

MINUTES OF THE 39th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER PROJECTS

The 39th Meeting of the re-constituted EAC (Thermal Power) was held on 10th April, 2020 through Video-conference organised by NIC in the Ministry of Environment, Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi under the Chairmanship of Dr. Naveen Chandra. The following members were present through video-conference:

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| 1. | Dr. Navin Chandra | - | Chairman |
| 2. | Dr. N.P Shukla | - | Member |
| 3. | Shri Suramya Vora | - | Member |
| 4. | Shri Gururaj P. Kundargi | - | Member |
| 5. | Shri Mohan Karnat, | - | Member |
| 6. | Dr. Jai Krishna Pandey | - | Member |
| 7. | Shri N.S. Mondal | - | Member (Representative of CEA) |
| 8. | Dr. S.K. Paliwal | - | Member (Representative of CPCB) |
| 9. | Prof. S.K. Gupta | - | Member (Rep. of ISM/IIT Dhanbad) |
| 10. | Dr. S. Kerketta | - | Member Secretary |

Dr. S. Lele, Dr.(Mrs.) Manjari Srivastava and Dr. R.K. Giri (Representative of IMD) could not be present due to preoccupation.

Item No.39.0: CONFIRMATION OF THE MINUTES OF THE 37th EAC MEETING.

The Minutes of the 37th EAC (Thermal Power) meeting held on 21.02.2020 were confirmed in presence of members present in the meeting. The 38th meeting scheduled on 2003.2020, couldnot be held due to outbreak of Coronavirus pandemic worldwide. Further, Member Secretary informed that the tenure of the EAC has been extended for three months (till June, 2020).

Item No. 39.0: CONSIDERATION OF PROJECTS

39.1 1x600 MW coal Based Thermal Power Plant at Villages Chhote Bhandar, Bade Bhandar, Sarvani and Amla Bhauna, Tehsil Pussore, District Raigarh, Chhattisgarh by M/s The Raigarh Energy Generation Ltd.-reg. extension of permission to transport coal by road. (F.No. J-13012/57/2008-IA.II (T) & Proposal No: IA/CG/THE/19988/2010)

(39.1.1) Project Proponent submitted online proposal on 13.3.2020 for extension of permission to transport coal by road for a period of three years (till 31.3.2023) from Bhupdevpur Railway siding to plant premises for a distance of 47 km.

(39.1.2) The Environmental Clearance for 1x600 MW Thermal Power Project granted vide Ministry's letter dated 20.5.2010 infavour of M/s Korba West Power Co. Ltd.. The permission to transport coal by road for a period of three years (15.4.2018) was issued vide Ministry's letter dated 16.4.2015. The EC and other permissions were transferred from first proponent to M/s The Raigarh Energy Generation Ltd. (Subsidiary Company of M/s Adani Power Ltd.). Subsequently,

the said permission was further extended for two years (till 15.4.2020) for continuing road transportation vide Ministry' letter dated 26.11.2019.

(39.1.3) Project Proponent has made presentation and inter-alia submitted the following information:

- i. Raigarh Energy Generation Limited is a 100% subsidiary of Adani Power Ltd. The Plant was under shutdown due to the accidental failure of the generator on 22nd May 2017.
- ii. BHEL, OEM of the generator has declared this failure as one of the very rare accident. They recommended to sent the stator, rotor & other accessories to their workshop for repairing & advised that it may take 10-12 months for the repairing of generator. The repairing was completed in month of May 2018.
- iii. Being a Single Unit plant, KWPCCL was under total shutdown and there was no Fund Generation. The financial crisis enforced KWPCCL to approach NCLT for initiation of Insolvency process.
- iv. On 21st May 2018, KWPCCL approached Hon'ble NCLT, Ahmedabad bench for initiation of Corporate Insolvency Resolution Process (CIRP) under Section 10 of IBC, 2016. The Railway Project was also put on hold since May 2017.
- v. After taking over the company from July' 2019, REGL has evaluated the pending works to complete the Railway Project. The plant has resumed it's operation from December' 2019.
- vi. The expenditure towards laying railway line is Rs.116.42 Crores out of total budget of Rs.436.15 Crores. The land of 355.3 acres was acquired out 515 acres and remaining 160 acres are to be acquired.
- vii. The coal requirement is 8,800 Tonnes/day which will involve 752 trips (To and fro) from Bhupdevepur Railwasy siding to the plant premises.

(39.2.4) On 17.04.2020 the PP has given an undertaking that in case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of amendment in EC i.e. extension of permission to transport coal by road. If any deviation is noticed subsequent to grant of amendment in EC, the amendment in EC shall be liable to be withdrawn at the cost of the project proponent.

(39.1.4) Committee noted that project proponent has not submitted traffic impact assessment study for assessing the road sufficiency at present along with other environmental sensitivities along the transportation route. Committee further noted that total of 5 years have been permitted for road transportation pending railway connectivity from nearest railway siding. The reason may be due to company was admitted under insolvency resolution process and subsequently, the assets were transferred from M/s Korba West Power Co. Ltd. to M/s Raigarh Energy Generation Ltd.

(39.1.5) Considering the progress of the railway connectivity and the COVID-19 pandemic, the **Committee recommends for extension of permission to transport coal by road for a period of one year (w.e.f. 16.4.2020 till 15.4.2021)** subject to following conditions:

- i. Traffic Impact Assessment Study shall be conducted for the proposed route and submitted to the Ministry for further extension, if any.
- ii. The progress (physical and financial) of railway connectivity shall be submitted as part of compliance report.
- iii. The status and progress of installation of pollution control equipment such as FGD, De-NO_x systems, etc. to meet revised emission norms vide Notification dated 07.12.2015 shall be submitted as part of compliance report.
- iv. Higher capacity of trucks viz., 30 T or 35 T (whichever is available) shall be used for coal transportation as the roads are NH and having enough bearing capacity.
- v. Tarpaulin covered trucks shall be used. The water sprinkling shall be carried out at loading and unloading points.
- vi. Air Quality monitoring shall be carried out along the road near villages to assess the impact of road transportation once in 3 months.

**(39.2) Expansion of 4x250 MW by addition of 4x600 MW Coal Based Thermal Power Plant at Tamnar, Tehsil Gharghoda, District Raigarh, Chhattisgarh by M/s Jindal Power Ltd.- reg. extension of permission to use existing dyke.
(File No. J-13012/117/2008-IA.II(T) & Proposal No. IA/CG/THE/147418/2020)**

(39.2.1) Project Proponent submitted online application on 5.3.2020 to extend the permission to use existing ash pond (198 ha) of 4x250 MW till October, 2021 as ash pond envisaged for 4x600 MW could not be established due to problems in land acquisition, etc.

(39.2.2) The chronology of the permissions to use existing ash pond is provided as below:

- i. The Environmental Clearance (EC) for 2x600 MW (Units #1 & 2) Thermal Power Plant was accorded on 18.03.2011 and for 2x600 MW (Units # 3 & 4) Thermal Power Plant was accorded on 04.11.2011.
- ii. Subsequently, the Ministry permitted to use existing ash dyke of 1,000 MW Thermal Power Plants for all the four expansion units (4x600 MW) for an interim period not exceeding three years, vide EC amendment letter dated 10.01.2014.
- iii. Further, the said permission to use the existing ash pond for 4x660 MW Power Plant was extended for two years (till 25.4.2019) vide Ministry's letter dated 26.4.2017.
- iv. Meanwhile, Project Proponent obtained amendment to increase the height of the ash pond from 10 m to 14 m to accommodate ash from both the plants vide Ministry vide letter dated 3.1.2019.
- v. Further, Project Proponent applied for extension of permission to use existing ash pond till October, 2020 for disposal of unutilized ash from 4x600 MW including 4x250 MW. The said proposal was appraised by the Expert Appraisal Committee (EAC) in its meeting held on 27.3.2019 and the EAC recommended to extend the

permission issued vide dated 26.4.2017 for a period of one year (from 26.4.2019 till 25.4.2020) for using the existing ash pond for disposal of unutilized ash from 4x660 MW as well. However, the Ministry has not yet communicated the recommendations made by EAC in its meeting held on 27.3.2019.

- vi. Ministry while processing the proposal, sought Project Proponent vide letter dated 30.5.2019, the compliance of 100% ash utilisation as per the Flyash Notification. It has been found that the ash utilisation percentage is 53% for 4x250 MW TPP and 67% for 4x600 MW TPP. As the ash utilisation is not in compliance with the Flyash Notifications and the power plants are located in the South Eastern Coalfields, the Ministry requested to M/s SECL to explore the back filling of ash in abandoned mines or working mines. M/s SECL has provided the reply recently stating that limited quantity of ash can be taken up as the overburden and ash is mixed during backfilling of mines.

(39.2.3) Project Proponent made the presentation and inter-alia submitted the following information:

- i. The coal quantity and ash generation from both the power plants are as below:

Project Configuration	Coal Quantity	Ash quantity	Disposal
4x250 MW	5 MTPA (from SECL)	2 MTPA @40 % ash)	198 ha of ash dyke is permitted.
4x600 MW	9.6 MTPA (from SECL)	3.264 MTPA @34% ash	239 ha of ash pond is to established.
Total quantity of ash generation		5.264 MTPA (15,000 Tons/day)	

- ii. The various units of Thermal power plant has achieved COD as per the following dates:

Unit No.	4x250 MW	4x600 MW
1	8.12.2007	14.3.2014
2	15.6.2008	31.3.2014
3	16.4.2008	15.1.2015
4	5.9.2008	12.12.2016

- iii. The flyash generation and utilisation details for 4x250 MW TPP since commissioning are as below:

Year	Quantity generated (Metric Tonnes)	Quantity utilized (Metric Tonnes)	Percentage utilisation

Dec'07-Mar'08	119210	35577	29.8%
2008-09	1393190	416018	29.9%
2009-10	2025961	523224	25.8%
2010-11	2075319	974631	47.0%
2011-12	2029653	1134420	55.9%
2012-13	1999551	1195184	59.8%
2013-14	2100322	1199935	57.1%
2014-15	2290987	1413812	61.7%
2015-16	1651142	496933	30.1%
2016-17	1503282	791399	52.6%
2017-18	1395031	1054552	75.6%
2018-19	1062635	1086015	102.2%
2019-20	820549	830335	101.2%
Total	2,04,66,832	1,11,52,035	54.5%

iv. The flyash generation and utilisation details for 4x600 MW TPP since commissioning are as below:

Year	Quantity generated (Metric Tonnes)	Quantity utilized (Metric Tonnes)	Percentage utilisation
2014-15	696774	374005	53.7
2015-16	1399383	415142	29.7
2016-17	1647664	528538	32.1
2017-18	2272734	1749418	77.0
2018-19	2303607	2351192	102.1%
2019-20	2495080	2520430	101%
Total	1,05,15,242	79,38,725	75.5%

