on ground along with the latest opinion of the State Government regarding the project vide letters dated 30.06.2015, 21.08.2015, 26.11.2015, 06.01.2016, and 15.06.2016. However, the information is yet to be received.

(2.13.5) Meanwhile, MoEF&&C Regional Office (RO) was requested to provide the report and status of developmental activities as the project site. As per RO report dated 04.04.2016, construction activities have not been commenced at the site except concrete work for compound wall construction and the same was suspended thereafter. In addition, five porta cabins and 500 kVA transformer yard along with 12 kVA DG set have been set up at the site.

(2.13.6) As per para 4 (i) (b) of CRZ Notification 2011, for projects involving both EIA Notification, 2006 and CRZ Notification, 2011, only clearance under EIA Notification (EC) shall be required subject to being recommended by the concerned State or Union territory Coastal Zone Management Authority.

This project attracts both:

(a) Schedule 1(d) of EIA Notification, 2006 for setting up of 1980 MW Thermal Power Project, and
(b) CRZ Notification, 2011 for laying of foreshore facilities involving intake & outfall pipelines, trestle, etc.

(2.13.6) *After deliberations, Committee* ***recommended*** *for the amendment of Environmental Clearance by consolidating CRZ recommendations under CRZ Notification, 2011 subject to following additional conditions:*

i. All the recommendations and conditions specified by Andhra Pradesh State Coastal Zone Management Authority (APSCZMA) vide letter No.4499/Env/CZMA/2013 dated 29.11.2014 shall be complied with.
ii. Filters shall be provided at intake to prevent entry of marine life along with the sea water.
iii. The outlet quality as well as the sea water near the outfall shall be monitored especially for temperature and salinity regularly. If the parameters are found to be of significant consequence, necessary remediation measures shall be taken. A report in this regard shall be submitted to Regional Officer, MoEFCC along with six monthly monitoring report.
iv. The State Pollution Control Board shall device a mechanism by which they will keep watch on any adverse damage to marine life from temperature or salinity adverse effects.

v. *Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.*

vi. *"Consent for Establishment" shall be obtained from State Pollution Control Board under Air (Prevention and Control of Pollution) Act, 1981 and Water (Prevention and Control of Pollution) Act, 1974.*

vii. *Coal transportation shall be through closed, joint less conveyor.*

viii. *Submit an undertaking that PP shall abide by the conditions given in the CRZ recommendations, Consent for Establishment/Operation and the amendments in Environmental Clearance.*

ix. *Publication of the EC amendment shall be made in newspapers (one in Vernacular language of the locality concerned and another one in English language) as a part of information to the General Public.*

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2.14 3x660 MW Coal based power units at Koradi TPS, in Nagpur District, in Maharashtra by M/s Maharashtra State Power Generation Co. Ltd- reg. amendment in EC

(2.14.1) The above proposal was last considered by the EAC in its 60th meeting held during 27th July, 2016, the minutes of which are as under:

Quote "*(2.2.1)*According to the background documents circulated by the PP to the EAC Members for this 60th EAC meeting on 27th July 2016, and as informed to the EAC by the MoEFCC representatives, the PPs proposal was appraised by the EAC in its meetings held in August 2009, and September 2009. In the later meeting, the EAC had recommended the proposal for EC subject to installation of FGD.EC for the above TPP had been accorded on 04.01.2010 with a validity of 5 years to start operations by the TPP. The Specific Condition No. (i) of the EC was that, *"FGD with one unit of 660 MW will be installed initially to begin with and the requirement, if any, for the installation of FGD system with the other two units will depend upon the prevalent ambient levels of SO_2. Provision for installation for FGD in all units shall be made*". The validity of the EC was extended vide letter dated 27.03.2015 till 30.06.2016 to start the production/operation of all the Units of the TPP.

(2.2.2) Even before issue of the EC in Jan 2010, the PP had been approaching the Ministry/EAC for waiver of installation of FGD in their plant. Accordingly, the matter was considered by the EAC in its meetings held in December 2009, April-May 2010, & August, 2012. The EAC and the MoEFCC did not however agree to the waiver.

