

NTPC/KGN/EMG/EC-MOEF&CC/2019



Khargone Date: 22.04.2019

To

The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (WZ),

Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3, Ravishankar Nagar, **Bhopal-**462016, Madhya Pradesh

Sub: Submission of 8th Half Yearly Environmental Clearance Compliance Report of Khargone Super Thermal Power Project (2 x660 MW) at Village Selda & Dalchi, Khargone, Madhya Pradesh by NTPC Ltd.

EC Ref: J-13012/54/2010-1A.II(T), Dated-31.03.2015

Sir,

With reference to the above mentioned subject we are submitting the half yearly compliance report to stipulated conditions of Environmental Clearance in soft (email id-rowz.bpl-mef@nic.in) & hard copy for the period (Oct '2018 - Mar'2019) for your kind records please.

Thanking you,

Yours sincerely

(K K Sharma)

AGM (Chem. & EMG)

Khargone Super Thermal Power Project

(NTPC Ltd)

Encl. as above

Copy to:

1. The Director
IA Division
Ministry of Environment, Forest and Climate Change,
Paryavaran Bhawan,
Lodhi Road, New Delhi-110003

2. The Chairman, **Central Pollution Control Board,** Parivesh Bhawan, CBD- cum-Office Complex, East Arjun Nagar, **Delhi-**110032

3. The Chairman, **Madhya Pradesh Pollution Control Board,** Parivesh Bhawan, E-5 Arera Colony, Paryavaran Parisar, **Bhopal**-462016



KHARGONE SUPER THERMAL POWER PROJECT

(2X660 MW)

HALF YEARLY COMPLIANCE REPORT OF ENVIRONMENTAL CLEARANCE CONDITIONS

(Vide Letter No. J- 13012/54/2010-IA. II (T) Dated 31st March 2015)

	MOEF & CC Stipulations	NTPC Response
A	Specific Conditions:	Status as on 31.03.2019
i	Coal transportation shall be by Rail only. An additional EIA shall be carried out and an EMP shall be prepared for laying down the rail line and alternate mode of transportation, in case rail line gets delayed. The EIA/EMP shall be	As the construction of railway route & MGR is being delayed, EC amendment applied to MoEF & CC, for change in mode of coal transportation by road initially.
		The proposal was considered in the EAC meeting held on 27.03.2019. As per Minutes of Meeting posted on MOEF&CC web site the EAC has recommended the proposal.
ii	The Sulphur and Ash content of coal shall not exceed 0.5% and 43% respectively. In case of	Shall be complied during operation phase of
	variation of quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments in the environmental clearance.	
iii	submitted to the Regional Office of the Ministry on an annual basis to monitor the	Land use classification based on latest satellite imagery will be submitted to the Regional Office of the MOEF&CC on an annual basis during operation phase of the project.
iv	Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within six months.	NTPC vide letter dated 07.09.2015 has submitted a project vision document to the Regional Office, MOEF&CC at Bhopal.
v	Harnessing solar power within the premises of the plant particularly at available roof tops shall be carried out and status of implementation including actual generation of	NTPC vide letter dated 07.09.2015 has submitted Scheme for harnessing solar power by installation of roof top solar plant within the premises of the proposed project. The scheme will be implemented during the operation phase of the project.
vi	provided with continuous on-line monitoring system of $S0_x$, $N0_x$ and $PM_{2.5}$ & PM_{10} . Exit velocity of flue gases shall not be less than 22 m/sec. In addition to the regular parameters	A twin-flue stack of 275 meters height has been provided. Continuous online monitoring system (CEMS) facilities are being installed for monitoring of SO2, NOx and Particulate matter (PM). Exit velocity of flue gases shall be maintained less than 22 m/sec. Mercury emission form stack shall also be monitored regularly.





vii	(ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ . Adequate dust extraction system such as cyclones/bag filters and water spray cyclometry to control fugitive emissions in dust	vulnerable dusty areas. (as per the 07.12.2015)
viii	COC of at least 5.0 shall be adopted.	notification it is 30 mg/Nm3) Closed cycle cooling water re-circulation system has been designed with minimum Cycle of Concentration (COC) of 5.0 for optimization of water requirement.
ix	quality shall be conducted regularly and	
х	Monitoring for heavy metals in ground water in the vicinity of plant shall also be	Regular monitoring of heavy metals in ground water in and around plant area will be carried out as per stipulation and report will be submitted to Regional Office of MoEF &CC Bhopal every six monthly during the operation phase of the project.
xi	shall be put in place within six months, which shall comprise of rain water collection from the built up and open area in the plan	Detailed rain water harvesting study has been carried out at the project. A well designed rain water harvesting system shall be established as per recommendations/ stipulations. Records shall be maintained for the quantity of water harvested every year and its use.
xii	No water bodies including natural drainage	The said stipulation is being complied during construction phase and shall also be complied during the operation phase of the project.
xiii	annually through an institute/ organization or repute to assess impact of surface water and ground water (especially around ash dyke). It case, any deterioration is observed specific mitigation measures shall be undertaker immediately. Reports/ data of water quality	Hydrology (NIH), Roorkee and shall be