- v. Due to non availability of PPAs, Only 1 or 2 units of 250 MW being operated since last few years and 2 units of 4x 600 MW are in operation at part load of 800 MW. Hence, sufficient capacity is available in the existing ash dyke of 4x250 MW to dispose bottom ash and unutilized ash from 4x 600 MW.
 - vi. The existing ash dyke divided into four sub-dykes (1A, 1B, 2A & 2B). The sub-dyke of 1A is exhausted. However, the volume of available from remaining dykes will be 0.32 Million Cubic Metres (MCM) which cater to the ash disposal for 40 months considering the present ash generation at lower capacity.
 - vii. To establish ash pond for 4x600 MW, the land for the construction of the new ash dyke for 4x 600 MW has been awarded by the state Government under the New Land Acquisition Act, 2013.
 - viii. However, CTE from CECB got delayed on account of CECB seeking clarifications from time to time w.r.t. land requirement, ash utilization plan, enforcement of model code of conduct in the Chhattisgarh State, change in officials in CECB, etc.
 - ix. CECB vide letter dated 07.05.2019 sought further clarification from MOEF&CC whether the Consent to Establish should be given to M/s Jindal Power Limited for construction of ash dyke in Village Dolesara (239 ha) for disposal of ash generated from 4x600 MW power plant as the MoEF has already given the permission to operationalize the same and whether the same shall be without any violation to the directions of Supreme Court and Hon'ble NGT. The board has given the following details in this regard:
 - a) Hon'ble NGT in the matter of Shantanu Sharma v. UoI with UoI v Sandplast, vide orders dated 20.11.2018 levied fine on all Thermal Power Stations who have failed to dispose 100% fly ash by 31.12.2017 as per the Flyash Utilisation Notification.
 - b) Subsequently, Supreme Court on 4.2.2019 stayed the NGT directions of 20.11.2018 regarding depositing the penalty and considered appropriate to give an opportunity to indicate the steps taken for compliance of Flyash Notification.
 - c) Thereafter, NGT vide order dated 12.3.2019 directed all power plants to submit their action plans to the Committee constituted for this purpose by MoEF to determine amount of damages and also the issue of action plan for achieving 100% utilisation and its scientific and environmentally sound disposal.
 - x. Owing to the delay in obtaining amendment in CTE for ash dyke of 4x600 MW from CECB, the present request is to extend permission to use existing ash dyke till October, 2021.
- (39.2.5) On 17.04.2020 the PP has given an undertaking that in case of any deviation in data found in any of the documents, the Authorized Signatory shall

be held responsible and furthermore, the above said project shall be rejected for grant of amendment in EC i.e. extension of permission to use existing dyke. If any deviation is noticed subsequent to grant of amendment in EC, the amendment in EC shall be liable to be withdrawn at the cost of the project proponent.

(39.2.5) Committee noted that the earlier recommendations of EAC to use ash pond for one year was not communicated to Project Proponent. Further, the ash utilisation from both the plants is in the range of 54.5% and 75.5%. As per the Flyash Utilisation Notification, the power plant shall achieve 100% utilisation in 4 years with balance unutilised ash to be utilised in another 5 years. Further, the ash utilisation in the last two years has increased to 100% because the large quantity of ash 47.7 Lakh Tonnes has been used in the ash dyke height raising which was also counted as utilisation. Other than dyke raising, other avenues such as brick manufacturing, backfilling in mines (6.6-29%) and filling low lying areas is minimal. Committee further noted that a committee was constituted by NGT to monitor flyash utilisation and levy penalty on non-compliant power plants for which CPCB has prepared a guidelines for assessing the environmental damage and penalty.

(39.2.6) **Committee after detailed deliberations, and considering the ash utilisation percentage, recommended for using the existing ash pond for disposal of unutilised ash generated from 4x600 MW power plant till October, 2021** subject to following additional conditions:

- i. The details of quantities of ash generation, utilisation to various purposes such as brick manufacturing, constructions, soil condition & cement manufacturing and disposal shall be provided for six months (April-September & October-March) in the six monthly compliance report.
- ii. As per the Ministry's fly ash amendment Notification vide SO.254 (E) dated 25.01.2016, the company shall upload the details of stock of each type of ash generated/available from all the units (4x250 MW and 4x600 MW) on their website and shall update the stock position regularly.
- iii. As per the Ministry's fly ash amendment Notification vide SO.254 (E) dated 25.01.2016, the fly ash shall be supplied to various utilising units. The cost of transportation of ash for road construction projects or for manufacturing of ash based products or use as soil conditioner in agriculture activity within a radius of hundred km from Thermal Power Station shall be borne by the company and the cost of transportation beyond the radius of hundred km and up to three hundred km shall be shared equally between the user and the company.
- iv. For achieving compliance of fly ash notification, a map and details of ash utilising units within 100 km radius and 100-300 km along with quantity of ash required for each unit shall be prepared and submitted to the Ministry within 3 months.
- v. A public notice in major daily newspapers shall be published in both vernacular and English that the fly ash/bottom ash will be supplied free of cost for ash

utilising units located within 100 km radius and the cost of transportation will be shared equally between user and company for ash utilising units located in the radius of 100-300 km, in compliance to the fly ash amendment notification dated 25.01.2016. A copy of newspaper advertisement shall be submitted to Regional Office.

- vi. The compliance of applicable revised emission norms vide Notification dated 07.12.2015, shall be achieved along with specific water consumption as per the notification issued vide dated 28.06.2018. The FGD System, NO_x control measures shall be installed to achieve the revised emission norms. The progress of its implementation shall be submitted as part of compliance report.

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(39.3) 3x800 MW NLC Talabira Thermal Power Project at Village Khumberi, Taraikela and Thelkolai, Tehsil and District Jharsuguda, Odisha by M/s NLC India Ltd. -reg. Environment Clearance. (F.No. J-13012/14/2017-IA.I(T) & Proposal No. IA/OR/THE/67938/2017)

- (39.3.1) Project Proponent submitted online application on 19.2.2020 for grant of Environmental Clearance for establishing 3x800 MW Thermal Power Project in Jharsuguda District, Odisha.
- (39.3.2) The project proponent along with Environment Consultants M/s ABC Techno Labs India Pvt. Ltd. have made the presentation inter-alia furnished the following information:
 - i. The NLCIL is proposing to setup 3x800 MW coal based NLC Talabira TPP (NTTPP) with super critical units to supply power to States/UT of SR & ER.
 - ii. The project is located in the v-fold of Bhedan river in Jharsuguda District and the ash pond is proposed on the other side of the river (opposite to power project) in Sambalpur District.
 - iii. Terms of Reference (ToR) has been issued by MOEF&CC vide letter dated 27.12.2017
 - iv. The estimated project cost for the proposed project is Rs.16073.86 Crores.
 - v. This project is linked to Talabira – II & III captive coal blocks allocated to NLCIL
 - vi. There is no forestland involved at the project site. There are three Reserved forest (Katikela RF – 6.5 km, Patrapali FR – 0.7 km, Malda RF – 3.18 km) within 10 km radius. There are no notified ecologically sensitive areas in the study area.
 - vii. The land requirement for the project is 1447 acres out of which 602 acres is main plant, 252 acres is greenbelt, 340 acres is ash pond and remaining area consists of reservoir, roads, township and corridors.
 - viii. Coal Requirement (11.37 MTPA will be met from NLCIL's Talabira -II & III captive mines of 20 MTPA capacity. Coal will be transported from the linked mines through Belt Conveyor system from coal stock up to transfer point at mine end and thereafter by Pipe conveyor for crossing Bheden River up to the plant area.

- ix. Estimated employment during Construction phase - 1500 (Temporary) & 250 (Direct) and Operation and maintenance - 700 (direct) & 400 (Indirect).
 - x. NOC from Sambalpur DFO obtained and NOC from DFO Jharsuguda is under process.
 - xi. The HFL of Bheden River joining at Ib River is 200.55 m and HFL of Hirakud reservoir is 199.90 m and Full Reservoir Level (FRL) of Hirakud reservoir is 192.02 m.
 - xii. Make up water requirement is about 7200 M³/h (72 cusec). Commitment of 90 cusec of water is available from DoWR from Hirakud Reservoir. This project is planned with close cycle CW System with IDCT. All the plant effluents would be recycled/ reused to achieve Zero Liquid Discharge (ZLD).
 - xiii. After taking into consideration the competitive users demand, the water resources Dept. Govt. of Orissa has given allocation of 90Cusecs from Hirakud Reservoir from the industrial quota without curtailing irrigation demand.
 - xiv. Public Hearing was conducted on 13.11.2019 at 11.00 AM village Tareikela, in front of Gariadihi UP School near Hirma village of Jharsuguda District, Odisha and 10.01.2020 at Khumbhari and Tareikela in the district of Jharsuguda and Thelkoli village in the district of Sambalpur (For Sambalpur District).
 - xv. Public Hearing was conducted on 13.11.2019 at 11.00 AM village Tarkeikela, in front of Gariadihi up school near Hirma village of Jharsuguda District, Odisha and 10.01.2020 at Khumbhari and Tareikela in the district of Jharsuguda and Thelkoli village in the district of Sambalpur (For Sambalpur District).
- (39.3.3) On 20.04.2020 the PP has given an undertaking that in case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of fresh EC. If any deviation is noticed subsequent to grant of EC, the EC shall be liable to be withdrawn at the cost of the project proponent.
- (39.3.4) Committee noted that EIA report does not address all the points in the ToR thoroughly. Further, the proposed location for ash pond is adjacent to Bhedan river. Committee has observed that if the ash pond is allowed close to River, there is a chance of breach of ash pond in future which will pollute river body. Similar incidents happened with other power plants where the ash pond was located next to Bhedan river. Further, the proposed ash pond location has one nallah passing in between and a village nearby. The sufficient distance of minimum 500 m is to be left in between ash pond and river body.
- (39.3.5) Further, committee noted that ToR conditions have not been duly addressed in the EIA report such as -
- a) socio-impact assessment study is not carried out.
 - b) water sustainability study has not been carried out.
 - c) action plan to address public hearing issues is not available.
 - d) land use and revenue status of proposed project area is not given.
 - e) cumulative impacts of existing industries within the study area are not considered.

