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File No: J-13012/99/2008-IA.II(T)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Date 07/05/2024



To,

Dr. Bholu Prasad Kushwaha
M/s MB POWER (MADHYA PRADESH) LIMITED
Village Laharpur, Jaithari, Anuppur District, ANUPPUR, MADHYA PRADESH, , 484330
bhola.kushwaha@hpppl.in

Subject: Expansion of existing Coal Based Sub-Critical Thermal Power Plant from 2X600 MW (1200MW) to 2X630 MW (1260 MW) under clause 7(ii)(a) in an area of 403.07 Ha (existing) at Villages Laharpur, Murra, Guwari, Belia & Jaithari, Tehsil Jaithari & Anuppur, District Anuppur (Madhya Pradesh) by M/s. M.B. Power (Madhya Pradesh) Ltd. - Environmental Clearance (EC) – reg.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/MP/THE/460983/2024 dated 05/02/2024 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC24A0601MP5267373N
(ii) File No.	J-13012/99/2008-IA.II(T)
(iii) Clearance Type	Fresh EC (Expansion under Ministry's OM dated 11.04.2022)
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(d) Thermal Power Plants, 8(a) Building / Construction
(vi) Sector	Thermal Projects Expansion of existing Coal Based Sub-Critical Thermal Power Plant from 2X600 MW (1200MW) to 2X630 MW (1260 MW) under clause 7(ii)(a) of EIA Notification 2006 amended from time to time at Villages: Laharpur, Murra, Guwari, Belia & Jaithari, Tehsil: Jaithari & Anuppur, District: Anuppur (Madhya Pradesh)
(vii) Name of Project	

(viii) Name of Company/Organization	MB POWER (MADHYA PRADESH) LIMITED
(ix) Location of Project (District, State)	ANUPPUR, MADHYA PRADESH
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. The Project Proponent M/s. MB Power (Madhya Pradesh) Limited (MBPMPL) and the accredited Consultant J.M Enviro Net Pvt. Ltd (Certificate No: NABET/EIA/2326/RA 0308 valid upto 7/8/2026) made a detailed presentation in the 6th EAC meeting held on 27.02.2024 and apprised following to the committee:

(i) The proposal is for the expansion of the existing Coal Based Sub-Critical Thermal Power Plant from 2x600 MW (1200MW) to 2x630 MW (1260 MW) under clause 7(ii)(a) of EIA Notification 2006 (as amended) at Villages: Laharpur, Murra, Guwari, Belia & Jaithari, Tehsil: Jaithari & Anuppur, District: Anuppur (Madhya Pradesh) by M/s. MB Power (Madhya Pradesh) Limited (MBPMPL).

(ii) This proposal is applied as per the provision of the Ministry's O.M. dated 11th April 2022 [Stage-I up to 20%] and para 7(ii) (a) of EIA Notification, 2006, amended from time to time for expansion in EC for which EIA/EMP Report has been prepared as per Standard Terms of Reference (ToR) available on Parivesh Portal for Project/Activity 1(d) "Thermal Power Plants". As the capacity is more than 3 500 MW the proposal is required to appraised at Central Level by the Expert Appraisal Committee (EAC).

(iii)The company has an existing 2 x 600 MW Sub-Critical Coal Based Thermal Power Plant at villages Laharpur, Murra, Guwari, Belia & Jaithari, Tehsil Jaithari and Anuppur, District Anuppur, Madhya Pradesh; for which, Environment Clearance (EC) was obtained in the name of M/s. Moser Baer Power & Infrastructure Ltd. vide letter no. J-13012/99/2008-IA.II(T) dated 28.05.2010. Later, Corrigendum was issued vide dated 01.09.2010 regarding changes in Para no. 2, line no. 11, "No forest land is involved" to be now read as "Diversion of 93.6 acres of forest land will be involved"; and Para no. 4, Specific Condition (i) & General Condition no. (xv) of EC letter dated 28.05.2010. In furtherance to above, Transfer of EC dated 23.11.2010 regarding substituting name of addressee in EC dated 28.05.2010 & 01.09.2010 from "M/s Moser Baer Power & Infrastructure Ltd." to "M/s. MB Power (Madhya Pradesh) Ltd.".

