GADARWARA SUPER
THERMAL POWER PLANT

ईएमजी/एचवाईसी/2026/01

दिनांक 30.06.2026

एनटीपीसी गाडरवारा एचवाईसी 2025-26 (अक्टूबर -25 से मार्च -26)

प्रति ,

अतिरिक्त प्रधान मुख्य वन संरक्षक
पर्यावरण ,वन एवं जलवायु परिवर्तन मंत्रालय
क्षेत्रीय कार्यालय (पश्चिम क्षेत्र),
केन्द्रीय पर्यावरण भवन ,
ई -5, अरेरा कॉलोनी ,लिंक रोड नं -3,
रविशंकर नगर , भोपाल (म.प्र.) - 462016

विषय : एनटीपीसी - गाडरवारा (स्टेज I 2x800 मेगावाट) की अर्द्धवार्षिक अनुपालन रिपोर्ट (अक्टूबर-25 से मार्च - 26)

महोदय ,

कृपया एनटीपीसी - गाडरवारा (स्टेज I 2x800 मेगावाट) की अर्द्धवार्षिक अनुपालन (HYC) रिपोर्ट , जो कि **अक्टूबर-25 से मार्च -26** की अवधि हेतु है , मंत्रालय द्वारा निर्धारित दिशा-निर्देशों के अनुसार संलग्न है |

आपकी कृपापूर्वक समीक्षा हेतु प्रेषित |

30.06.2026

(गिरीश चौधरी)
उपमहाप्रबन्धक,
पर्यावरण प्रबंधन समूह
एनटीपीसी गाडरवारा
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GADARWARA SUPER THERMAL POWER PROJECT, STAGE-I (2X800 MW)
Compliance status of Environmental Clearance Vide Letter No: J-13012/125/2009- IA, II(T) Dt:22/03/13.
Period of Compliance Report – (01.10.2025 to 31.03.2026)

S.NO.	MOEF STIPULATION	STATUS AS ON 31.03.2026
A. Specific Conditions:		
i	The project proponent shall set up the power project as a model plant demonstrating that ecology and development can co-exist in harmony and set examples for others to emulate similar practices.	In the present era of rapid urbanization, industrialization and modernization, the power industry has emerged as a masterworks that enable production of electrical energy which appeared as one of the basic & prime needs of life after water and food and also played a pivotal role in overall development. However, it is also known fact that every anthropogenic activity is associated with some externalities and therefore power generation through burning of fossil fuel is also having some consequences on environment which can be minimized/attenuated only through proper environmental management systems supported by state of art technologies so that balance between ecology and development can co-exists. NTPC well accepts the facts of these externalities and likely impacts of power projects on environment. However, being a committed and socially responsible corporate citizen since its inception, sustainable power generation has always been the prime objective of NTPC Limited. Gadarwara STPP, Stage-I (2x800 MW) has been installed as an example of the effort of NTPC towards achieving this objective for generating and providing reliable power at competitive prices in a sustainable manner by optimizing the use of multiple energy resource with innovative eco-friendly technologies thereby contributing to the economic development of the nation, social upliftment of the society and promoting a healthy environment.
		In pursuance of above, NTPC Gadarwara Project has installed the adequate mitigative measures for controlling the air emission/pollution from the project and maintain the ambient air quality in the surrounding area within latest NAAQ limit and also to comply with the latest emission standards for Thermal power plant dated 07.12.2015. Some mitigative measures adopted for ensuring minimal degradation of the environment due to the operation of the power project are as follows.
		The proposed project is designed with super-critical technology having higher efficiency compared to the conventional sub- critical technology based units. Adoption of higher cycle parameters will improve power plant efficiency and thereby reduce coal consumption per unit of electricity generation with consequent reduction in CO2 emissions. The super critical technology is relatively new to the Indian Power sector; where till recently, plants were operating on sub-critical parameters. These super critical units have a cycle efficiency of around 4-5% more than conventional sub-critical technology and consume 5% less fuel for the same amount of energy generated. This results in consequent reduction in CO2 foot print. Installation of high efficiency (99.99%) electrostatic precipitators (ESPs) to limit the particulate emission to 30 mg/Nm3. Twin flue stack of 275 m height for wider dispersal of remaining particulates and gaseous pollutants resulting in lower ground level concentrations. Installation of Flue Gas De-sulphurization (FGD) system for removal of excess sulphur dioxide (SO_2) is in the advanced stage of completion. Boilers of the latest state-of-the-art technology are commissioned with low NOx burners and Secondary Over Fire Air (SOFA) Dampers for NOx control. The project has been designed with zero Liquid Discharge (ZLD) concept in order to reduce the quantity of effluents generated from the plant. About 168 acres of land has been developed into thick green belt (within all available spaces of the project area & township which is attenuating the impact of air pollution and playing a vital role in offsetting the carbon footprint.
		The ash disposal scheme for fly ash envisages collection of fly ash by DAES (dry ash extraction system) to the storage silos and residual fly ash transported through HCSD (High Concentration Slurry Disposal system), which uses thick – viscous – high concentration slurry of ash for disposal which gets solidified within 1-2 days, thereby minimizing the possibility of fugitive emission. Under the above disposal system there is no risk of Ash flying in the wind due to it being cemented.
		Water spraying is being done at all dust generation areas viz., the coal and ash handling areas.
		Regular monitoring of ambient air quality parameters through three nos. fixed Continuous Automatic Ambient Air Quality Monitoring Stations (AAQMS) as well as portable Ambient Air Quality Monitoring equipment.
		Continuous emission monitoring system in stack for flue gases and particulate matter.
		Hence, it can be concluded that implementation of above practices/technology at Gadarwara project has enhanced the power Generation Efficiency in eco-friendly manner.
ii	Sulphur and ash contents in the coal to be use in the project shall not exceed 0.5% and 34% respectively at any given time. In case of variation of coal quality at any point of time fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary.	NTPC-Gadarwara shall approach MoEF & CC for seeking suitable amendments for any variation in coal quality. Latest Report attached as **Annexure-A** for reference.

