सत्यमेव जयते

File No: J-13012/125/2009-IA.II(T)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division
****

Date **28/05/2025**

To,

Mr. Rajesh Malik
M/s. NTPC Limited
NTPC Bhawan, SCOPE Complex, Institutional Area, Lodhi Road, New Delhi – 110003
E-mail: environment.ntpc@gmail.com

Subject: **Proposed expansion of Gadarwara STPP by adding Stage- II: 1600 MW (2x800 MW) with UltraSuper Critical technology having Air Cooled Condenser system to the existing Stage- I: 1600 MW (2x800 MW) by M/s. NTPC Limited at Villages Gangai, Mehrakheda, Chorbarheta, Dongergaon and Kudari, Tehsil Gadarwara, District Narsinghpur, Madhya Pradesh - Environmental Clearance -Regarding**

Sir/Madam,

This is with reference to your proposal number IA/MP/THE/532566/2025 dated 17.04.2025 along with a written submission dated 08.05.2025 seeking for grant of Environmental Clearance (EC) under the provisions of the EIA Notification 2006 and as amended thereof for the project mentioned above.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC25A0601MP5141531N
(ii) File No.	J-13012/125/2009-IA.II(T)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(d) Thermal Power Plants
(vi) Sector	Thermal Projects
(vii) Name of Project	Gadarwara Super Thermal Power Project, Stage-II (2x800MW)
(viii) Name of Company/Organization	M/s. NTPC Limited
(ix) Location of Project (District, State)	Narsinghpur, Madhya Pradesh
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. M/s. NTPC Limited has made an online application vide proposal no. IA/MP/THE/532566/2025 dated 17.04.2025 along with copy of EIA/EMP report, Form (CAF, Part A, B & C) and Certified compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above.

4. The proposed project activity is listed at item no. 1(d) – Thermal Power Plants under Category 'A' of the schedule of the EIA Notification, 2006 and appraised at Central Level. Further, the project does not attract the General Condition of the EIA Notification, 2006.

5. The instant Proposal was considered by the EAC (Thermal) in its 24th meeting held on 29th April, 2025. The PP has submitted the written information on 08.05.2025. The MoM for the same may be seen using the following web link: https://parivesh.nic.in

Details submitted by the project proponent

6. The proposed project is for expansion of existing Gadarwara Super Thermal Power Project from 1600 MW (2x800 MW; Stage-I) to 3200 MW (Stage-II) with addition of 2 Units of 800 MW each (2x800 MW) based on Ultra Super Critical Technology & Air-Cooled Condenser (ACC), by M/s. NTPC Limited is located at Villages Gangai, Mehrakheda, Chorbarheta, Dongergaon and Kudari, Tehsil Gadarwara, District Narsinghpur, Madhya Pradesh.

7. The detail of the Terms of Reference (ToRs) obtained for the expansion project for undertaking EIA/EMP study is furnished as below:

Proposal No. with Date	Consideration	Details		ToR Validity
IA/MP/THE/465459/2024 dated 09.03.2024	12th EAC (Thermal) Meeting held on 29.08.2024.	Terms of Reference	30.09.2024	29.09.2028

8. The existing Stage I (2x800 MW) project was accorded Environmental Clearance vide letter. no. J-13012/125/2009-IA. II(T) dated 22/03/2013 from Ministry of Environment and Forest, New Delhi. The Environmental Clearance was amended vide letter dated 01.09.2017, 07.02.2019, 22.10.2019, 11.08.2020 & 24.12.2021. The project has been implemented and the unit is under operation. Madhya Pradesh Pollution Control Board (MPPCB), Bhopal accorded consent to Operate renewal for the existing Stage-I (2x800 MW) units, vide Letter No. AW-60741 dated 22.07.2024. The validity of the CTO is up to 30.09.2026.
Details of existing project and its Environment Clearance & consent details along with its implementation status are given as below:

S. No	Facility	Issuing Authority	Details of Letter No.	Date of issuance
1.	2x800 MW (Stage-I) Gadarwara Super Thermal Power Project near villages Gangai, Umaraiya, Mehrakheda, Chorbarheta, Dongergaon and Kudari, in Gadarwara Tehsil, Narsinghpur District, in Madhya Pradesh Environmental Clearance	MoEF&CC	J 13012/ 125/2009-IA.II 1(T)	22.03.2013
2.	Amendment in Environmental Clearance for changing coal source from Talaipalli to Pakri Barwadih coal block and for temporary permission of transportation of coal by road	MoEF&CC		01.09.2017
3.	Amendment in Environmental Clearance for changing coal source from Pakri Barwadih coal block to NCL, WCL nd SECL mines and for extending temporary permission of transportation of coal by road	MoEF&CC		07.02.2019
4.	Amendment in Environmental Clearance for changing the CSR condition	MoEF&CC		11.08.2020
5.	Amendment in Environmental Clearance conditions related to Particulate matter and Radio activity & heavy metals in coal and fly ash	MoEF&CC		24.12.2021
6.	Consent to Operate (CTO) for Stage-I (2x800) under Water Act, Air Act	MPPCB	AW-60741	22.07.2024 valid up to

S. No	Facility	Issuing Authority	Details of Letter No.	Date of issuance
				30.09.2026

***Implementation status of the existing project*:**

Configuration	Capacity (MW)	As per EC dated	Implementation Status as on 18.04.2025	Production as per CTO
Stage-I 1600MW (2x800 MW)	1600	22/03/2013	Both the units have been commissioned and are under commercial operation	1600 MW

9. **Certified compliance report from Regional Office**: The Status of compliance of earlier EC was obtained from Regional Office, MoEF&CC Bhopal, Madhya Pradesh vide letter no. 4-10/2013(Env) dated 28.06.2024 in the name of M/s. NTPC Limited for Gadarwara STPP Stage-I (2x800MW) project. The Action taken report regarding the partially/non-complied conditions submitted to Regional office, MoEF&CC, Bhopal, Madhya Pradesh vide letter no. GW/EMG/MoEF&CC/2024/02 dated 04.07.2024. PP vide email dated 20.02.2025 submitted Action Taken Report (ATR) w.r.t. conditions marked as partly complied. The ATR submitted by the PP was examined by the RO, Bhopal and submitted detailed analysis and review of ATR vide letter dated 21.04.2025.

10. **Environmental site settings**:

<table>
<tr><th>S. No.</th><th>Particulars</th><th colspan="5">Details</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Total land</td><td colspan="5">910.706 Ha
[Private Land: 746.536 Ha; Govt. Land: 164.170 Ha]</td><td>Land Use: The land to be used for the proposed expansion is within existing TPP premises which is already under the possession of project proponent.</td></tr>
<tr><td>2.</td><td>Land use break up</td><td>S.N.</td><td>Description</td><td>Area Utilised for Stage-I, Ha.</td><td>Area Proposed for Stage-II, Ha.</td><td>Total Area, Ha. (St-I & St-II)</td><td rowspan="8">Out of total project area of 910.706 Ha, an area of 56.146 Ha has not been acquired but the land is under Right of Use (ROU) or for makeup water pipeline.
*Existing plantation for Stage I has been developed on 163.9 Acre (66.367 ha) in compliance to Stage-I EC requirement of</td></tr>
<tr><td></td><td></td><td>A</td><td>Main Plant</td><td>127.990</td><td>81.820</td><td>209.81</td></tr>
<tr><td></td><td></td><td>B</td><td>Ash Pond</td><td>157.020</td><td>99.000</td><td>256.02</td></tr>
<tr><td></td><td></td><td>C</td><td>Greenbelt area within main plant</td><td>7.740</td><td>0.000</td><td>7.740</td></tr>
<tr><td></td><td></td><td>D</td><td>Total area considered for Greenbelt calculation (A+B+C)</td><td>292.750</td><td>180.820</td><td>473.570</td></tr>
<tr><td></td><td></td><td>E</td><td>Greenbelt area adjacent to main plant (on NTPC Land)</td><td>58.628</td><td>90.412</td><td>149.040</td></tr>
<tr><td></td><td></td><td>F</td><td colspan="3">Total Greenbelt Area Provision (C+E) (7.740+149.040=156.780 Ha ~33.1% of 473.570 Ha.)</td><td>156.780</td></tr>
<tr><td></td><td></td><td>G</td><td>Others- (Railway Corridor/ Siding/ Misc. areas i.e.,</td><td>213.950</td><td>18.000</td><td>231.950</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th colspan="5">Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td colspan="5"><table>
<tr><td></td><td>Outside Roads, Reservoir, Township, misc. facilities etc.)</td><td></td><td></td><td></td></tr>
<tr><td>H</td><td>Total Land Acquired (D+E+G)</td><td>565.328</td><td>289.232</td><td>854.560</td></tr>
<tr><td>I</td><td>ROU Land for Pipeline (Ownership with Farmers)</td><td>56.146</td><td></td><td>56.146</td></tr>
<tr><td>J</td><td>Total Land with ROU (H+I)</td><td>621.474</td><td>289.232</td><td>910.706</td></tr>
</table></td><td>150 Acres(60.70 Ha). Further 90.412 Ha. has been identified for development of 33% area as green belt considering total area of main plant and ash dyke (473.570 Ha.).</td></tr>
<tr><td>3.</td><td>Land acquisition details as per MoEF&CC O.M. dated 07/10/2014 & 20/02/2025.</td><td colspan="5">The proposed expansion is within the plant premises area. The land is already under the possession with NTPC Limited. No additional land acquisition is envisaged for the proposed expansion project.</td><td></td></tr>
<tr><td>4.</td><td>Existence of habitation & involvement of R&R, if any.</td><td colspan="5">Project site: No land acquisition required for the proposed expansion project
Study Area:
<u>Habitation</u>
Within 2 km radius from the project site, 12 villages are located as per the following details:
<table>
<tr><th>Habitation/Village Name</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Chhena Kachhar</td><td>1.85</td><td>SW</td></tr>