(2.2.3) According to the background documents circulated by the PP to the EAC Members, after the PP obtained Consent to Operate (CTO) from the MPCB, Unit 8 "has been declared for commercial operation" from 16.12.2015. However, when approached by the PP in Jan 2016, the MPCB did not agree to issue the CTO for Unit 9, "and asked to install the FGD to at least one unit". Thereafter, the MAHAGENCO Board had approved FGD installation on the third unit i.e. Unit 10. With this, MAHAGENCO once more approached MPCB in April 2016 for CTO for Unit 9; however, MPCB "has not considered our request and asked for obtaining the amendment of EC regarding the FGD condition from MoEF for issue of C to E".

(2.2.4) Further, according to the background documents circulated by the PP to the EAC Members, the Chief Minister of Maharashtra had last year in July 2015 taken

up the matter with the Union Environment Minister. The Union Environment Minister in August 2015 had however not agreed to the request.

(2.2.5) Now, the PP vide online application dated 09.06.2016 has *inter-alia*, stated that MAHAGENCO shall abide by the Ministry's Notification dated 07.12.2015 regarding the stack emission levels of TPP on or before 07.12.2017. In addition, in the background documents circulated by the PP to the EAC Members, it has been requested that now that the Dec 2015 Notification has been issued, the MoEFCC is requested to ".....kindly amend the condition of FGD in the EC and permit to install the FGD / SO_2 control systems upto 7/12/2017 in line with the Gazette Notification....."

(2.2.6) *In the light of the above background, the EAC in this 60th meeting on 27th July 2016 was not clear why the PP had yet again approached the EAC for waiver of the FGD installation. During discussions, a view was also put forward that the EC condition reproduced in para 2.2.1 above did not mean that FGD had to be installed in the first unit itself – it could be installed in any of the three Unite 8,9, or 10. It was however pointed out that in the EC condition, very specific words had been used i.e. "initially", immediately followed by "to begin with". Not only common usage, but even the dictionary meaning of these words would make it amply clear that the intention was for FGD installation in the first unit to come on stream, in this case Unit 8.*

(2.2.7) The PP informed that monitoring of SOx from stack of Unit 8 is now being done regularly and the value is found to be less than 50 ppm. It was also informed by the PP that as some of the old units i.e. Unit Nos. 1 to 4 have been shut down permanently and Unit No. 6 is under R & M, the value of SOx at the GLC is also stated to be much less than the prescribed standards and thus, installation of FGD plant was not done in Unit No. 8. Therefore, installation of FGD plant was thought up to provide in any of the three Units.

(2.2.8) In this connection, the CEA representative further informed that another unit i.e. Unit 5 of 200 MW capacity also have been shut down permanently which in turn has further reduced Ambient SO_2 level. The installation of FGD in the unit/s should be considered in consonance with Revised Emission Norms for Thermal Power Plants published by MOEF&CC dated 7th December 2015.

(2.2.9) *In passing, the EAC noted that the documents submitted by the PP didn't have any detailed comparative data of the AAQ, year wise i.e. baseline data, when old plants were shut down and when Unit-8 came into operation along with stack emission data, year wise. However, quite apart from this, the EAC was of the view that since the PP has approached the EAC for FGD waiver for the reasons recorded in para 2.2.5 above, bringing up monitoring data by the PP was not justified. If the PP now wished to have his case of FGD waiver considered on the basis of new /additional information, the proper course would be for the PP to first approach the MoEFCC since the MoEFCC, at the level of the Union Environment Minster, had earlier not agreed to the request (ref para 2.2.4 above).The MoEFCC could then, if it so desired, refer the matter to the EAC. The EAC was of the further view that seeking FGD waiver on the grounds put forward by the PP was itself not correct – the 2015 Notification was actually meant to 'strengthen' the ECs already granted, and not to 'weaken' the existing ECs by diluting the already laid down conditions.*

(2.2.10) The PPs proposal for FGD waiver was not considered further in the light of the reasons recorded in para 2.2.9 above.

