

MINUTES OF THE 16TH MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS

The 16th Meeting of the re-constituted EAC (Thermal Power) was held on 19th April, 2018 in the Ministry of Environment, Forest & Climate Change at Brahmaputra Meeting Hall, Vayu Wing, First Floor, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi under the Chairmanship of Dr. Navin Chandra. The following members were present:

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| 1. | Dr. Navin Chandra | - | Chairman |
| 2. | Dr. N.P. Shukla | - | Member |
| 3. | Shri N. Mohan Karnat | - | Member |
| 4. | Dr. Sharachchandra Lele | - | Member |
| 5. | Dr. Jai Krishna Pandey | - | Member |
| 6. | Shri Gururaj P. Kundargi | - | Member |
| 7. | Dr. Manjari Srivastava | - | Member |
| 8. | Prof. S.K. Sinha | - | Member (Rep. of ISM/IIT, Dhanbad) |
| 9. | Dr. R.K. Giri | - | Member (Rep. of IMD) |
| 10. | Shri N.S. Mondal | - | Member (Rep. of CEA) |
| 11. | Dr. S.K. Paliwal | - | Member (Rep. of CPCB) |
| 12. | Dr. S. Kerketta | - | Member Secretary |

Shri S.D. Vora (Member) could not be present.

Item No.16.0: CONFIRMATION OF THE MINUTES OF THE 15th EAC MEETING.

The Minutes of the 15th EAC (Thermal Power) Meeting held on 28th February, 2018 were confirmed.

Item No. 16: CONSIDERATION OF PROJECTS

16.1 Proposed 23 MW Municipal Solid Waste based Power Plant at Adampur Chhavani, Phanda Block, Huzur Tehsil, Bhopal District by M/s Bhopal Municipal Solid Waste Private Limited. - reg. re-consideration of ToR. (File No: J-13012/16/2017-IA I(T) & Online no: IA/MP/THE/69646/2017)

16.1.1 The proposal was earlier considered by the EAC in its 11th meeting held on 26.10.2017 wherein the Committee sought additional information regarding water bodies present in the study area, preparation of comprehensive pre-feasibility report comprising of waste segregation, details regarding e-waste management, certification from DFO w.r.t non-involvement of forest land in the proposed area, map indicating project facility, water bodies, forest area to be shown on SoI toposheet, etc.

16.1.2 PP submitted the reply to the additional information vide their letter dated 11.1.2018. PP along with their EIA consultant M/s ABC Techno Labs made the presentation and inter-alia submitted the following information:

- i. Pre-feasibility Report containing waste management details along with the proposed power plant has been submitted.

- ii. Flow diagram for collection, transportation, segregation has been furnished. It has been mentioned that the following wastes segregated and sent for reusing.

Type of waste	Mode of disposal
Plastic waste, metals, e-waste	Recyclers
Paper waste, Wooden waste, Cotton waste, Leather waste, Organic waste	Incineration
Glass, clay and inert waste	Landfilling

- iii. Conservator of Forest & Divisional Forest Officer, Bhopal vide letter dated 10.4.2018 issued No Objection Certificate and also stated that there is no forest land involved in the proposed project area of 44 acres at Khasra no.195/1/14, village Aadampur Chhawani and the allotted land is revenue land.
 - iv. Baseline data collection has been started from October, 2017 onwards. Study period will be October – December, 2017 and March, 2018 onwards.
- 16.1.3 Committee noted that environmental sensitivity has not been adequately addressed in the revised report. Committee took note that there are forest areas, water bodies, temples and important archaeological sites which were not listed in the revised report. Further, committee noted that whether there are some alternatives studied by PP like composting, etc in addition to proposed power plant as the power plant incineration emits lot toxic gases including dioxins and furans. Committee further took note of requirement of Diesel Generator sets with capacity of 1500 kVA & 1250 kVA and felt that it is capacities are on higher side and may need less power during grid failure.

16.1.4 **After detailed deliberations, EAC recommended for grant of additional ToR** in addition to the standard ToR for the proposed 23 MW Municipal Solid Waste based Power Project under Schedule 1(d) of the EIA Notification, 2006:

- i. As proposed, 'mass incineration technology' has been finalised for the proposed power plant.
- ii. Proposed DG sets with capacity of 1,500 kVA and 1,250 kVA to be downsized as per the actual requirement of power in case of grid failure.
- iii. For integrated and inter-linked projects, Ministry's guidelines dated 24.12.2010 shall be followed.
- iv. Detailed environmental sensitivity shall be included in the EIA report.
- v. Feasibility of RDF Incineration vis-à-vis proposed mass incineration shall be explored.
- vi. Characterisation of leachate for the existing waste to energy power plant at Jabalpur to be done and the analogy is drawn for the proposed power plant for adequate treatment.
- vii. Impacts of surface runoff, leachate and/or ETP effluents from the plant into the reservoir downstream of the plant shall be assessed.
- viii. Details of Flue gas treatment and ash utilisation/disposal methods shall be included in the EIA report.

- ix. Alternate method of disposal such as composting, etc shall be assessed in the EIA report.

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16.2 22 MW Captive coal based Thermal power plant, Village Prakasha, Nandurbar district, Maharashtra by M/s Genus Paper and Boards Ltd.-reg. re-consideration of ToR.

(File No: J-13012/02/2018-IA.I (T) & Online no: IA/MH/THE/71692/2017)

16.2.2 The proposal was earlier considered by the EAC in its 14th meeting held on 12.1.2018. EAC deferred the project for want of following additional information:

- i. Alternate site analysis report shall be submitted by considering atleast three sites.
- ii. Pre-feasibility Report shall include detailed Kraft Paper Manufacturing Process and details of raw materials, impacts, etc.
- iii. The proposed site locations shall be beyond 500 m from the HFL of Tapi river.
- iv. Policy Division is required to be consulted after submission of details of Kraft Paper Manufacturing process so as to determine the requirement of EC for Kraft Paper Plant.

16.2.3 Project Proponent submitted the additional information vide letter dated 9.2.2018. PP along with environmental consultant M/s Enviro Techno Consult Private Limited made the presentation inter-alia submitted the following information:

- i. Alternate site analysis has been carried out. Total of four sites were analysed for locating the proposed project viz. Industrial area under MPAKVN, Indore in Madhya Pradesh, Alirajpur in Madhya Pradesh Dahej, PCPIR region in Gujarat and Nandurbar in Maharashtra. Three sites are not feasible due various reasons such as non-availability of water, no access roads, involvement of tribal land, hilly terrains.
- ii. Pre-feasibility report including details of kraft manufacturing process has been submitted.
- iii. Certificate from SDO stating that the boundary of the proposed project is at 700 m from HFL of Tapi river.
- iv. Further, kraft paper is manufactured by making pulp out of waste paper. Further, there is no bleaching and de-inking involved in the kraft manufacturing process. Process flow diagram along with details have been included in the revised Pre-feasibility Report.

16.2.4 Committee noted that 22 MW power project is captive power plant to the kraft paper plant. Member Secretary briefed the committee that that IA (Policy) Division has been consulted to determine the requirement of EC. Further, IA (Policy) has mentioned that whether the process involves de-inking and bleaching is not clear and PP may be requested submit the process flow sheet for further examination. Committee noted that as the IA (Policy) is yet to decide the requirement of EC for kraft manufacturing plant, PP may be suggested to follow the procedure described in the Ministry's Office Memorandum dated 24.12.2010 regarding Integrated and Inter-linked projects.

16.2.5 **After detailed deliberations, EAC recommended for grant of following ToRs** in addition to the standard ToR for the proposed 22 MW Captive coal based Thermal power plant under Schedule 1(d) of the EIA Notification, 2006:

- i. Public Consultation/hearing shall be conducted in Nandurbar District. However, villages falling in Gujarat state within 10 km radius shall also be involved in the public hearing process.
- ii. For integrated and inter-linked projects, Ministry's guidelines issued vide dated 24.12.2010 shall be followed.
- iii. Environmental impacts due to transportation of coal, wastepaper and flyash shall be assessed.
- iv. Data on distribution of water for other uses including industrial, agriculture and in-stream uses, in upstream and downstream locations and including both existing and commitments made for imminent projects, and the water availability for the proposed Thermal Power Plant & Paper Manufacturing Plant be authenticated and submitted. The effect on downstream due to water withdrawal especially during lean season shall be studied further.

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**16.3 2x660 MW (Stage-III, Expansion) Talcher Thermal Power Project, Tehsil Talcher Sadar, Angul District, Odisha by M/s NTPC Ltd-reg. EC.
(F.No: J-13012/31/2009-IA.II (T) & Proposal No: IA/OR/THE/66791/2014)**

16.3.1 Project Proponent submitted online application on 16.2.2018 for grant of Environmental Clearance. PP along with environmental consultant M/s EQMS India Pvt. Ltd. made the presentation inter-alia provided the following information:

- i. ToR for establishing 2x660 MW Talcher Thermal Power Project (Expansion) has been issued on 22.10.2014 which was valid for two years, i.e. till 21.10.2016. Further, ToR has been extended for one more year, i.e. till 21.10.2017 on 13.1.2017. ToR has been further extended for one more year, i.e. till 21.10.2018 on 15.9.2017.
- ii. Proposed Power Plant is located within the premises of Talcher Thermal Power Station (TTPS) is situated near Talcher town in Angul district of Odisha having existing capacity of 460 MW [Stage-I (4x60 MW) + Stage-II (2x110 MW)]. The project was implemented by erstwhile Orissa State Electricity Board (OSEB) and was subsequently taken over by NTPC on 03.06.1995 and is under commercial operation.
- iii. NTPC is proposing to enhance the capacity of Talcher Thermal Power Station (TTPS) by adding 2 nos. units of 660 MW each, as Talcher Thermal Power Project (TTPP) Stage-III (2x660 MW).
- iv. No additional land is envisaged for acquisition for proposed expansion Stage-III (2x660 MW) of TTPS. The plant facilities for this expansion stage would be accommodated within the land available in the existing power station and township of Talcher TPS, Stage-I & II. Total land required for proposed expansion project is about 193 acres, including 2.337 acres of government forest land near upstream of Samal Barrage on Brahmani River, is proposed to be acquired from state government. Make-up Water Pipelines (about 30 km) are proposed to be laid along the Right Bank Canal of Samal Barrage up to TTPP. About 223 acres of land would be required for Right of Use (ROU) for about 30 meter wide corridor and about 30 Km long pipeline. Total land requirement for proposed project is 446 acres.
- v. The application for diversion of 2.337 acres of forest land, submitted to DFO (Angul) on 08.05.15 and same is under approval process.