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xiv		eAn effluent management scheme will be eimplemented during the operation phase of the project with the objective to treat the waste water as per the standards prescribed by SPCB/CPCB, before its discharge.
xv	site, if require shall be taken from within the sites (to the extent possible) so that natural drainage system of the area is protected.	drainage system of the area.
xvi	storage facility (silos) shall be provided Un-utilised fly ash shall be disposed off in the ash pond in the form of slurry. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the effluents emanating from the	dAn ash management & disposal scheme will be dimplemented consisting of dry ash extraction resystem (DAES) for dry collection of fly ash with dadequate storage facility (silos), supply of ash to be entrepreneurs for utilization and promoting ash reutilization to maximum extent and safe disposal hof un-utilised ash in the ash pond in the form of slurry.
		A long term agreement for fly ash utilization of about 3055 MT/day has been already done with cement industries.
		Two different systems are being provided for ash disposal—Conventional wet slurry disposal system with ash water re-circulation for bottom ash and High Concentration Slurry Disposal (HCSD) system for fly ash.
		Periodic monitoring for mercury & heavy metals in the bottom ash and water emanating from ash pond will be carried out during the operation phase of the project.
		No ash will be disposed off in low lying area.
xvii	be controlled such that no agricultural of non-agricultural land is affected. Damage to any land shall be mitigated and suitab	Ill Fugitive emission of fly ash & dust will be or controlled up to the maximum extent with the coaid of suitable pollution control devices such as leESP, Dust Extraction, Dust Suppression systems nand water spray arrangements.etc. Further, extensive plantation will be undertaken in all available spaces including coal handling, ash pond area etc selectively with Air Pollution
		Ash will be disposed off in the designated area only. Moreover, trucks with closed containers will be used for transportation of fly ash in order to avoid any dust emission.
xviii	or any other suitable impermeable media s that no leaching takes place at any point	ngTo avoid any leaching and ground water cocontamination from ash slurry, bottom ash of lagoons are being provided with impervious belining with suitable impermeable material i.e. mBentonite blended clay.
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	getting breached.	The structure of ash dykes has been designed,
		constructed and will be operated as per State of the Art engineering practices for the design and construction of earth dams with adequate factor of Safety. The ash dyke is being constructed considering the seismic parameters in its design.
xix	metals contents of coal to be used shall be	n S S
xx	three tiers of plantations of native specie	Around 124 acres of land has been envisaged sfor the green belt development. Green Belt around the Main Plant area except
	justification shall be submitted to the Ministry	transmission corridor is being planted.
	be planted. Tree density shall not be less than	being planted. Extensive afforestation will be undertaken at all available spaces in and around project, after
		construction is complete. Avenue Plantation along the Road also being done.
		Shelter belt Plantations along the vicinity of ash storage/disposal sites/water reservoirs and along boundary walls is being taken up.
		About 31,200 sapling has been planted till Mar'2019 under green belt development in and around NTPC premises.
 x		Further, about 1,50,000 saplings have been planted outside the plant premises at various locations in Dist. Khandwa, Khargone at MF Rajya Van Vikas Nigam Limited's sites under the additional carbon sink plantation.
		Also, about 5000 fruit plant saplings were distributed to villagers.
xxi	Green belt shall also be developed around the Ash Pond over and above the Green Bel around the plant boundary.	eWill be complied during operation phase of the tproject.
xxii		nimplemented based on need based survey in deconsultation with the village Panchayat and the District Administration;



undertaken. Company shall provide separatebeing provided in nearby villages. budget for community development activities Drinking Water: Renovation/Up-gradation and income generation programmes.

prior identification of local employable youth Infrastructural development: Construction of the eventual employment in the project after Internal roads, Culverts, Bus stand, Community imparting relevant training shall be alsocentres, Solar street lights, Bridges and Drains are

> Providing of of water pipelines, Construction of water tank, Sump pit, Development of water source and Construction of Ghats are being provided in nearby villages.

> Education: Construction of additional class rooms Boundary wall & Renovation of school, Distribution of desk ,bench, chair, table, school uniforms & sports materials. Fencing of ground, Rural sports camps. Distribution of scholerships etc. are being provided.

> Health: Medical camps, Eye checkup & Dental checkup and Hygiene medical camps are being organized, Provided air conditioners to Govt. hospitals, Hiring/deployment of Mobile health clinic are being provided.