(2.2.11) *The EAC also noted the following:- (i) that the PP has violated/not-complied with the said EC condition as the Unit-8 is in operation without FGD and also no initiative, so far, has been taken for installation of FGD for Unit-8. (ii) as recorded in para 2.2.1 above, the validity of the EC was till June 16 for all the units to come into operation. The validity of the EC had thus already expired. The EAC recommended that the MoEFCC may take appropriate action on (i) and (ii).*

*(2.2.12) The Ministry was also requested to provide to the PP a copy of the representation received by the EAC vide e-mail dated 27.07.2016 for requisite action by the PP and the Ministry in line with the decision recorded under Agenda item 3.1 of the 59th EAC meeting held during 14-15 July, 2016. **" Unquote.***

(2.14.2) Competent Authority in the Ministry has approved for re-consideration for the amendment of the EC condition. Accordingly, proposal is placed before EAC.

(2.14.3) Project Proponent (PP) along with Consultant - Pollution and Ecology Control Services (PECS), Nagpur inter-alia submitted the following:

i. Unit-8 (600MW) & Unit-9 (600MW) commissioned on 16.12.2015 and 22.11.2016, respectively. Unit-10 (600 MW) is scheduled to commission on 30.12.2016.
ii. Nagpur (Koradi) is located in dry arid region of India where dispersion of emissions takes place and the ground level concentration is very less.
iii. Validity of EC dated 04.01.2010 was extended till 30.06.2016 vide Ministry's letter dated 27.03.2015. Further as per the MoEF New Notification, EC validity is given up to 7 years.
iv. AAQ monitoring has been done from March-November, 2016 which indicate hat the baseline concentrations of SO_2 is low to the tune of 22 $\mu g/m^3$ where as the standard is 80 $\mu g/m^3$.

(2.14.4) Committee noted that as per amendments of EIA Notification dated 29.04.2015 and 14.09.2016, EC validity is for seven years for commencement of operations or completion of construction activities i.e. till 03.01.2017. Though baseline AAQ for SO_2 shows less values, stack emissions to be monitored to understand the emissions from the power plant. Committee also noted that revised emission norms as per E(P) Amendment rules dated 07.12.2015 are to be complied. Committee suggested that the non-compliances may be dealt by Ministry and appropriate action may be initiated.

(2.14.5) *After detailed deliberations and considering all the aspects of the environmental concers, Committee **recommended for the amendment** of the following conditions.*

i. Specific condition 4(i): Revised Emission standards as per E(P) amendment Rules dated 07.12.2015 for PM, SO_2, NO_2 and Hg shall be complied with and the same shall be achieved within two years from the date of publication of the notification dated 07.12.2015 for all Units-8, 9 & 10 (3x660 MW). An undertaking/written commitment in this respect shall be submitted that FGD shall be installed in all the units before 07.12.2017.
ii. Change in coal source from Machhakata Coal Mines to Gare Palma Coal mines is permitted.

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2.15 250 MW Coal based Thermal Power Project at Parli- Vaijanathi, Dist. Beed, Maharashtra by M/s Maharashtra State Power Generation Co. Ltd- reg. amendment in EC.

(2.15.1) The proposal was appraised by the EAC earlier in its 46th& 57th meetings held during 26-27.11.2015 & 16th-17th June, 2016, the minutes of which are as under:

Quote "(2.5.1)The Committee noted that EC for the above TPP was accorded by MoEF&CC on 09.09.2008 with a validity period of five years to start the production operations by the TPP. The PP has applied to MoEF&CC for extension of validity of EC only on 02.11.2015 i.e. after more than two years after the expiry of validity. The Committee also noted that the PP has revised the TPP capacity to 250 MW without the prior approval of MoEF&CC.

2. As the validity of the EC expired more than 2 years back, the proposal could not be considered**" Unquote.**

Quote "(2.5.2) The proposal was again referred to the EAC in this 57th meeting on 16.06.2016 as per the clarification provided by the Ministry vide O.M. dated 12.04.2016 on the subject matter. The EAC noted that as per the Ministry's amendment Notification dated 29.04.2015 regarding extension of validity of EC, the maximum validity of EC for the TPPs is only seven years. The EAC was appraised by the Member Secretary that there was an error in the said amendment Notification i.e. the maximum validity of EC for the TPPs is ten years (5 years initially, extendable by another 5 years, as stated in the EIA Notification, 2006) and not seven years. The same is being rectified by the Ministry.