- f) the compliance to recommendations given by sub-committee during its visit are not met.
- g) Proposed only 17% greenbelt (252 acres) of the total project area. There is no greenbelt proposed around periphery of ash pond.
- h) The project is 200 m away from Bhedan river. Minimum distance from HFL needs to be verified.
- i) Patralpali Forest is 700 m from the project. Exact location needs to be shown on the map.
- j) Details of transportation of coal such as Conveyor belt and its route map from Talabira mines to Project is to be provided.
- k) Map showing Water intake point and route for transportation pipelines are to be shown.
- l) Coal linkage document of MoC states that it is to be used for power plants at Tuticorin TPS, Guatampur TPS (Kanpur) & Sirkhaji TPS (Nagapattinam). There is no mention of present project.
- m) Environmental Management Plan (EMP) and its cost does not provide breakup of FGD and other pollution control. Water consumption in the FGD, in case of wet lime dosing, and management of gypsum including its land requirement shall be provided in the EIA report.
- n) As shown the EIA, the maximum flood level of 100 years submerges ash pond area and part plant area. Justification is to be provided.
- o) Project is part of IB valley and Jharsuguda critically polluted area. The additional precautionary measures to be proposed to prevent pollution load in the region.
- p) Reply and commitment to issues raised in Public hearing to be submitted.
- q) The NOC from DFO Jharsuguda is not available regarding impact of proposed project on forest and wildlife.
- r) Presentation simply refers to chapters in the EIA without providing any salient points of the subject. For example:
 - i. w.r.t. Sub-committee recommendations, it was replied that these were almost complied. No details provided,
 - ii. W.r.t. Social Impact Assessment, it was referred to EIA. Summary of socio-economic status of study area is not provided.
 - iii. W.r.t. diversion of nallah in ash pond area, it referred to NIH area drainage report. Salient recommendations of NIH, diversion proposal was not furnished.
 - iv. W.r.t. cumulative impacts of emissions, it referred to EIA report. The cumulative impact considering several power plants, mines, alumina and steel plants located within the study area. However, no cumulative impacts were carried out.

(39.3.6) Committee after deliberations deferred the proposal for revising the EIA report based on the observations made by the EAC above.

(39.4) 1x800 MW Coal Based Supercritical Thermal Power Plant and Decommissioning of 2x120 MW Units at Ukai Thermal Power Plant at Vill. Vagda, Tehsil –Fort Songadh, District-Tapi, Gujarat by M/s Gujarat State Electricity Corporation Limited (GSECL)- reg. Environment Clearance. (F.No. J-13012/4/2018-IA.I(T) & Online No. IA/GJ/THE/144074/2018)

(39.4.1) Project Proponent has submitted online application on 19.2.2020 for grant of Environmental Clearance to establish 1x800 MW Thermal Power Project within the premises of existing units 2x200 MW, 1x210 MW and 1x500 MW.

(39.4.2) Project Proponent along with Environment Consultants M/s Mantec Consultants Pvt. Ltd. have made the presentation inter-alia furnished the following information:

- i. The project proposal is for establishing 1x800 MW coal based Supercritical Thermal Power Plant and decommissioning of 2x120 MW units at Ukai Thermal Power Plant, Vill. Vagda, Tehsil–Fort Songadh, Dist. Tapi, Gujarat.
- ii. The Term of Reference (TOR) for the project was granted vide Ministry's letter dated 04.09.2018.
- iii. The total installed generating capacity at Ukai TPS is 1350 MW, comprising 2x120 MW (Units 1 & 2- Decommissioned), 2x200 MW (Units 3 & 4), 1x210 MW (Unit 5), and 1x500 MW (Unit 6).
- iv. The land requirement for the project 89 Acres (69 Acres in Ash Pond 'A' and 20 Acres vacant land within existing TPP premises).
- v. There is no forest land involved in the project. There are No National park, Sanctuary, Elephant/tiger Reserve (existing as well as proposed), migratory routes, exist within 10 km of the project site.
- vi. The coal required for the proposed project is 3.34 Million. The company has been allocated Gare Palma Sector-I coal block, in Mand Raigarh Coal field, Raigarh district of Chhattisgarh.
- vii. The expected coal quality is: Ash Content- 31.97%, Sulphur- 0.54%, Gross CV- 4706 kcal/kg, Moisture-5.38 %, Mercury- 0.125 (ppm), Fixed carbon-35.66%, Volatile matter-26.9 %.
- viii. The company has its own railway siding and rail network in the plant to receive coal from nearest railway Songadh railway station (6 km). Accordingly, the proposed coal will also be transported by rail.
- ix. The maximum water requirement for the proposed 1x800 MW unit is about 1900 m³/h, which is less than 3.0 m³/MWh. Ukai Thermal Power station is situated next to the Ukai left bank Main Canal, the water requirements for the existing plant of 1x210 MW, 2x200 MW and 2x120MW and 1x500 MW is being met from the supply from Main Canal.
- x. Two units of 120 MW are decommissioned and the existing raw water pumps (3x50%) each of capacity 10500 m³/h and head is 8.5 kg/cm² presently catering to these units will be used for supplying the plant water required for the proposed 1x800MW unit. The available pumping head of 8.5 kg/cm² (g) is sufficient for additional pumping of plant consumptive water the up to the clarifier of new 1x800 MW unit. The proposed project will be operated on zero effluent discharge concept, and no wastewater will be discharged.
- xi. Ambient air quality has been monitored during pre-monsoon season of 2018. The observed PM₁₀ concentration was ranging from 50 µg/m³ at GEB Colony to 88 µg/m³ at Ghoda Village, Navi Ukai Village, Motikhervan Village. The

maximum observed PM_{2.5} concentration was 48 µg/m³ at Navi Ukai Village. The maximum SO₂ concentration was 18 µg/m³ at Charcharbunda Village. Further NO₂ concentration maximum observed was 28 µg/m³ at Partharda village. All the ambient air quality parameters are within the national standards.

- xii. The incremental concentrations due to emissions from proposed project have been predicted and are within the limits.

Pollutant	Baseline air quality (µg/m³)	Incremental concentrations (µg/m³)	Resultant concentrations (µg/m³)	National standard (µg/m³)
PM	88	0.35	88.35	100
SO ₂	26	1.19	19.19	80
NO ₂	18	1.19	27.19	80

- xiii. In house temperature measurement for Temperature dilution study in the Ukai left bank canal is carried out by GSECL. Thermal dilution study have been carried out for evaluating discharge of return water from power plant into Ukai left bank Main Canal through an open channel. The scientific simulation software “Hydrodyn POLSOFT”, developed at Environ Software (P) Ltd. has been used for predicting the water levels, currents and dispersion of temperature.
- xiv. ESP up gradation for units 3, 4 & 5 of Ukai TPS completed. Draft Tender for FGD installation in old units received and is under Scrutiny. EPC tender for FGD in unit 6 of Ukai TPS will be invited soon. Regarding once-through cooling system in Units 3 to 5, GSECL has requested MoEF&CC for grant of exemption from installation of cooling towers. The specific water consumption in unit 6 is within MoEF&CC norms of 3.5 m³/MWh.
- xv. 3.2 KW Solar-Wind hybrid units are provided at VIP Guest House, Ukai TPS. Solar water heaters will be used for the administrative office building, control rooms, guesthouse, club and colony houses. Street lighting powered by solar power is also being envisaged for the Plant Site.
- xvi. UTPS has already approach Roshni Stone Quarry and Dhara Stone Quarry, situated in the 20 Km radius from the proposed thermal power plant for utilizing of the fly ash in their open cast stone quarry reclamation and back-filling operations. W.O. is placed on 26.09.2019. Further, GSECL had invited offers from Ash utilizes through Web Portal for utilizing Ash to be generated from #8 WTPS and allocated 31 parties like Cement manufactures, RMC, Brick Manufactures etc. Total allocation is 2.5 times the estimated ash Generation. GSECL will follow similar line of action for the proposed Ukai unit no 7.
- xvii. Being an existing thermal power station at Ukai, GSECL has been doing the social works towards its corporate social responsibilities since very long. For expansion within existing TPS with estimated cost between 1000 to 10000 crores, the project proponent has to allocate and spend minimum 0.25% of the

project cost under the schemes identified under Corporate Environment Responsibility. Therefore, the amount of Rs.12.78 crores will be spent by GSECL under activities

xviii. The compliance to the Sub-committee observations is as below:

Sl.No.	Subject	Compliance status
1	Ash water recirculation system for existing ash ponds. Treatment of decanted water and Reuse.	DPR for ash water re-circulation & establishing zero liquid discharge (ZLD) scheme prepared on 10.1.2020. The expected completion date is Feb, 2021.
2	Segregation of Solid waste and hazardous waste, alternate disposal mechanism other than ash pond.	Presently solid and hazardous wastes is not dumped with ash. Municipal Solidwaste from colony and TPP is sent to landfill site near village Patharda. Order for Vermi composting pits in the colony was placed on 05.12.2019, construction is in progress. Hazardous waste is sent to TSDF site in Nandesari.
3	Dry fly ash along the roads and banks to be lifted or embankment to be stabilized with vegetation.	The extra fly ash on top of bunds and roads has been cleared. Stabilization of the ash dyke bund with plantation is a regular process. Work order for raising greenbelt along the dyke was given to Forest dept., Surat for three years. Total 13750 nos. of plants are planned in 5.50 Ha at ash dyke area and 2500 nos. of plants planted in 1.0 Ha in colony area by Forest Department.
4	Continuous flow meters at intake & discharge points for cooling water are not available.	work order is placed on 11.11.2019 and material is received in February 2020.
5	Ash water is being released into Ghodanala from the ash pond, monitoring of the flow & quality at	Providing real time monitoring system for flow & quality at all ash dyke discharge water is included in tender of zero

	this point are not done.	discharge scheme. Monitoring of ash dykes outlet is carried out through external GPCB-approved agency.
6.	Water balance for all the processes to be clearly maintained.	Water balance for all the processes is clearly maintained in the water balance diagram.
7.	Air quality monitoring is to be done near to ash dyke.	Ambient Air quality monitoring near ash dyke is included in the EIA study.
8.	To set up continuous online ambient air quality monitoring stations both at Plant & Township.	CAAQMS installed in colony area and plant area in February 2020.
9.	Water quality monitoring in the upstream and downstream of Ukai canal.	Analysis has been carried out.

- xix. Latest EC compliance report for the period April-Sept 2018 was submitted by Ukai TPS to MoEF&CC, Bhopal office on 1.11.2018.
- xx. Public Hearing conducted for the proposed project on 19.06.2019 (at 11:00 am) at Urja Nagar Colony, Post: Ukai, Ta. Fort Songadh, District: Tapi, Gujarat.
- xxi. Employment, CSR activities, the disposal/utilisation system for ash from proposed unit, reclamation of ash ponds, air born flyash causing air pollution, tree plantation, compensation issues of earlier acquired land, transfer of plots to tribals in the new colony, provision of health care facilities, etc.
- xxii. Project Proponent replied to the public during hearing that the land acquired for earlier plant facilities was compensated. Further, CSR activities and tree plantation shall be extensively carried out in surrounding villages. After providing ash slurry recirculation pump house, height of ash dyke will be raised upto 5m. Existing ash shall be utilized in stone quarry nearby Songadh area after the consent of respective owners. Annual order of approx. 2,35,000 MT of pond ash has already been issued , this pond ash will be used in stone quarry filling.
- xxiii. Capital cost of EMP measures provided in the project is Rs. 799.20 Crores and the recurring cost of operation and maintenance of these measures is Rs. 47.40 Crores/annum.
- xxiv. Green belt development around the Ash Pond is a regular process. Massive tree plantation is being carried out around Ash pond and in the colony through Forest Department. Total 13750 nos. of plants planted in 5.50 ha of ash dyke area and 2500 nos. of plant planted in 1 ha in colony area.
- xxv. Estimated project cost is Rs.5,113 Crores. Capital Cost of Environmental Control Measures is Rs.799.20 Crores and recurring cost of EMP is 47.4 Crores.

