

CE (O&M)/KTPS/660MW/Env Cell./FL No 0 0 6 4 5

Date: 20 FEB 2024

To,
Scientist 'E'
Ministry of Environment, Forest & Climate Change
Regional Office, East Wing, Ground floor
New Secretariat Building,
Civil Lines, Nagpur-440001
Email- apccfcentral-ngp-mef@gov.in

Sub: Compliance Status of Environmental Clearance conditions for 3x660MW Coal based Thermal Power Plant at Koradi.


Dear Sir,

With reference to above subject matter, please find enclosed herewith the status of Environmental Clearance Conditions issued to 3x660MW KTPS Koradi for a period of 01.07.2023 to 31.12.2023.
This is for your information, please.

Thanking you.

Encl.: As stated above.

Yours faithfully


Chief Engineer
KTPS, Koradi

Copy f.w. cs to:

- 1) Exe. Director (E & S), MSPGCL, HDIL Tower, 4th Floor, A-Wing, Bandra (E), Mumbai-51
- 2) Regional Officer, MPCB, Udyog Bhavan, 5th Floor, Civil Lines, Nagpur-440001

**MoEF, New Delhi: Environmental Clearance conditions for 3X660 MW,
Expansion Project at Koradi, Dist. - Nagpur.**

MoEF Condition No.	Condition	Status as on December-23
MoEF Letter Ref. No. J- 13012/87/2007-IA. II (T) dtd. 04/01/2010.		
i	FGD with one unit of 660 MW will be installed initially to begin with and the requirement, if any, for the installation of FGD system with the other two units will depends upon the prevalent ambient levels of SO ₂ . Provision for installation of FGD in all units shall be made.	Regarding installation of FGD MSPGCL has placed LoA vide no CE (P&P)/ 3X 660MW/Koradi/FGD/1236 dated 16.11.2023 for design engineering, manufacture, assembly, testing at works, supply at site, civil, structural & architectural works and erection, testing & commissioning of FGD system for 3X 660 MW unit 8, 9 &10 at Koradi, TPS on Erection Procurement Commissioning (EPC) basis including O&M of installed FGD system for the span of three years. Work completion schedule as per LoA is 26 months for unit-8, 28 months for unit-9 & 30 months for unit-10 from zero date (16.11.2023).Initial meeting was conducted with the vendor & accordingly site clearance activity for land development is taken up and arrangement for construction power supply is being made.
ii	Hydro-geological study of the area shall be reviewed annually & results submitted to the Ministry & concerned agency in the State Govt. In case adverse impact on ground water quantity & quality is observed, immediate mitigating steps to contain any adverse impact on ground water shall be undertaken.	A detailed study of Hydro geological study has been carried out by M/S Surya Enviro tech in the month of June-2016. Hydro geological investigation for 3x660 MW Koradi project is done by conducting ground water analysis for Physiochemical parameters periodically from MoEF approved lab. The parameters are found to be within desirable range. Copy of latest ground water report attached as Annexure-I
iii	Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ rivers even in lean season. It shall be ensured that natural drainage in the region is not disturbed due to activities associated with operation of the plant.	The 3X660 MW Koradi Project was installed on the land available with MAHAGENCO. The natural drainage system available on this land was not disturbed. Koradi TPS, 3X660 MW has installed and commissioned in-house system for trade and sewage effluent. In-house ETP & STP are in operation since inception of units i.e. 2017.
iv	Tri-Flue stacks of 275 m height each shall be provided with continuous online monitoring equipment's for SO _x , NO _x & PM. Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	One stack with three flue cans of 275 meters height is provided. Continuous Online monitoring system for PM, SO ₂ , NO _x for Unit-8, 9 & 10 is commissioned and connected to CPCB & MPCB servers on 10.05.2017. Exit velocity & mercury emission is monitored regularly for all three units. Exit velocity is load depended. CPCB-(OCEMS)- http://cpdms.forbesmarshall.in:8080/enviroconnect/ CPCB(EQMS)- https://glens.glensserver.com/#/login MPCB(OCEMS & EQMS)- https://onlinecems.ecmpcb.in/#/landing/industryReports/realTimeReport
V	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	High efficiency ESPs are installed at all three Units with design efficiency 99.9 % for particulate emission not more than 50 mg/Nm ³ since commissioning of project.