- vi. There are no defence installations, National Parks, Wildlife Sanctuary, Elephant/Tiger Reserve, Elephant corridor etc. within 10 km radius. However, one (Ananta Sayi Vishnu at Saranga) monument of archaeological importance and some Reserve/Protected Forests are located within 10 km of the proposed project site.
- vii. The total land available with existing project (Stage-I & II) is about 997 acres including ash ponds. Out of this 997 acres of land, Talcher TPS plant area including township (existing Stage-I, II and proposed stage-III) is approx. 427 acres. About 190 acres is available within this 427 acres land of existing project. The topography of project site is plain. No forest land is involved for plant and township.
- viii. Ultra-super critical technology envisaged to be used in proposed Talcher TPP has steam parameters higher than supercritical/ sub-critical technology. In preliminary design consideration main steam pressure will be 270 kg/cm² (a) at HPT inlet, main steam temperature at HPT inlet will be 600°C and hot reheat steam temperature at IPT inlet will be 600°C.
- ix. Adoption of Ultra-super critical technology with above USC steam parameters will increase the plant efficiency by approximately 3.12 % point, while the carbon emission would reduce by approximately 7.5% per kwhr.
- x. Coal requirement for Talcher TPP Stage-III (2 x 660 MW) is estimated to be about 6.9 MTPA considering 85% PLF. NTPC vide letter dated 24.10.2017 requested to Ministry of Power to recommend the Ministry of Coal, for allocation of long-term Coal Linkage for proposed Talcher Stage-III (2x660 MW) under the new coal allocation Policy for Power Sector – Shakti 2017 (Scheme for Harnessing and Allocating Koyala [Coal] Transparently in India). However, a firm coal linkage is yet to be allotted by NTPC. It is expected that coal mine of Mahanadi Coalfields will be allotted for the proposed project.
- xi. Expected Coal quality is Total moisture 11 – 17%, Ash content is 34% (maximum), GCV is 2900-4100 kcal/kg, Sulphur: 0.5-0.55%. The envisaged mode of coal transportation from the coal mines to the power plant is by Rail in BOBR wagons. The rakes shall be unloaded at the track hopper terminal. Coal will be transported by Rail.
- xii. The expansion of Talcher Thermal Power Project with addition of Stage-III (2x660 MW) involves demolition of old quarters and common facilities in existing township/infrastructures. The existing township/ infrastructures (about 190 acres) will be demolished in phased manner. No additional raw water reservoir is proposed for expansion project (Stage-III). However, existing raw water reservoir of Talcher TPS would be relocated and utilized for Stage-III also.
- xiii. The makeup water required at inlet of various locations involving the process of the power generation, cooling, ventilation, service water, and Ash handling, ash slurry system etc is 3800 m³/hr. Water Balance Diagram of about 5 Cycle of Concentration (COC) is envisaged for the proposed project.
- xiv. Water Resource Department, Govt. of Odisha, vide letter dated 13.02.2014 allocated 52.8 cusecs water from River Brahmani for expansion project of TTPS. As per suggestion of Industrial Promotion and Investment Corporation of Odisha Limited (IPICOL), Bhubaneswar, vide letter dated

19.03.2015, revised requirement of water (39 cusecs) has been requested by NTPC to Water Resource Department (WRD), Govt. of Odisha vide letter dated 05.05.2015 and 08.07.2016. Further IPICOL vide letter 11.08.2016, recommended the 39 cusecs of water may be taken by NTPC after 12.02.2019. Accordingly, WRD, Government of Odisha requested NTPC to submit fresh proposal for phase wise allocation of Water as per recommendation of IPICOL.

- xv. A railway siding already exists within project site which will be extended with use of proposed railway land. Construction of marshalling yard on railway land (about 30 acres) is envisaged, and its availability on lease from railways will be explored.
- xvi. The ash pipeline is envisaged to be laid along the existing ash pipeline towards MCL mine voids. The ash pipe line from bifurcate point (from existing route) to Jagannath Mine voids will be laid on MCL land after consultation with MCL.
- xvii. Baseline data was collected during 1st March 2015 to 31st May 2015 (Pre-monsoon Season) within a study area of 10 km radial distance around the proposed Talcher Thermal Power Project Stage-III (2x660 MW). Ambient Air Quality monitoring commenced from 03rd March, 2015 and was extended up to 06th June, 2015 to collect adequate number of samples. The predominant wind direction at site is from WNW and West direction. Ambient air quality has been collected from seven locations. Air quality (98 percentile values) is in the range of PM₁₀: 70-112 µg/m³, PM_{2.5}: 29-48 µg/m³, SO_x: 18.6-27.4 µg/m³, NO_x: 22.1-31.1 µg/m³, Hg: <0.001 µg/m³ & O₃: 27.6-39.6 µg/m³.
- xviii. The noise levels observed are in the range of during day time 46.5 – 63.7 dB(A) and for night time 36.6 – 53.2 dB(A) for the various zones. The ambient noise levels of the study area are well within the National Ambient Standards for Noise w.r.t residential area, commercial area, silence zone and industrial area categories.
- xix. Surface water quality of Samal Barrage, Brahmini River at different location is found to meet the BDU Criteria class “C” of CPCB except BOD concentration in few of the samples. No metallic contamination was found in surface water samples.
- xx. The pH value of water samples in all the location (ranging from 7.25-7.92) did not show any significant variations and all the values were within permissible limit. The EC values were found to be in the range of 345 - 1220 µmhos/cm. The electric conductivity values of Chalarharh Village are high with respect to other locations. The chloride values in ground water sample found in the range of 26 – 212 mg/l. The chloride concentration for all ground water samples was within desirable as well as permissible limit of IS. The total hardness value in ground water sample found in the range of 120 – 385 mg/l and found within permissible range. Calcium and Magnesium concentration for all ground water samples were within permissible range. The concentration of Nitrates as NO₃ found to be in the range of 0.26 – 4.1 mg/l. The concentration of Nitrates was reported to be within the desirable as well as permissible limit of IS. Zinc is within the desirable limit at all locations, while Fe was observed more than permissible limit only at Chalarharh. The concentration of Cu was observed within the desirable limit. Other metals in ground water were below

detection limit. All the parameters (except Fe at one location) in ground water sample of study area are well within the permissible limit of Indian Standard IS: 10500.

- xxi. Soils of the study area are moderately fertile in the study area with medium level of available nutrients. Soils are observed generally slightly to moderately alkaline in nature. Most of the study area soils are with medium to high level of organic carbon contents as well as organic matter. Soils are low to medium in available nitrogen content. Medium phosphorous levels were also observed in the soils of study area. Low to medium potassium levels are observed in the soil of the area.
- xxii. No threatened species of flora and fauna are found in the study area. There are 142 urban and rural settlements situated in the study area 10 km radius from the proposed plant. As per 2011 census, 2,08,929 persons were inhabited in these 142 settlements out of which 63,680 are from SC/ST. Literacy levels in the study area at 74.15% as per 2011 census data.

xxiii. Incremental ground level concentrations are as below:

Parameter	Baseline ($\mu\text{g}/\text{m}^3$)	GLC for 150m stack ($\mu\text{g}/\text{m}^3$)	GLC for 275 m stack ($\mu\text{g}/\text{m}^3$)	Distance (m)
PM	89	2.31	1.75	1600
SO ₂	27.4	7.70	5.87	1800
NO _x	31.1	7.70	5.87	1800

xxiv. Considering the cumulative impact of two power plants within 10 km radius (1x350 MW GMR Kamalnaga, 2x660 MW Nagapatnam Power), the incremental concentrations are as below:

Parameter	Baseline ($\mu\text{g}/\text{m}^3$)	GLC ($\mu\text{g}/\text{m}^3$)	Distance (m)
PM	89.00	2.74	1600
SO ₂	27.40	9.10	1300
NO _x	31.10	9.10	1300

- xxv. No ground water source will be tapped for meeting the water requirements during operation phase of power plant. The entire water requirement of the project will be drawn from Samal Barrage on Brahmani River.
- xxvi. As the project is designed with Zero Liquid Discharge (ZLD), the wastewater from the project during normal operations will not be discharged outside into any water body. Approx. 750 m³/hr of wastewater will be generated from various process of the power plant viz. CT Blow down, Clarifier Sludge, Tube settler sludge, Filter Backwash, Boiler Blowdown, DM Neutralization Pit and Domestic Sewage.
- xxvii. It is proposed to use closed cycle cooling system with cooling towers would be adopted for condenser and auxiliary cooling. The system has been optimized to operate at about 5 Cycles of Concentration (COC) for conservation of water.
- xxviii. Approximately 80% (1.84 MTPA) of it will be flyash and balance 20% (0.46 MTPA) will be in the form of bottom ash. Ash generated from the power plant will be utilized as per MOEF&CC notifications (03.11.2009 &

amendment dated 25.01.2016). The Ash generated from Talcher TPS Stage-I & II (existing units 460MW) is already being disposed in Balanda mine voids 2 & 3. NTPC Talcher is also issuing dry flyash to flyash brick manufacturing units and asbestos cement units. The ash generated from the proposed Talcher Stage-III is proposed to be disposed in the Mine Voids of Jagannath Mines (abandoned mine voids of MCL). Jagannath mine is located about 14 km away from the plant. The permission for disposal of ash in mine voids of Jagannath mines will be obtained from MoEF&CC separately. Gypsum produced by the FGD system is envisaged to be removed by conveyers to a storage shed for further use by cement industries or disposal in an environmentally friendly manner.

- xxix. It is proposed to install adequately designed, high efficiency electrostatic precipitator having an efficiency that limits the outlet emission to 30 mg/Nm³. NO_x emission values from the steam generator shall be limited to the applicable values by employing low NO_x burners (LNB), combustion staging and reducing NO_x in the tail flue gas using either SNCR (selective non-catalytic reduction) or SCR (selective catalytic reduction) technology as applicable. Wet lime stone based flue gas desulphurization (FGD) system shall be installed at the tail end of the steam generator downstream of the ESP to capture SO₂. To facilitate wider dispersal of pollutants and gaseous pollutions, a 150 m/275 m high twin-flue reinforced concrete chimney is envisaged after ESP. The chimney shall be provided with personal access doors and sampling ports for continuous online monitoring. Talcher TPS Stage-III has provision of dust suppression system in the Coal Handling Plant (CHP) area to minimize suspended particulate matter in the working area. The dust suppression consists of water spraying which shall be provided along the conveyor belts.
- xxx. Talcher area has cluster of steel, aluminium, thermal power, chemical and mining industry etc. The area has been declared as critically polluted area by CPCB. A moratorium on Environmental Clearance for the project located in areas of Angul, Talcher (Odisha) was imposed by MOEF&CC vide OM dated 13.01.2010 and lifted vide OM dated 31.03.2011.
- xxxi. SPCB Odisha site inspection report dated 25.1.2018 has been submitted. Further, consent to operate has been issued by SPCB, Odisha vide letter dated 15.2.2016 which is valid up to 31.3.2018.
- xxxii. Public Hearing was conducted by Odisha SPCB on 12.07.2017 at D.A.V. School, Talcher TPS, Talcher, Odisha with presence of about 1300 people. Public Hearing was chaired by Sh. Sh. Srinibas Behera, ADM Angul and other member of panel was Sh. Binod Bihari Dash, Regional officer, OSPCB, Angul. NTPC official made presentation about proposed Talcher TPP Stage-III (2x660 MW) and EIA study before public. The main issues raised by public are employment, free education, free health facilities at Talcher TPS hospital, free electricity, infrastructure development, drinking water, CSR and pollution due to fly ash and other emissions etc. Local people protested initially for these issues but later on supported the said project for development of area.
- xxxiii. Total estimated project cost is Rs. 7,732.35 Crores. A cost provision Rs.2016.5 crores towards providing environmental measures Environmental Management Plan which includes Rs. 5 crores towards afforestation, greenbelt & landscaping has been made in project cost.