(iv) The salient features of the project are as under: -

Project description:

Co-ordinates of all four corners of TPP Site:	Lat: 23° 3'13.88"N to 23° 4'42.06"N Long: 81°46'19.79"E to 81°48'21.88"E
The average height of: (a) TPP site, (b) ash pond site etc. above MSL	Average elevation above mean sea level of: (a) TPP site: 520 m (b) ash pond: 512 m
Whether the project is in the Critically Polluted Area (CPA) or within 10 km of CPA. If so, the details thereof:	No
CRZ Clearance	No
Cost of the Project (As per EC and revised): Cost of the proposed activity in the amendment:	Cost of the project as per EC: Rs. 6241 Crores Cost of the project at current price level: Rs. 8374 Crores Cost of the proposed activity in the amendment: Rs. 300 Crores
Employment Potential for the entire project/plant and employment potential for the proposed amendment (specify	The existing Manpower of the TPP is 425 persons employed on a permanent basis & 1000 Temporary / Contractual employment basis. No additional manpower will be required for the expansion project during the operation phase.

number of persons and quantitative information).	
Benefits of the project (specify quantitative information)	Help to reduce demand-supply gap of electricity in the country as the power generated from the power plant is being and will be supplied to Uttar Pradesh, Madhya Pradesh & other parts of the Country, via state and national grid through transmission lines. Madhya Pradesh State is getting revenue in terms of taxes, local people are having opportunity in terms of indirect employment and business opportunities like transport of raw materials.
R&R details	No additional land is required for the project. R&R is not applicable.

Electricity Generation capacity:

Capacity & Unit Configurations:	1260 MW (2x630 MW)
Generation of Electricity Annually	Around 8800 MU@ 85% PLF annually

Details of fuel and Ash disposal

Fuel to be used:	Coal
Quantity of Fuel required per Annum:	Existing: 5.88 MTPA Additional: 0.29 MTPA After Expansion: 6.17 MTPA
Coal Linkage / Coal Block: (If Block allotted, status of EC & FC of the Block)	6.17 MTPA coal will be required for Thermal Power Plant after expansion. The Coal Supply Agreement has been made between South Eastern Coalfields Limited (SECL) and MB Power (Madhya Pradesh) Limited for 3.89 MTPA dated 09.10.2020. Balance coal is being procured under SHAKTI policy 2017 of Govt. of India.
Details of mode of transportation of coal from coal source to the plant premises along with distances	Total distance from SECL to MBPMPL is 250 km. The coal is being and will be sourced from SECL Coal field, which is being and will be transported through Indian Railways Network from SECL to Jaithari Railway Station and then to site through dedicated railway siding.
Fly Ash Disposal System Proposed	Lean Slurry disposal system is already installed and functional However, at present 100% ash is being disposed/utilized outside the plant.
a. Ash Pond/ Dyke: (Area, Location & Co-ordinates) Average height of area above MSL (m) b. Space left in ash dyke area	Ash Pond Area: Approx 21.45 Ha (53 Acres) and no additional area will be required for the ash pond due to the expansion project. At present approximately 37 acres of Ash Pond area has been reclaimed. Location: Adjacent to coal handling area within the plant site Co-ordinates: Latitude: 23°4'26.16"N to 23°4'8.96"N Longitude: 81°46'34.88"E to 81°46'56.97"E Average height of area above MSL (m): 512 m Space left in ash dyke area: 16 acres
Quantity of a. Fly Ash to be generated b. Bottom Ash to be generated:	Total Ash to be generated: 2.2 to 2.5 MTPA Fly Ash to be Generated: 1.8 MTPA Bottom Ash to be Generated: 0.5 MTPA
Stack Height (m) & Type of Flue	275 meters of stack height & flue gas comprising dust (PM2.5 & PM10) and gaseous emissions (SO ₂ , NO ₂ , CO, Hg)