iii	Bi-flue stack of 275 m height with flue gas velocity not less than 22 m/s shall be installed and provided with continuous online monitoring equipment's for SOx, NOx and PM2.5 & PM. Mercury emissions from stack may also be monitored on periodic basis.	A bi-flue stack of 275 meters height constructed and minimum flue gas velocity of 22 m/sec ensured. Continuous stack monitoring facility for online measurement of SO2, NOx and Particulate Matter(PM) is being done. Third party Hg monitoring report attached as **Annexure-B**. Chimney photo & drawing is attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
iv	No mine void filling or filling up of low-lying areas with fly ash shall be undertaken.	No mine void filling shall be done. Whenever required, due permission is being sought from MPPCB. Abandoned stone quarry at Chawarpatha (approximately 50 km away from NTPC Gadarwara Plant) is being filled as per the latest guidelines and due permission of MPPCB. MoEF&CC Gazette notification which enables for mine void filling Report attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
v	COC of 5.0 shall be adopted	a) COC or the Cycles Of Concentration is an abbreviation, used when talking about cooling water or cooling tower water. The COC specifies, how often a fresh water added into the loop, can be used or pumped around, before the water has to blown down or bleed off from the cooling tower. b) Only water can evaporate. Minerals dissolved or suspended in the cooling water can not. So the amount of minerals in the cooling water are increasing over time. These minerals lead to scaling or fouling in the system. To minimize this, part of the water has to be replaced regularly. This is done by the process of blow down or bleed off. Part of the higher concentrated cooling water is drained from the system and replaced by feed water. The feed water holds far less minerals. This fresh water is used to replace the water evaporated and bled off. The fresh water is diluting the left cooling water and so brings down the overall concentration in the cooling water. c) Closed cycle cooling system has been designed with COC of 5.0 for optimization of water requirement. Report already furnished in HYC submitted for the period 01.10.2023 to 31.03.2024.
vi	Continuous monitoring of Narmada River water quality in its upstream and downstream of water tapping point shall be undertaken regularly and records maintained.	Regular monitoring by third party of Narmada River water quality in its upstream and downstream of water tapping point is being undertaken regularly during operation phase of the project. Third Party Report attached as **Annexure-C**.
vii	The project proponent shall explore the possibility for storage of excess monsoon water for use during lean season. The same could be by construction of barrage at appropriate location which could be carried out in close consultation with the WRD, Govt. of Madhya Pradesh.	a) Gadarwara project has constructed weir on Narmada River in consultation with WRD, Government of Madhya Pradesh. Photo of weir / barrage on Narmada River attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
		b) Scheme to collect storm water from plant premises and store it in the plant's reservoir is being implemented. Photo of tank which has been constructed is attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
		c) Rainwater harvesting Scheme / Ground water recharge through bore wells is being implemented. Photo Report attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
		d) Deepening of pond work has been completed in Gangai, Chor Barhata and Ghat Pipariya. Report attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
viii	The ash pond design shall be such that no breach takes place even in the worst case of natural calamity. Since the geology of the area indicates sandy loam and loamy soil, the ash pond needs to be appropriately lined with appropriate impermeable media.	All the engineering practices have been followed for the construction of Ash Dyke. It has been designed with adequate factor of Safety. The design of ash dyke also takes into consideration the seismic parameters. Regular monitoring and inspection of ash dykes is being done to ensure no risks of failure. In addition, ash pond lined with suitable impermeable material like Bentonite blended clay. Moreover, the Fly Ash Disposal System for the project envisages the use of High Concentration Slurry Disposal (HCSD) System, which leads to solidification of the layers of ash slurry within 1-2 days. The solidified layers of ash shall be self- supporting and there will be no risk of ash flowing in the surrounding areas. For disposal of bottom ash, a conventional slurry disposal system with ash water recirculation has been adopted. However, NTPC Gadarwara is committed to 100% ash utilization. Ash Dyke Stability analysis report and annual Certification of Ash Dyke attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
ix	Ash pond for Stage-II (400 acres) can be considered only after the first ash pond is dispensed with by filling up of bottom ash and demonstration of 100% fly ash utilization established within four years of commissioning of the plant.	Noted. Ash utilization for FY 2024–25 is 82.19%. However, NTPC is committed to achieving 100% ash utilization in the coming years. A detailed 5-year Ash Utilization Plan is attached as **Annexure-D** for reference.
	The 2nd ash pond for Stage-II (400 acres) requirement should not arise and land earmarked can be converted for green belt and or water storage.	Permission for construction of ash pond in 244.634 acres has been granted for Stage-II Environmental Clearance.
x	Long term study shall be carried to assess impact on the ecology of the river Narmada downstream of the present project site at a different location especially at tapping points for drinking water supply and irrigation. The study shall be carried out by an institute of repute like IIT, Roorkee preferably within six months and report submitted to the Ministry. Thereafter the study shall be repeated after commissioning of both units of 2x800 MW and report subsequently submitted to the Ministry.	Study on impact of water intake due to Gadarwara STPP on Ecology of Narmada River has been carried out by Central Inland Fisheries Research Institute (CIFRI). Attached as **Annexure-E**.
		Base Line study report is attached and latest report attached as Report attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
xi	The project proponent shall explore setting up of R.O System to treat cooling tower blow down discharge of about 5 cusecs and the R.O system shall be so designed so as to take care of drinking water supply for the nearest few villages.	Plant is 100% ZLD complied. Cooling towers blow down water is being reused for ash handling system, fire water, service water etc. within the plant only.
		However, drinking water has been provided in all PAV'S villages. Photos attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
xii	The village ponds / surface water bodies located within 5 kms radius of the	Under Various community CSR-CD works following initiatives were undertaken:

	project site shall be regenerated in the as part of its social welfare activities.	Four ponds in project affected villages (PAVs) were identified for deepening out of which, work has been completed in three villages (Ghat Pipariya, Chor Barhata & Gangai). Work Completion certificate, Pond Photos attached, Sustainable Developement budget allocation email for FY 2024-25 attached in HYC submitted for the period 01.10.2023 to 31.03.2024. This budget will be used for pond rejuvenation activities in nearby villages. One Pond in Kudari village have been identified for deepening as a special project by district administration. Construction of 2 Checkdams in Bohani village is being taken up through the SD Budget for FY 25-26. Budget allocation IOM and Demand letter from CEO Jila Panchayat attached as **Annexure-F.**
B. General Conditions		
(i)	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 08.04.2013 has already submitted the Project Vision Document to the Regional Office (Western Zone) of the Ministry of Environment and Forest & Climate Change (MOEF&CC), Bhopal. Attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
(ii)	Scheme for implementation for harnessing solar power within the premises of the plant particularly at available roof tops shall be formulated and status of implementation shall be submitted periodically to the Regional Office of the Ministry.	Installation and Commissioning of 1083kWp of Rooftop Solar PV panels is completed at all potential buildings. Photo Attached attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
(iii)	Provision for installation of FGD shall be provided for future use.	Installation of FGD work is in progress, Contract awarded to ISGEC Heavy Eng. Ltd. on 26/09/2018, Scheduled completion date for Unit#1 is March 26 and for Unit#2 is Feb 26 as per newly defined timelines as Gadarwara falls under Category "C". Photo attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
(iv)	Coal transportation to plant site shall be undertaken by rail and no road transportation shall be permitted.	Coal transportation to plant site is being done by rail through dedicated railway siding. WCR agreement document attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
(v)	A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter mechanism for an in- built continuous monitoring for Radio activity and heavy metals in coal and fly ash (including bottom ash) be put in place.	'The radio activity study BARC' for analyzing natural background radiation monitoring at Gadarwara project has been carried out by BARC. Latest Report attached as **Annexure-G.**
		The Condition has been amended vide File no J-13012/125/2009-IA.II (T) dated 24.12.2021. The term "..... *in- built continuous monitoring* ....." in the said stipulation has been amended with "....*regular periodical monitoring* ...." Coal, Fly ash, Bottom Ash Samples sent to BRIT (Board of Radiation and Isotope Technology) for analysis on 14.11.2024. Report shall be shared after test results. Previous report attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
(vi)	Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Ash utilization for FY 2023–24 and FY 2024–25 are 111.69% and 82.19% respectively. However, NTPC is committed to achieving 100% ash utilization in the coming years. A detailed 5-year Ash Utilization Plan is attached as **Annexure-D** for reference.
		NTPC Gadarwara is committed to 100% ash utilization.
		Status of implementation is being sent to the Regional Office time to time.
(vii)	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm3.	The High Efficiency Electrostatic Precipitators (ESP) are designed and installed for achieving guaranteed efficiency of 99.99 %. ESP photo attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
(viii)	Adequate dust extraction system such as cyclones / bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Dust extraction system at Coal crusher house and adequate no. of dust suppression systems are provided in coal handling area including coal stock yard area, ash handling points, transfer points, and other vulnerable dusty areas for control of fugitive dust Emissions. Photo attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
		Dry fog dust suppression system has been provided at coal conveyor transfer Points. Photo attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
		Water sprinklers installed at dust prone sites in order to attenuate fugitive dust emission i.e. Wagon Tipplers, Coal Yard, Ash dyke, water sprinkling at roads etc. Photos of water Sprinkling at Wagon Tipplers, Coal Yard, Ash dyke and hauling roads are attached Report attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
		Filter bags are used in buffer hopper to separate the fly ash from Ash and air mixture coming from ESP. As from ESP, fly ash is extracted through vaccum pumps and in process and Ash both are conveyed to Buffer hoppers. Photo attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
(ix)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As,Hg,Cr,Pb etc.) shall 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.	An ash management scheme has been implemented consisting of dry ash extraction system (DAES) for dry collection of fly ash with storage facility (silos). Supply of ash to entrepreneurs for utilization and promoting ash utilization to maximum possible extent and safe disposal of unused ash in the ashpond area. Photos of Silo Report attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
		The plant is operating two different systems for ash disposal– conventional wet slurry disposal with ash water re-circulation for bottom ash and High Concentration Slurry Disposal (HCSD) for disposal of unused fly ash.
		Periodic monitoring for mercury & heavy metals in the bottom ash and water emanating from ash pond is being done. Report Attached as **Annexure-H**