(39.4.3) On 17.04.2020 the PP has given an undertaking that in case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of fresh EC. If any deviation is noticed subsequent to grant of fresh EC, the EC shall be liable to be withdrawn at the cost of the project proponent.

(39.4.4) Committee noted that the project is proposed on existing ash pond area which does not involve acquiring fresh land. Project Proponent has to clarify the following points w.r.t. environmental aspects of proposed project and compliance of existing power plant:

- i. The air quality predictions have been estimated only by considering the emissions from the proposed project. However, the emission load from the existing units has not been considered for assessing the cumulative impacts.
- ii. The ultimate pollution load from each unit with full pollution controls (ESP & FGD, De-NO_x systems) and with partial control measures (only ESP) shall be estimated. Subsequently, the cumulative pollution load and its impact on environment is to be predicted.
- iii. Environmental Management Plan (EMP) and its cost does not provide breakup of FGD and other pollution control. Water consumption in the FGD, in case of wet lime dosing, and management of gypsum including its land requirement shall be provided in the EIA report.
- iv. The results of thermal dilution study shall be submitted to assess whether there is any impact of temperature of cooling water discharge on agriculture fields dependent on canal irrigation.
- v. 33% greenbelt area is to be mapped for the total project area including existing units.
- vi. The action plan for public hearing issues such as air pollution from air borne ash of ash pond, transfer of land plots in their name for rehabilitated colony, employment to tribals, etc.
- vii. The time lines along with budgetary allocations for installing FGD for existing plants. Water consumption in the FGD, in case of wet lime dosing, and management of gypsum including its land requirement shall be provided in the EIA report.
- viii. Extension given to implement pollution control measures to meet revised emission norms and water consumption norms by CPCB, if any.
- ix. The possibility directly using cooling water discharge (once through cooling system) for the proposed project. This will avoid taking additional fresh water from Ukai canal and discharge of hot cooling water (once through system) from existing power plants. Action plan in this regard is to be submitted.
- x. The Regional Office compliance report shows several partial compliance such as stack emissions exceeding the standard, effluent release into natural drain, no garland drain around the coal stock yard, no settling pond near ash pond, house keeping, etc. An action plan to achieve compliance of these conditions is to be provided.
- xi. Ash generation, Ash utilisation vis-a-vis 100% utilisation as per Ministry's fly ash notification during last five years.

(39.4.5) Committee after deliberations, **deferred the proposal for furnishing the information as per the above observations.**

(39.5) 1x660 MW (Unit-VI) Super Critical Technology Bhusawal Coal Based TPP at Village Pimpri-Sekam, Bhusawal Taluk, Jalgaon District, Maharashtra by M/s Maharashtra State Power Generating Co. Limited –reg. amendment in EC.

(F.No. J-13012/75/2010-IA.II(T)& Proposal No. IA/MH/THE/146614/2020)

(39.5.1) Project Proponent has submitted online application on 6.3.2020 for amendment in EC conditions for change in coal source from existing Machakuta mines to WCL/MCL/SECL mines and revision of stack parameters due to implementation of FGD systems.

(39.5.2) The project proponent along with Environment Consultants M/s Pollution and Ecology Control Services, Nagpur made the presentation and *inter-alia* submitted the following information:

- i. The Environment Clearance for 1x660 MW Bhusawal Thermal Power Project was issued vide Ministry's letter dated 27.11.2012, which is valid for five years i.e. till 26.11.2017. Inline with Ministry's EIA amendment notification vide S.O.3944(E) dated 14.09.2016, the said Environment Clearance was valid for seven years i.e. till 26.11.2019.
- ii. The validity of the EC dated 27.11.2012 was extended for further period of three years vide Ministry's letter dated 14.1.2020.
- iii. As per the EC, the coal source requirement is 3.99 MTPA which is to be sourced from MachMachakata Coal Block, Talcher Coalfields, District Angul, Odisha. Based on Hon'ble Supreme Court decision dated 24.9.2014, the coal block was cancelled.
- iv. Now, the Standing Committee on Linkages, Ministry of Coal vide letter dated 15.12.2020 has permitted to use the existing linkages of Koradi Unit-5, Parli Unit-3, Bhusawal Unit-2 as these units were permanently shut down. The coal will be sourced from WCL, SECL and MCL mines.
- v. It is expected that 80-90% of coal will be sourced from WCL mines and remaining quantity will be procured from SECL & MCL mines. The coal will be transported by rail only. The present coal requirement has now been reduced to 3.18 MTPA. The restrictions of ash content in coal to be less than 34% is applied for SECL and MCL coal as the coal source is more than 500 km. In such case, the washed coal will be used to meet the Ministry's notification dated 2.1.2014.
- vi. The incremental emission concentrations have been predicted with change in coal characteristics and with new pollution control equipment. The results were compared with EIA results computed during the grant of EC.

Parameter	Incremental GLCs as per	Incremental GLCs with FGD	Resultant	NAAQS

	Old EIA, 2009	and SCR & New coal source	concentration (baseline + incremental)	
PM ($\mu\text{g}/\text{m}^3$)	0.65	0.139	75.139	100
SO ₂ ($\mu\text{g}/\text{m}^3$)	15.78	2.04	18.04	80
NO _x ($\mu\text{g}/\text{m}^3$)	5.31	1.35	30.35	80

vii. As the FGD is planned to control sulphur emissions, the exit velocity of the flue gas be amended to 18.3 m/s instead of existing 22 m/sec. The stack height of 275 m will remain the same.

(39.5.3) On 17.04.2020 the PP has given an undertaking that in case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of amendment in EC i.e. change in coal source from the existing mine. If any deviation is noticed subsequent to grant of amendment in EC, the amendment of EC shall be liable to be withdrawn at the cost of the project proponent.

(39.5.4) Committee noted that the coal source is due to cancellation of earlier mine which was allocated to the unit. As the coal is now expected from three different sources, the ash content in the coal to be ensured below 34% for sources located more than 500 km which is inline with Ministry's notification dated 2.1.2014. Project Proponent agreed that washed coal will be used in case source is more than 500 km. W.r.t. flue gas exit velocity, there is no guidelines arrived to specify the minimum exit velocity for proper dispersion of pollutants. However, CPCB member suggested that minimum of 17 m/s should be maintained for power plants which install FGDs. But, in absence of any such guidelines, the Member Secretary informed the Committee that until there is any such standard guidelines, as requested by PP, the exit velocity of 18.3 m/s, cannot be aceded to. The Committee also agreed on the suggestion of Member Secretary.

(39.5.5) The committee discussed on the issues of keeping the minimum value of exit velocity of the stack that the exit velocity needs to be sufficient to establish a plume height that will adequately dissipated (even in "no wind conditions") in order to prevent exhaust stress on the local environment. Further, the Member Secretary informed that the current size of the chimney and for maximum flume rate (100% PLF), the exit velocity needs to be adequate for air dissipation. There are studies with the increase exit velocity and stack gas temperature, plume rise increases under all stability conditions and as such needs to be planned and considered at the initial stages of plant set up in order to have

minimum GLC of air pollutants from such plants even if FGD and other pollution control equipment are to be installed.

(39.5.5) **Committee after detailed deliberations, recommended for amendment in EC for change in coal source from Machakata Mines to WCL/SECL/MCL mines and change in flue gas exit velocity** subject to following additional conditions:

- i. The coal transportation is to be done by rail only.
- ii. The ash content in coal to be ensured based on Ministry's notification dated 02.01.2014 and subsequent amendments.
- iii. Water consumption in the FGD, in case of wet lime dosing, and management of gypsum including its land requirement shall be provided.
- iv. A study with the increase exit velocity and stack gas temperature is to be carried out to find out the increase in plume rise under all stability conditions to have minimum GLC of air pollutants from such plants even if FGD and other pollution control equipment are to be installed. Based on such study, a report be submitted to the Ministry for taking a decision to fix the exit velocity of the stack.

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**(39.6) 2x660 MW Super Critical Thermal Power Plant at Village Koradi, Tahsil Kamptee, District Nagpur, Maharashtra by M/s Maharashtra State Power Generation Company Limited (MAHGENCO)- reg. re-consideration for ToR.
(F.No. J-13012/87/2007-IA.I(T) & Proposal No. IA/MH/THE/102533/2019)**

(39.6.1) M/s Maharashtra State Power Generation Company Ltd.(MAHGENCO) has applied for grant of Terms of Reference (ToR) on 20.4.2019 for establishing 2x660 MW Power Project in the premises of 2x210 MW & 3x660 MW Koradi Power Plant near Village Koradi, Tehsil Kamptee, District Nagpur.

(39.6.2) The proposal of ToR was earlier considered by the EAC in its meeting held on 28.5.2019 and the committee recommended for a site visit by the Sub-committee to review the pollution levels in the surrounding area, emissions from the operating power plants, impact on Nagpur and Koradi towns, review the implementation of pollution control equipment, availability of land without compromising the greenbelt area. The Committee visited Koradi Power Plant during 01st -3rd August, 2019 and submitted its site visit report.

(39.6.3) The site visit report has been placed before EAC in its meeting held on 23rd August, 2019 and the committee suggested that Project Proponent should submit the action plan to the observations made in the site visit report for reducing the pollution levels in the area.

(39.6.4) The action plan to the observations made by the sub-committee has been submitted by the Project Proponent on 20.11.2019. The action plan was

appraised by the EAC in its meeting held on 4.12.2019 and the committee deferred the proposal for submitting the revised map showing operational units, proposed project and to cover 33% greenbelt of the total area and map showing piezometric wells around the ash pond. Simultaneously, Ministry may take the action on non-compliances regarding FGD installation and other issues mentioned in the site visit report.

(36.5.5) Show-cause notice was issued to M/s Mahagenco vide Ministry's letter dated 29.1.2020 for non-compliances regarding non-functioning of ETP and AWRS, emissions exceeding the standards, discharging effluents into open drains, and not establishing piezometric wells around ash pond. Subsequently, Proponent submitted the action plan to fulfill the non-compliances which is examined by the Ministry.

(39.6.6) Project Proponent also submitted the reply to the EAC queries sought on 4.12.2019 regarding ensuring 33% greenbelt and establishment of piezometric wells around ash pond. Accordingly, the proposal was considered in the present meeting.