Water Requirement

Source of Water:	Source: Son River Water is being sourced from existing Water Barrage (~6 km away from the plant site) constructed on Son River. The water is being supplied to the plant site via existing pipeline and is stored at the water reservoir within the plant premises for further usage. The Barrage area & submergence area is around 724.64 acre. The same will suffice for the proposed expansion as well.
Quantity of water requirement:	Existing: 65,232 KLD Additional: 3,168 KLD After Expansion: 68,400 KLD
Distance of source of water from Plant:	6 Km
Whether barrage/ weir/ intake well/ jack well/ others proposed:	No, the Barrage (~6 km away from the plant site) is already constructed on Son River which will suffice for the proposed expansion as well.
Mode of conveyance of water:	Pipeline already Existing
Status of water linkage:	Revised Permission for withdrawal of 26.40 MCM water has been obtained from the Water Resource Department, Bhopal (M P) vide letter no. V.R.P.N.M/31/Tak/Rasht.-160/2008/353 dated 16.05.2018.
Mode / Management of Brine:	NA
Cooling system	Condenser Cooling Water System (Induced).

Land Area Breakup

Land Requirement: a) TPP Site b) Ash Pond c) Township d) Railway Siding & Others e) Raw Water Reservoir f) Green Belt g) others Total (if expansion states additional land requirement)	<i>No Additional land is required for the proposed expansion project.</i>		
	S.No.	Existing Plant Units	Area covered (Acre)
	1.	Main Plant Facility	271
	2.	Water Reservoir	110
	3.	Ash Pond	53
	4.	Greenbelt	200
	5.	Miscellaneous like Office, etc.	20
	6.	Colony	41
7.	Open Area	301	
Total Project Area		996	
<i>Note: Additional land of ~ 36.45 acres around the plant boundary has also been developed under the greenbelt.</i>			
Status of Land Acquisition	No Additional land is required for the proposed expansion project. The complete land of the existing plant is owned by the company and the land use of the entire land is industrial.		
Status of the project: If under construction phase: please specify the reasons for delay, works completed till date and balance works along with expected date of completion. If under operation phase, date of commissioning (COD) of each unit. Whether the plant was under shutdown since commissioning, details and reasons.	Plant is under operation. Unit-1 Commissioning date: 20.04.2015 Unit-2 Commissioning date: 30.03.2016		

(v) Total land required for project components: 403.07 ha (996 Acres) [Private land: 310.41 Ha; Government Land: 54.78

Ha; Forest Land: 37.875 Ha]. No additional land is required/will be acquired by the Company for the expansion of the project. The Forest Clearance for 37.875 ha (93.6 acres) of forest land involved in the plant site was obtained [Stage 1 FC obtained on 04.06.2010 & Stage 2 obtained on 17.08.2011].

(vi) There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site.

(vii) Baseline data (both primary and secondary) were collected in core as well as buffer zone (10 km distance from the plant boundary) during the study period i.e., Post Monsoon Season (Oct., 2023 to Dec., 2023).

(viii) Project Proponent informed that Ash utilization is being done in line with the latest Notification issued by MoEF&CC. 100% fly ash utilization is being and will be achieved by the plant. PP further apprised to the committee that 14.21 Million Tonne ash has been generated from the project since inception of the plant (Till Jan. 24). Out of this, 12.87 Million Tonne has been utilized so far in Cement Manufacturing, Brick & Cement sheet making, filling in low laying areas and mine voids. Lagoon -1 of our ash pond has been stabilized and reclaimed with green belt development and it has been certified by MPPCB. Total 1.292 Million Tonne ash has been reclaimed in lagoon-1 of our ash pond. Certificate for Stabilization of ash pond and Reclamation with greenbelt development vide S.No. 222/MPPCB/2024 dated 19.01.2024. 0.049 Million Tonne is available ash in the operational ash pond.