		Ash shall be disposed off in low lying area with due approval of MPPCB and other statutory body and as per latest gazette notification of MoEF & CC.
(x)	Ash pond shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached. Ash pond water shall be re- circulated and utilized.	To avoid the ground water contamination from bottom ash slurry, one of the bottom ash lagoons is separated by a small temporary bund and is lined with impervious liner of 300 MM thickness.
		Ash pond is lined with suitable impermeable material like Bentonite blended clay or HCSD layer.
		All the engineering practices have been followed for the construction of Ash Dyke.
		It has been designed with adequate factor of Safety. The design of ash dyke also takes into consideration the seismic parameters. Ash dyke stability analysis report is attached w.r.t. above condition no-viii of Specific conditions.
		Regular monitoring and inspection of ash dykes is being done which will ensure no risks of failure. Report attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
		AWRS system has also been commissioned.
(xi)	Fugitive emissions shall be controlled to prevent on such that no agricultural / non-agricultural land. Impact to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.	Adequate no. of dust suppression and extraction system have been provided in coal handling area including coal stock yard area, ash handling points, transfer areas and other vulnerable dusty areas for control of fugitive dust Emissions. Please refer General condition no-viii.
		Extensive plantation has been carried out in all available areas, selectively with Air Pollution Tolerant Index (APTI) plant species. More plantations shall be undertaken at available areas. Plantation Photos, inspection documents (sample) and total plantation record attached as **Annexure-I**.Third party air quality monitoring reports inside plant and surrounding areas are attached as **Annexure-J.**
(xii)	Hydrogeology of the area shall be reviewed annually from an institute / organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case any deterioration is observed specific mitigation measures shall be undertaken and reports / data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry	During operation phase of the project the Hydrogeology of the area is being reviewed annually from an institute / organization of repute to assess impact of surface water and ground regime (especially around ash dyke) and reports of water quality monitored being submitted to the Regional Office of the Ministry.
		Hydro-geological study for Gadarwara project has been carried out by National Institute of Hydrology (NIH) Roorkee. Hydro-geological study for Gadarwara project completed by National Institute of Hydrology (NIH) Roorkee on January-2024. Report submitted in HYC for the period 01.10.2023 to 31.03.2024.
(xiii)	No ground water shall be extracted for use in operation of the power plant even in lean season.	No ground water extraction is being done at Gadarwara STPS. Certification regarding the same submitted in HYC for the period 01.10.2023 to 31.03.2024.
(xiv)	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.	No water body including natural drainage system of the area has been disturbed due to activities associated with the setting up of the power plant.
		Moreover, the said stipulation is also being complied during the operation phase of the project.
(xv)	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office	Adequate nos. of piezometers are installed for regular monitoring of ground water level in and around ash pond area as per stipulation.
		Ground Water Level Report attached at submitted in HYC for the period 01.10.2023 to 31.03.2024. Ground water Monitoring Report is attached as **Annexure-K.**
(xvi)	Monitoring surface water quality in the area 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 be undertaken.	Plant is 100% ZLD complied and no discharge of water outside plant boundry. However, Monitoring of surface water quality is being carried out regularly as per stipulations. Reports are being submitted to Regional Office of MOEF&CC (Western Zone) at Bhopal. Monitoring for heavy metals in ground water is being done and its record being maintained. Surface water Monitoring report attached at **Annexure-L**. Groundwater Monitoring reports are attached as **Annexure-M.**
(xvii)	Minimum required environmental flow suggested by the Competent Authority of the state Govt. shall be maintained in the Channel / Rivers (as applicable) even in lean season.	Noted.
(xviii)	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	The project has an integrated scheme for treatment, re-cycle and re use of effluents. Provision has been made to re-circulate cooling water and ash pond effluent. The cooling tower blow down is being used fully for ash handling, service water system, coal handling & firefighting etc. Provision is being kept for treatment, recirculation & reuse of entire quantity of coal handling plant effluents & service water effluents is being done.
		The effluent treatment system comprising of neutralization pit for DM plant regeneration waste, oil separator/skimmers for oily waste, coal slurry settling pond for coal handling plant effluents, lamella clarifier for service water effluents and cooling towers for hot water etc have been provided.
		The effluents is being treated adequately conforming to the stipulated regulatory standards.
		An independent plant effluent drainage system is constructed to ensure that plant effluents do not mix with storm water drainage.
		Plant is ZLD complied, hence No water is being discharged outside plant boundry. Photos of ETP,STP,CSSP, Neutralisation Pit already submitted in HYC for the period 01.10.2023 to 31.03.2024. Treated effluent test report attached as **Annexure-N.**
(xix)	Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB/CPCB.	Plant is ZLD complied. No water is being discharged outside plant.