Greenbelt of 8.09 Ha is proposed to be developed. In addition, 12.14 Ha around Talcher TPS in nearby villages will be developed with greenbelt if land is provided by the Government. Employment during construction phase is 1500. No litigations/court cases are pending.

16.3.2 Committee noted that the specific coal mine from which coal will be transported is not known. Longterm coal linkage is yet to be allotted by Ministry of Coal. PP is anticipating that the coal will be sourced from nearby MCL mines. PP submitted that the ash content in the coal used for proposed power plant will not exceed 34%. The ash content of the MCL mines is more than 34%. Either MCL mines shall supply beneficiated coal or Project Proponent shall set up a washery at power plant to meet bring down the ash content below 34%. Further, PP has done the air quality modelling for both stack heights viz. 150 & 275 m. PP further has carried out cumulative impact by considering two power plants within 10 km radius. However, PP has not considered the cumulative impact or combined release of plume from all the stacks of existing power plant (460 MW) as well as proposed power plant. As the proposed power plant is located near Talcher, which is a critically polluted area, the baseline values which are shown in the EIA report are low compared to the baseline status in the Talcher CPA. CPCB member has verified the online data which show that PM10 is 240.3 $\mu\text{g}/\text{m}^3$ and PM2.5 is 79.8 $\mu\text{g}/\text{m}^3$. Further, PP has submitted site inspection report of SPCB Regional Office. However, the site inspection report does not cover detailed point-wise compliance status of the conditions stipulated in the Consent to Operate. Further, SPCB report mentions that PP is in the process of setting up Effluent Treatment Plant. PP is presently discharging ash in lean slurry form into South Balanda mines through 12 km pipeline. It is also reported that PP is constructing two ash ponds with an area of 133.848 acres and 156.538 acres at Jhadiamba and Santhapada. As per analysis report by SPCB shows that at TTPS colony, PM10 is 123 $\mu\text{g}/\text{m}^3$. PM emissions from all the stacks and ETP discharge are within the prescribed standard. Further, PP has mentioned that the existing power plant will be decommissioned at later stage and only the proposed power plant will be under operation. However, PP has not submitted any details in the EIA report regarding decommissioning of existing power plant which is under operation. Further, Committee felt that cost of green belt development Rs.5 crores is very minimum and to be revised. CPCB member mentioned that the existing power plant was given directions under Section 5. Committee also noted that Water Resource Department requested NTPC to submit a fresh proposal for reducing the quantity from 52.8 cusecs to 39 cusec from River Brahmani.

16.3.3 **After deliberations, Committee deferred the project** for want of following additional information:

- i. One month summer season baseline data is to be collected for verification of baseline status of the project. Baseline data is to be collected at 4 monitoring locations (two locations from sampling locations mentioned in the EIA report & two locations from Continuous Air Quality Monitoring Station and all four locations should be in the downwind direction). The results shall be compared with data from the 4 OSPCB Air Quality Monitoring Stations in Talcher.
- ii. Certified point-wise compliance report for Consent to Operate for the existing power plant by RO, OSPCB, as the site visit report submitted by the RO, OSPCB is incomplete.

- iii. Details of firm coal linkage.
- iv. Action plan for meeting ash content in coal up to 34%. Action plan for setting up of a coal washery, if any.
- v. Details of capital budget for CSR activities and implementing Public Hearing commitments.
- vi. Action plan for achieving new thermal emission standards vide dated 7.12.2015 for power plants under operation.
- vii. Implementation of decision taken by the Ministry of Power vide letter No. 19/3/2018-OM (E)-Part (1) dated 01.03.2018 regarding transportation of coal through closed Pipe conveyor for Power plants within 20 KM of coal source and shall use MGR system for TPS within 20 to 40 KM from coal source.
- viii. Cumulative prediction of air quality for the worst case scenario considering all the stacks which are under operation for both the stack heights 150 m/ 275 m.
- ix. Status of forest clearance for 2.337 acres.
- x. Decommissioning plan for existing power plant, if any.
- xi. Details and copy of directions issued by CPCB/SPCB, if any.
- xii. Water requirement of the existing and proposed power plants vis-à-vis availability of water in the Brahmani river considering the potential users in the upstream and downstream.

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**16.4 Expansion by addition of 2x660 MW Stage-II based on Super Critical Technology Tanda Super Thermal Power Project, Village Bahadurpur, Tehsil Tanda, District Ambedkar Nagar, Uttar Pradesh by M/s NTPC Ltd-reg. extension of validity of EC.
(F.No: J-13011/96/2007-IA. II(T) & Proposal No: IA/UP/THE/12047/2011)**

16.4.1 PP submitted online application on 6.3.2018 for extension of validity of EC for further period of three years. PP made the presentation and inter alia submitted the following information:

- i. Environmental Clearance for 2x660 MW Super-critical based Thermal Power Plant has been issued on 13.4.2011 which was valid for five years, i.e. till 12.4.2016. As per S.O.1141(E) dated 29.4.2015, the validity of EC is for seven years. As the said EC is valid on the date of publication of the EIA amendment notification dated 29.4.2015, the validity of the EC automatically gets extended to seven years, i.e. 12.4.2018.
- ii. Present status of Unit-5: Mechanical and Electrical equipment erection work is progressing at all front of main plan including offsite areas like CHP, WPT, firefighting, station piping, etc. Boiler hydro test is anticipated in April, 2018 and Commissioning is anticipated in September, 2018.
- iii. Present status of Unit-6: Civil and structural work is in progress in main plant area. Boiler hydro test is anticipated in September, 2018 and Commissioning is anticipated in May, 2019.
- iv. Delay caused due delay in award, delay in land acquisition and ban on sand mining.
- v. Three years extension is requested till 12.4.2021.

16.4.2 Committee noted that PP has submitted Cover letter and form-1 and PP has not submitted the detailed progress of the construction activities and milestones to

be achieved. However, during the presentation, it was submitted that both the units will be commissioned by September, 2018 and May, 2019 respectively. Committee noted that it takes maximum of six months to commission after first unit is commissioned. In the present case, the gap between two units is almost 9 months. Further, committee noted that the status of installation of pollution control equipment to meet the new emission standards vide Ministry's notification dated 7.12.2015. Committee further noted that the project cost of Rs.6250.43 crores as per EC dated 13.4.2011 has now been revised to Rs.7800 crores as informed by PP during the presentation.

16.4.3 After detailed deliberations, **EAC recommended for extension of validity of EC** dated 13.4.2011 for further period of two years, i.e. till 12.4.2020 subject to following additional conditions:

- i. Revised emission standards as per the Ministry's notification dated 07.12.2015 and subsequent amendments notified from time to time shall be complied. In case, plant is ready for commissioning and not meeting revised emission norms, operations shall be stopped unless otherwise an extension is given to the said power plant through a specific direction or an amendment to the Notification.
- ii. As per the specific condition No. xxviii of EC, Capital budget of Rs.25 Crores for CSR activities shall be revised in commensurate with the revised project cost Rs.7,800 Crores.

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16.5 3x660 Expansion of Coal Based power unit at Koradi TPP in Nagpur District, Maharashtra by Maharashtra State Power Generation Company Limited. - reg. re-consideration of Amendment in Environment Clearance. (File No: J-13012/87/2007-IA.II (T)& Online no: IA/MH/THE/24219/2010)

and

16.6 1x500 MW Coal based expansion project at Khaperkheda Thermal Power Station at Khaperkheda, Nagpur, Maharashtra by M/s Maharashtra State Power Generation Company Limited. -reg. re-consideration of Amendment in Environment Clearance. (File No: J-13011/24/2005-IA.II(T) & Online no: IA/MH/THE/10223/2005)

(16.5.1) & (16.6.1) The proposal for amendment in EC for change in transportation of coal from road to pipe conveyor was earlier considered by the EAC in its meeting held on 26.10.2017 and committee deferred the project as for want of following additional information:

- i. Detailed project report including coal source and quantity
- ii. Environmental Impact Assessment report which includes land acquisition, R&R and environmental sensitivity.
- iii. Layout map on Survey of India toposheet showing proposed routes, location of mines and power plants. Shape file (.kml) showing proposed project features.

(16.5.2) & (16.6.2) PP submitted the additional information on 19.2.2018. PP along with Environmental Consultant M/s Pollution and Ecology Control Services made the presentation inter-alia submitted the following information:

- i. Environmental Clearance for the 3x660 MW Koradi TPP and 1x500 MW Khaperkheda Power Plant has been issued vide Ministry's letters dated 4.12.2010 and 2.6.2010 respectively.
- ii. Coal requirement for 3x660 MW Koradi Power Plant and 1x500 MW Khaperkheda Power Plant is 10.11 MTPA (30,638 TPD) and 2.5 MTPA respectively. Presently, the coal is being transported by road.
- iii. It is proposed to transport the Coal from WCL's open cast mines to its Koradi & Khaperkheda Thermal Power Stations near Nagpur. Coal from WCL's Gondegaon, Kamptee & Inder mines will be taken from a single point feeding at Gondegaon to be provided by WCL. It was decided that combined coal from Gondegaon will be delivered at an intermediate junction point at Bhanegaon where coal from other two mines i.e. Singhori & Bhanegaon mines will also be fed. From this junction point, coal will be feed into Khaperkheda for consumption at Khaperkheda plant. One diversion line is envisaged from Khaperkheda to Koradi plant replacing the existing ropeway route.
- iv. The capacity of the conveyor is 1200 TPH for all conveyors except 1000 BC-01 & 1000 BC-02 which will have capacity of 250 TPH.

Conveyors	Receipt of coal from mines	Total evacuation capacity	Capacity of conveyor
1001CCPC-1	Gondogaon	5.5 MTPA	1076 TPH*
	Kampte		
	Inder		
1003CCPC-1	Singhori	1.85 MTPA	316 TPH*
	Bhanegaon		

*Considering Coal conveying system will work in 2 shifts with effective conveying time as 14 hours.

- v. The breakup of the pipe conveyor length is as follows:

Sector	Distance
From Gondegaon mines to Bhanegaon IP	5.36 km
Bhanegaon IP to Khaparkheda TPP	2.84 km
Khaperkheda TPP to Koradi TPP	7.9 km
Total length of conveyor	16.1 km

- vi. Foundation for Pipe Conveyor supporting Trestles (Concrete Trestles approximately 5.5 m to 6.0 m from existing ground level @ 22.0 m have been considered and after every 110 m four legged concrete trestles are considered to transfer the longitudinal force to ground) and other trestles for inplant conveyor.
- vii. The conveyor lift is 20 m and the pipe conveyor having diameter 45 cm will be placed on trestle. As part of conveyor system total 20 concrete pillars (8 in PENCH, 8 in Kanhan and 4 in Kolar) will be constructed inside the river bed. Distance between two pillars is 36 m. The depth of the pillar

foundation is 6-8 m inside the river bed. The river depth varies between 2.5-3.0 m.

- viii. Total 2.79 Ha of private land will be purchased on mutual agreed terms. The proposed pipe conveyor will cross 3 rivers (Pench, Kanhan and Kolar) and 17 nallahs, 16 main roads, 13 HT lines and 20 HT lines. Proposed ESZ of Pench National Park and Mansingdev Wildlife Sanctuary is at 17.33 km. No forest land is involved in the proposed route.
- ix. The total pipe conveyor length is 16.1 Km from Bhanegaon to Koradi TPP. The cost of the project is Rs.516 Crores. Expected employment for the proposed activity is 30 people.
- x. Benefits of the project are lesser cost of transport per km/ton of coal, environmentally friendly, more reliable and does not depend on extreme weather events, decongestion of road and less pilferage.