(ix) As per the Office Memorandum dated 11.04.2022 point No. 5 (II) the proposed expansion project is exempted from Conduction of Public hearing considering 5% expansion. However, an amount of Rs. 3.0 Crore has been earmarked for Socio-Economic development activities for next 3 years (Table 1) for the proposed expansion project for EMP as per Office Memorandums of MoEF&CC dated 30th Sept., 2020, & 20th Oct., 2020:

Table 1:

S. No.	Particular	Budget in Rs Cr.
1.	Construction/Repair of 10 No. of Toilets with water facility in Guwari, Murra & nearby villages	0.50
2.	Pond deepening in Murra and Guwari Village	0.25
3.	Self Help Group – Women micro-entrepreneurship with skill development & capacity building	0.50
4.	Upliftment of associated infrastructure i.e. Road, Rail etc.	1.75
	Total Cost (Crores)	3.00

(x) As per MoEF&CC Notification dated 5th Sep 2022, Plant falls in Category C and henceforth, we are directed to install FGD in our plant by Dec 2026. Accordingly, we have commenced the construction activities of Wet Limestone FGD (technology as approved by CEA). FGD and all associated systems are under the advanced stage of construction & the commissioning of FGD is scheduled in FY 2024- 25. Capital Cost for the project: Rs. 300 Crores. Cost for Environmental Protection Measures: Capital Cost: Rs. 14.50 Crores & Recurring Cost: Rs. 1.0 Crore/annum (Table 2):

Table 2:

S. No	EMP Capital Expenditure	Capex (Rs Cr)	Annual Recurring Cost* (Rs Cr)
1	Dust Suppression Systems & other misc. equipment in CHP area	5.00	0.34
2	Dust Suppression Systems & other misc. equipment in AHP area	5.00	0.34
3	Green Belt	2.00	0.14
4	Control of Fire & Explosion Hazards	2.00	0.14
5	Environment lab equipment & Online Monitoring Equipment	0.50	0.04
	Total	14.50	1.0

(xi) A certified compliance report of the conditions stipulated in the EC letter has been obtained from IRO, MOEF&CC Bhopal vide letter no. 4-15/2010(Env) dated 03.02.2024 based on site inspection held on 24-25, January, 2024.

(xii) There is no case pending against the Company under the acts such as Environment (Protection) Act, 1986; The Forest (Conservation) Act of 1980; Wild Life (Protection) Act, 1972; The Air (Prevention and Control of Pollution) Act, 1981; The Water (Prevention and Control of Pollution) Act, 1974 and their amendments thereof.

(xiii) Plant is also having CTO issued from M.P. Pollution Control Board vide Consent No:AW-57392 dated 23.01.2023 to M/s. MB Power (Madhya Pradesh) Ltd for generation of 1200 (2 x 600 MW) MW electricity from Coal based power plant which is valid up to 30.04.2024.

4. The Committee in its 6th meeting held on 27/02/2024 deliberated on various aspects of the project proposal interalia including the compliance EC conditions, EIA/EMP report, Ash utilization, air quality modelling etc. The Committee also noted the compliance of OM dated 11/04/2022. After detailed deliberations on the information submitted and as presented by the PP during the meeting, EAC, **recommended** for grant of Environmental Clearance to M/s. MB Power (Madhya Pradesh) Ltd for expansion of the existing Coal Based Sub-Critical Thermal Power Plant from 2X600 MW (1200MW) to 2X630 MW (1260 MW) in an area at Villages Laharpur, Murra, Guwari, Belia & Jaithari, Tehsil Jaithari & Anuppur, District Anuppur (Madhya Pradesh) subject to compliance of the additional specific environmental safeguard conditions (Annexure 1), in addition to the standard EC conditions stipulated for the thermal power plants and conditions already stipulated in earlier ECs and amendments.

5. The MoEF&CC has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto, OM dated 11/4/2022 and based on the recommendations of the EAC hereby **accords** Environment Clearance to M/s. MB Power (Madhya Pradesh) Ltd, for expansion of the existing Coal based Sub-Critical Thermal Power Plant from 2X600 MW (1200MW) to 2X630 MW (1260 MW) in an area 403.07 Ha located at Villages Laharpur, Murra, Guwari, Belia & Jaithari, Tehsil Jaithari & Anuppur, District Anuppur (Madhya Pradesh), subject to compliance of the additional specific environmental safeguard conditions (Annexure 1), in addition to the standard EC conditions stipulated for the thermal power plants and conditions already stipulated in earlier ECs and amendments.