vi	Adequate dust extraction system such as cyclones/ bag filters & water spray system in dusty areas such as in coal handling & ash handling points, transfer areas & other vulnerable dusty areas shall be provided.	<p>At Coal Handling plant mist type fogging systems are commissioned at both the stack yards & are operated as per requirement. The dust suppression system at all transfer points is in service. Additional spray system in CHP area is installed to prevent dust. Fire quenching line erected in stack yard to control fire in coal yard.</p> <p>To arrest the ash in ash handling plant following actions are taken:</p> <ul style="list-style-type: none"> a) Ensuring availability of vent fans. b) Periodical cleaning of ash filter bags. c) Ensuring optimum efficiency of filter bags purging system through regular routine check. d) Replacement of filter bags in each intermediate silo as and when required. e) Attending fly ash conveying pipelines leakage on priority and replacement of wear out portion of pipelines. f) Regular water sprinkling on nearby roads is carried out periodically. g) DS system is provided at Wagon tippler, bunker level, TP 3, 4, 5, 6 & TP 7. Total 07 DS systems are provided.
vii	Utilization of 100% fly ash generated shall be made from 4 th year of operation of the proposed expansion. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	<p>Considering four years from date of operation, the PP has supposed to achieve fly ash utilization target by Jan-2021 efforts were made to encourage utilization of pond ash in various activities such as brick manufacturing, Ash bund dyke raising, construction of national highways etc. Apparently, it is to inform that the total ash utilization % for FY 2020-21 for entire Koradi, TPS stood to 80.96%</p> <p>Since most of the thermal power plant across India are facing the problem of target achievement regarding 100% use of fly ash, MoEF&CC came out with the new notification vide no. SO 5481 (E) dtd 31.12.2021 wherein as per section A(5) the applicability of notification has commenced from 01.04.2022 giving all Thermal power plant across India to dispose off the fly ash within the period of 3 years (i.e March-2025). Similarly, the new notification states for legacy ash that the utilization of legacy ash has to be completed within 10 years from the date of publication of this notification. Hence the timeline for 100% use of legacy ash shall be up to Dec-2031. Monthly ash utilization reports of 210 MW & 660 MW units at Koradi are send to State pollution control board.</p> <p>1) Availability of stone quarries for ash filling:- The list of allotted stone quarries for Koradi TPS, are Aasola- Sawangi stone quarry mines Wardha road Nagpur. Saoner Boregaon(Junglee), Abandoned mines-Betul road nagpur, H.G. infra stone quarry mines Boregaon (junglee), M/S Guru Baxani's stone quarry Mines, Mahurazari, Nagpur. which are at very much longer distance. In the plant, the bottom ash series disposal system of Koradi TPS is designed for peripheral of 7 KM & in this 7 km of range ,there is no direct abandoned stone quarries available for day-to-day ash filling, so that it is not feasible to direct ash filling in allotted stone quarries. For Ash filling in the abandoned mines, the distance is very much longer. Hence there is no direct disposal piping available to the said longer distance about 30 to</p>