(16.5.3) & (16.6.3) **After detailed deliberations, Committee recommended for transportation of coal by closed pipe conveyor for a length of 16.1 km from Gondegaon and Bhanegaon mines to Koradi Thermal Power Plant via Khaparkheda Thermal Power Plant** subject to the following additional conditions:

- i. Construction of pillars in the water bodies (Rivers and Nallahs) shall be carried out in the dry season only.
- ii. Dust suppression system such as mist/dry fog jet sprinklers to be setup at the transfer points to arrest the fugitive dust emissions.
- iii. For every tree cut along the proposed route in the non-forest area, guidelines of Forest (Conservation) Act, 1980 shall be followed in consultation with the local State Forest Department.
- iv. Noise level shall be in accordance with the Noise Pollution Rules.

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16.7 2x500 MW Chandrapur Super Thermal Power Project Expansion Project at Chandrapur, District Chandrapur, Maharashtra by M/s Maharashtra State Power Generation Company Limited. -reg. re-consideration of Amendment in Environment Clearance.

(File No: J-13011/53/2008-II(T) & Online no: IA/MH/THE/10241/2008)

(16.7.1) The proposal for amendment in EC for change in transportation of coal from road to pipe conveyor was earlier considered by the EAC in its meeting held on 26.10.2017 and committee deferred the project as for want of following additional information:

- i. Detailed project report including coal source and quantity
- ii. Environmental Impact Assessment report which includes land acquisition, R&R and environmental sensitivity.
- iii. Layout map on Survey of India toposheet showing proposed routes, location of mines and power plants. Shape file (.kml) showing proposed project features.

(16.7.2) PP submitted the additional information on 19.2.2018. PP along with Environmental Consultant M/s Pollution and Ecology Control Services made the presentation inter-alia submitted the following information:

- i. Environmental Clearance for 2x500 MW Chandrapur TPP has been issued vide Ministry's letter dated 30.1.2009.

- ii. Coal requirement for 2x500 MW Chandrapur TPP is 5.0 MTPA. Presently, the coal is being transported by road.
- iii. In existing Chandrapur Thermal Power plant coal is being transported by rail wagon from SECL and Trucks from Bhatadi, Padmapur & other mines of WCL. The existing route of coal transportation is passing through Bhatadi, Kitalli, Mingaon, Padmapur, Durgapur, Chak Tirwanja, Chota nagpur, Vichora BK and Ambhora villages.
- iv. It is proposed to lay closed pipe conveyor with a length of 6.431 km from Bhatadi mines to Padmapur railway siding via Padampur mines. Further, it will be transported by rail from Padampur mines to the Chandrapur TPP.
- v. The conveying system from Bhatadi shall bring the coal to Padmapur rail loading area, and with the installation of another in motion train load station it can work independently of Padmapur coal supply system. This will avoid mixing of coal supplied from the two mines avoiding logistics and commercial issues.
- vi. The capacity of the conveyor is 500 TPH and will work in 2 shifts with effective conveying time as 14 hours. Nearest boundary of proposed eco-sensitive zone of Tadoba-Andhari Tiger Reserve is at 3.33 km from the proposed coal conveyor system and 13.27 km from the Tadoba Andhari Tiger Reserve. The conveyor will pass through 1 river (Erai river), 1 road, 2 nallahs, 2 HT lines and 14 LT lines.
- vii. As part of construction of pipe conveyor system, 4 pillars are proposed to be constructed inside the river bed of Erai river. Two pillars will be constructed at the edge of the Erai river. Construction work in river bed will be completed in 45 days and it will be carried out in summer season when there is no water.
- viii. Cost of the project is Rs. 123 Crores. Additional employment will be 30 persons.

(16.7.3) After detailed deliberations, Committee recommended for transportation of coal by closed pipe conveyor for a length of 6.431 km from Bhatadi mines and Padmapur coal mines to Padmapur Railway siding subject to following additional conditions:

- i. Construction of pillars in the water bodies (Rivers and Nallahs) shall be done in the dry season only.
- ii. Dust suppression system such as mist/dry fog jet sprinklers to be setup at the transfer points to arrest the fugitive dust emissions.
- iii. For every tree cut along the proposed route in the non-forest area, guidelines of Forest (Conservation) Act, 1980 shall be followed in consultation with the local State Forest Department.
- iv. Noise level shall be in accordance with the Noise Pollution Rules.

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**16.8 1x800 MW Pit Head Ultra Super Critical TPP at Umred Coal Mine area village Heoti, Tehsil Umrer, District Nagpur, Maharashtra by M/s Maharashtra State Power Generation Company Limited. -reg. ToR.
(F.No: J-13012/07/2018 & Proposal No: IA/MH/THE/73481/2018)**

(16.8.1) PP has submitted online application on 13.3.2018 for grant of ToR. PP along with environmental consultant M/s Pollution and Ecology Control Services made the presentation inter-alia submitted the following information:

- i. Mahagenco is planning to replace the older capacity plants with higher efficient and higher capacity plants. The total capacity planned to be replaced is around 1880 MW.
- ii. The proposed 1x800 MW Umred Ultra Super critical technology based Thermal Power Plant will be considered as the replacement for the older units.
- iii. The proposed site is located in Umed coal mine of WCL, in village Heoti in Umrer Tahsil, Nagpur Dist, Maharashtra. The proposed site is mined area which was back filled over a period 30 years. There is no village/habitations located inside the proposed site area. The land terrain with variations of upto 30 meters is seen in the proposed area. The available area is approximately 475 acres and the exact availability of area and the contour shall be ascertained by topographic survey. The identified site will be taken on long lease from WCL and no land acquisition is required for the main power plant facilities including ash pond. The township will also be located adjacent to the existing WCL township area. However right of way needs to be established for conveying the treated waste water from NMC and river water from Goshikurd dam to proposed power plant.
- iv. The Major State Highway (MSH-9) is 5 km away on the eastern side of the proposed site. The existing railway station at Umrer is 6 km from the proposed site. The nearest airport is Nagpur which is located at 42 km away from the proposed site. Ecological Sensitive area of Karhandla Wildlife Sanctuary is 10.30 km. No forest land is involved in the proposed project area.
- v. Proposed boundary of Eco-sensitive zone of Karhandla Wildlife Sanctuary is 10.30 km.
- vi. Total land requirement is 499 acres and Water consumption is 2400 m³/hr (17.87 MCM/annum).
- vii. The proposed project is a pit head power project located in Umred coal mines. WCL have confirmed for supply of coal for the proposed project. Coal from the Umred coal mines of WCL will be the source for the proposed power plant. The grade of coal to be considered for the project is in the range of 3000 – 3400 Kcal/kg, typical coal analysis is given in Appendix 3. The annual coal requirement considering the GCV of 3400 Kcal/kg for 1 x 800 MW is 3.68 MTPA.
- viii. The available sources of water for the plant are viz Treated waste water from Nagpur Municipal Corporation (NMC) and River water from Goshikhurd dam. The treated waste water from NMC will have to be sourced from Nagpur which is located at a distance of around 45 km. The Goshikhurd dam is located at a distance of around 56 km from the proposed site.
- ix. Presently Nagpur municipality corporation (NMC) is supplying 130 MLD of treated waste water to MAHAGENCO STP at Bhadaewadi, which is used for CW cooling, ash handling coal washeries etc., for Power generation at Koradi Thermal power station. NMC is augmenting the existing 100 MLD STP at Bhandewadi to 200 MLD capacity, the augmentation work is likely to be completed by Dec 2018.

- x. Availability of 28 MCM per annum is confirmed by NMC through a consent letter. As an alternative, Mahagenco has taken a consent for about 28 million cubic meter from Chief Engineer Irrigation Goshikhurd project for use of river water for the proposed plant.
- xi. Treated water from Nagpur and Right of way of 45km / River water from Goshikhurd dam and Right of way of 56 km is considered for water intake.
- xii. Due to ultra-super critical technology, gain in efficiency will result in the environmental benefits, i.e. reduced specific coal consumption and hence lower amount of CO₂, NO_x, SO₂ and Mercury emission (Hg) per kWh of power generated using efficient supercritical plants.
- xiii. The unutilized fly ash will be transported to the ash pond as high concentrate slurry using high concentrate slurry pumps. All the bottom ash will be transported to ash pond in lean mode.
- xiv. Total ash generation considering (at ash content-45%) is 1.87 MTPA (1.5 MTPA flyash and 0.37 MTPA bottom ash). The fly ash will be collected from silos and sent to nearby small scale industries in road tankers. The flyash will be dispatched from silos to consumers through road tankers.
- xv. Estimated Project Cost is Rs.6019 Crores. Estimated employment is 1000 persons during construction phase and 900 persons during operation phase.

(16.8.2) Committee felt that the proposed project site is located on the abandoned mine/backfilled mine. Committee felt that the Umred mine has to be closed as per the mine closure plan and proposed project activity is to be incorporated in the mine closure plan. Further, the stability of the backfilled area for withstanding the proposed activity shall be ascertained. As informed, the unutilised ash will be disposed in the mine void as the mine is not completed backfilled and reclaimed. Project Proponent has not provided alternate sites.

(16.8.3) **Considering the sensitivity of the proposed location, EAC recommended for a site visit by the sub-committee** comprising of following members:

- i. Prof. Om Prakash
- ii. Shri G.P. Kundargi
- iii. Shri Mohan Karnat
- iv. Shri N. S. Mondal (Representative of CEA)
- v. Representative of RO, MoEF&CC.
- vi. Representative of MoEF&CC, New Delhi.

Accordingly, the project is deferred.

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16.9 5x270 MW Coal based TPP at Sinnar Industrial Area, Dist. Nasik, Maharashtra by M/s Rattan India Nasik Power Ltd.- reg. re-consideration in amendment of EC for temporary permission for transportation of coal by road.

(File No: J-13012/11/2008-IA II (T) & Online no:IA/MH/THE/10301/2010)

(16.9.1) The proposal for permission for road transportation by road has been earlier considered by the EAC in its meeting held on 28.11.2017 and deferred for want of the following information:

- i. Baseline monitoring for air quality and noise levels along the proposed routes to be carried along with incremental pollution load. Air quality and noise

- modelling shall be carried out to assess the incremental impacts due to increase of traffic in the proposed road for transportation coal.
- ii. Dust fall measurement to be carried out at habitated areas.
- iii. To reduce traffic burden, there shall be least loading on the routes proposed along Shirdi and Mumbai-Nagpur road.
- iv. Details of forest area falling enroute to the proposed routes, if any.