6. The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

7. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

8. The PP is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.

9. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

10. General Instructions:

(i) The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC website where it is displayed.

(ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn must display the same for 30 days from the date of receipt.

(iii) The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions.

(iv) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project

proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

(v) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(vi) The Regional Office of this MoEF&CC shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(vii) Validity of EC is as per the provision of EIA Notification, 2006 and its subsequent amendment.

11. This issue with an approval of the Competent Authority

Copy To

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Integrated Regional Office, E-5, Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3, Ravishankar Nagar, Bhopal – 462016.
3. The chairman, CEA, Sewa Bhawan, R K Puram , New Delhi -110066.
4. The Chairman, Madhya Pradesh Pollution Control Board, E-5, Main Rd No. 3, Ekant Park, Arera Colony, Bhopal, Madhya Pradesh 462016.
5. The Member Secretary, Madhya Pradesh Pollution Control Board, E-5, Main Rd No. 3, Ekant Park, Arera Colony, Bhopal, Madhya Pradesh 462016.
6. The District Collector, **Anuppur** Government of Madhya Pradesh.
7. PARIVESH Portal

Annexure 1

Specific EC Conditions for (Thermal Power Plants)

1. [A] Environmental Management

S. No	EC Conditions
1.1	PP shall install and commission the FGD during FY 2024-25 and report in this regard submitted to concerned RO.
1.2	Ash pond area and fly ash utilization shall be as per Fly Ash Notification issued by Ministry/ CPCB from time to time.
1.3	PP shall ensure that pipelines carrying the fly ash and effluent shall be inspected regularly for any leakages.
1.4	PP shall install solar power plant on roof top and also road side poles within the project site will be lighting through solar power. Provision of floating solar power plant in the water reservoir shall be explored and report shall be sent to RO, MoEF&CC within 6 months of grant of EC. Implementation status of solar plant shall be specifically submit in six monthly compliance report.

S. No	EC Conditions
1.5	As committed by the PP Zero liquid discharge shall be adopted.
1.6	No BS-IV trucks shall be use for transportation, BS-VI complaint vehicle shall be purchased and preference shall be given to EV/CNG/LNG based trucks.
1.7	33% Plantation shall be carried out within the plant boundary apart from the peripheral plantation in ash pond area. Further, planation shall be carried out on additional land of 14.58 ha (~36.45 acres) acquired around the plant boundary for the acquisition of complete khasra numbers, has also been developed under the greenbelt with Miyawaki plantation technique.
1.8	Extensive green cover within 2 km range of the plant boundary and for the schools within 10 KM radius shall be developed. An action plan in this regard to be prepared in consultation with state forest department/expert institution and submitted before Regional Office of the Ministry within 6 months.
1.9	The budget earmarked for the plantation shall be kept in a separate account and audited annually. PP should annually submit the audited statement of expenditure along with proof of activities viz. photographs (before & after with geolocation date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC and on PARIVESH Portal as the case may be for the activities carried out during previous year.
1.10	24x7 online monitoring system for ambient air quality shall be established with its connectivity with SPCB and CPCB server. Stack monitoring shall be done through 24X7 online monitoring system.
1.11	Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as waste delivery points, transfer areas and other vulnerable dusty areas shall be provided along with an environment friendly sludge disposal system. Water Sprinkling on roads inside the plant area and outside the plant area at least for 2KM on a regular basis to control the air pollution. A logbook shall be maintained for the activity and be in six-monthly compliance report.
1.12	LED display of air quality (Continuous Online monitoring) shall be installed at prominent locations preferably outside the plant's main entrance for public viewing and maintenance of devices shall be done regularly.
1.13	PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM.
1.14	Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.
1.15	Project proponent shall explore the use of treated sewage water from the Sewage Treatment Plant of Municipality / local bodies/ similar organization located within 50km radius of the proposed power project to minimize the water drawl from surface water bodies.
1.16	A detailed action plan regarding leachate handling shall be prepared and implemented in consultation with SPCB and the same shall be submitted to the Regional Office of the Ministry. Leachate shall be treated and reused. No treated leachate shall be discharged in any circumstances. Characteristics of Leachate and the treated leachate shall be monitored once in quarter and records shall be maintained.