(39.6.7) Project Proponent along with Environment Consultants M/s Pollution and Ecology Control Services, Nagpur made the presentation and inter-alia submitted the following information:

- i. **Revised map showing project, 33% greenbelt of the total area:** 44 acres of GBD out of 176 acres of project area is 25%. To make up 33%, it is proposed to add 104 ha (260 acres). Accordingly, total project area including existing units is 652 ha (1670 acres) and the GBD is 215 Ha (550 acres) which comes to 33%.
- ii. **Map showing piezometric wells around ash pond:** 3 piezo wells marked on map around existing ash pond.
- iii. **Action on non-compliances:** Show-cause notice issued by Ministry on 29.1.2020. Action plan was also submitted to Ministry. The salient points are mentioned below:
 - i. FGD could not be set up in one unit. Waiver was sought from the Ministry. However, it was declined.
 - ii. Now, technical bids were received for FGD for 3 existing units. Approval of board of directors was sought for placing Letter of Award. Installation will be completed by extended timelines given by CPCB.
 - iii. ETP made has been made functional. Online connectivity of emissions and effluents was done with CPCB.
 - iv. Ash recovery pumps was made functional at Khasara ash pond. Ash recovery water at Koradi is sent to ETP for treatment.
 - v. Piezometric wells around existing ash pond will be established by June, 2020

(39.6.8) On 17.04.2020 the PP has given an undertaking that in case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant

of fresh ToR. If any deviation is noticed subsequent to grant of fresh ToR, the ToR shall be liable to be withdrawn at the cost of the project proponent.

(39.6.9) Committee noted that the main issue for deciding the ToR was availability of sufficient land without compromising 33% greenbelt and the existing pollution levels. As far as land is concerned, project proponent has attached additional 104 ha to make up 33% of greenbelt in an area of 250 ha. The second issue is the pollution levels within the Koradi and surrounding areas. At present Project Proponent has not installed FGD for any unit. It is expected to implement and meet emission norms by 2022 as per the extension given by time lines. Further, Ministry issued a show-cause notice for which a separate action will be taken by the Ministry to deal with non-compliances as per the guidelines. Further, Member Secretary briefed that Ministry issued an amendment to EIA notification vide dated 17.2.2020 which mentions that Standard ToR will be issued to expansion projects (having EC from MoEF for existing units) without referring to EAC within 7 days of acceptance.

(39.6.9) Committee after detailed deliberations recommended the following ToRs in addition to the standard ToRs:

- i. The EIA study and assessment pollution load and impact prediction shall be carried out for two scenarios, i.e. Scenario-1: One unit of 660 MW proposed project and existing Koradi units; Scenario-2: Two units of 660 MW proposed project and existing Koradi units. Further, the assessment is to be done based on actual status of pollution without FGD and with FGD, as the FGD is yet to be implemented.
- ii. The issue of ToR for two units does not guarantee the Environmental Clearance. The decision on which shall be taken only after assessment of the pollution load and incremental pollution of both scenarios as above.
- iii. The Status Compliance to the issues mentioned in the Ministry's Show-cause letter dated 29.1.2020 shall be submitted.
- iv. The status of action plan to be submitted as per the recommendations/ observations of the Sub-committee in its visit during 01st -3rd August, 2019.
- v. The water requirement from the proposed project shall be met from Treated Sewage Water from Nagpur City. Status of transportation pipelines is to be submitted.
- vi. The fly ash generation & utilisation vis-a-vis 100% utilisation target as per the Flyash Notification in the last five years is to be submitted.
- vii. Emissions of existing units in comparison with emission standards will be provided.

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(39.7) 5x270 MW Coal based TPP at Sinnar Industrial Area, Dist. Nasik, Maharashtra by M/s RattanIndia Nasik Power Ltd.- reg. amendment of EC for temporary permission for transportation of coal by road. (F.No. J-13012/11/2008-IA.II(T)& Proposal No. IA/MH/THE/139686/2020)

(39.7.1) Project Proponent submitted online application on 11.3.2020 for extension of permission to transport coal by road for two units from two routes Ekhlahare Railway siding (35 km) and Igatpuri railway siding (70 km).

(39.7.2) The following clearances were issued till date for the 5x270 MW Thermal Power Plant:

- i. Environment Clearance for 5x270 MW coal based Thermal Power Plant in District Nashik, Maharashtra was accorded to M/s Indiabulls Realtech Limited vide Ministry's letter dated 28.07.2010 which was valid for five years.
- ii. Temporary permission for transporting coal by road for *one year* (till 24.8.2015) was issued vide Ministry's letter dated 25.8.2014.
- iii. The validity of the EC was also for a period of two years, i.e. till 27.7.2017 and temporary permission for transportation of coal by road was extended for another *two years* (i.e. till 24.8.2017) to M/s RattanIndia Nasik Power Ltd. vide Ministry's letter dated 10.2.2016 as the company assets were transferred to M/s RattanIndia Nasik Power Ltd.
- iv. Temporary permission for road transportation was extended *till March, 2020* for 9600 Tonnes per day from four three (i.e. Rahuri siding, Ekhlahare siding, and Igatpuri siding) vide Ministry' letter dated 30.4.2019.

(39.7.3) Project Proponent along with consultants M/s GreencIndia Consulting Pvt. Ltd. made the presentation and inter-alia submitted the following information:

- i. All 5 Units of Nasik Plant were commissioned by May, 2017 but due to lack of PPA the plant could not generate power. However permission for road transportation of coal was got extended up to 31.03.2020 vide letter dated 30.04.2019.
- ii. There had been no further PPA opportunities and the 650 MW PPA signed earlier with MSEDCL could not be operationalized due to litigation by another Company (M/s Sai Wardha Power) on the ground that opportunity to supply power had not been provided to it.
- iii. As the STPL Units are not operational, the Lenders Consortium has stopped funding for the remaining Railway siding works. Only critical Plant preservation activities are being taken up for keeping it ready for operation as required.
- iv. The dispute regarding 650 MW PPA has been ultimately resolved by MERC by hiving off share of STPL (650 MW) & Adani Power (440 MW) and re-distribution to STPL (507 MW), APML (343 MW) & Sai Wardha Power (240 MW) with Tariff @ Rs. 3.28/ kWh.
- v. On MERC direction, MSEDCL has issued LOI to STPL for supplying 507 MW by signing PPA along with Contract Performance Bank Guarantee (CPBG) of Rs. 153 Crores. The matter has been accordingly taken up with Lenders Consortium with Power Finance Corporation (PFC) as Lead Lender for arranging CPBG and Working Capital for plant operation to supply power to MSEDCL.

- vi. Pursuant to the Revised Circular of Reserve Bank of India (RBI) dated 07.06.2019, Lenders are presently in the process of formulating a suitable Resolution Plan for STPL. We are in the process of securing Working Capital & other Non- fund based support from Lenders for execution of PPA and operationalization of 2 Units to meet MSEDCL PPA requirement.
- vii. While the bankers are sympathetic to our cause in the backdrop of sectoral challenges, they have their own procedural formalities to be completed before CPBG can be furnished.
- viii. In the recent meeting Chaired by Hon'ble Minister of State (IC) for Power and NRE on 21.10.2019, PFC highlighted the issues of projects having PPA and FSA like STPL who were facing problems in obtaining Working Capital loan from the lenders. The concerned banks were accordingly advised by the Hon'ble Minister for resolving the issue of Working Capital being faced by power projects with operating/commissioned units.
- ix. It is now well known that many coal based thermal power plants are stressed due to various reasons majority pertaining to sectoral challenges. This project despite of commissioning of all units categorised under stressed assets.
- x. Two Units can be operationalized within 3 months period from signing of PPA i.e. by June, 2020.
- xi. After start of operations of two units, Lenders will allow disbursement of funds for railway siding and the balance works of railway siding will be started immediately to ensure completion by March, 2022.
- xii. The company made investment of more than 9,500 Crores in Nasik Project. It is pertinent to mention that many thermal power plants in the country are currently stressed mostly due to non availability of PPA/FSA. All out efforts are being made by Ministry of Power to revive such Power Plants and the results are now showing up slowly. STPL already has FSA in place and now LOI for 507 MW PPA has been received from MSEDCL.
- xiii. As the Plant could not be operated due to non availability of PPA and as such no Coal Transportation by road could be undertaken since commissioning.
- xiv. Now since PPA for 2 Units is about to be signed, we request for permission for coal transportation for 400 trucks only from 2 different routes (200 from each route) for which traffic survey has been conducted. For modeling and Impact Assessment purpose worst case scenario has been considered i.e. 400 trucks from each route.
- xv. Water for the project has been allocated from sewage treated water of Nasik Municipal Corporation. Cross-country GRP Pipeline has been laid for entire length of 29.47 kms from Eklahare Pump House upto Plant.
- xvi. Coal linkage for the project has been granted by Coal India Limited. Fuel Supply Agreement for 4.1808 MTPA has been signed with SECL and MCL.

- xvii. Coal for this plant is to be transported from SECL/MCL coal fields by railways up to the nearby Odha Railway Station near Nasik. Accordingly a 29.5 Km long dedicated Railway Siding was envisaged to connect Odha Railway Station with the Plant site.
- xviii. Accordingly 184 Ha land was acquired through Govt. of Maharashtra (MIDC) by making full payment of 140 Cr. However possession of ~ 76% land (142 Ha in patches) has been made available and balance ~42 Ha land is awaited.
- xix. Moreover land in possession is not contiguous and small pieces/parcels of land are yet to handed over to the Company making progress slow & difficult.
- xx. The route involves construction of total 58 bridges comprising 2 nos. Major river bridges, 19 nos. RUB, 8 nos ROB, 27 nos. Cross Drainage and 1 no. Tunnel.
- xxi. Presently 26 out of the 58 major and minor bridges have been completed and 41% of the earthwork has been completed.
- xxii. The existing traffic volumes of the both routes considering the 400 trucks from each route are mentioned as below:

Route	Traffic point	Design Volume (PCU/day)	Existing Traffic	Resultant traffic including proposed Traffic	% Utilisation
Common for both Routes: Ekhlahare siding	Devur Phata (NH160)	60,000	19,046	19,998	33%
Route-1: Ekhlahare siding	MIDC Sinnar (NH-50)	60,000	40,551	42,579	71%
Route-2: Igatpuri siding	Dhamangaon (MDR)	25,000	11,416	11,987	48%
Route-2: Igatpuri siding	Ghoti Budruk (NH-3)	60,000	65,528	68,805	115%

- xxiii. The ambient air quality along the route has been monitored and the air quality is within the national ambient standards. Further, the incremental air pollution from proposed traffic is estimated to be in the range of 0.05-1 $\mu\text{g}/\text{m}^3$. Accordingly, the resultant concentrations are within the standards.

Station	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)	CO (mg/m ³)

Devur Phata (NH160)	63.3	25.1	14.4	21.1	0.7
MIDC Sinnar (NH-50)	62.5	26.3	15.6	24.3	0.8
Dhamangao (MDR)	61.8	26	13.6	22.6	0.9
Ghoti Budruk (NH-3)	64.5	28.4	15.2	24.6	0.9

(39.7.4) On 17.04.2020 the PP has given an undertaking that in case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of amendment of EC i.e for temporary permission of transportation of coal by road. If any deviation is noticed subsequent to grant of amendment of EC, the amendment of EC shall be liable to be withdrawn at the cost of the project proponent.