		<p>100 Km area, it's the design constraints. Hence it is not feasible.</p> <p>2) Details of the abandoned mines nearby TPS:- The distance of the nearby abandoned mines from KTPS is about 45 km to 65 km. Hence, to & fro of transportation for ash filling in the abandoned mines is not feasible. The KTPS representative visited the nearby abandoned mines & the possibility checking for filling of ash. The transportation and filling of ash in the abandoned mines is under consideration.</p> <p>3) Status of private owner survey for ash utilization :- The following agencies owner visited for survey for ash utilization</p> <ul style="list-style-type: none"> i) M/s Super Engineering works ii) M/s Ashtech India Pvt. Ltd. iii) M/s Tanmay Infratech Pvt. Ltd. iv) M/s. ACC v) M/s. MSRDC and projects <p>Above listed agencies visited at site but the response from them is poor. But the negotiations is under progress to increase ash utilization percentage.</p>
viii	Fly ash shall be collected in dry form & storage facility (silos) shall be provided. 100 % fly ash utilization shall be ensured from 4 th year onwards. Unutilized fly ash shall be disposed off in the slurry form. Mercury & 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. No ash shall be disposed off in low lying area.	Arrangement has been made for disbursement of dry fly ash utilization from intermediate/ HCSD silo no. 1. Provision of three Remote silo is also made for dust free loading of ash in bulkers. Unutilized ash is disposed of by HCSD system in Khasara ash bund. Heavy metals are monitored regularly in effluent of ash bund through MoEF&CC approved lab. PP is taking all efforts for 100% ash utilization as per notification no. SO 5481 (E) dated 31.12.2021. 1125Cu/m dry ash is stored per silo.
ix	Ash pond shall be lined with HDP/LDP lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety shall also be implemented to protect the ash dyke from getting breached.	Koradi TPS is using Khasara Ash Bund for ash disposal, Khasara Ash bund is live hence the work of HDPE & LDPE lining cannot be taken up in hand. Hence it was understood that any lining to the peripheral area of bund is not possible being a live bund. However, following measures are taken to maintain the bund: <ul style="list-style-type: none"> a) Stone pitching is done at dyke wall. b) Decanted water is being recycled and reutilized in plant. Bund water is recovered through available weir & drain wells. c) Proper maintenance of ash bund is done to avoid any breaching of bund. d) Lagoons are in place inside the ash bund & siphoning system is also in place.
x	For disposal of bottom ash in abandoned mines (if proposed to be undertaken) it shall be ensured that the bottom & sides of the mined out areas are adequately lined with clay before bottom ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity.	The distance of the nearby abandoned mines from KTPS is about 45 km to 65 km. Hence, to & fro of transportation for ash filling in the abandoned mines is under consideration. The KTPS representative visited the nearby abandoned mines & the possibility checking for filling of ash. The transportation and filling of ash in the abandoned mines is under consideration.
xi	Closed cycle cooling system with natural draft cooling towers shall be provided. The effluents shall be treated as per the prescribed norms.	Closed cycle cooling water system comprising of Natural Draft Cooling Tower is installed and in service for unit 8, 9 & 10. The effluent from blow down is treated through ETP as per norm and reused for ash disposal.