<tr><td>Kudari</td><td>0.45</td><td>SE</td></tr>
<tr><td>Dogragaon (Dongargaon)</td><td>0.65</td><td>NE</td></tr>
<tr><td>Chor Barhata</td><td>0.08</td><td>NE</td></tr>
<tr><td>Gagai (Gangai)</td><td>1.2</td><td>SW</td></tr>
<tr><td>Umariya</td><td>0.95</td><td>NW</td></tr>
<tr><td>Mehra Kheda</td><td>0.5</td><td>N</td></tr>
<tr><td>Ghat Pipariya</td><td>1.59</td><td>N</td></tr>
<tr><td>Manakwara</td><td>1.51</td><td>NE</td></tr>
<tr><td>Ratanpura</td><td>1.1</td><td>NE</td></tr>
<tr><td>Tekapar</td><td>1.86</td><td>NE</td></tr>
<tr><td>Kajrota</td><td>1.51</td><td>N</td></tr>
</table>
· Within 10 km radius from the project site, a total of 125 villages are present, as per the Survey of India Toposheet and the Census of India 2011 data.
<u>Schools</u>
<table>
<tr><th>School</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Bal Bharti public school (BBPS)</td><td>1.57</td><td>NE</td></tr>
<tr><td>Chor Barhata</td><td>1.58</td><td>NE</td></tr>
<tr><td>Kodari</td><td>2.67</td><td>SE</td></tr>
<tr><td>Dongargaon</td><td>2.46</td><td>NE</td></tr>
<tr><td>Gangai</td><td>1.62</td><td>SW</td></tr>
<tr><td>Chena Kachar</td><td>2.89</td><td>SW</td></tr>
<tr><td>Umariya</td><td>3.6</td><td>NW</td></tr>
<tr><td>Mehra Kheda</td><td>1.93</td><td>N</td></tr>
<tr><td>Ghat pipariya</td><td>3.0</td><td>N</td></tr>
<tr><td>Manakwara</td><td>5.83</td><td>NE</td></tr>
</table></td><td>R&R is not required as land is already under possession of the proponent.</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Tekapar</td><td>1.86</td><td>NE</td></tr>
<tr><td>Kajrota</td><td>1.51</td><td>N</td></tr>
</table>
<u>Health Centre</u>
<table>
<tr><th>Hospital</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Jeevan Jyoti Hospital</td><td>1.12</td><td>NE</td></tr>
<tr><td>Gangai</td><td>1.62</td><td>SW</td></tr>
</table>
</td><td></td></tr>
<tr><td>5.</td><td>Latitude and Longitude of all corners of the project site.</td><td>
A. Plant site:
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>22°52'34.18"N</td><td>78°50'30.68"E</td></tr>
<tr><td>B</td><td>22°51'24.50"N</td><td>78°50'31.31"E</td></tr>
<tr><td>C</td><td>22°51'10.92"N</td><td>78°51'16.39"E</td></tr>
<tr><td>D</td><td>22°51'10.47"N</td><td>78°52'26.94"E</td></tr>
<tr><td>E</td><td>22°51'39.23"N</td><td>78°52'26.57"E</td></tr>
<tr><td>F</td><td>22°52'0.26"N</td><td>78°52'56.87"E</td></tr>
<tr><td>G</td><td>22°52'01.01"N</td><td>78°51'47.60"E</td></tr>
<tr><td>H</td><td>22°52'24.12"N</td><td>78°51'46.77"E</td></tr>
<tr><td>I</td><td>22°52'40.47"N</td><td>78°52'53.26"E</td></tr>
<tr><td>J</td><td>22°53'17.34"N</td><td>78°53'15.79"E</td></tr>
<tr><td>K</td><td>22°54'16.82"N</td><td>78°52'12.34"E</td></tr>
<tr><td>L</td><td>22°54'46.58"N</td><td>78°52'57.37"E</td></tr>
<tr><td>M</td><td>22°54'40.57"N</td><td>78°51'20.65"E</td></tr>
<tr><td>N</td><td>22°54'16.85"N</td><td>78°51'47.74"E</td></tr>
<tr><td>O</td><td>22°53'17.97"N</td><td>78°53'14.20"E</td></tr>
<tr><td>P</td><td>22°52'44.46"N</td><td>78°52'55.55"E</td></tr>
<tr><td>Q</td><td>22°52'40.82"N</td><td>78°52'7.70"E</td></tr>
<tr><td>R</td><td>22°52'37.72"N</td><td>78°51'44.13"E</td></tr>
<tr><td>S</td><td>22°52'29.48"N</td><td>78°51'1.59"E</td></tr>
</table>
Ash Pond: Existing:
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>22° 52’ 34” (N)</td><td>78° 50’ 30” (E)</td></tr>
<tr><td>B</td><td>22° 52’ 27” (N)</td><td>78° 51’ 23” (E)</td></tr>