(39.7.5) Committee noted that the railway siding could not be completed due to non-availability of funds as the power plant was categorised as stressed asset. Proponent also informed that though the plant was commissioned in May, 2017, the plant was not in operation due to lack of PPA. Proponent has resolved issues with MSEDCL and expected to sign PPA with two units. After running the two units, the funds required for railway line will be released by banks based on performance. Further, out of two routes proposed for road transportation, the route of Igatpuri siding is congested and the existing traffic itself is 109% and the proposed incremental traffic of 400 trucks will further increase the traffic utilisation to 120-135%. Firstly, the committee is of the opinion that the requested quantity of 16000 Tonnes/day coal is not needed as only two units are intended to be run initially. Accordingly, committee felt that the coal quantity required for two units which is approx. 7000 Tonnes/day may be allowed. As the existing traffic from Igatpuri route has already exceed its design volume, only bear bear minimum incremental traffic is to be permitted. The number of trucks along Igatpuri route is to be reduced to 100 trucks/day from 400 trucks/day. The remaining quantity with 250 trucks/day may be allowed from Eklahare siding which is the shortest route of 35 km from the plant.

(39.7.6) Committee after detailed deliberations, **recommended for permission for transportation of 7000 Tonnes/day for a period of two years, i.e. till March, 2022** from the following routes:

Sl.No.	From	Distance	Number of trucks per day (20 T Capacity)	Quantity of Coal
1	Eklahare Railway siding	35 km	250	5000 TPD
2	Igatpuri Railway siding	70 km	100	2000 TPD
Total			350 trucks	7,000 TPD

(39.7.6) The following additional conditions shall be stipulated:

- i. The conditions stipulated in the Ministry's permission dated 30.4.2019 shall be complied with w.r.t. transportation of coal by road.
- ii. The statement of fly ash generation and its utilisation/disposal shall be submitted.
- iii. The status and implementation of pollution control measures (both physical and financial) in line with the new emission norms vide Ministry's notification dated 7.12.2015 shall be submitted.

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**(39.8) Expansion of Obra TPP by addition of 2x660 MW at Obra, Tehsil Robertsganj, District Sonbhadra, Uttar Pradesh by M/s Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.- reg. EC amendment for additional ash dyke.
(F.No.J-13012/144/2007-IA.II(T) & Proposal No.IA/UP/THE/134383/2019)**

(39.8.1) Project Proponent has submitted online application on 31.12.2019 for amendment in EC for permission to construct new ash dyke in an area of 400.41 acres (162.04 ha) at Villages Chanchalia-Panari & Tola-Guroor.

(39.8.2) The proposal was earlier considered by the EAC in its meeting held on 23.1.2020 and sought the following additional information:

- i. The details of generation of ash from existing 5x200 MW and proposed 2x660 MW power projects. The details of coal consumption, ash content and source of coal including transportation may also be furnished.
- ii. The available volume & area of existing ash ponds vis-à-vis present generation of ash. The volume availability versus generation is to be estimated based on dyke height raise and ash generation from existing & proposed projects.
- iii. The action plan for ash disposal/utilisation for the life of power plant to achieve 100% utilisation in light of directions from Hon'ble NGT in the matter of Shantanu Sharma vs UoI.
- iv. The potential of using stone quarries/abandoned coalmines nearby power plant. The use of ash in cement industries.

- v. The plan to avoid forest land, agricultural land and community lands. Further, the status of forest land proposed for ash pond is to be provided whether it is reserve forest, protected forest or village forest.

(39.8.3) Project Proponent has submitted the information sought by EAC. Accordingly the proposal has been considered in the present EAC meeting. Project Proponent along with technical consultants M/s NTPC Ltd. have made the presentation and inter-alia submitted the following information:

- i. The average ash generation during last 5 years from Obra-B TPP (5x200 MW) is about 1.3 MTPA. About 3.25 MTPA Coal is being sourced from coal mines of NCL and CCL with ash content about 40% through railway wagons. The estimated ash generation from proposed 2x660 MW Power Project would be 1.9 MTPA considering 35% ash content.

Year	Energy Generation (MU)	Ash Generation (Lakh Tonnes)	Ash Utilisation (Lakh Tonnes)	Ash utilisation (%)
FY 2014-15	3128.72	13.47	3.09	22.94%
FY 2015-16	3445.04	14.77	2.92	19.77%
FY 2016-17	3360.97	13.85	3.83	27.66%
FY 2017-18	4107.18	13.26	2.25	16.97%
FY 2018-19	3292.66	9.75	0.9	9.26%

- ii. The area of existing ash dyke at Chakari is about 70 Ha with available volume of pond ash about 115 lakh m³.
- iii. Pondage capacity created during the 1st raising of ash dyke shall be exhausted in 14 months (by July, 2021). The Pondage Capacity created during the 2nd and 3rd raisings shall be exhausted in next 25 months (by August, 2023).
- iv. The available volume of existing Chakari ash pond (70 ha) after raising the dyke height and its life is estimated as below:

Details	First raising (4.5 m)	Second and third raising (4 m each)
Available volume	10.3 Lakh m ³	44.88 Lakh m ³ .
The quantity of ash generation	2808 MT/day from 5x200 MW	9360 MT/day from both 5x200 MW and 2x660 MW
Life of ash pond	13.6 months (till July, 2021)	25 months (till August, 2023)

- v. Obra TPP is making its best efforts for 100% utilization of ash as per directions from Hon'ble NGT in the matter of Shantanu Sharma Vs UoI. The details are as below:
- a. Cement Sector : There are 16 cement plants within 300 km of Obra TPP, however, only three cement plants of Jaypee (Chunar & Churk), Ultratech Cement, Dalla located near Obra TPS agreed to lift the ash.
 - b. Ready Mix Concrete (RMC) Plants : No major construction activities in region. However, Obra TPP will encourage the entrepreneurs to install RMC plants for future requirement.
 - c. Fly ash Bricks: It is anticipated that fly ash brick plants will lift 2000 Ton/year and 9500 Ton/year fly ash from Obra TPP (B&C) during 2021-22 and 2022-23 respectively. Obra TPP shall set up fly ash brick manufacturing plant at ObraTPP. The bricks produced would be utilized for in-house construction works and also to make available fly ash bricks in the vicinity. This shall also encourage other brick manufacturers in the vicinity to use fly ash.
 - d. Road and Highway Development: NHAI has a plan for 4 laning of Sultanpur to Varanasi Section of Ghaghara Bridge to Varanasi Section of NH-133. The other State Highways and village roads can also be developed using ash from the said power station. This will create a demand of 22,000 TPA and 32,000 TPA of ash during 2021-22 and 2022-23 respectively.
 - e. Filling of Voids in Stone Quarries : 7 nos. abandoned stone quarries having pondage capacity 6.8 lakh tonnes with average depth 20 m, having total area 8.4 acres which have been earmarked by District administration for ash filling. There are about 52 abandoned dolomite stone quarries over an area of 104.915 acres in village Billi Markundi, Dist. Sonebhadra with an estimated capacity about 84.90 lakh Cum of ash disposal. UPRVUNL is in consultation with district administration and forest department for disposal of ash. However, various issues associated with these quarries like ownership disputes and NOC from forest department are beyond the control of UPRVUNL. It was estimated that about 84,89,722 Cum of ash can be disposed in to these voids as per guidelines of pollution control board. After filling of quarries with ash, plantation can be done after laying a layer of soil.
 - f. Coal Mining Segment : UPVRUNL has approached to NCL for allocation of any abandoned coal mine for ash filling. It was informed by NCL authorities that currently, Gorbi Mines is only abandoned Mines available for ash disposal which has already been allocated to NTPC Vindhychal STPP.

- vi. There is forest land involved in proposed ash pond at Guroor village which is reserve forest as per Survey of India toposheet no. 63L/15 and DFO letter dated 13.02.2020.
- vii. W.r.t. avoiding forest land, it is submitted that the forest land is in scattered in various patches and fringes. While the forest land in patches cannot be avoided at all, avoiding forest land in fringe will make the boundary of the ash dyke highly irregular leading to significant loss of storage capacity. Therefore it is not feasible to avoid the forest land. However, excluding the area along Renuka River, the net land requirement for the ash dyke would be 124.76 Ha.
- (39.8.4) On 17.04.2020 the PP has given an undertaking that in case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of amendment in EC. If any deviation is noticed subsequent to grant of amendment in EC, the amend of EC shall be liable to be withdrawn at the cost of the project proponent.
- (39.8.5) Committee noted that project proponent is planning to increase the dyke height of existing Chakari ash pond of in 70 ha which will create 115 lakh m³ and will last about 40 months (more than 3 years) considering the current trend of utilisation. As per the NGT directions, in a move to achieve 100% flyash utilisation, project proponent submitted an action plan which will reach its target by 2022-23 in a phased manner. The proposed ash pond also has forest land of 39.69 ha (98 acres) for an application for forest clearance has been submitted. Committee noted that the reserve forest land should not be used for ash disposal unless there is dire need.
- (39.8.5) **Committee after detailed deliberations, recommended for allowing emergency ash pond of 0.1 ha area for MW excluding the forest land, i.e. 132 ha** subject to following conditions:
- i. The status of implementation of flyash utilisation plan submitted as per the NGT directions shall submitted as part of compliance report.
 - ii. The penalty if any determined by the CPCB for not achieving 100% ash utilisation shall be paid. An undertaking in this regard shall be submitted.
 - iii. The proponent shall explore the abandoned stone quarries available nearby for backfilling of ash in these mines. As estimated, the volume of 6.8 lakh tonnes with average depth 20 m and area of 8.4 acres shall be explored for backfilling.
 - iv. The statement of ash generation, utilisation and disposal into ash pond, available volume of ash ponds & its residual life vis-a-vis 100% utilisation target as per Ministry's Flyash Notification shall be submitted to the Ministry as part of compliance report.

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(39.9) 2x800 MW (Phase-I) Imported coal based Sri Damodaram Sanjeevaiah Thermal Power Project at Nelaturu Village, Muthukuru Mandal, SPSR Nellore District, Andhra Pradesh by M/s Andhra Pradesh Power Development Corporation Ltd.- reg. re-consideration for permission ash pond for addition.

(File No. J-13012/25/2012-IA.II(T) & Online No. IA/AP/THE/114419/2007)

(39.9.1) M/s Andhra Pradesh Power Development Corporation Ltd. submitted online application dated 13.08.2019 for amendment in EC for increasing the ash pond area from 130 acres to 200 acres.

(39.9.2) The Environmental Clearance for 2x800 MW Thermal Power Plant vide dated 17.7.2007 initially allowed only 100 acres of ash pond as an emergency ash pond. Subsequently, Ministry vide letter dated 3.9.2019 allowed to use additional 30 acres ash pond.

(39.9.3) Subsequently, Project Proponent approached to increase the ash pond for additional 70 acres in addition to 130 acres (100 acres+ 30 acres) which was already permitted stating that APPCB restricted the height of 30 acres ash pond to 2 m due to proximity of a village to ash pond. The proposal was considered by the EAC in its meeting held on 23.8.2019 and the committee didn't recommend for granting permission of using another land of 70 acres for using ash pond.