*(2.5.3) The EAC recommended that the proposal may be referred to them, if required, after rectification of the said amendment Notification and the Ministry's communication to the PP intimating that the PP's case would be covered by the above referred to (under process) rectification.**" Unquote.***

(2.5.2) Project Proponent (PP) vide letter dated 20.10.2016 inter-alia submitted that due to various reasons, application for extension of EC has been delayed. The project implementation has also been delayed due to following reasons:

a. Severe water crisis (drought in Marathwada region) since last four years, has affected project erection and commissioning activities.
b. Non sequential and inadequate supply of BTG material by M/s BHEL.
c. Readiness of BoP by the EPC contractor.
d. Under RBI guidelines, Project Financing for the project have fallen under Non Performing Asset (NPA), had the COD of the unit not been declared on or before 30.10.2016. In addition, Maharashtra Pollution Control Board (MPCB) is not issuing Consent to Operate (CTO) for want of revalidation of EC.

(2.5.3) Ministry examined the matter and accordingly extended the validity of Environmental Clearance for revised capacity of 250MW till 30.04.2017.

(2.5.4) As the matter has been placed before EAC, Project Proponent (PP) made a presentation regarding revision of capacity and status of the project.

a. 4x250 MW TPS have already been in service from BHEL make and the performance of these units is satisfactory. To enhance flexibility and inter-

changeability of spare, it is planned to install the units of 250 MW instead of 300 MW.

b. COD of 250 MW (Unit-8) has been achieved on 29.11.2016 and the unit has been declared commercially operative.

(2.5.5) Committee noted that EC granted on 09.09.2008 and valid for 5 years i.e.till 09.09.2013. However PP approached for extension of validity of EC on 02.11.2015 which is more than 2 years after expiry of validity. In addition, full load test of the unit has been achieved on 30.03.216. PP continued project activities after expiry of EC validity and without getting validity extended. Committee suggested that the Ministry may take appropriate action against PP regarding these non-compliances/violations.

(2.5.6) Committee noted that changing the capacity from 300 MW to 250 MW will not increase any incremental pollution. Committee noted that MoC allocated the Gare Palma Sector-II cola block to PP. Meanwhile to bridge the gap between requirement of coal and the start of production from allotted mine, MoC granted the bridge linkage from Western Coal Fields (WCL) till Gare Palma Sector-II is ready for production. Committee also noted that delay in application has been condoned by the Competent Authority in the Ministry and accordingly EC extension/revalidation has been issued. Committee also noted that the Unit for which EC has been granted is ready for commercial operation. As validity of EC has been extended till 30.04.2017 by the Competent Authority of the Ministry, and the COD has already been achieved, there is no necessity to further extend the EC beyond 30.04.2017. *Accordingly, the proposal has been* ***recommended*** *ex-post facto for the validity of EC till 30.04.2017 and change in source of coal from Machhakata to Gare Palma Sector II coal block, with bridge linkage from WCL till Gare Palma Coal Block is in Operational.*

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Any other

2.16 2x660 MW Supercritical coal based Thermal Power Plant at Villages Ottapidaram & Sillanatham, Taluk Ottapidaram, District Thoothukkudi, Tamil Nadu by M/s KU Thermal Power Pvt. Ltd.

2.17 Expansion by addition of 1x800 MW (Stage-III), North Chennai TPP at Villages Ennore & Puzhudivakkam, Taluk Ponneri, District Thiruvallur, Tamil Nadu by M/s Tamil Nadu Generation & Distribution Corporation Ltd. (TANGEDCO)

2.18 Expansion of Ramagundam STPP by addition of 2x800 MW (Stage-IV, Telangana STPP, Phase-I) at Village & Mandal Ramagundam, District Karimnagar, Telangana by M/s. NTPC Ltd.