		NTPC has already optimised its water requirement in order to comply with the latest notification by MOEF&CC for TPP dated 07.12.2015.
(xx)	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising green belt/plantation.	All domestic sewage emanating from township is being treated in a sewage treatment plant. The treated sewage conforming to prescribed standards is being utilized for plantation & raising greenbelt to the extent possible.
		Capacity of STP is 1200KLD.
(xxi)	The project proponent shall undertake rainwater harvesting measures and shall develop water storage for use in operation of the plant. Rainwater harvesting system shall be put in place which shall comprise of rain water collection from the built up and open area in the plant premises. Action plan for implementation shall be submitted to the Regional Office of the Ministry.	Rainwater harvesting scheme developed inside plant and Township. Status: 8 borewells completed in Township. 22 borewells completed in Plant to recharge ground water directly.
		Location of borewells and action plan submitted in HYC for the period 01.10.2023 to 31.03.2024.
(xxii)	Additional soil for leveling of the proposed site shall be generated within the site (to the extent possible) so that natural drainage system of the area is protected and improved.	All additional soil leveling of the project site has been done from within the sites only with all necessary precautions to protect natural drainage system of the area.
(xxiii)	Common property resource falling in the vicinity of the project area shall be identified and if any common property resource (such as grazing land, pond etc.) is falling within the plant area and is developed and handed over to the community.	There is no common property resource falling within the plant area.
(xxiv)	Adequate safety measures 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 plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	The entire fire system in NTPC Gadarwara plant is catered by -
		Pump for hydrant system –
		03 nos electric motor driven.
		01 no diesel engine driven as standby. Pump for water spray system -
		01 no electric motor driven.
		01 no diesel engine driven as standby. Jockey pumps -
		02 nos electric motor driven + 1 no main + 01 no standby
		Following areas are covered by Hydrant and Spray Systems for fire protection
		1) Hydrant system : Through piping network and valves covers entire main plant and offsite area.
		2) Hydrant Booster pumps : It is provided to supply adequate pressure in hydrant system of Boiler and elevated area like Bunker Transfer points.
		3) High Velocity Sprinkler system : It has been provided in areas where Oil is being used transformers, Turbine Driven BFPs, Boiler burner floors, Turbine lube oil system, Oil canal, Generator seal oil units
		4) Medium Velocity Sprinkler system: Coal conveyors and Transfer points, LDO Tanks, DG Sets, Cable galleries at various levels at TG Building. Plant Layout for Disaster management Plan already submitted in HYC for the period 01.10.2023 to 31.03.2024.
xxv	Well-designed acoustic enclosures for the DG sets and noise emitting equipment's to achieve the desirable insertion loss viz. 25 dB (A) should be provided.	Well-designed acoustic enclosures meeting the latest statutory norms for DG sets are provided.
		Total DG Set (2+1) = 03, Capacity-1760 KW at 40 Degree (2200KVA) , Make - Supernova Enginers Ltd. (photo HYC for the period 01.10.2023 to 31.03.2024) Noise Monitoring report attached as **Annexure-O.**
xxvi	Storage facilities for auxiliary liquid 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 shall 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.	Storage facilities for auxiliary liquid fuel LDO/HFO are designed conforming to the safety standards and where risk is minimal. 02 Nos LDO tank with capacity of 2500 KL (Each). PESO Certificate, Sulphur content, report Photo attached in HYC for the period 01.10.2023 to 31.03.2024.
		A detailed Disaster Management Plan & Risk assessment including fire and explosion issues prepared and finalized in consultation with Department of Explosives, Nagpur and regular mock drills are being conducted as per plan in order to address any eventuality in case of an accident. Displayed on Gadarwara intranet. DMP already submitted in HYC for the period 01.10.2023 to 31.03.2024.
xxvii	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	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 ensures that effective compliance of the said stipulations.
		Various measures implemented during construction phase through contractor are:

		Adequate infrastructure facilities, such as sanitation, 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. The sanitary waste from these areas shall be accorded suitable treatment.
		Safety equipment such as earplugs and earmuffs, Helmets, face shields, safety goggles etc. is being provided to workers engaged in high risk areas.
		A first aid center & ambulance have been established to provide immediate medical aid to the workers and their Family members. An ambulance service is available at site to transport injured workers to nearby hospitals.
xxviii	Noise levels emanating from turbines shall be limited to 85 dB (A) from source. For people working in the high noise area, requisite PPEs shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc. shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	Design specification for the equipment has been made to comply with the stipulation. Personal protective equipment has been arranged through contractors during construction phase. Periodic examination of workers is being done regularly. The workers of generator halls and other high noise area are being provided with appropriate ear protection devices. PPEs i.e. Ear Plug, safety Shoes, Safety Helmet, Mask etc are provided to the workers through contractor. Noise monitoring report attached as **Annexure-P.**
xxix	Regular monitoring of ambient air ground level concentration of SO2, NOx, PM2.5 & PM10 and Hg shall be carried out in the impact zone and record 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 and frequency of monitoringshall 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.	Regular monitoring of AAQ is being done during the operation of the plant. The four locations of AAQMS have been finalized in consultation with MPPCB.
		Three (3) no. of AAQMS equipment have been installed at site for regular motoring of ambient air quality around plant premises and one (1) AAQMS has been shifted and installed at Narsinghpur as suggested by MPPCB and Collector office. Linking with CPCB done for real-time data submission to the CPCB and SPCB.
		The data also being put up on the website of NTPC.
xxx	Green Belt consisting of 3 tiers of plantations of native species around plant not less than 100m width shall be raised (except in areas not feasible). The density of trees shall not less than 2500per ha with survival rate not less than 80%.	Green Belt around the Main Plant area except transmission corridor shall be planted.
		Around 163 acres of land has already been covered under green belt development.
		Extensive afforestation has been undertaken at all available spaces in and around the project.
		Avenue Plantation along the Road from NTPC to Gadarwara is completed.
		It is ensured to keep the density of trees not less than 2500 per ha with all efforts to maintain the survival rate not less than 80%.
		Till date, approximately 83639 trees have been planted around plant (inside and outside) under Green belt work, and road side plantation work.
		Area Details submitted in HYC for the period 01.10.2023 to 31.03.2024.
xxxi	An Environmental Cell comprising of at-least one expert in environmental science / engineering, occupational health and a social scientist, shall be created preferably at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the Head of the Cell shall directly report to the head of the organization who would be accountable for implementation of environmental regulations and social impact improvement / mitigation measures.	An Environment Management Group (EMG) has been set up at Gadarwara STPP.
		CGM (Head of Project)
		Additional General Manager (E8)
		Assistant Officer (E0) Deputy General Manager (E7)
		The EMG is responsible for implementing and monitoring the stipulations/ issues / statutory norms.
xxxii	The project proponent shall also adequately contribute in the development of the neighboring villages. Special package with implementation schedule for providing potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	Expenditure of Rs. 37.81 Crore has been done regarding Community Development works in the neighboring villages out of which, R&R Department has undertaken various community development focusing on areas such as education, health, sanitation, drinking water, women empowerment, skill development etc.
		Under drinking water, NTPC Gadarwara has installed water coolers in government schools, water supply pipeline and handpumps in 7 surrounding villages of plant area**. All 7 PAV's have provided Solar lights at main locations of the villages. 10 PCs have been provided to Govt. Higher Secondary School, Raipur. Water cooler, School bags & Stationery have been provided to Govt. Primary and Middle school, Ghurpur. In the vicinity of plant 04 nos. Water coolers, Dust bins and waiting chairs are provided at Gadarwara Railway Station.**
		To provide better employment opportunity to the women of the area the stitching center constructed at Gangai Village.
		A foot path shala run by NGO in vicinity area of the plant, the required help is provided by the NTPC as social responsibility to UPAY.
		Photos submitted in the HYC report from 1.10.2023 to 31.03.2024.