(16.9.2) PP submitted the additional information on 8.1.2018 and the proposal was placed before the EAC in its meeting held on 28.2.2018. However, the project was deferred as the PP did not attend the meeting. The proposal has been re-considered in the present meeting. PP along with their environmental consultant M/s Greenc India Consulting Private Limited made the presentation inter-alia submitted the following information:

- i. The ambient air quality monitoring along the proposed routes has been conducted and the results are as follows:

Sr.No.	Location	98 th percentile				
		PM10 ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	SO2 ($\mu\text{g}/\text{m}^3$)	NOX ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)
AAQ1	DevpurPhata (Sinnar-Vavi)	63.3	25.1	14.4	21.1	0.7
AAQ2	Dhamangaon (Ghoti Budruk- Sinnar)	62.5	26.3	15.6	24.3	0.8
AAQ3	Take (Igatpuri- Ghotibudruk)	61.8	26.0	13.6	22.6	0.9
AAQ4	MIDC Sinnar(Nasik Sinnar)	64.5	28.4	15.2	24.6	0.9
AAQ5	Chandori (Nasik- Niphad)	59.9	25.3	13.3	22.0	0.8
AAQ6	Talegaon (Talegaon- Loni)	61.7	25.1	13.9	23.1	0.9
AAQ7	Guha (Shirdi- Rahuri)	56.6	23.5	12.4	20.5	0.8
AAQ8	Hiwargaon (Sinnar- Niphad)	62.9	26.2	14.0	26.8	0.9

- ii. An additional traffic of 800 trucks will be added due to coal transport for the proposed project.
- iii. Incremental concentrations of ambient air quality have been predicted due to proposed traffic and the concentrations are within the CPCB standards.
- iv. Rahuri railway siding is along NH-160 with high volume of existing traffic along Ahmednagar-Shirdi route and therefore least number of trucks i.e. 80 per day have been proposed along the said route.

- v. Except Igatpuri and Eklahre railway siding, there is no forest along the proposed routes. There is about 579 acres and 279 acres of reserved forest land enroute of Igatpuri and Eklahre railway siding routes respectively.
- vi. Due to proposed 800 trucks/day (2400 PCU/day), incremental dust fall of 0.88 g/m² is estimated which contributes to only 1.2% incremental values from the baseline data.

(16.9.3) After detailed deliberations, EAC recommended for transportation of coal by road from the proposed four routes for a temporary period of three years subject to following additional conditions:

- i. Details of nature (Bitumen, concrete, kutchha), Type of the road (Village/PWD/SH/NH), width of the road along the complete length shall be submitted to identify the narrow passages where traffic congestion is high and to explore the possibility of expanding the road/shoulders in consultation with PWD/custodian of the road.
- ii. Trucks shall be completely covered with tarpaulin sheets so that coal dust will not get exposed to atmosphere and becomes air borne.
- iii. Water sprinkling measures as proposed at loading and unloading points shall be continued.
- iv. All trucks shall have PUC and regular maintenance will be carried out for the vehicles and records to be maintained. Overloading of vehicles should be avoided.
- v. Avenue plantation shall be carried out in consultation with local State Forest Department.

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**16.10 2x300 MW Coal Based TPP at villages Bhengari, Nawpara, Katangih and Khokhrama, Ghargoda Tehsil, Raigarh District, Chhattisgarh by M/s TRN Energy Pvt. Ltd.-reg. amendment in EC.
(F.No. J-13012/44/2009-IA.II (T) & Proposal No: IA/CG/THE/20427/2011)**

(16.10.1) Project Proponent applied for amendment in EC on 14.3.2018 for transportation of coal by road. As the Project Proponent did not attend the meeting, EAC has deferred the project.

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**16.11 Proposed installation of 20 MW Captive Thermal Power Plant at Plot No. NS16(P), Aurangabad Industrial Growth Centre (BIADA), District Aurangabad, Bihar by M/s Shree Cement Ltd (Unit- New Bihar Cement Plant – CPP) reg. reconsideration for ToR.
(F.No: J-13012/05/2018-IA.I(T) & Proposal No: IA/BR/THE/72184/2018)**

(16.11.1) The proposal for grant of ToR was earlier considered by the EAC in its meeting held on 28.2.2018. Committee noted that the project site is located on South side of the existing project. However, habitations are located at the distance of 200 m and 300 m apart from the proposed project site. Also, the dominant wind direction is towards habitations/settlements. Accordingly, the project was deferred the project for revising the project report along with possible alternatives.

(16.11.2) PP along with their environmental consultant has made the presentation inter-alia submitted the following information:

- i. CPP has been proposed to meet the power demand of existing grinding units. The proposed project is located in existing notified industrial area and the land has been transferred by BIADA infavor of M/s Shree Cements Ltd. and land is well connected with BIADA road and National Highways. Therefore, no alternate site has been considered.
- ii. As the nearest habitation is at 200m SE direction, three tier plantation of minimum of 5 feet height along the project boundary with local species will be carried out. In addition, 10 ft boundary wall in SE direction, installation of ESP, silos for flyash and bed ash storage, covered shed for storage of coal, covered conveyor belts, concrete plant area with vacuum sweeping and installation bag filters at all material transfer points with regular maintenance will be provided.
- iii. The turbine and compressors will be installed in closed building. Silencer will be provided at the steam venting.
- iv. ESP, Lime feeding, Low NO_x burners will be installed to control PM emissions to 30 mg/Nm³, SO₂ emission to 100 mg/m³ and NO_x emission to 100 mg/m³ respectively.
- v. Baseline study has already been started for summer season (March to May, 2018).

(16.11.3) After detailed deliberations, EAC recommended for following ToRs in addition to the standard ToR:

- i. Cumulative impact of power plant as well as cement grinding units shall be considered for air quality impact prediction.
- ii. AAQ monitoring shall be carried out near the habitations in the SE direction.
- iii. For integrated and inter-linked projects, Ministry's guidelines 24.12.2010 shall be followed.
- iv. As proposed, action plan to meet the PM emissions to 30 mg/Nm³, SO₂ emission to 100 mg/m³ and NO_x emission to 100 mg/m³ respectively shall be included along with pollution control measures in the EIA report.

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**16.12 50 MW Gas based Captive Power Plant at Tripura Mega Food Park, Tehsil Bishalgarh, District West Tripura, Tripura and Tehsil Silchar, District Cachar, Assam by M/s Sikaria Mega Foodpark Pvt. Ltd. -reg. ToR.
(F.No. J-13012/06/2018-IA.I(T) & Proposal No: IA/TR/NCP/72800/2017)**

(16.12.1) Project Proponent submitted online application for grant of ToR for 50 MW gas based Power Plant on 10.3.2018. Project Proponent attended the meeting.

(16.12.2) Committee noted that 50 MW gas based Power Plant is to be considered as Category 'B' project and is to be dealt at State level. Project Proponent could not explain why the project is to be considered at the Central Level as Category 'A' as it is mentioned that general condition/special condition is not applicable for the proposed project. Further, there are several sub units of power generation which are leading to 50 MW and these units are to be set up at different places of Assam and Tripura. Project Proponent could not explain the details regarding location, state boundaries and further site specific details. Committee noted that inter-

state boundary of Nagaland is at approx. 8 km. However, the same could not be explained by the PP. Project Proponent is not well conversant with details of the project. Further, there is no QCI-NABET consultant present along with the project proponent. Committee noted that senior personnel from the project shall be present during next appraisal before the EAC.

- (16.12.3) **After deliberations, EAC deferred the project for revising the Form-1 along with the Pre-feasibility report.** A concrete justification shall be submitted for considering the project as Category 'A' project.

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**16.13 358 MW Gas Based Combined Cycle Power Plant at Nand Nagar Industrial Estate, Phase-II, Village Mahuakheraganj, Kashipur Tehsil, Udham Singh Nagar Dist., Uttarakhand by M/s Beta Infratech Pvt. Ltd- reg. extension of validity of EC.
(F.No. J-13012/99/2010-IA II (T) & Proposal No: IA/UK/THE/10645/2010)**

- (16.13.1) Project Proponent has submitted online application for extension of validity of EC on 19.2.2018 for extension of validity of EC for two years.

- (16.13.2) Environmental Clearance 358 MW gas based Power Plant has been issued vide Ministry's letter dated 31.1.2011 which is valid for five years, i.e. till 30.1.2016. As per S.O.1141(E) dated 29.4.2015, the validity of EC is for seven years. As the said EC is valid on the date of publication of the EIA amendment notification dated 29.4.2015, the validity of the EC automatically gets extended to seven years, i.e. 30.1.2018. Ministry has also clarified vide Office Memorandum dated 12.4.2016 that the those EC which are valid on the date of notification i.e. 29.4.2015, the validity automatically get extended for seven years.

- (16.13.2) PP has submitted online application after expiry of validity of EC, i.e. after 30.1.2018. Further, as per the EIA amendment notification dated 14.9.2016, if the application is submitted within thirty days after the validity period of Environmental Clearance, such cases shall be referred to concerned Expert Appraisal Committee or State Level Expert Appraisal Committee or District Level Expert Appraisal Committee and based on their recommendations, the delay shall be condoned at the level of the Joint Secretary in the Ministry of Environment, Forest and Climate Change. Member Secretary briefed the committee that the condonation for submitting the delayed application has been approved by the Joint Secretary.

- (16.13.3) PP made the presentation inter-alia submitted the following information:

- i. Commissioning of 358MW (225MW + 133MW) Gas-based Combined Cycle Power Plant in Udham Singh Nagar District, Uttarakhand has been delayed due to non-availability of gas linkages.
- ii. PPA signed for 50% PLF with Uttarakhand Power Corporation Ltd ("UPCL") on UERC norms.
- iii. Natural gas requirement for the proposed project is 1.17 MMSCD.
- iv. Various agreements are in place like Power Purchase Agreement with Uttarakhand Power Corporation Limited. Gas Transportation Agreement with Gas Authority of India limited. Connection Agreement with Power Transmission Corporation of Uttarakhand Limited for connectivity with PTCUL system at 220/132 KV Mahua Khera Ganj sub-station.

- v. SGSA & GTA was signed with GAIL. GAIL has installed Gas Skid at Plant. Laying of transmission line is completed upto substation. LILO with substation pending. Funding proposal being taken up by Bankers consortium.
 - vi. 95% of plant work completed, expected to be commissioned by 31st March, 2019.
 - vii. The project was envisaged to be commissioned during the 11th plan i.e. by March 2012 so as to be eligible for allocation of domestic gas. However, gas could not be made available to the plant due to steep fall in production of gas at KG-D6. Further due to delay in release of funds by bankers due to fuel ambiguity, the plant could not be commissioned as planned even though 97% civil construction and 95% of main plant and associated equipment erection work was completed.
 - viii. Project is yet to be commissioned after completion of commissioning activities and availability of gas at viable price for sale of power to Govt. of Uttarakhand.
 - ix. The targeted commissioning of our plant has not been feasible in spite of our best efforts due to abnormal delay in receipt of funds from consortium of 5 banks lead by PNB due to various reasons beyond our control. Recently in March 2018 the issues got resolved with respect to bankers and the process of sanction and disbursement of funds have now been taken up by all banks of consortium.
 - x. It will take around 6 months to commission the plant in total along with obtaining various clearances from boiler inspector, electrical & Instrumentation inspection etc. Since the plant machinery remained Idle for long time, retesting of equipment is required to be carried out which are time consuming. These activities are essential for safety of manpower & machines.
 - xi. The release of funds from banks is likely to happen by August / September 2018, thereafter we shall mobilize our vendors. Around 2-3 months shall be required for starting the work at site by vendors to complete the pre- commissioning and commissioning activities. This process is likely to be completed by January / February 2019 if there are no obstructions or issues with the activities.
 - xii. Estimated project cost has now been revised to Rs.1560 crores.
- (16.3.4) Committee noted that PP has almost completed all the construction activities by mid of 2012. Only few activities viz. erection of air cooled condenser, piping work, construction of buildings, canteen & store and pre-commissioning activities are remaining. However, PP could not commission the project as it was not economically viable due to high gas prices. PP is now expecting to get the reasonable gas prices and plan to commission the project. However, PP requires approx. Rs.200 crores (including IDC-100 crores) for completing remaining work for which funds are expected from the banks. Committee noted that PP requires maximum period of six months for commissioning the plant from the date of funds made available. PP also informed that GAIL has assured the gas supply.
- (16.3.5) **After detailed deliberations, EAC recommended for extension of validity of EC for further period of 18 months** subject to following additional conditions:
- i. As per the specific condition No. xviii of EC, Capital budget of Rs.4 Crores earmarked towards CSR activities shall be revised in commensurate with the revised project cost of Rs.1560 Crores.