<tr><td>C</td><td>22° 52’ 00” (N)</td><td>78° 51’ 20” (E)</td></tr>
<tr><td>D</td><td>22° 52’ 00” (N)</td><td>78° 50’ 32” (E)</td></tr>
</table>
Ash Pond: Proposed:
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>22° 51’ 59” N</td><td>78° 50’ 31” E</td></tr>
<tr><td>B</td><td>22° 51’ 37” N</td><td>78° 50’ 31” E</td></tr>
<tr><td>C</td><td>22° 51’ 37” N</td><td>78° 51’ 21” E</td></tr>
<tr><td>D</td><td>22° 52’ 00” N</td><td>78° 51’ 21” E</td></tr>
</table>
</td><td></td></tr>
<tr><td>6.</td><td>Elevation of the project site</td><td>378 m above mean sea level</td><td>---</td></tr>
<tr><td>7.</td><td>Involvement of Forest land if any</td><td>Status of stage I Forest Clearance: Not Applicable
Area of the forest land involved: NIL
There is no Forest Land involved in the proposed expansion Project.</td><td>---</td></tr>
<tr><td>8.</td><td>Water body (Rivers, Lakes,</td><td>Project site: Gadarwara STPP Stage-II (2x800MW)
Study area: 10 km radius from the project area.</td><td>Water Resource Department</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td>Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>
<table>
<tr><td>S.N.</td><td>Name</td><td>Distance in Km</td><td>Direction</td></tr>
<tr><td colspan="4">Water Bodies</td></tr>
<tr><td>1</td><td>Shakkar River</td><td>0.60</td><td>NE-N</td></tr>
<tr><td>2</td><td>Sitarewa River</td><td>0.90</td><td>SW-N</td></tr>
<tr><td>3</td><td>Sukha Nadi</td><td>2.30</td><td>SW</td></tr>
<tr><td>4</td><td>Sapan Nala</td><td>5.00</td><td>SE</td></tr>
<tr><td>5</td><td>Lendia Nadi</td><td>7.60</td><td>N</td></tr>
</table>
Inference of the HFL data:
Highest HFL of Shakkar river recorded at Gadarwara monitoring point is 332.47m (MSL) while the Gadarwara STPP is at an elevation of approx. 378m. The project site is located at substantial higher elevation compared to the HFL of the river.</td><td>vide letter dated 15/10/2024 has given certificate regarding HFL level of Shakkar river at Gadarwara which is 332.47m recorded on 08.09.1999.</td></tr>
<tr><td>9.</td><td>Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area.</td><td>No Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. within the study area of 10 km.
List of Reserved and Protected Forests in study area:
<table>
<tr><th>S.N.</th><th>Name</th><th>Distance in Km</th><th>Direction</th></tr>
<tr><td>1</td><td>Chhawargaon Reserve Forest</td><td>4.33</td><td>S</td></tr>
<tr><td>2</td><td>Chaugan RF</td><td>8.90</td><td>SSE</td></tr>
<tr><td>3</td><td>Bargaon PF</td><td>9.80</td><td>S</td></tr>
<tr><td>4</td><td>Prempur Reserve Forest</td><td>8.94</td><td>SSE</td></tr>
<tr><td>5</td><td>Belkhedi Reserve Forest</td><td>6.72</td><td>SE</td></tr>
<tr><td>6</td><td>Bijanpur Reserve Forest</td><td>8.78</td><td>SE</td></tr>
</table></td><td>Certification from Forest Dept. has been submitted.</td></tr>
<tr><td>10.</td><td>Archaeological sites monuments / historical temples etc.</td><td>No Archaeological sites within 10 km of study area</td><td>--</td></tr>
<tr><td>11.</td><td>Facility envisaged in CRZ area (Only for coastal power plant)</td><td>Not Applicable</td><td>--</td></tr>
<tr><td>12.</td><td>Involvement of Critically Polluted Area/Severely Polluted area as per 2018 CEPI score.</td><td>No Involvement of Critically Polluted Area/Severely Polluted area.</td><td>--</td></tr>
</table>