(39.9.3) However, the Ministry considering the request of proponent for the urgent need to dispose ash in the additional ash pond, granted permission to use another 30 acres (Total: 100 acres + 30 acres + 30 acres) vide letter dated 27.2.2020. However, Project Proponent had given the commitment of 100% flyash utilisation as per the agreements with Inpower cements: 3000 MT/Day, Penna Cements: 1500 MT/day, NCL Altek (Bricks): 350 MT/day would be materialised by March, 2020. Considering the implementation of agreements with ash users, Ministry decided that the proposal is to be referred to EAC for assessing the additional requirement of ash pond. Further, Ministry decided that a sub-committee would conduct site to assess the ash utilisation and need for further ash pond requirement. Accordingly, the proposal was placed before EAC in this meeting.

(39.9.5) On 21.04.2020 the PP has given an undertaking that in case of any deviation in data found in any of the documents, the Authorized Signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of amendment in EC. If any deviation is noticed subsequent to grant of amendment of EC, the amendment of EC shall be liable to be withdrawn at the cost of the project proponent.

(39.9.6) Committee noted that the Ministry has recently granted additional 30 acres of ash pond to the proponent. Accordingly, proponent can use this area for disposing unutilised ash from the plant. **As per the Ministry's decision to constitute a committee, the sub-committee comprising of following members is formed for conducting site visit :**

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| i. | Dr. Navin Chandra | - | Chairman |
| ii. | Shri Suramya Vora | - | Member |

- iii. Shri Gururaj Kundargi - Member
- iv. Dr. S.K. Paliwal - Member
- v. Dr. S. Kerketta - Member Secretary

(39.9.5) The report of the sub-committee after conducting site visit to be examined by the EAC. The sub-committee should conduct site visit after subsiding the COVID-19 pandemic.

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/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided.
- xi) If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents.
- xii) The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report.
- xiii) Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided.
- xiv) Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of

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

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

- xxxvii) Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required.
- xxxviii) One complete season site specific meteorological and AAQ data (except monsoon season) as per latest MoEF Notification shall be collected and the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include 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.
- xliv) Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports.
- xliii) Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished.
- xliii) 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
- xliv) Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt.
- xlvi) For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted.

- xlvii) Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished.
- xlviii) EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified.
- xliv) 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.

Standard EC Conditions for Thermal Power Sector:

A. Statutory compliance:

1. Emission Standards for Thermal Power Plants as per Ministry's Notification S.O. 3305(E) dated 7.12.2015, G.S.R.593(E) dated 28.6.2018 and as amended from time to time shall be complied.
2. Part C of Schedule II of Municipal Solid Wastes Rules, 2016 dated 08.04.2016 as amended from time to time shall be complied for power plants based on Municipal Solid Waste.
3. MoEF&CC Notification G.S.R 02(E) dated 2.1.2014 as amended time to time regarding use of raw or blended or beneficiated/washed coal with ash content not exceeding 34% shall be complied with, as applicable.
4. MoEF&CC Notifications on Fly Ash Utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 as amended from time to time shall be complied.
5. Thermal Power Plants other than the power plants located on coast and using sea water for cooling purposes, shall achieve specific water consumption of 2.5 m³/MWh and Zero effluent discharge.
6. The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
7. No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance.
8. Groundwater shall not be drawn during construction of the project. In case, groundwater is drawn during construction, necessary permission be obtained from CGWA.

B. Ash content/ mode of transportation of coal:

1. EC is given on the basis of assumption of ____% of ash content and ____km distance of transportation in rail/road/conveyor/any other mode. Any increase of %ash content by more than 1 percent, and/or any change in transportation mode or increase in the transport distance (except for rail) require application for modifications of EC conditions after conducting the 'incremental impact assessment' and proposal for mitigation measures.

C. Air quality monitoring and Management:

1. Flue Gas Desulphurisation System shall be installed based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO₂ emissions standard of 100 mg/Nm³.
2. Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SNCR) system or Low NOX Burners with Over Fire Air (OFA) system shall be installed to achieve NO_x emission standard of 100 mg/Nm³.
3. High efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission to meet the stipulated standards of 30 mg/Nm³.
4. Stacks of prescribed height ____m shall be provided with continuous online monitoring instruments for SO_x, NO_x and Particulate Matter as per extant rules.
5. Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.

6. Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM₁₀, PM_{2.5}, SO₂, NO_x within the plant area at least at one location. The monitoring of other locations (at least three locations outside the plant area covering upwind and downwind directions at an angle of 120° each) shall be carried out manually.
7. Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
8. Appropriate Air Pollution Control measures (DEs/DSs) be provided at all the dust generating sources including sufficient water sprinkling arrangements at various locations viz., roads, excavation sites, crusher plants, transfer points, loading and unloading areas, etc.

D. Noise pollution and its control measures:

1. The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
2. Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
3. Periodical medical examination on hearing loss shall be carried out for all the workers and maintain audiometric record and for treatment of any hearing loss including rotating to non-noisy/less noisy areas.

E. Human Health Environment:

1. Bi-annual Health check-up of all the workers is to be conducted. The study shall take into account of chronic exposure to noise which may lead to adverse effects like increase in heart rate and blood pressure, hypertension and peripheral vasoconstriction and thus increased peripheral vascular resistance. Similarly, the study shall also assess the health impacts due to air polluting agents.
2. Baseline health status within study area shall be assessed and report be prepared. Mitigation measures should be taken to address the endemic diseases.
3. Impact of operation of power plant on agricultural crops, large water bodies (as applicable) once in two years by engaging an institute of repute. The study shall also include impact due to heavy metals associated with emission from power plant.
4. Sewage Treatment Plant shall be provided for domestic wastewater.

F. Water quality monitoring and Management:

1. Induced/Natural draft closed cycle wet cooling system including cooling towers shall be set up with minimum Cycles of Concentration (COC) of 5.0 or above for power plants using fresh water to achieve specific water consumption of 2.5 m³/MWhr. (Or) Induced/Natural draft open cycle cooling system shall be set up with minimum Cycles of Concentration (COC) of 1.5 or above for power plants using sea water.
2. In case of the water withdrawal from river, a minimum flow 15% of the average flow of 120 consecutive leanest days should be maintained for environmental flow whichever is higher, to be released during the lean season after water withdrawal for proposed power plant.

3. Records pertaining to measurements of daily water withdrawal and river flows (obtained from Irrigation Department/Water Resources Department) immediately upstream and downstream of withdrawal site shall be maintained.
4. Rainwater harvesting in and around the plant area be taken up to reduce drawl of fresh water. If possible, recharge of groundwater to be undertaken to improve the ground water table in the area.
5. Regular (at least once in six months) monitoring of groundwater quality in and around the ash pond area including presence of heavy metals (Hg, Cr, As, Pb, etc.) shall be carried out as per CPCB guidelines. Surface water quality monitoring shall be undertaken for major surface water bodies as per the EMP. The data so obtained should be compared with the baseline data so as to ensure that the groundwater and surface water quality is not adversely impacted due to the project & its activities.
6. The treated effluents emanating from the different processes such as DM plant, boiler blow down, ash pond/dyke, sewage, etc. conforming to the prescribed standards shall be re-circulated and reused. Sludge/ rejects will be disposed in accordance with the Hazardous Waste Management Rules.
7. Hot water dispensed from the condenser should be adequately cooled to ensure the temperature of the released surface water is not more than 5 degrees Celsius above the temperature of the intake water.
8. Based on the commitment made by the Project Proponent, Sewage Treatment Plants within the radius of 50 km from proposed project, the treated sewage ofKLD from STP (name) shall be used as an alternative to the fresh water source to minimize the fresh water drawl from surface water bodies.
9. Wastewater generation ofKLD from various sources (viz. cooling tower blowdown, boiler blow down, wastewater from ash handling, etc) shall be treated to meet the standards of pH: 6.5-8.5; Total Suspended Solids: 100 mg/l; Oil & Grease: 20 mg/l; Copper: 1 mg/l; Iron:1 mg/l; Free Chlorine: 0.5; Zinc: 1.0 mg/l; Total Chromium: 0.2 mg/l; Phosphate: 5.0 mg/l;
10. Sewage generation ofKLD will be treated by setting up Sewage Treatment plant to maintain the treated sewage characteristics of pH: 6.5-9.0; Bio-Chemical Oxygen Demand (BOD): 30 mg/l; Total Suspended Solids: 100 mg/l; Fecal Coliforms (Most Probable Number):<1000 per 100 ml.

G. Risk Mitigation and Disaster Management:

1. Adequate safety measures and environmental safeguards shall be provided in the plant area to control spontaneous fires in coal yard, especially during dry and humid season.
2. Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made as per the extant rules in the plant area in accordance with the directives of Petroleum & Explosives Safety Organisation (PESO). Sulphur Content in the liquid fuel should not exceed 0.5%.
3. Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
4. Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
5. Regular mock drills for on-site emergency management plan and Integrated Emergency Response System shall be developed for all kind of possible disaster situations.

H. Green belt and Biodiversity conservation:

1. Green belt shall be developed in an area of 33% of the total project with indigenous native tree species in accordance with CPCB guidelines. The green belt shall inter-alia cover an entire periphery of the plant.
2. *In-situ/ex-situ* Conservation Plan for the conservation of flora and fauna should be prepared and implemented.
3. Suitable screens shall be placed across the intake channel to prevent entrainment of life forms including eggs, larvae, juvenile fish, etc., during extraction of seawater.

I. Waste management:

1. Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
2. Toxicity Characteristic Leachate Procedure (TCLP) test shall be conducted for any substance, potential of leaching heavy metals into the surrounding areas as well as into the groundwater.
3. Ash pond shall be lined with impervious liner as per the soil conditions. Adequate dam/dyke safety measures shall also be implemented to protect the ash dyke from getting breached.
4. Fly ash shall be collected in dry form and ash generated shall be used in phased manner as per provisions of the Notification on Fly Ash Utilization issued by the Ministry and amendment thereto. By the end of 4th year, 100% fly ash utilization should be ensured. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry. Mercury and other heavy metals (As, Hg, Cr, Pb, etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. Flyash utilization details shall be submitted to concerned Regional Office along with the six-monthly compliance reports and utilization data shall be published on company's website.
5. Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry/Medium Concentration Slurry/Lean Concentration Slurry method. Ash water recycling system shall be set up to recover supernatant water.
6. In case of waste-to-energy plant, major problems related with environment are fire smog in MSW dump site, foul smell and impacts to the surrounding populations. Therefore, the following measures are required to be taken up:
 - i) Water hydrant at all the dumpsites of MSW area to be provided so that the fire and smog could be controlled.
 - ii) Sprayer like microbial consortia may be provided for arresting the foul smell emanating from MSW area.

J. Monitoring of compliance:

1. Environmental Audit of the project be taken up by the third party for preparation of Environmental Statement as per Form-V & Conditions stipulated in the EC and report be submitted to the Ministry.
2. Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
3. Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report. Renewable Energy Purchase Obligation as set by MoP/State Government shall be

met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy Certificates.