xxxiii	CSR scheme shall be undertaken based on need based assessment in and around the villages within 5 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR employment of local youth after imparting relevant training as may be necessary shall be undertaken as committed.	As per NTPC's R&R Policy, all community development initiatives are need based in consultation with VDAC CEO, Zilla Parishad and District Collector. Girls Empowerment Mission is undertaken by NTPC Gadarwara every year. The mission has been started since 2022 at NTPC Gadarwara and we have trained 236 girl children so far through different types of activities i.e. self-empowerment, sports, art and craft, dance, education etc. In 2025, we have taken 38 girl children for the mission. Girls of PAV's and areas in the vicinity of plant studying in 6th Standard are invited for one month in house residential program consisting of exciting activities for overall development of Girls. Photos submitted in HYC from 1.10.2023 to 31.03.2024 .
xxxiv	It shall be ensured that an in-built monitoring mechanism for the CSR schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time. The achievements should be put on company's website.	Monitoring of R&R-CD activities are undertaken by Corporate CSR-R&R Dept. of NTPC annually. Apart from this, VDAC meetings are conducted from time to time and follow-ups are undertaken by the district administration regarding the status of implementation of various community development activities. A social impact evaluation is also conducted by third party agencies to understand the impact of various initiatives undertaken by NTPC Gadarwara. Social Impact evaluation report submitted in HYC from 1.10.2023 to 31.03.2024 .
xxv	Provision shall be made for the housing of 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 may be in the form of temporary structure to be removed after the completion of the project.	Almost all construction activities are completed but the O&M workers working at NTPC Gadarwara Project are being provided temporary accommodation near to the work site. As a part health and sanitation regular medical checkup is being done by NTPC and for sanitation part, cleaning drive and fogging is conducted on regular basis.
xxxvi	The project proponent shall advertise in at least two local news papers 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 and copies of clearance letter are available with the State Pollution Control Board/Committee and may seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in.	The information of Environmental Clearance was published in Two newspapers widely circulated in the region; Dainik Bhaskar on 27.03.2013 (Hindi) Nayi Duniya on 23.03.2013 (Hindi). Please Refer page no 443 of HYC furnished on 10.03.2014. Attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
xxxvii	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila parishad/ Municipal Corporation, urban local body and the Local NGO, if any, from whom suggestions / representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	The copy Environmental Clearance has been submitted to the following concerned offices. (1) Collector, Narsinghpur. (2) General Manager, District Trade & Industries Centre, Narsinghpur. (3) CEO, Zila Panchayat (4) Secretary, Gram Panchayat Gangai. (5) Secretary, Gram Panchayat Kudari. (6) Secretary, Gram Panchayat Chor Baretha. The Environmental Clearance has also been uploaded on the NTPC website. Forwarding Letters for the above correspondences are not available since there was a massive fire in the construction office in 2018, entiremany such official documents were burnt. However, HYC submitted on 14.03.2014 gives a good insight to understand the compliance to this condition. Also attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
xxxviii	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely, SPM, RSPM (PM2.5 & PM10), SO2, 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.	The latest HYC report of EC conditions is regularly being submitted to the Regional Office (Western Zone) of MOEF&CC at Bhopal and at the same time it is also uploaded on the NTPC website which is periodically being replaced with updated HYC report. Online continuous Stack Emission Monitoring System (CSEMS) for the parameters like particulate matter (PM) NOX, SO2, Mercury are commissioned. Linking with CPCB done for real-time data submission to the CPCB and SPCB. Parameters like SOx, NOx, PM are being displayed continuously at main gate (Plant Gate #1 and #2) of the company.The criteria pollutant levels are being monitored on realtime basis and linked with CPCB and MPPCB through following links. CPCB - rtdms.cpcb.gov.in, MPPCB - esc.mp.gov.in & erc.mp.gov.in