11. The unit configuration and capacity of existing and proposed project is given as below:

S. N.	Existing Power Plant configuration and capacity	Proposed power plant configuration and capacity	Total	Technology
1.	Stage-I 2 X 800 MW (1600 MW)	Stage-II 2X800 MW (1600 MW)	3200 MW	**Stage-I:** Super Critical with Water Cooled Condenser System **Stage-II:** Ultra Super Critical Technology with Air-Cooled Condenser System

12. The details of the fuel (coal/gas/LDO) requirement for the proposed project / expansion cum proposed project along

with its source and mode of transportation is given as below:

Coal Transportation of existing plant is through Indian Railway from 27.11.2019. Coal transportation for proposed expansion is also envisaged through Indian Railway. The coal unloading shall be done through Wagon Tippler/ Track Hopper.

Details	Fuel requirement (METRIC TONNES PER ANNUM)	Source	Distance from site (Kms)	Mode of Transportation	Coal characteristics (Worst case scenario)	Linkage document
Existing TPP (2x800 MW)	7.56 Million TPA at 90% PLF considering 3704 kcal/kg GCV	SECL	500-650	Rail	Ash – 43(%) Sulphur-0.55 (%) Moisture -14% GCV - 3200Kcal/Kg	Fuel (Coal) supply agreement is available with WCL, NCL, SECL.
		NCL	540	Rail		
		WCL	470-640	Rail		
Proposed TPP	6.10 Million TPA at 90% PLF considering 4400 Kcal/kg	SECL	500-650	Rail	Ash: 29-43 (%) Sulphur: 0.3-0.55(%) GCV:3200-4300 Kcal/Kg	Coal supply shall be tentatively from SECL MCL. CIL letter has been submitted.
		MCL	740-1000	Rail		

13. **Water requirement**: Existing Water requirement is 1,12,200 m3/day, which is obtained from Narmada River and permission for the same has been obtained from Water Resources Department, Govt. of Madhya Pradesh, vide letter dated 19.05.2008 (Water Allocation was given for 125 CUSECS ~ 111.64 MCM which was subsequently reduced to 56 MCM ~ 1,53,425 m3/day vide letter dated 09.09.2021). The water requirement for the proposed project is estimated as 48,000 m3/day, out of which 41,224 m3/day of fresh water requirement will be obtained from the surplus allocation/permission for drawl available under Stage-I and the remaining requirement of 6,776 m3/day will be met from the additional water allocation/permission for drawl of 11 MCM (30,136 m3/day) surface water for Stage-II obtained from Water Resources Department, Govt. of Madhya Pradesh, vide letter dated 19.02.2024. The water will be transported to the plant site through pipeline. The Specific water consumption for existing Stage-I and proposed Stage-II project shall be less than the prescribed norm of 3.0 m3/MWhr.

14. **Power requirement**: Existing power requirement of 100MW is obtained from Gadarwara STPP Stage-I. The power requirement for the proposed project is estimated as 124 MW which will be obtained from the own generation.

15. **Baseline Environment Studies**

Period	From March 2024 to May 2024	Additional study (if any)
AAQ parameters at 10 locations (min. & max.)	• PM_{10} = 36.10 & 91.30 µg/m^3 • $PM_{2.5}$ = 14.56 & 32.33 µg/m^3 • SO_2 = 5.79 & 13.18 µg/m^3 • NO_x = 10.71 & 18.70 µg/m^3 • CO = 0.20 & 1.10 mg/m3	---
Incremental GLC Level	**Existing and Proposed Projects** • PM_{10} = 1.76 µg/m^3 (Level at 1.10 km in SSE direction) • $PM_{2.5}$= 0.85 µg/m^3 (Level at 1.10 km in SSE direction) • SO_2 = 6.66 µg/m^3 (Level at 1.10 km in SSE Direction) • NO_2 = 5.87 µg/m^3 (Level at 1.10 km in SSE direction) (@100 mg/Nm^3) • NO_2 = 17.6 µg/m^3 (Level at 1.10 km in SSE direction) (@300 µg/m^3) **Pollution control measures**:	---