xii	The treated effluents conforming to the prescribed standards only shall be recirculated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangement shall be made that effluents and storm water do not get mixed.	In house ETP is installed and commissioned to treat trade effluents arising from power station premises. Currently treated effluent is reused within the plant for ash disposal purpose. Separate storm water drainages are provided in plant premises.
xiii	A sewage treatment plant shall be provided & the treated sewage shall be used for raising green belt/plantation.	Two sewage treatment plants having capacity of 25 and 10 KLD are established and treated water is used for developing green belt / plantation. These sewage treatment plants are established for treating raw sewage inside industrial premises only.
xiv	Rainwater harvesting should be adopted. Central groundwater, Authority/ Board shall be consulted for finalization of appropriate rainwater technology within a period of three months from the date of clearance & details shall be furnished.	Rain water harvesting tanks at 3 locations are provided.
xv	Adequate safety measure shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plan layout shall be submitted to the regional Officers of the Ministry.	Fire hydrant system is provided at various locations across plant area .Fire quenching line erected in stack yard to control fire in Coal yard.
xvi	Storage facility for auxiliary liquid fuel such as LDO/HFO & LSHS shall be made in the plant area in consultation with Departmental of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	Oil handling plant is commissioned as per plan sanctioned by Explosive Department. License for oil handling plant is issued by Explosive department. LDO/ HFO is received from Oil India companies and use as received basis. Disaster management plan/ onsite emergency preparedness plan is prepared to address any eventuality. Main Tank FO-2 nos each capacity of 2000KL LDO-2nos each capacity of 1000KL Main tank(qty- 6000KL) license no. P/HQ/MH/15/6192 (P305883) valid upto 31/12/2027 Day Tank FO-2 nos each capacity of 500KL LDO-1no capacity of 500KL day tank(qty- 1500KL) license no. P/HQ/MH/15/6192 (P327547) valid upto 31/12/2027.
xvii	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells & constructing new piezometers. Monitoring around the ash pound area shall be carried out particularly for heavy metal (Hg, Cr, As, Pb) & records maintained & submitted to the Regional office of the Ministry. The data so obtained should be compared with baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Three Nos. of Piezo wells has been installed at periphery of Khasara Ash Bund. Analysis of Ground Water is carried out periodically through MoEF&CC approved laboratory. Recent ground water report is enclosed as Annexure-I.
xviii	Green Belt consisting of 3 tiers of plantations of native species around plant & at least 100 m width shall be raised. Wherever 100 m width is not feasible, a 50 m width shall be raised & adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate less than 70%.	Being an expansion project the green belt is actually developed on the land available with MAHAGENCO. Being already existing plant with infrastructure and residential colony, ample plantation/ green belt has already occupied nearby area. Tree plantation near ash bund area is carried out. 10,000 trees planted in FY 2023-24 around plant area including bund & proposal of plantation of 24000 trees in colony area is initiated.. The total project area is 652.02 ha. 33 % of total project area is comes to be 215.16 ha. Out of total project area till dated 276.4 area has been developed as green belt (42.38%). PP has proposed to plant 10,000 trees in FY 2023-24 around plant area including bund.

xix	First aid & sanitation arrangements are to be made for the drivers & other contract workers during construction phase.	First aid & sanitation arrangements were made for the drivers & other contract workers during construction phase. Now, construction phase is over and all three units are commissioned.
xx	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ earmuffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc. shall be periodically examined to maintain audiometric records & for treatment for any hearing loss including shifting to non-noisy/ less noisy area.	Acoustic enclosures are provided to high noise generating auxiliaries. Sound proof cabins are provided for staff working in high noise area. Personal protective equipments are provided to staff and contractor labors. Regular medical checkup is arranged by Medical Dispensary for audiometric examination.
xxi	Regular monitoring of ground level concentration of SO ₂ , NO _x , RSPM (PM ₁₀ & PM _{2.5}) & Hg shall be carried out in the impact zone & records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations shall be decided in consultation with SPCB. Periodic reports shall be submitted to the regional Office of this Ministry. The data shall also be put on the website of the company.	KTPS Koradi, 3X660 MW, is carrying out ambient air quality monitoring twice in week at three different locations approved by SPCB. Three CAAQMS are installed around the premises of 3X660 MW Koradi at various locations as approved from SPCB. CAAQMS connectivity to SPCB server is established, Data is available through online connectivity with MPCB server. CAAQMS connectivity to CPCB server is under process. Koradi TPS is regularly carrying out GLC study, recently carried out in May-2023 for PM, SO ₂ & NO _x emission. The concentration of pollutants predicted by Industrial source Complex (ISCST3) Dispersion modeling carried out for various locations are found to be normal.
xxii	A good action plan for R & R (if applicable) with package for the project affected persons be submitted & implemented as per prevalent R & R policy within three months from the date of issue of this letter.	No additional land required and the project is installed in existing premises and hence R & R policy is not applicable to this project.
xxiii	An amount of Rs. 20 Crores shall be earmarked as per time capital case for CSR program. Subsequently a recurring expenditure of Rs.4 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be along with road map for implantation.	Impact Assessment of implementation of CSR action plan adjoining villages of TPS had been carried out. The activities undertaken by Mahagenco with capital cost of Rs. 20.00 cr. are completed.
xxiv	As part of CSR program the company shall conduct need based assessment for the nearby villages to study economic measures with action plan which can help in up liftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such community development activities & income generating program. This will be in addition to vocational training for individuals imparted to take self-employment & jobs.	The work orders for Bamboo plantation at Mahagenco's land were issued to the agency which is helping in up liftment of poor section of society.
xxv	Provision shall be made for the housing of construction labor within the site with all necessary infrastructure & facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	Already provided during construction phase. Provision were made for the housing of construction labor within the site along with all necessary infrastructure & facilities. As of now, construction phase is over and all three units are commissioned.
xxvi	The project proponent shall advertise in at least two local newspaper widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance & copies of clearance letter are available with the State Pollution Control Board/ Committee & may also be seen at	PP had advertised in accordance with the procedure of environmental clearance in newspaper.