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(16.14) ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR.

16.14 1x800 MW Coal based Super Critical Thermal Power Project Units in the premises of existing 2x120 MW and 1x200 MW Ukai Power Plants at Village Vagda, Tehsil Fort Songadh, District Tapi, Gujarat by M/s Gujarat State Electricity Co. Ltd.- reg. ToR

(F.No. J-13012/4/2018-IA.I (T) & Online No. IA/GJ/THE/72913/2018)

(16.14.1) The proposal for grant of ToR has been considered by the EAC in its meeting held on 28.2.2018 and EAC **recommended for the site visit by Sub-committee of the EAC** ensure that the proposed site doesn't fall in the Wildlife Corridor, to ensure that there are no WLS within 10 km radius of the project, proper lay out of the proposed plant based on the maximum GLC, locations of monitoring stations of different environmental parameters based on CPCB guidelines, etc.

(16.14.2) The sub-committee comprising of following members have visited the project site during 6th -7th April, 2018.

- | | |
|----------------------------|---|
| 1. Shri S.D. Vora | - Chairman |
| 2. Shri N. Mohan Karnat | - Member |
| 3. Shri N.S. Mondal | - Member (Rep. of CEA) |
| 4. Shri Vishwabandhu Meena | - Member and Representative of RO-MoEF&CC, Bhopal |
| 5. N. Subrahmanyam | - Member Secretary, MoEF&CC |

(16.14.3) The detailed report of the sub-committee is appended as **Annexure-A3**. Sub-committee made the following observations:

- i. There are three large ash ponds which are used for disposing bottom ash and flyash.
- ii. Ashwater recirculation is not done. It is discharged without treatment at three locations. Monitoring of ashwater discharge into the nallah is done at one discharge point.

Parameter	Value
Quantity of discharge	85 m ³ /hr
TSS	47 mg/l
pH	8.12
Temperature	27.7 0C

- iii. Ash is being dumped in dry form at several places. Hazardous waste, municipal solidwaste is mixed with flyash.
- iv. At several places, bunds were made of ash which can flow into the water body during monsoon.
- v. Effluent Treatment Plant is not functioning.
- vi. PM emissions in the stack are within the limit (100 mg/m³).
- vii. SO₂ and NO_x emissions are high for which CPCB granted extension up to 2022.
- viii. Huge water drawal of approx. drawing 1.45 Million m³/day water is being done Ukai left bank canal which is meant for irrigation. However, majority portion is discharged into the canal. Cooling tower is installed for Unit-6 (800 MW). Remaining units, once through cooling is done. Monitoring of quantity

and quality (pH, salinity, TSS) of cooling tower discharge is not done. PP stated that monitoring is done. However, analysis reports could not be shared.

- ix. Fugitive dust emissions observed from the haul roads leading to ashdyke.
- x. Greenbelt on the bunds and periphery of ashponds and power plant is almost Nil.
- xi. Nearly 50,000 m³/day is being discharged into the water bodies. In the upstream of the water bodies, paper mill discharge is contributing to the pollution load than the power plant discharge.

(16.14.4) Sub-committee made the following recommendations:

- i. Ash water recirculation is to be done. Treatment of wastewater and reuse shall be explored.
- ii. Solid waste and hazardous waste should be segregated and not to be dumped with ash. Quantification and waste management plan shall be submitted.
- iii. At several places, bunds were made of ash which can flow into the water body during monsoon. All the dry flyash along the roads and banks to be lifted or embankments to be stabilised with vegetation.
- iv. Effluent Treatment Plant should be made functional and effective. Effluent monitoring is to be regularly carried out.
- v. Continuous water sprinkling is to be done along the haul roads to arrest air borne dust. Roads shall be black topped.
- vi. Water sprinklers may set up in the ash pond as the dry ash pond should not get carried by air currents.
- vii. Strengthening of environment management cell to be done at the plant site as well as corporate office by engaging qualified environmental staff to meet the environmental compliance and for implementation of environmental mitigation measures.
- viii. Out of three ash ponds, PP may close one ashpond and use only two ash ponds. Closed ashpond near power plant may be used for proposed unit.
- ix. Avenue plantation and extensive greenbelt to be developed. Greenbelt on the bunds and periphery of ashponds and power plant is almost Nil. It is to be developed with indigenous species with the help of local state forest department.
- x. Zero Effluent Discharge option may be explored except for condenser cooling discharge.
- xi. The temperature and quality of the discharge water is to be analysed for assessing any impact on irrigation and aquatic life, if any. Temperature dilution study in the Ukai left bank canal may also be conducted.
- xii. Demolition of existing units shall be done in accordance with construction, debris and inert waste rules.
- xiii. Sub-committee recommended that ToR may be issued with above mentioned observations. However, setting up of proposed power plant in the ash pond area after reclamation needs to be explored.**

(16.4.4) EAC also opined that PP is using three large ash ponds which occupied more area than the area of power plant. EAC felt that PP may close down at least one ash pond and use the other ash ponds only incase of emergency. Considering the

space constraint in the existing power plant area, **EAC suggested that PP should submit the action plan to locate the proposed power plant to the ash pond area adjacent to the power plant along with the reclamation plan for ashpond.**

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

Terms of Reference (TOR):

- i) The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference.
- ii) Vision document specifying prospective long term plan of the project shall be formulated and submitted.
- iii) Latest compliance report duly certified by the Regional Office of MoEF& CC for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted.
- iv) The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted.
- v) Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed.
- vi) Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted.
- vii) The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them.
- viii) Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided.
- ix) Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided.
- x) Present land use (including land class/kisam) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.
- xi) If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents.
- xii) The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.
- xiii) Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
- xiv) Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of

- the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him.
- xv) Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted.
 - xvi) A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted.
 - xvii) A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted.
 - xviii) Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash.
 - xix) The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re-circulation of effluents.
 - xx) Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State.
 - xxi) It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways.
 - xxii) Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted.
 - xxiii) Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea.
 - xxiv) Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water.

- xxv) Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.
- xxvi) Feasibility of near zero discharge concept shall be critically examined and its details submitted.
- xxvii) Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified.
- xxviii) Plan for recirculation of ash pond water and its implementation shall be submitted.
- xxix) Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area.
- xxx) Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities.
- xxxi) Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project.
- xxxii) If the area has tribal population it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.
- xxxiii) A detailed CSR plan along with activities wise break up of financial commitment shall be prepared. CSR component shall be identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified. Separate budget for community development activities and income generating programmes shall be specified.
- xxxiv) While formulating CSR schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CSR details done in the past should be clearly spelt out in case of expansion projects.
- xxxv) R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them.
- xxxvi) Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared.
- xxxvii) Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company

shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conductive 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 PM₁₀, PM_{2.5}, SO₂, 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.
- xl ii) Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.
- xl iii) Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
- xl iv) 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
- xl v) 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.
- xl vi) 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.
- xl vii) 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.
- xlvi) 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 CO₂ 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.

Specific Conditions related to Thermal Power Projects:

- (i) Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within **six months**.
- (ii) Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.
- (iii) A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof analyzed every two year and reported along with monitoring reports. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.
- (iv) Online continuous monitoring system for stack emission, ambient air and effluent shall be installed.
- (v) High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 30 mg/Nm³ or as would be notified by the Ministry, whichever is stringent. Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system.
- (vi) Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.
- (vii) Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.
- (viii) A well designed rain water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.
- (ix) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.
- (x) Additional soil for leveling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.
- (xi) Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) shall be monitored in the bottom ash. No ash shall be disposed off in low lying area.
- (xii) No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken

- from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.
- (xiii) Fugitive emission of fly ash (dry or wet) shall be controlled such that no agricultural or non-agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.
 - (xiv) Green Belt consisting of three tiers of plantations of native species all around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 80 %.
 - (xv) Green belt shall also be developed around the Ash Pond over and above the Green Belt around the plant boundary.
 - (xvi) The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.
 - (xvii) CSR schemes identified based on need based assessment shall be implemented in consultation with the village Panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Company shall provide separate budget for community development activities and income generating programmes.
 - (xviii) For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall also be evaluated by an independent external agency. This evaluation shall be both concurrent and final.
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Site visit Report of sub-committee on ‘Proposed 1x800 MW Coal based Super Critical Thermal Power Project, Village Vagda, Tehsil Fort Songadh, District Tapi, Gujarat by M/s Gujarat State Electricity Co. Ltd.’

1.0 Introduction:

The proposal for establishing of 1x800 MW Super-critical Thermal Power Plant by M/s Gujarat State Electricity Co. Ltd’ has been appraised by the EAC on 28.2.2018 for grant of Terms of Reference. EAC in its meeting held on 28.2.2018 recommended that a site visit by sub-committee may be conducted to ensure that the proposed site doesn’t fall in the Wildlife Corridor, to ensure that there are no WLS within 10 km radius of the project, proper lay out of the proposed plant based on the maximum GLC, locations of monitoring stations of different environmental parameters based on CPCB guidelines, etc. Accordingly, Ministry constituted the sub-committee vide Order dated 16.3.2018 (**Annexure-I**). Ministry also requested Regional Office, Bhopal to nominate a scientist for the site visit. Accordingly, Shri Vishwa Bandhu Meena, Scientist ‘C’ has been nominated by the Regional Office. Sub-committee co-opted Shri Vishwa Bandhu Meena as a member of the sub-committee. Accordingly, the following members of the sub-committee were present during the visit.

1. Shri S.D. Vora - Chairman
2. Shri N. Mohan Karnat - Member
3. Shri N.S. Mondal - Member (Rep. of CEA)
4. Shri Vishwa Bandhu Meena, Scientist ‘C’, MoEF&CC, RO, Bhopal - Member
5. N. Subrahmanyam, Scientist ‘C’, MoEF&CC, New Delhi - Member Secretary

Sub-committee was accompanied by the Ukai TPP representatives (attendance enclosed as **Annexure-II**).

1.1 Project Details:

Ukai power plant has total of six units with total installed capacity of 1350 MW with several individual units. However, Unit-1 (120 MW) and Unit-2 (120 MW) have been shut down since 1.4.2017. Presently total capacity of 1110 MW is under operation. The details of individual units along with the commissioning dates are as below:

UNIT		CAPACITY	COMMISSIONING DATE	REMARKS
THERMAL	UNIT-1	120 MW	19/03/1976	Retired w.e.f 01.04.2017.
	UNIT-2	120 MW	23/06/1976	
	UNIT-3	200 MW	21/01/1979	
	UNIT-4	200 MW	11/09/1979	
	UNIT-5	210 MW	30/01/1985	

	UNIT-6	500 MW	08/06/2013	
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Environmental Clearance for the Unit: 1-5 were not available as these units were commissioned before 1994. Environmental Clearance for Unit-6 (500 MW) has been accorded by the Ministry vide letter dated 13.6.2008. As informed, the proposed power project (1x800 MW) will be set up in place of Unit-1,2 &3 after decommissioning these individual units.