4. Monitoring of Carbon Emissions from the existing power plant as well as for the proposed power project shall be carried out annually from a reputed institute and report be submitted to the Ministry's Regional Office.
5. Energy and Water Audit shall be conducted at least once in two years and recommendations arising out of the Report should be followed. A report in this regard shall be submitted to Ministry's Regional Office.
6. Environment Cell (EC) shall be constituted by taking members from different divisions, headed by a qualified person on the subject, who shall be reporting directly to the Head of the Project.
7. The project proponent shall (Post-EC Monitoring):
 - a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government;
 - b. upload the clearance letter on the web site of the company as a part of information to the general public.
 - c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at <http://parviesh.nic.in>.
 - d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically;
 - e. monitor the criteria pollutants level namely; PM (PM₁₀& PM_{2.5} in case of ambient AAQ), SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company;
 - f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB;
 - g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company;
 - h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project and the date of commencement of the land development work.

K. Corporate Environmental Responsibility (CER) activities:

1. CER activities will be carried out as per OM No. 22-65/2017-IA.II dated 01.05.2018 or as proposed by the PP in reference to Public Hearing or as

earmarked in the EIA/EMP report along with the detailed schedule of implementation with appropriate budgeting.

L. Marine facilities:

1. As the seawater intake systems are required for the plant fall in CRZ area, recommendations from State Coastal Zone Management Authority (SCZMA) as per CRZ Notification shall be implemented.
2. Marine intake and outfall pipelines shall be located as per the recommendations State Coastal Zone Management Authority (SCZMA).

M. Sea Water Intake:

1. Seawater intake system shall be so designed and constructed to ensure sufficient seawater in terms of quantity and quality.
2. The withdrawal of seawater shall be preferably through a pipeline with a riser equipped with a velocity cap arrangement and bar screen to arrest the impingement of large marine organisms.
3. In all tide conditions (particularly at spring low tides) the riser head must be flooded with the required submergence of seawater above its top.

N. Effluent Release:

1. At the effluent release point, maximum temperature of the discharge water shall not be more than 5°C and salinity shall not exceed 50 ppt with respect to that of the ambient seawater.
2. Use of antifouling agents like chlorine / hypochlorite, shall be carefully controlled. The chlorine concentration shall not exceed 0.2 ppm at the effluent release point.
3. The effluent when released at the selected location shall attain sufficient dilution so that near ambient water quality (particularly temperature and salinity) is attained within 500 m from the release location, at low tide.
4. The location of the diffuser shall be marked with a solar lighted buoy to avoid accidents.
5. The site selected based on mathematical modeling shall ensure absence of recirculation of the effluent plume in the seawater intake area under all tidal conditions.
6. The effluent shall be released through a properly designed multiport diffuser above the seabed to facilitate its efficient initial mixing with the receiving seawater.
7. Efficacy of the diffuser shall be ascertained at least once in 2 years through scientific studies and corrective actions such as cleaning of the diffuser from marine growth, removal of silt deposits, etc. shall be taken up, if warranted.
8. Continuous online monitoring system for Temperature and Salinity shall be installed to monitor the quality of effluent.

O. Common to intake and effluent:

1. The pipeline shall be buried below the seabed at a depth to ensure its stability under rough sea conditions particularly during cyclone / tsunami. The depth of burial will depend on the seafloor strata but normally the top of the pipeline shall be at least 1 m below the bed level. In the surf and intertidal zones, the pipeline shall be buried below the maximum scour level.

2. In case of open channel, the channel shall be constructed as per the recommendations of State Coastal Zone Management Authority (SCZMA).
3. If the substratum is rocky the pipeline may be anchored to the rock provided the geology of the area satisfactorily supports the structure which shall be ascertained through geo-technical investigations.
4. Exposed pipeline section and riser shall be protected by armour stone from waves, boats anchoring, fishing activities etc.
5. The location of the riser & diffuser shall be marked with a solar lighted buoy to avoid accidents from boats.
6. Marine / Sea water quality shall be monitored at effluent release location at the center. Parameters to be monitored shall be as follows:
 - a. *Physico-chemical*: Temperature, Salinity, pH and Dissolved Oxygen.
 - b. *Biological*: Primary Productivity, Phytoplankton (Chlorophyll a, Phaeophytin, Population, Species), Zooplankton (Biomass, Population, Species) and Benthos (Biomass, Population, Species).
7. In case of Coastal Power Plants, the Mangrove plantation shall be taken up in an area ofha, along the coast/ on the banks of Estuary.

Attendance List

Sl.No.	Name	Role	Signature
1.	Dr. Navin Chandra	Chairman	Sd/-
2.	Dr. N.P Shukla	Member	Sd/-
3.	Shri Suramya Vora	Member	Sd/-
4.	Shri Gururaj P. Kundargi	Member	Sd/-
5.	Shri Mohan Karnat,	Member	Sd/-
6.	Dr. Jai Krishna Pandey	Member	Sd/-
7.	Shri N.S. Mondal	Member (Representative of CEA)	Sd/-
8.	Dr. S.K. Paliwal	Member (Representative of CPCB)	Sd/-
9.	Prof. S.K. Gupta	Member (Rep. of ISM/IIT Dhanbad)	Sd/-
10.	Dr. S. Kerketta	Member Secretary, MoEF&CC	Sd/-

Approval of the Chairman

Email

s.kerketta66@gov.in

Re: Exit velocity of stack - reg

From : navinchandrarrl@yahoo.com

Fri, May 01, 2020 07:53 AM

Subject : Re: Exit velocity of stack - reg

To : Dr S Kerketta <s.kerketta66@gov.in>

Reply To : navin chandra <navinchandrarrl@yahoo.com>

01/05/2020

Dear Dr. Kerketta Ji,

I have gone through the MoM sent by you. The Minutes are in order and accordingly approved. These may be uploaded on the website of MoEF&CC.

Regards,
yours truly,

(NAVIN CHANDRA)

Dr. Navin Chandra,
Vice Chancellor, IES University, Bhopal
Chairman, Coal Mining & Thermal Power,
MoEF&CC, GOI, New Delhi.
Ex-Director General MPCST, Bhopal,
(Retd.) Director (Actg.), CSIR-AMPRI, Bhopal
Member, RC, CSIR-AMPRI, Bhopal.
Phone (Res.) 91-755-2454600
navinchandrarrl@yahoo.com, navinchandraampri@gmail.com

On Thursday, 30 April, 2020, 03:14:34 pm IST, Dr S Kerketta <s.kerketta66@gov.in> wrote:

Sir,

PFA for kind comments.

regards,

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

AGENDA OF 39th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE ON THERMAL POWER PROJECTS

DATE : 10th April, 2020
TIME : 11.00 A.M.- 1.00 PM
VENUE : VIDEO-CONFERENCE

ITEM	
Item No. 39.0	CONFIRMATION OF MINUTES OF 38th EAC (THERMAL) MEETING
Item No.	CONSIDERATION OF PROJECTS
39.1 Time Slot: 11:05-11:15 AM (10 min)	1x600 MW coal Based Thermal Power Plant at Villages Chhote Bhandar, Bade Bhandar, Sarvani and Amla Bhauna, Tehsil Pussore, District Raigarh, Chhattisgarh by M/s The Raigarh Energy Generation Ltd.-reg. extension of permission to transport coal by road. (F.No. J-13012/57/2008-IA.II (T) & Proposal No: IA/CG/THE/19988/2010)
39.2 Time Slot: 11:15-11:25 AM (10 min)	Expansion of 4x250 MW by addition of 4x600 MW Coal Based Thermal Power Plant at Tamnar, Tehsil Gharghoda, District Raigarh, Chhattisgarh by M/s Jindal Power Ltd.- reg. extension of permission to use existing dyke. (F.No.J-13012/117/2008-IA.II(T)& Proposal No. IA/CG/THE/147418/2020)
39.3 Time Slot: 11:25-11:45 AM (20 min)	3x800 MW NLC Talabira Thermal Power Project at Village Khumberi, Taraikela and Thelkolai, Tehsil and District Jharsuguda, Odisha by M/s NLC India Ltd -reg. Environment Clearance. (F.No. J-13012/14/2017-IA.I(T) & Proposal No. IA/OR/THE/67938/2017)
39.4 Time Slot: 11:45AM- 12:05PM (20 min)	1x800 MW Coal Based Supercritical Thermal Power Plant and Decommissioning of 2x120 MW Units at Ukai Thermal Power Plant at Vill. Vagda, Tehsil –Fort Songadh, District-Tapi, Gujarat by M/s Gujarat State Electricity Corporation Limited (GSECL)- reg. Environment Clearance. (F.No. J-13012/4/2018-IA.I(T) & Online No. IA/GJ/THE/144074/2018)
39.5 Time Slot: 12:05 -12:15 PM (10 min)	1x660 MW (Unit-VI) Super Critical Technology Bhusawal Coal Based TPP at Village Pimpri-Sekam, Bhusawal Taluk, Jalgaon District, Maharashtra by M/s Maharashtra State Power Generating Co. Limited –reg. amendment in EC. (F.No. J-13012/75/2010-IA.II(T)& Proposal No. IA/MH/THE/146614/2020)
39.6 Time Slot: 12:15 -12:25 PM (10 min)	2x660 MW Super Critical Thermal Power Plant at Village Koradi, TahsilKamptee, District Nagpur, Maharashtra by M/s Maharashtra State Power Generation Company Limited (MAHAGENCO)- reg. re-consideration for ToR. (F.No. J-13012/87/2007-IA.I(T) & Proposal No. IA/MH/THE/102533/2019)

<p>39.7 Time Slot: 12:25-12:40 PM (15 min)</p>	<p>5x270 MW Coal based TPP at Sinnar Industrial Area, Dist. Nasik, Maharashtra by M/s RattanIndia Nasik Power Ltd.- reg. amendment of EC for temporary permission for transportation of coal by road. (F.No. J-13012/11/2008-IA.II(T)& Proposal No. IA/MH/THE/139686/2020)</p>
<p>39.8 Time Slot: 12:40-12:50 PM (10 min)</p>	<p>Expansion of Obra TPP by addition of 2x660 MW at Obra, Tehsil Robertsganj, District Sonebhadra, Uttar Pradesh by M/s Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.- reg. EC amendment for additional ash dyke. (F.No.J-13012/144/2007-IA.II(T) & Proposal No.IA/UP/THE/134383/2019)</p>
<p>39.9 12:50-01:00 PM (10 min)</p>	<p>1x800 MW (Phase-II) Imported coal based Sri Damodaram Sanjeevaiah Thermal Power Project at Nelaturu Village, Muthukuru Mandal, SPSR Nellore District, Andhra Pradesh by M/s Andhra Pradesh Power Development Corporation Ltd.- reg. re-consideration for permission ash pond for addition. (File No. J-13012/25/2012-IA.II(T) & Online No. IA/AP/THE/114419/2007)</p>
<p>39.10</p>	<p>ANY OTHER ITEM WITH THE PERMISSION OF THE CHAIR.</p>