	Website of the Ministry of Environment & Forest at http://envfor.nic.in .	
Xxvii	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad /Municipal Corporation, Urban Local Body & the Local NGO, if any, from whom suggestions/ representation, if any, received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	PP had sent clearance letter to Panchayat, Zila Parishad /Municipal Corporation, Urban Local Body. The EC of the project proponent was available on MoEF website along with the minutes of EAC. The PP is regularly submitting compliance of EC conditions to IRO, MoEF & CC Nagpur.
xxviii	A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	PP has set up the Environment Management cell. The list of staff available at Environment Management Cell is prepared.
Xxix	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website & shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB & the SPCB. The criteria pollutant levels namely RSPM (PM10 & PM 2.5), SOx, NOx, (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	Yes, compliance to EC conditions are regularly submitted to respective authorities by PP. Monitoring of ambient air quality parameters is carried out regularly. The reports are submitted to regional office of SPCB. Compliance of the stipulated EC conditions sent to the Regional Office of MoEF through mail. Electronic display board at entrance gate for display of CAAQMS & stack parameters is provided. Connectivity of three CAAQMS stations with SPCB server is established and registration for connectivity with CPCB server is also completed.
xxx	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored date (both in hard copies as well as by e-mail) to the respective regional office of MoEF, the respective Zonal Office of CPCB & SPCB.	Yes, compliance to EC conditions are regularly submitted to respective authorities by PP. Monitoring of ambient air quality parameters is carried out regularly. The reports are submitted to regional office of SPCB. Compliance of the stipulated EC conditions sent to the Regional Office of MoEF through mail. Last date of submission: vide no 6895 dtd 03.08.2023.
xxxi	The environment statement for each financial year ending 31 st March in Form-V as mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions & shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Environment statement in Form-V of 3X660 MW Koradi for FY 2022-23 is submitted online on MPCB portal. date of submission: dtd 16.09.2023.
xxxii	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment & Forests, its regional Office and Central Pollution Control Board & State Pollution Control Board. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website & update the same periodically & simultaneously send the same by e-mail to the Regional office, Ministry of Environment & Forests.	Yes, compliance to EC conditions are regularly submitted to respective authorities by PP. Monitoring of ambient air quality parameters is carried out regularly. The reports are submitted to regional office of SPCB. Compliance of the stipulated EC conditions sent to the Regional Office of MoEF through mail. Electronic display board at entrance gate for display of CAAQMS & stack parameters is provided. Connectivity of three CAAQMS stations with SPCB server is established and registration for connectivity with CPCB server is also completed
xxxiii	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report & Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the	Yes, PP are regularly submitted EC conditions to respective authorities. Monitoring of ambient air quality parameters is carried out regularly. The reports are submitted to regional office of SPCB. Compliance of the stipulated EC conditions sent to the Regional Office of MoEF through mail.