S. No	EC Conditions
1.17	PP shall implement the activities proposed to address the issues raised during PH and as committed Rs. 4.5 crores/annum shall be spent for CSR activities as per Company Act for the project (2x630 MW). Additionally, the amount (Rs 3.0 Cr) earmarked for Socio-Economic development activities for the proposed expansion project shall be implemented in a time-bound manner within a period of 2 years. The budget earmarked shall be kept in a separate account and audited annually. PP shall submit the implementation status of the action taken for the same along with documentary proof and photograph to the concerned regional office for the activities carried out for the previous year.
1.18	Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
1.19	PP shall provide LEDs Solar lights, solar panel, availability of drinking water, internet connectivity and equip with smart classes, and other basic necessity to School present in 10 km radius of the plant boundaries.
1.20	Monitoring of surface water quality and Ground Water quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report.
1.21	A well designed rain-water harvesting system shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plant premises and detailed record kept of the quantity of water harvested every year and its use.
1.22	No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/ operation of the power plant. A list of all small and large water bodies shall be prepared after physical survey within 10 km radius of the project. A detailed conservation plan for all these water bodies shall be prepared and submitted before the Regional Office of the Ministry within 3 months. Implementation status of conservation plan be submitted in 6 monthly compliance report.
1.23	Watershed development plan shall be prepared in consultation with reputed government institute and implemented focusing on micro watershed development within 10 km radius of the project. Action taken report in this regard be submitted before regional office of the Ministry in 6 monthly compliance report.
1.24	A detailed ecological monitoring and survey covering forestry, fisheries, wildlife and its habitat shall be done once in two years to assess the impacts of project on the local environment and ecology. Monitoring report shall be uploaded on the Parivesh Portal and a copy of the same be submitted to the regional office of MoEF&CC.
1.25	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
1.26	PP shall ensure that all types of plastic waste generated from the plant shall be stored separately in isolated area and disposed of strictly adhering to the Plastic Waste Management Rules 2016 (as amended). In pursuant to the Ministry's OM dated 18/07/2022 PP shall also create awareness among the people working in the project area as well as in its surrounding area on the ban on Single

S. No	EC Conditions
	Use Plastic(SUP) in order to ensure compliance of Ministry's Notification published by the Ministry on 12/08/2021. A report along with photograph on the measures taken shall also be included in the six monthly compliance report being submitted by PP.

2. [B] Socio-economic

S. No	EC Conditions
2.1	A vision document comprising prospective plan for implementation of various CER activities, plantation programme outside the project cover area, rejuvenation and conservation of water bodies within 5km radius of the project cover area, creation of sacred groves etc. shall be prepared and submitted to the Regional Office of the Ministry within 6 months. Implementation status of the same shall be reported to the Regional office in 6 monthly compliance report.
2.2	Epidemiological Study among population within 5 km radius of project cover area shall be carried out on regular interval (Once in two year) through independent agency. Necessary measures shall be taken as per findings of study in consultation with district administration. Action taken report shall be submitted to the Regional Office of the Ministry.
2.3	The Project Proponent shall submit the time-bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of Environmental Clearance for undertaking the CER activities, committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September 2020.
2.4	The activities proposed for addressing the issues raised during PH which are recurring in nature, the PP shall make the suitable budget provision for the same (at least for 10 years) and CSR budget may be utilised for the same. The amount shall be kept in a separate account and audited annually. PP shall submit the activities undertaken with proof and an audited statement of expenditure to the concerned RO, MoEF&CC every year for the activities carried out in the previous year.
2.5	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
2.6	PP has proposed in CSR for the health facilities accordingly it is suggested that i) PP shall explore the possibility to increase the number of beds at least by 10% on the nearby existing Govt. Medical hospital , ii) PP shall more equip the local Government's PHCs & CHCs under CSR, iii) PP shall organise health check-up camps at regular intervals for the nearby community & project affected families, if any, and iv) Medicines, ambulance facility and other help should be provided to the patients of nearby community. PP shall submit the details of health facilities provided to nearby community in the compliance report submitted to RO with documentary proof.
2.7	PP has proposed in CSR for the education facilities and a 10+2 Grade school with capacity of at least 500 students with well-equipped modern science practical lab, computer lab and other necessary infrastructure shall be established to provide education facilities in the area. The students from project affected families shall be given free of cost education.
2.8	The establishment of a robust public grievance redressal mechanism to address concerns and complaints from local communities regarding the power plant's operations, environmental impacts, or social issues shall be developed. A Senior Officer shall review the functioning of the mechanism