> Training to physically challenged Training: distribution of Aid Equipments, person & distribution of tricycles. Training for General Electrician & Domestic wiring, Car driving, Distribution of sewing machines, tool kits for electricians. Training for Computer education, Beautician, Dress making, Masala papad making, Manufacturing of cattle feed are being provided for women empowerment.

> Archeological /Heritage: Repairing /Renovation of Mandir at Maheshwar

> Cultural activities/Music & Festivals: Financial aids provided to nearby villages for cultural events, Public address system, tents & chairs are being provided for cultural & spiritual events.

> Adm. Recommendation Works: Construction of toilets, Distribution of computers, printers, Fin. aid for CCTV cameras, Construction of community centres, boundary wall, renovation of temples, Fin. Collector-Nirashrit Nidhi Yoina, for Construction of Goumukh Ghat, Safety Wall from Narmda River to back side of Temple, Solar light etd are being done.

> Apart from the above various infrastructure development (i.e. community center, boundary wall, road, school bhawan, solar lights, construction of ghats, drainage, water pipelines, panchayat bhawan) and other community works are also being taken up in the villages affected by Railway siding.





THE REAL PROPERTY.		~
		The total R&R budget is Rs. 3199 + 720 = Rs. 3919 Lakhs , wherein the total R&R expenditure incurred is Rs. 762.37 + 214.50= Rs. 976.87 Lakhs including the expenditure incurred for financial year 2018-19 i.e. Rs. 351.05+ 214.50 = Rs. 565.55 Lakhs
xxiii	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 also be evaluated by an independent external agency This evaluation shall be both concurrent (every six months) and final.	
xxiv	one expert in environmental science/engineering, ecology, occupational health and	
	the project site itself and shall be headed by an officer of appropriated seniority and qualification. 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.	EMG is responsible for implementation and compliance of environmental stipulations. EMG is having sufficient qualified/trained manpower for environmental management to ensure implementation of environmental regulations and social impact improvement/ mitigation
В	General Conditions:	
i	Space for FGD shall be provided for future installation, if required.	Adequate space has been provided in the layout for installation of FGD plant.
		Installation of FGD plant package is awarded to M/s L&T in Sep'2018 and shall be completed in 34 months.
ii		neutralization pit, oil and grease separator, lamella clarifier, cooling towers etc are being provided. The effluents will be treated
		Provision is being kept to re-circulate cooling water and ash pond effluent. The entire cooling tower blow down shall be reused in CHP, AHP, FGD and firefighting.
12		An independent plant effluent drainage system is being constructed to ensure that plant effluents do not mix with storm water drainage.
		Further, Zero Liquid Discharge (ZLD) scheme is being implemented for recycle & reuse of waste water generated, thereby reducing and optimizing the quantities of water requirement



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iii	(as applicable) and the treated sewage shal be used for raising greenbelt/plantation.	Sewage treatment plants are being provided at plant and township area to treat the sewage. The treated sewage, conforming to prescribed standards shall be utilized for plantation & raising greenbelt to the extent possible.
iv	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 plant layout etc. as and when finalized, shall	
V	fuel such as LDO/HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5% Provisions of the Manufacture, Storage and Import of Hazardous Chemical Rules and the Chemical Accidents (Emergency Planning Preparedness and Response) Rules, 1996 shall be applicable as per the quantity stored Disaster Management System shall be established as per the Disaster Management	Sulphur content in LDO is being ensured less than 0.5%. A detailed Disaster Management Plan & Risk assessment including fire and explosion issues is being prepared and finalized in consultation with Department of Explosives, Nagour, Regular mock
	accident taking place due to storage of oil.	drills being conducted as per plan in order to address any eventuality in case of an accident.
vi		All arrangements related to first aid, health & safety and sanitation for workers during construction phase of the project have been kept under the scope of EPC contractor. However, NTPC will ensure effective compliance of the said stipulations. Various measures implemented during construction phase through contractor are:-
		•Adequate infrastructure facilities, such as sanitation, fuel, restroom, medical facilities, safety, and suitable water supply are being provided at various stages of project construction to the labor colonies housing the work force during construction phase of the project.
		•Safety equipment such as earplugs and earmuffs, helmets, face shields, safety goggles etc. are being provided to workers engaged in high risk areas.
		•A first aid center facility have been provided in township as well as plant area to provide immediate medical aid to the workers and their family members.