	Regional office for their use during monitoring. Project proponent will upload the compliance status in their website & update the same from time to time at least six-monthly basis. Criteria pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant.	Electronic display board at entrance gate for display of CAAQMS & stack parameters is provided. Connectivity of three CAAQMS stations with SPCB server is established and registration for connectivity with CPCB server is also completed.
xxxiv	Separate funds shall be allocated for implementation of environment protection measures along with item wise break up. This cost shall be included as part of project cost. The funds earmarked for environment protection measures shall not be diverted for other purposes and year wise expenditure shall be reported to the ministry.	The activity has been completed in project stage.
xxxv	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure & final approval of the project by the concerned authorities & the dates of start of land development work & commissioning of plant.	Date of approval of Project: 18/01/2008. The dates for Land development work were informed during the initiation phase of the project and subsequently the dates of COD for respective units are also intimated to MoEF&CC accordingly. Regarding date of financial closure, it will be intimated after compliance of EC conditions. Date of comm. /COD: U-8: 16/12/2015, U-9: 22/11/2016, U-10: 17/01/2017.
xxxvi	Full co-operation shall be extended to the Scientist/ Officers from the Ministry/ Regional office of the Ministry at Bangalore/CPCB/SPCB who would be monitoring the compliance of environment status.	PP has consented to the condition.
MoEF Letter Ref. No. J- 13012/87/2007-IA. II (T) dtd. 27/03/2015.		
Xxxvii	Harnessing solar power within the premises of the plant particularly at available rooftops shall be carried out and status of implementation including actual generation of solar power shall be submitted along with half yearly monitoring report.	Complied PP has already initiated to install 5 MW solar plant in the vicinity of Koradi, TPS.
xxxviii	A long-term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute and results thereof shall be analyzed every two years and reported in monitoring reports. Thereafter mechanism for an in-built continuous monitoring system for radioactivity and heavy metals in coal and Fly ash (including bottom ash) shall be put in place.	Coal & Ash samples were tested at Board of Radiation & Isotope Technology (BRIT), New Mumbai. Reports indicated that the measurement values of Coal & Ash samples are below the clearance level for radionuclides of natural origin in bulk solid material as per capital AERB (Atomic Energy Regulatory Board) directives 01/2010 (Table B) table 26.11.2010.
xxxix	Fugitive emissions shall be controlled to prevent impact on agriculture or non- agriculture land.	KTPS is taking all out efforts to reduce source emissions thereby achieving ambient air quality such as installation of ESP with 99.9 % efficiency, and over fire air(OFA) low NOx burners. Whereas, FGD installation is proposed to control SO2 emission. At Koradi TPS one stack consisting of three flue cans with height 275 m is installed which disperses the emission in wider area which minimize the impact of emission. Additionally, The dust suppression at all transfer points of CHP area and fogging system are in service. DS system is installed at site to control coal dust. Additional spray system in CHP area is installed to prevent dust. Measures taken to minimize the fugitive dust in CHP & AHP area.
XI	Fly ash shall not be used for agriculture purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media so that no leaching shall take place at any point of time. In case, the option for mine void filling is adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and installation of adequate clay lining shall be ascertained if	PP has consented to condition.