xxxix	The environment statement for each financial year ending 31st March in Form-V as is 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 environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	The environment statement for each financial year ending 31st March in Form-V submitted to Madhya Pradesh Pollution Control Board (MPPCB) is submitted every year. Environment Statement for year 2024-25 Attached as Annexure-Q.
xl	The project proponent shall submit six monthly reports on the status of the implementations of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status ofcompliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by email to Regional office, Ministry of Environment and Forests.	Latest Six-monthly reports on the status of the implementations of the stipulated environmental safeguards is regularly being submitted to the MOEF&CC/MPPCB/Regional Office (Western Zone, Bhopal) and at the same time and it is also uploaded on the NTPC website which is periodically being replaced with updated HYC report. Last 5 HYC has been submitted on the following dates: 31.12.2023, 09.05.2024 and 31.12.2024, 30.06.2025, 31.12.2025.
xli	Regional office of the Environment & Forests shall monitor the implementation of 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. Project proponent shall up-load the compliance status in their website and up-date 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.	A complete set of documents including Environmental Impact Assessment (EIA) Report and Environment Management Plan (EMP) along with the additional information / clarifications were forwarded on 10.03.2014 to the Regional Office (Western Region) of MOEF&CC at Bhopal.
xlii	Separate funds shall be allocated for implementation of environmental protection measures along with item – wise break–up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purpose and year-wise expenditure should be reported to the ministry.	The requisite funds for environmental mitigation measures have been included in the project cost. Financial provision stipulated towards environmental mitigation measures are not being diverted for other purposes. Commercial operation date for Unit#1 and Unit#2 are 01.06.2019 and 01.03.2021. Approved budget details for environment management and sustainable developement activities are attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
xliii	The project authorities shall inform the 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 development work and commissioning of plant.	Complied. Attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
xliv	Full cooperation shall be extended to the Scientists/officers from the Ministry / Regional Office of the Ministry/ CPCB /SPCB who would be monitoring the compliance of environmental status.	Complied. Full cooperation is being extended to the Scientists / officers from the Ministry / Regional Office of the Ministry at Bhopal (Western Region) / the CPCB / the MPPCB during monitoring of the project.
xlv	The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions of modify the existing ones, if necessary.	Noted.
xlvi	The environmental clearance accorded shall be valid for a period of 5 years to start operations by the power plant	Noted.
xlvii	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.	Noted.
xlviii	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.	Noted.

Compliance status of Environmental Clearance Vide Letter No: J-13012/125/2009- IA, II(T) Amendment Dt:01.09.2017

S.NO.	MOEF STIPULATION	STATUS AS ON 31.03.2026

i	Road Repair and Maintenance to be carried out by NTPC	As per WCR Agreement the transporatation of coal by road from Gadarwara Railway Station to NTPC Gadarwara has been discontinued w.e.f.27.11.2019. The Road Repair and Maintenance is being carried out by NTPC time to time. Details and Photo attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
ii	Trucks shall be covered with tarpoulin and properly stamped to ensure that tarpoulin is properly tied with the help of rope and truck shall be fully covered so that there is no spillage of coal and / or emission of dust during transportatoin.	Coal was transported from Gadarwara Railway Station by trucks very carefully, and was well covered with tarpaulin. The tarpaulin was tied with the help of rope. NTPC practiced patrolling on the road to ensure that spillage of coal does not occur on the road. Water was sprinkled on the road during the entire period of transportation. However, as per the WCR agreement , transportation of coal by road from Gadarwara Railway Station to NTPC Gadarwara has been discontinued w.e.f. 27.11.2019. Agreement attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
iii	Continuous water sprinkling, sweeping and dust control measures shall be carried out throughtout the road for minimising the air pollution.	NTPC Gadarwara installed fog guns to prevent dust at the coal unloading site near Gadarwara railway station. Apart from this, NTPC practiced patrolling on the road to ensure that spillage of coal does not occur on the road. Water was sprayed on the road during the entire period of transportation. If any coal spillage was found anywhere, it was cleaned immediately.
iv	Plantation shall be carried out along side of the road for noise attenuation and control of air dust.	14656 trees planted along the road on both sides from Gadarwara Railway Station to NTPC Gadarwara. Report submitted in HYC submitted for the period 01.10.2023 to 31.03.2024.
v	Plantation shall also be carried out on the banks of sangam confluence of Shakkar nadi and Narmada Nadi	Tree plantation was done at the confluence of Shakkar and Narmada rivers, but the vegetation/trees developed near the confluence site were washed away during the floods in the Narmada river. However, the vegetation/trees developed at some distance from the confluence site attached in HYC submitted for the period 01.10.2023 to 31.03.2024.

Compliance status of Environmental Clearance Vide Letter No: J-13012/125/2009- IA, II(T) Amendment Dt:07.02.2019

S.NO.	MOEF STIPULATION	STATUS AS ON 31.03.2026
i	The detailed Progress report of Railway Siding, Unit-2 (1X800MW) along with the balance works and timelines/milestones for completion is to be submitted to the Ministry as well as Regional office within three months.	As per WCR Agreement submitted in HYC submitted for the period 01.10.2023 to 31.03.2024 the transporatation of coal by road from Gadarwara Railway Station to NTPC Gadarwara has been discontinued. NTPC Gadarwara has received first Coal rake on 27.11.2019.Photo attached in HYC submitted for the period 01.10.2023 to 31.03.2024.. Facilities has been developed at NTPC Gadarwara for coal tranportation via rail. DPR attached in HYC submitted for the period 01.10.2023 to 31.03.2024.
ii	All other conditions mentioned in the EC letter dated 22.03.2013 and amendment / temporary permission letter dated 01.09.2017 shall remain the same, as applicable.	Noted and being complied.