(2.16.1, 2.17.1 & 2.18.1) Environmental Clearance for '2x600 MW Supercritical Imported Coal based Thermal Power Plant' at Villages Ottapidaram & Sillanatha, Taluk Ottapidaram, Dist. Thoothukkudi, Tamil Nadu has been issued to M/s KU Thermal Power Private Limited vide Ministry's letter dated 31.03.2016.

Specific Condition at para 6(A)(v) mentions that "High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm^3 or as would be notified by the Ministry, whichever is lesser. 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."

Environmental Clearance for 'Expansion by addition of 1x800 MW (Stage-III), North Chennai TPP along with foreshore facilities' at Villages Ennore & Puzhudivakkam, Taluk Ponneri, Dist. Thiruvalllur, Tamil Nadu has been issued to M/s Tamil Nadu Generation & Distribution Corporation Ltd. vide Ministry's letter dated 20.01.2016.

Specific Condition at para 7(A) (xxiv) mentions that "Wastewater generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB."

Environmental Clearance for 'Expansion of Ramagundam STPP by addition of 2x800 MW (Stage-IV, Telangana STPP, Phase-I)' at Vilalge & Mandal Ramagundam, Dist.Karimnagar, Telangana has been issued to M/s NTPC Ltd. vide Ministry's letter dated 20.01.2016.

Specific Condition at para 6(A) (xvii) mentions that "High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm3 or as would be notified by the Ministry, whichever is lesser. 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."

(2.16.2, 2.17.2 & 2.18.2) In the OA No.315/2016 in the matter of Sunil Dahiya Vs Union of India pending before Hon'ble NGT Delhi, applicant brings it to the notice of the Hon'ble Tribunal that the conditions specified above in the said ECs have been stipulated against notified standards Environment (Protection) Amendment Rules, 2015 vide S.O. 3305(E) dated 07.12.2015. These conditions mention that the Particulate Matter (PM) should not exceed 50 mg/Nm^3 as against the standard of 30 mg/Nm^3 as vide notification dated 07.12.2015. Also, another condition mentions that wastewater shall be discharged after treatment whereas the notification dated 07.12.2015 specifies for zero discharge.

It has been brought to the notice of Hon'ble Tribunal by the Ministry that the standards notified dated 07.12.2015 are binding upon all TPPs w.e.f the respective dates as mandated in the said notification irrespective of stipulation of a condition in the Environmental Clearance (EC) or even not having an EC itself i.e. old Thermal Power Plants (TPPs). Also, the EAC has accordingly been appraised and recommended these projects prior to the said notification dated 07.12.2015. Condition regarding particulate emissions clearly mentions that "..Particulate emission does not exceed 50 mg/Nm^3 or as would notified by the Ministry, whichever is lesser. ...". Condition regarding discharge of treated water, it may be noted as typographic error.

(2.16.3, 2.17.3 & 2.18.3)*After detailed deliberations and considering all the facts and figures presented by the Member Secretary, the Committee* ***recommended*** *to amend the respective conditions in the said ECs inline with the notified standards Environment (Protection) Amendment Rules, 2015 vide S.O 3305(E) dated 07.12.2015.*

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

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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/kism) 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) Corporate Environment Policy

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

Approval of Minutes of the 1st Meeting of the Re-constituted Expert Appraisal Committee (EAC) on Environmental Impact Assessment (EIA) of Thermal Power Projects by the Chairman.

Subject: **Final Minutes of First Thermal Meeting uploaded ?**
To: "Dr. S. Kerketta" <suna1466@rediffmail.com>,
"Dr S. Kerketta" <s.kerketta66@gov.in>,
"N. Subrahmanyam" <n.subrahmanyam@gov.in>,
"N. Subrahmanyam" <n.subrahmanyam@nic.in>

Date: 01/09/17 02:16 PM
From: navin chandra <navinchandrarrl@yahoo.com>
Reply-To: navin chandra <navinchandrarrl@yahoo.com>

09/01/2017

Dear Kerketa Ji,

The minutes were seen and discussed with you on 06/01/2017. Have you uploaded the minutes? The dates for next meeting finalised (19th and 20th January?). After receiving your confirmation I shall book my tickets.
Regards,
Sincerely,

(NAVIN CHANDRA)