S. No	EC Conditions
	twice in a month.

3. [C] Miscellaneous

S. No	EC Conditions
3.1	An Environmental Cell headed by the Environment Manger with postgraduate qualification in environmental science/environmental engineering, shall be created. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures
3.2	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
3.3	All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.
3.4	PP shall submit an undertaking on following within 30 days of grant of EC: (a) Ambient air quality data shall be uploaded on CPCB server uninterruptedly through continuous monitoring station. (b) For both the existing unit of TPP, FGD will be installed within stipulated time. (c) Ground water analysis including heavy metal and micro bacterial study shall be done on regular basis and same shall be submitted in six monthly compliance report. (d) Legacy ash if any shall be completely utilized within 1 year after the start of operations for construction of roads by NHAI/ brick making etc. (e) To comply with all the conditions in which" PP has assured to comply" written in the review report of RO dated 03.02.2024 on the action taken report.

Standard EC Conditions for (Thermal Power Plants)

1. Statutory Compliance

S. No	EC Conditions
1.1	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.
1.2	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.
1.3	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.
1.4	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.

S. No	EC Conditions
1.5	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 m ³ /MWh and Zero effluent discharge.
1.6	The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
1.7	No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance.
1.8	Groundwater shall not be drawn during construction of the project. In case, groundwater is drawn during construction, necessary permission be obtained from CGWA.

2. Ash Content/mode Of Transportation Of Coal

S. No	EC Conditions
2.1	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.

3. Air Quality Monitoring And Management

S. No	EC Conditions
3.1	Flue Gas Desulphurisation System shall be installed based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO ₂ emissions standard of 100 mg/Nm ³ .
3.2	Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SNCR) system or Low NO _x Burners with Over Fire Air (OFA) system shall be installed to achieve NO _x emission standard of 100 mg/Nm ³ .
3.3	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/Nm ³ .
3.4	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.
3.5	Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.
3.6	Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM ₁₀ , PM _{2.5} , SO ₂ , 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.
3.7	Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas

S. No	EC Conditions
	and material transfer points to control fugitive emissions.
3.8	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.

4. Noise Pollution And Its Control Measures

S. No	EC Conditions
4.1	The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
4.2	Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
4.3	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.

5. Human Health Environment

S. No	EC Conditions
5.1	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.
5.2	Baseline health status within study area shall be assessed and report be prepared. Mitigation measures should be taken to address the endemic diseases.
5.3	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.
5.4	Sewage Treatment Plant shall be provided for domestic wastewater.

6. Water Quality Monitoring And Management

S. No	EC Conditions
6.1	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 m ³ /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.

S. No	EC Conditions
6.2	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.
6.3	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.
6.4	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.
6.5	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.
6.6	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.
6.7	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.
6.8	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.
6.9	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;
6.10	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.

7. Risk Mitigation And Disaster Management

S. No	EC Conditions
7.1	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.
7.2	Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made as per the

S. No	EC Conditions
	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%.
7.3	Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
7.4	Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
7.5	Regular mock drills for on-site emergency management plan and Integrated Emergency Response System shall be developed for all kind of possible disaster situations.

8. Green Belt And Biodiversity Conservation

S. No	EC Conditions
8.1	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.
8.2	In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.
8.3	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.

9. Waste Management

S. No	EC Conditions
9.1	Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
9.2	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.
9.3	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.
9.4	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.

S. No	EC Conditions
9.5	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.
9.6	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.