	required, by the State Pollution Control Board. The dumping in mine void shall be carried out in close co-ordination with the State Pollution Control Board.	
xli	Green Belt of 20-50 m width shall also be developed around the ash pond over and above the green belt around the plant boundary	The total project area is 652.02 ha. 33 % of total project area is comes to be 215.16 ha. Out of total project area till dated 276.4 area has been developed as green belt (43.38%). PP has proposed to plant 10,000 trees in FY 2023-24 around plant area including bund.
xlii	An Environment cell comprising of at least one expert in Environment Science/Engineering, Ecology, Occupational Health and Social Science, shall be created preferably at the project site itself and shall be headed by an officer of appropriate seniority and qualification. It shall be ensured that the head of the cell shall directly report to Head of the plant who would be accountable for implementation of Environmental regulations and social impact improvement/mitigation measures.	A separate Environment Cell is in place.
Xliii	For periodic monitoring of CSR activities, a CSR Committee or a Social Audit Committee or a suitable credible external agency shall be appointed. CSR activities shall be evaluated by an independent external agency, both concurrently and final.	After completion of activities under one-time capital Rs. 20.00 Cr. agency M/s Surya Envirotech has carried out CSR impact assessment study in the nearby villages of TPS and submitted the report.
xliv	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable Environmental laws and regulations.	Environment Safeguard Responsibility Frame Work/Corporate Environment Policy is formulated by MAHAGENCO at corporate level.
MoEF Letter Ref. No. J- 13012/87/2007-IA. II (T) dtd. 23/03/2017.		
I	Specific condition 4(i) to be amended as "Ministry's Notification SO 3305(E) E(P) Amendment Rules, 2015 dated 07.12.2015 regarding revised emission standards for PM, SO ₂ , NO ₂ and Hg shall be complied with and the same shall be achieved within two years from the date of publication of the notification for all Units-8, 9 & 10 (3 x 660MW) i.e. on or before 07.12.2017".	The MoEF & CC has revised the timeline for compliance to emission standards vide notification no. 682 (E) dtd 05.09.2022.
ii	Change in Coal source from Machhakuta Coal Mines to Gare palma coal Sector-II Block, Mand raigarh Coalfields, Raigarh District, Chhattisgarh is permitted.	At present coal supply from Gare Palma coal Sector-II Block, Mand raigarh Coalfields, Raigarh District, Chhattisgarh is not started. However, EC & FC is granted to Gare Palma Coal block. Koradi TPS is receiving coal from various mines of WCL, MCL, SCCL and SECL. Currently, TPS is using washed coal (approx. 95%) & Raw coal (approx. 5%) of the total coal received. The allocation of coal quantity is as per the Fuel Supply Agreement and as per the current requirement of TPS.
iii	Ministry Notification No. GSR 02(E) Dtd. 02.01.2014 regarding supply of raw or blended or beneficiated coal with ash not exceeding thirty four percent shall be implemented, as applicable.	Koradi TPS has been using the wash coal with ash content around < 34%. Now, Mahagenco and MSMC are in agreement for supply of wash coal for the period of 5 years. The MoEF & CC notification Dtd 21.05.2020 states that, "Use of coal by thermal power plant without stipulations as regards ash contents or distance, shall be permitted subject to setting up technology solution for emission norms". In this context, it may please be informed that 660 MW units at Koradi are taking all out efforts for use of low ash content coal by blending wash coal and raw coal.

iv	The compliance of EC conditions shall be reviewed on quarterly basis. In this regard, a compliance mechanism shall be set up through plant head who is responsible for implementing the conditions stipulated in the Environmental clearance, non-compliances and violations. Budget to implement various environmental pollution control measures as proposed in the EMP shall be kept in a separate account and shall not be diverted for any other purposes. Compliance reports shall be uploaded on company's website.	PP has consented for the same. Organizational hierarchy is established for compliance reporting mechanism at plant level. PP has been submitting EC conditions compliance on six monthly basis regularly. Last date of submission on dtd 03.08.2023.
MoEF Letter Ref. No. J- 13012/87/2007-IA. II (T) dtd. 29/05/2018.		
i	Construction of pillars in the water bodies (Rivers & Nallahs) shall be carried out in the dry season only.	Work for transportation of coal by closed pipe conveyor for a length of 16.1 km and with a capacity of 7.35 MTPA from Gondagaon and Bhanegaon mines to Koradi Thermal Power Plant via Khaperkheda Thermal Power Plant has been started as per EC amendment dtd. 29.05.2018. Consent to establish is received from MPCB for closed pipe conveyor system. Work completed for Khaperkheda TPS & Koradi, TPS. Trial run for Koradi portion is taken. However, the system will be commissioned after receipt of consent to operate.
li	Dust suppression system such as mist/dry for jet sprinklers to be setup at the transfer points to arrest the fugitive dust emissions.	Dust suppression system in the form of sprinklers are working for closed pipe conveyor system.
lii	For every tree cut along the proposed route in the non-forest area, guidelines of Forest (Conservation) Act, 1980 shall be followed in consultation with the local State Forest Department.	No tree cut for pipe conveyor has been done.
iv	Noise level shall be in accordance with the Noise Pollution Rules.	Noise level has been maintained as per Noise Pollution Rules.