1.2 Water drawal:

The power plant is drawing 1.45 Million m³/day water from Ukai left bank canal. The broad breakup is as below:

Usage	Quantity (m ³ /day)	Discharge (m ³ /day)
Cooling water make up + ash water make up	14,15,708	Cooling water discharge after once through cooling to Ukai left bank canal: 13,70,343
Raw water for Unit: 3-5	14,156	ETP+ Ash water discharge to Ghoda Nalla: 49,872
Raw water for Unit: 6	19,057	

Cooling tower has been installed for Unit-6 (1x500 MW). Remaining units have once through cooling system. Further, continuous flow meters at intake and discharge point for cooling water are not available.

1.3 Ash and Solid waste management:

There are three ash ponds which are used for disposing the fly ash and bottom ash. Ash pond adjacent to the power plant is utilised for disposing the bottom ash and remaining two ash ponds are utilised for flyash. Lean slurry concentration method is used for ash disposal. It has been observed that at several places, flyash is mixed for making bund and road connecting to the ashpond. Further, flyash, bottom ash, municipal solid waste and hazardous waste is dumped openly at few places. Further, it was also noticed that dry ash from the one of the ash ponds is being lifted through trucks. Sub-committee noted that large amount of area is used for ash disposal and it felt that the ash pond adjacent to power plant may be reclaimed and utilised for constructing the proposed power plant as the existing area (Unit 1 to 3) is very congested. Small quantities of bottom ash and flyash were seen at the main plant area near Boiler area which need to be removed regularly.

1.4 Wastewater treatment:

As the Unit-6 was under shut down due to rotor earth fault in the generator and the same was under maintenance, the ETP connected to the Unit-6 was also not functional. Further, ash water coming from bottom ash is being monitored for following parameters.

Parameter	Values during the visit
Quantity of discharge	85 m ³ /hr
TSS	47 mg/l
pH	8.12
Temperature	27.7 °C

It has been observed that there is no treatment facility for ashwater which is being released into Ghoda nalla. Further, ashwater is being released into Ghoda nalla at two other places from the ash pond through Guchinala, monitoring of the flow and quality at these points are not done. Further, the discharge from ETP is being released in the upstream of Guchinalla. In total, the wastewater/ashwater is released at four discharge points meeting Ghoda nalla. It was also informed that the of Guchinalla is already polluted due to release of effluent from paper mill in the upstream. Committee noted that there should be proper treatment mechanism as well as water balance for all processes to be clearly maintained.

1.5 Emission Control:

Sub-committee appreciated the Particulate Emissions from all the running stacks are within the standard of 100 mg/Nm³. Project Authorities informed that ESPs have been retrofitted recently. Further, SO_x and NO_x from the stacks are shown exceeding the standards. Online emission details can be seen in the photograph no.13 in the ***Annexure-III: Photographs***. Project Authorities informed that CPCB granted extension up to 2022 to meet the emission norms for SO_x and NO_x.

Fugitive dust emissions observed from the haul roads along the left bank canal, roads leading to ash pond. Road shall be black topped and continuous water sprinkling to be done to arrest airborne dust.

1.6 Environmental Sensitivity:

Sub-committee noted that there are no sensitive such as national parks, wildlife sanctuaries or any wildlife corridors within 10 km radius of the project except water bodies viz. Ukai dam & reservoir and Tapi River

1.7 Greenbelt Development:

Sub-committee could not see any greenbelt around the power plant and around the periphery of ashponds except the natural growth. It has been emphasised that extensive greenbelt is to be developed with indigenous species with the help of local state forest department.

1.8 Location of Monitoring Stations:

Sub-committee observed that number of surface water quality monitoring samples for the purpose of EIA is less. So, the committee suggested increasing the number of water samples from upstream and downstream of Ghoda nallah and upstream of another water body wherein ashwater is being discharged and to set up continuous online ambient air quality monitoring at plant and township. Further, water quality is to be monitored at two locations on upstream and downstream of Ukai left bank canal from the discharge point. Further, air quality monitoring is to be done nearby ashdyke.

1.9 Miscellaneous:

Sub-committee noted that housekeeping is to be improved within plant area. It has been observed that only one person at plant and another person at Head Office specialised in environment discipline are available for implementation of environmental protection measures which needs to be strengthened by setting up dedicated Environmental Cell. Further, left bank canal water is meant for irrigation purpose. Cooling water is being discharged in to left bank canal. A study of temperature dilution in the left bank canal may be conducted.

1.10. Recommendations: Sub-committee made the following recommendations.

- i. Ash water recirculation is to be done. Treatment of wastewater and reuse shall be explored.
- ii. Solid waste and hazardous waste should be segregated and not to be dumped with ash. Quantification and waste management plan shall be submitted.
- iii. At several places, bunds were made of ash which can flow into the water body during monsoon. All the dry flyash along the roads and banks to be lifted or embankments to be stabilised with vegetation.
- iv. Effluent Treatment Plant should be made functional and effective. Effluent monitoring is to be regularly carried out.
- v. Continuous water sprinkling is to be done along the haul roads to arrest air borne dust. Roads shall be black topped.
- vi. Water sprinklers may set up in the ash pond as the dry ash pond should not get carried by air currents.
- vii. Strengthening of environment management cell to be done at the plant site as well as corporate office by engaging qualified environmental staff to meet the environmental compliance and for implementation of environmental mitigation measures.
- viii. Out of three ash ponds, PP may close one ashpond and use only two ash ponds. Closed ashpond near power plant may be used for proposed unit.

- ix. Avenue plantation and extensive greenbelt to be developed. Greenbelt on the bunds and periphery of ashponds and power plant is almost Nil. It is to be developed with indigenous species with the help of local state forest department.
- x. Nearly 50,000 m³/day effluent is being discharged into the water bodies. In the upstream of the water bodies, paper mill discharge is contributing to the pollution load other than the power plant discharge. Zero Effluent Discharge option may be explored except for condenser cooling discharge.
- xi. The temperature and quality of the discharge water is to be analysed for assessing any impact on irrigation and aquatic life, if any. Temperature dilution study in the Ukai left bank canal may also be conducted.
- xii. Demolition of existing units shall be done in accordance with construction, debris and inert waste rules.
- xiii. Sub-committee recommended that ToR may be issued with above mentioned observations. However, setting up of proposed power plant in the ash pond area after reclamation needs to be explored.**



Shri N. S. Mondal
(Member)



Shri N. Mohan Karnat
(Member)



Shri Vishwa Bandhu Meena
(Member & Representative of
RO, Bhopal)



Shri N. Subrahmanyam
(Member Secretary)



Shri S. D. Vora
(Chairman)

Annexure-I: Officer Order regarding conducting of site visit.



No. J-13012/4/2018-IA.I (T)
Government of India
Ministry of Environment, Forest and Climate Change

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

Dated: 16.3.2018

OFFICE ORDER

Sub: 1x800 MW Coal based Super Critical Thermal Power Project Units in the premises of existing 2x120 MW and 1x200 MW Ukai Power Plants at Village Vagda, Tehsil Fort Songadh, District Tapi, Gujarat by M/s Gujarat State Electricity Co. Ltd.-reg. Site Visit.

Sir,

This has reference to the online application no. IA/GJ/THE/72913/2018 dated 12.02.2018 submitted by M/s Gujarat State Electricity Co. Ltd and meeting of 15th Expert Appraisal Committee (Thermal Power) held on 28.2.2018 for grant of Terms of Reference for the above mentioned Project.

2. The EAC (Thermal) in its 15th Meeting held on 28.10.2018 recommended that a site visit to be carried out by sub-committee to ensure that the proposed site doesn't fall in the Wildlife Corridor, to ensure that there are no WLS within 10 km radius of the project, proper lay out of the proposed plant based on the maximum GLC, locations of monitoring stations of different environmental parameters based on CPCB guidelines, etc.

3. In acceptance of the recommendations of the EAC (Thermal) in its meeting held on 28.2.2018, the Ministry hereby constitutes a sub-committee comprising of following members which would make site inspection and submit a report on findings with respect the concerned project of M/s Gujarat State Electricity Co. Ltd. A representative from concerned Regional Office of MoEF&CC is also requested to accompany sub-committee for the site visit.

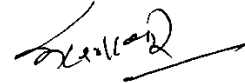
- | | | | |
|------|-------------------------------|---|------------------|
| i. | Shri S.D. Vora | - | Chairman |
| ii. | Shri Mohan Karnat | - | Member |
| iii. | Shri N.S. Mondal, CEA | - | Member |
| iv. | Shri N. Subrahmanyam, MoEF&CC | - | Member Secretary |

4. The Sub-committee shall make a site inspection in **April, 2018** and submit the report within 15 days to the Ministry for further consideration.

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

This issues with the approval of the Competent Authority.

Yours faithfully,



(Dr. S. Kerketta)
Director

Copy to: -

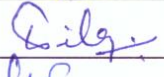
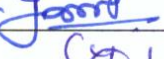
1. Shri S.D. Vora / Shri Mohan Karnat/ Shri N.S. Mondal.
2. The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forests and Climate Change, Regional Office (WZ), E-5, Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3, Ravishankar Nagar, Bhopal – 462016
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Additional Chief Secretary, Forests & Environment Department, Government of Gujarat Block 14, 8th floor, Sachivalaya, Gandhinagar - 382 010, Gujarat.
5. The Chairman, Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10A Gandhinagar-382010.
6. The District Collector, Tapi District, Govt. of Gujarat Tapi-Vyara, Gujarat – 394651.
7. The Chief Engineer (Planning & Project), Gujarat State Electricity Corporation Ltd., Vidyut Bhavan, Race Course, Vadodara-390007.
8. Guard file/Monitoring file.
9. Website of MoEF&CC.



(Dr. S. Kerketta)
Director

Annexure-II: Attendance of representatives of Ukai Power Plant, M/s GSECL.