10. Monitoring Of Compliance

S. No	EC Conditions
10.1	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.
10.2	Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
10.3	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.
10.4	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.
10.5	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.
10.6	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.
10.7	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& PM2.5) in case of ambient AAQ, SO ₂ , 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

S. No	EC Conditions
	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.

11. Corporate Environmental Responsibility (Cer) Activities

S. No	EC Conditions
11.1	CER activities will be carried out as per OM No. 22-65/2017-IA.III dated 30.9.2020 or as proposed by the PP in reference to Public Hearing or as earmarked in the EIA/EMP report along with the detailed scheduled of implementation with appropriate budgeting.

12. Marine Facilities

S. No	EC Conditions
12.1	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.
12.2	Marine intake and outfall pipelines shall be located as per the recommendations State Coastal Zone Management Authority (SCZMA).

13. Sea Water Intake

S. No	EC Conditions
13.1	Seawater intake system shall be so designed and constructed to ensure sufficient sweater in terms of quantity and quality.
13.2	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.
13.3	In all tide conditions (particularly at spring low tides) the riser head must be flooded with the required submergence of seawater above its top.

14. Effluent Release

S. No	EC Conditions
14.1	At the effluent release point, maximum temperature of the discharge water shall not be more than 50C and salinity shall not exceed 50 ppt with respect to that of the ambient seawater.

S. No	EC Conditions
14.2	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.
14.3	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.
14.4	The location of the diffuser shall be marked with a solar lighted buoy to avoid accidents.
14.5	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.
14.6	The effluent shall be released through a properly designed multiport diffuser above the seabed to facilitate its efficient initial mixing with the receiving seawater.
14.7	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.
14.8	Continuous online monitoring system for Temperature and Salinity shall be installed to monitor the quality of effluent.

15. Common To Intake And Effluent

S. No	EC Conditions
15.1	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.
15.2	In case of open channel, the channel shall be constructed as per the recommendations of State Coastal Zone Management Authority (SCZMA).
15.3	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.
15.4	Exposed pipeline section and riser shall be protected by armour stone from waves, boats anchoring, fishing activities etc.
15.5	The location of the riser & diffuser shall be marked with a solar lighted buoy to avoid accidents from boats.
15.6	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).

S. No	EC Conditions
15.7	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.



Budgetary Provision for EMP submitted by the Project Proponent

As per the Office Memorandum dated 11.04.2022 point No. 5 (II) the proposed expansion project is exempted from Conduction of Public hearing considering 5% expansion. However, an amount of Rs. 3.0 Crore has been earmarked for Socio-Economic development activities for next 3 years (Table 1) for the proposed expansion project for EMP as per Office Memorandums of MoEF&CC dated 30th Sept., 2020, & 20th Oct., 2020:

Table 1:

S. No.	Particular	Budget in Rs Cr.
1.	Construction/Repair of 10 No. of Toilets with water facility in Guwari, Murra & nearby villages	0.50
2.	Pond deepening in Murra and Guwari Village	0.25
3.	Self Help Group – Women micro-entrepreneurship with skill development & capacity building	0.50
4.	Upliftment of associated infrastructure i.e. Road, Rail etc.	1.75
	Total Cost (Crores)	3.00

As per MoEF&CC Notification dated 5th Sep 2022, Plant falls in Category C and henceforth, we are directed to install FGD in our plant by Dec 2026. Accordingly, we have commenced the construction activities of Wet Limestone FGD (technology as approved by CEA). FGD and all associated systems are under the advanced stage of construction & the commissioning of FGD is scheduled in FY 2024- 25. Cost for Environmental Protection Measures: Capital Cost: Rs. 14.50 Crores & Recurring Cost: Rs. 1.0 Crore/annum (Table 2):

Table 2:

S. No	EMP Capital Expenditure	Capex (Rs Cr)	Annual Recurring Cost* (Rs Cr)
1	Dust Suppression Systems & other misc. equipment in CHP area	5.00	0.34
2	Dust Suppression Systems & other misc. equipment in AHP area	5.00	0.34
3	Green Belt	2.00	0.14
4	Control of Fire & Explosion Hazards	2.00	0.14
5	Environment lab equipment & Online Monitoring Equipment	0.50	0.04

	Total	14.50	1.0
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