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		 24x7 hrs ambulance service is available at site to transport injured workers to nearby hospitals.
vii	be limited to 85 dB (A) from source. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided.	construction phase. Periodic examination of workers during operation phase shall be done as
	audiometric record and for treatment for any hearing loss including shifting to non noisy/less noisy areas.	•
viii	and Hg shall be carried out in the impact zone of the project and record shall be maintained.	being done by MPPCB Lab, Indore. Ambient air monitoring reports are submitted herewith at Annexure-IV.
	limits, necessary control measures shall be taken immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation	Further, four nos. of Continuous AAQMS (2 at main plant, 1 at township and 1 at Khargone city) are being provided and its location have been already finalized in consultation with MPPCB. The data shall be uploaded on website of the
	submitted to the Regional Office of this Ministry every six months. The data shall also be uploaded on the website of the company.	company during the operation phase of the
ix	the 4 th year of operation of the power plant. Status of fly ash utilization shall be reported each year to the Regional Office of the Ministry.	Ash Utilization Plan has been prepared and shall be implemented in compliance to fly ash gazette notification dated 03.11.2009 and its amendments thereafter. Status of fly ash utilization shall be reported each year to the Regional Office of the Ministry during the operation phase of the project.
х	construction labor (as applicable) within the site with all necessary infrastructures and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing	The same has been kept have been kept under the scope of EPC contractor. However, NTPC will
		ensure effective compliance of the said stipulations.
хі	The project proponent shall advertise in at least two local newspapers widely circulated	The information of Environmental Clearance was published in two news papers widely circulated in the region; Hindustan Times (English) and Nai Dunia (Hindi) on dated 04.04.2015.

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AND DESCRIPTION OF THE PERSONS ASSESSMENT OF	
	Environment and Forests at http://envfor.nic.in.
xii	A copy of the clearance letter shall be sent by Copy of clearance letter were sent vide our the proponent to concerned Panchayat, Zilaletter dated 06.04.2015 to Sarpanch of village parisad/ Municipal Corporation, urban local Panchayat of Selda & Dalchi village, CEO of body and the Local NGO, if any, from whom Khargone Distt & CEO of Khargone Municipal suggestions/representations, if any, received Corporation. while processing the proposal. The clearance The environmental Clearance was also uploaded letter shall also be put on the website of the Company by the proponent.
xiii	The proponent shall upload the status of The latest half yearly compliance status report of compliance of the stipulated environmental EC conditions is regularly being submitted to the clearance conditions, including results of Regional Office of MOEF&CC and being also monitored data on their website and shall uploaded on the NTPC website, which is update the same every six months. It shall periodically being replaced with updated HYC simultaneously be sent to the Regional Office report. of MOEF, the respective Zonal Office of CPCB and the SPCB.
xiv	The criteria pollutant levels namely; SPM, Online Continuous Emission Monitoring System RSPM ($PM_{2.5} \& PM_{10}$), SO ₂ , NO _x (ambient levels (CEMS) for Stack emission to monitor pollutant as well as stack emissions) shall be displayed parameters namely; Particulate Matter (PM), at a convenient location near the main gate of NOX, & SO ₂ , is being installed. the company in the public domain.
	monitoring of ambient air quality. Data will be displayed at a convenient location near the main gate of the company in the public domain during operation phase of the project.
XV	The environment statement for each financial The environment statement for each financial year ending 31 st March in Form-V as year ending 31 st March in Form-V shall be prescribed under the Environment submitted to MPPCB & RO, MoEF&CC during the (Protection) Rules, 1986, as amended operation phase of the project. subsequently, shall be submitted by the project proponent to the concerned State Pollution Control Board. The same shall also be uploaded on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.
xvi	The project proponent shall submit six Six monthly compliance status report of EC monthly reports on the status of the conditions is regularly being submitted to the implementations of the stipulated Regional Office of MOEF&CC, CPCB & MPPCB environmental safeguards to the Ministry of and being also uploaded on the NTPC website, Environment and Forests, its Regional Office, which is periodically being replaced with Central Pollution Control Board and State updated report. Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same every six months and simultaneously send the same by





	email to the Regional office, Ministry of Environment and Forests.	
xvii	the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.	Environmental Impact Assessment (EIA) Reporand Environment Management Plan (EMP) along with the additional information/clarifications has been submitted on 05.10.2015.
xviii	break-up of Rs.1421.2 crores allocated for implementation of environmental protection	environmental mitigate measures shall not be diverted for other purposes.
xix	Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land	Site leveling/ Land development work started on July 17 th . 2015.
XX	Scientists/officers from the Ministry /	Full cooperation shall be extended to the Scientists/Officers from the Ministry/Regional Office of the Ministry at Bhopal/CPCB/SPCE during monitoring of the project.
5	The Ministry reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.	
6	The environmental clearance accorded shall be valid for a period of 5 years from the date of issue of this letter to start operation of the power plant.	
7	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	



8	In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.	
9	The above stipulations would be enforced among others under the water (prevention and Control of pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act,1981, the Environment (Protection) Act,1986 and rules there under, Hazardous Wastes (Management, Handling & Trans-boundary Movement) Rules, 2008 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	
10	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	