Representatives of Ukai thermal power plant ,GSECL during site visit by Sub- committee on 06.04.2018

sr no	Name	Designation	signature
1	Shri H. N. Baxi	Executive Director	
2	Shri R. D. Parmar	Asst. Chief Engineer	
3	Shri. S. N. Patel	Asst. Chief Engineer	
4	Shri. D. H. Vasava	SE (C.P.P.), Co	
5	Shri K. S. Talpada	SE (Fuel & MC)	
6	" S. G. Patel	Asst. SE (C.P.P.)	
7	" M. B. Chaudhari	SE (Electrical)	
8	" C. S. Baghel	DE (M) (H.R.)	
9	" P. R. Patel	S. E (COP)	
10	" D. C. Chaudhari	Deputy Engineer	
11	" J. D. Joshi	Deputy Engineer	
12	Danishwar Hirani	JE (Gen)	
13	" D. V. Garmit	DE (Gen) - Comm. WPS	
14	M. K. Karna	EE (C)	
15	G. C. Mehta	SE (M-II)	
16	A. A. PADHYA - GSECL	EE (CIVIL) - C.O	
17	BABU MENON	S. E (C.W.)	
18	N. G. MEHTA	Asst. C.P.P. - C.O	
19	A. B. Jainwal	EE (Env.), Co	
20			
21			
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1. Ukai Power Plant



2. Ukai Power Plant along with ashponds and other facilities



3. Water Intake point from Ukai Left Bank Canal



4. Ashwater discharge and online monitoring point



5. Ashwater discharge point into nallah



6. Dry flyash in the ashpond



7. Exposed bund with mix of ash content



8. Loose ash material on the sides of bund



9. Lean slurry discharge



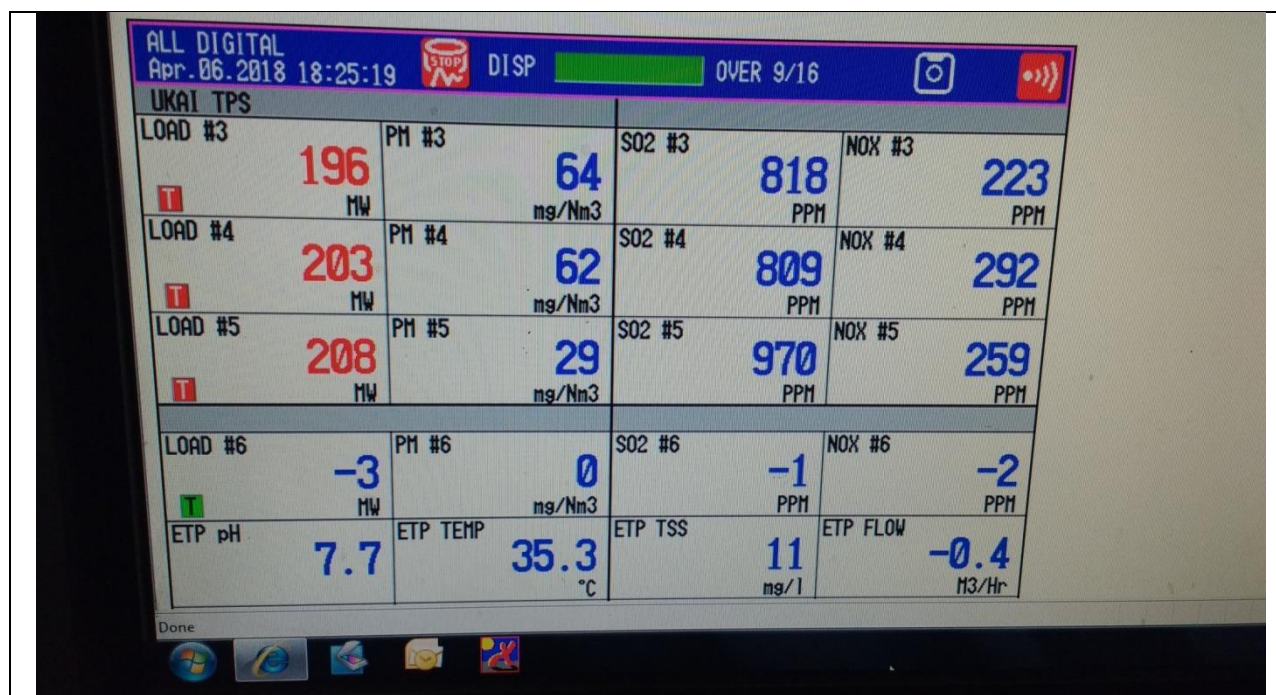
10. Dryash dumping and fugitive dust



11. Dumping of Municipal solidwaste, hazardous waste along with ash



12.Dry ash loading into trucks



13. Online Emission and effluent discharge monitoring



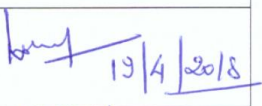
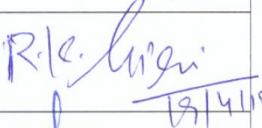
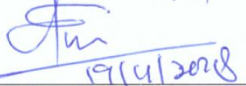
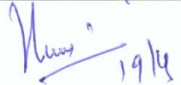
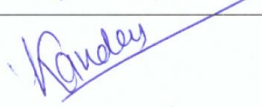
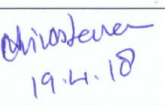
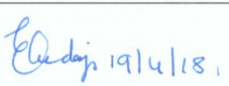
14. Sub-committee discussions with Ukai TPP representatives

LIST OF MEMBERS (Attendance Sheet)

16th EXPERT APPRAISAL COMMITTEE MEETING (Thermal)

DATE & TIME : 19th April 2018, 10:00 AM

VENUE : Brahmaputra Meeting Hall, Vayu Wing, Indira Paryavaran Bhawan, New Delhi

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

5/2/2018

https://mail.gov.in/iwc_static/layout/shell.html?lang=en&3.0.1.2.0_15121607

Subject: **Re: 16th EAC of Thermal Sector - MoM regarding**
To: Dr S Kerketta <s.kerketta66@gov.in>

Date: 05/01/18 01:25 PM
From: navin chandra <navinchandrarrl@yahoo.com>

01/05/2018

Dear Dr. Kerketta,

Thanks for sending the finalized text of the 16th EAC meeting of Thermal sector after incorporating the suggestions of the members. I have gone through the minutes. it is in order and can be uploaded to the website of the ministry of Environment, Forests and Climate Change.

Regards,
yours sincerely,

(NAVIN CHANDRA)

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

On Tuesday, 1 May, 2018, 12:58:57 PM IST, Dr S Kerketta <s.kerketta66@gov.in> wrote:

Sir,

Please find the attachment. The draft MoM is sent herewith after incorporating the comments received from the domain experts. May please approve the draft MoM for uploading it in the Ministry's website.

--
regards,

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

**AGENDA OF 16th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL
COMMITTEE ON THERMAL POWER PROJECTS**

DATE : 19th April, 2018

TIME : 10.30 A.M. ONWARDS

**VENUE : BRAHMAPUTRA MEETING HALL, VAYU WING, FIRST FLOOR, IPB,
JORBAGH ROAD, NEW DELHI-110003.**

ITEM	
Item No. 16.0	CONFIRMATION OF MINUTES OF 15th EAC (Thermal) MEETING
Item No.	CONSIDERATION OF PROJECTS
16.1	Proposed Integrated Municipal Solid Waste Management Plant (including 23 MW power plants) at Adampur Chhavani, Phanda Block, Huzur Tehsil, Bhopal District by M/s Bhopal Municipal Solid Waste Private Limited. - reg. re-consideration of ToR. File No: J-13012/16/2017-IA I(T) & Online no: IA/MP/THE/69646/2017.
16.2	22 MW Captive coal based Thermal power plant, Village Prakasha, Nandurbar district, Maharashtra by M/s Genus Paper and Boards Ltd.-reg. re-consideration of ToR. File No: J-13012/02/2018-IA.I (T) & Online no: IA/MH/THE/71692/2017.
16.3	2x660 MW (Stage-III, Expansion) Talcher Thermal Power Project, Tehsil Talcher Sadar, Angul District, Odisha by M/s NTPC Ltd-reg. EC. F.No: J-13012/31/2009-IA.II (T) & Proposal No: IA/OR/THE/66791/2014.
16.4	Expansion by addition of 2x660 MW Stage-II based on Super Critical Technology Tanda Super Thermal Power Project, Village Bahadurpur, Tehsil Tanda, District Ambedkar Nagar, Uttar Pradesh by M/s NTPC Ltd-reg. extension of validity of EC. F.No: J-13011/96/2007-IA. II(T) & Proposal No: IA/UP/THE/12047/2011.
16.5	3x660 Expansion of Coal Based power unit at Koradi TPP in Nagpur District, Maharashtra by Maharashtra State Power Generation Company Limited. - reg. re-consideration of Amendment in Environment Clearance. File No: J-13012/87/2007-IA.II (T)& Online no: IA/MH/THE/24219/2010
16.6	1x500 MW Coal based expansion project at Khaperkheda Thermal Power Station at Khaperkheda, Nagpur, Maharashtra by M/s Maharashtra State Power Generation Company Limited. -reg. re-consideration of Amendment in Environment Clearance. File No: J-13011/24/2005-IA.II(T) & Online no: IA/MH/THE/10223/2005
16.7	2x500 MW Chandrapur Super Thermal Power Project Expansion Project at Chandrapur, District Chandrapur, Maharashtra by M/s Maharashtra State Power Generation Company Limited. -reg. re-consideration of Amendment in Environment Clearance. File No: J-13011/53/2008-IAII(T) & Online no: IA/MH/THE/10241/2008
16.8	1x800 MW Pit Head Ultra Super Critical TPP at Umred Coal Mine area village Heoti, Tehsil Umrer, District Nagpur, Maharashtra by M/s Maharashtra State Power Generation Company Limited. -reg. ToR. F.No: J-13012/07/2018 & Proposal No: IA/MH/THE/73481/2018.
16.9	5x270 MW Coal based TPP at Sinnar Industrial Area, Dist. Nasik, Maharashtra by M/s Rattan India Nasik Power Ltd.- reg. re-consideration

	in amendment of EC for temporary permission for transportation of coal by road. File No: J-13012/11/2008-IA II (T) & Online no: IA/MH/THE/10301/2010.
16.10	2x300 MW Coal Based TPP at villages Bhengari, Nawpara, Katangih and Khokhrama, Ghargoda Tehsil, Raigarh District, Chhattisgarh by M/s TRN Energy Pvt. Ltd.-reg. amendment in EC. F.No. J-13012/44/2009-IA.II (T) & Proposal No: IA/CG/THE/20427/2011.
16.11	Proposed installation of 20 MW Captive Thermal Power Plant at Plot No. NS-16(P), Aurangabad Industrial Growth Centre (BIADA), District Aurangabad, Bihar by M/s Shree Cement Ltd (Unit- New Bihar Cement Plant – CPP) reg. reconsideration for ToR. F.No: J-13012/05/2018-IA.I(T) & Proposal No: IA/BR/THE/72184/2018.
16.12	50 MW Gas based Captive Power Plant at Tripura Mega Food Park, Tehsil Bishalgarh, District West Tripura, Tripura and Tehsil Scilchar, District Cachar, Assam by M/s Sikaria Mega Foodpark Pvt. Ltd. -reg. ToR. F.No. J-13012/06/2018-IA.I(T) & Proposal No: IA/TR/NCP/72800/2017.
16.13	358 MW Gas Based Combined Cycle Power Plant at Nand Nagar Industrial Estate, Phase-II, Village Mahuakheraganj, Kashipur Tehsil, Udham Singh Nagar Dist., Uttarakhand by M/s Beta Infratech Pvt. Ltd- reg. extension of validity of EC. F.No. J-13012/99/2010-IA II (T) & Proposal No: IA/UK/THE/10645/2010.
16.14	ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR.

Note: If project documents are not submitted to Committee Members on time along with brief summary/basic information as per pro-forma, it will be the Committee's discretion to consider the project. Project proponents shall bring shape file (.kml file) containing project boundaries & facilities and shall be saved on computer in the meeting hall. Project Proponents are required to bring hard copy (A0/A1 size) and soft copy (pdf) of a map showing project facilities superimposed on Survey of India Toposheet. Proponents shall submit the attendance form duly filled to the Member Secretary before starting the presentation.