Period	From March 2024 to May 2024	Additional study (if any)
	• High efficiency Electrostatic Precipitator (ESP) to control PM emissions from TPP Stacks. • Installation of Flue Gas Desulfurization (FGD) units to reduce SO_2 emissions. • Stack of 275 meter height • Use of Low-NOx burners and Over Fire Air to control NO emissions. • Dust suppression system in coal handling and ash handling areas. • Regular maintenance of equipment to ensure efficient functioning. • Continuous Emission & Ambient Air Quality monitoring systems.	
Ground water quality at **6** locations	pH: 7.10 to 7.84, Total Hardness: 184.9 to 276.2 mg/l, Chlorides: 10.4 to 24.15 mg/l, Fluoride: 0.22 to 0.38 mg/l. **Heavy Metal** Iron: 0.14 to 0.27 mg/l; Zinc (Zn), mg/l: 0.44-0.88, Arsenic (As), mg/l: BDL, Cadmium (Cd), mg/l: BDL, Chromium (Cr^{+6}): BDL, Copper (Cu), mg/l: BDL, Lead (Pb), mg/l: BDL, Selenium (Se), mg/l : BDL, Mercury (Hg), mg/l: BDL	---
Surface water quality at **6** locations	pH: 6.99 to 7.66; DO: 5.20 to 5.80 mg/l and BOD from 5.0 to 8.00 mg/l. COD from 15.0 to 32.0 mg/l	
Effluent generation details and its treatment	**Effluent generation from TPP (Stage-I):** 2255 m^3/Hr **Effluent requiring Treatment:** 235 m^3/hr **Treatment plant Capacity (Stage-I):** 335 m^3/Hr **Effluent generation from TPP (Stage-II):** 1,025 m^3/Hr **Effluent requiring Treatment:** 205 m^3/hr **Treatment plant Capacity (Stage-II)**: 385 m^3/Hr **Mode of treatment & reuse**: Neutralization for DM plant regeneration wastewater, Settling pit for Coal Settling, Oil Removal, Lamella clarifier/Tube settler. Treated Wastewater will be utilized in Aux. Cooling makeup, dust suppression, ash handling, horticulture etc. within the plant to achieve Zero Liquid discharge (ZLD). Rest quantity of effluents like cooling tower blowdown, Clarifier drainages etc. will be reused recycled mainly for Ash Handling and fugitive dust control purpose within the plant premises maintaining Zero Liquid discharge (ZLD). **Domestic wastewater generation (Stage-I):** 1,200 KLD **Treatment plant Capacity (Stage-I):** 1,200 KLD **Domestic wastewater generation (Stage-II):** 75 KLD **Treatment plant Capacity (STP):** 75 KLD **Mode of Treatment & Reuse:** Domestic wastewater will be treated through Sewage Treatment Plant based on MBBR Technology. Treated water will be utilized for Horticulture, plantation and greenbelt development etc.	
Noise levels (Day and Night)	50.0 dB(A) to 54.6 dB(A) for the daytime and 41.7 dB(A) to 44.8 dB(A) for the Nighttime.	
Traffic assessment study findings	• Traffic study has been conducted at **SH-22** which is approximately **18.7** km from the plant site. • Transportation of raw material (coal) will be done **100** % by rail. • Coal is being transported by rail for the existing units and same is envisaged for coal transportation for the expansion as well. However, for existing units, ash transportation is being carried out via road. During the traffic assessment, the scenario of ash, gypsum and other materials being transported via road is considered for PCU calculations, due to which the additional PCU/day due to project expansion has been predicted in traffic impact assessment. • Existing PCU is 2439.5(T1), 2646(T2), 5658(T3) PCU/hr on **SH22** and existing level of service (LOS) is:	

<table>
<tr><th>Period</th><th>From March 2024 to May 2024</th><th>Additional study (if any)</th></tr>
<tr><td></td><td>
<table>
<tr><td>Road</td><td>V (Volume PCU/hr.)</td><td>C (Capacity PCU/hr.)</td><td>Existing V/C Ratio</td><td>LOS</td></tr>
<tr><td>T1: Road Junction near 220KV substation, Chichi</td><td>2439.5</td><td>15000</td><td>0.16</td><td>A</td></tr>
<tr><td>T2: SH 22, Panari</td><td>2646</td><td>15000</td><td>0.17</td><td>A</td></tr>
<tr><td>T3: SH 22, Gadarwara</td><td>5658</td><td>15000</td><td>0.37</td><td>B</td></tr>
</table>
• PCU load after proposed project will be 2561.48(T1), 2778.3(T2), 6054.06(T3) PCU/hr (Existing) + 285(T1), 231(T2), 574(T3) (Additional) PCU/hr and level of service (LOS) will be:
<table>
<tr><td>Road</td><td>V (Volume PCU/hr.)</td><td>C (Capacity PCU/hr.)</td><td>Proposed V/C Ratio</td><td>LOS</td></tr>
<tr><td>T1: Road Junction near 220KV substation, Chichi</td><td>2846.48</td><td>15000</td><td>0.19</td><td>A</td></tr>
<tr><td>T2: SH 22, Panari</td><td>3009.3</td><td>15000</td><td>0.20</td><td>A</td></tr>
<tr><td>T3: SH 22, Gadarwara</td><td>6628.06</td><td>15000</td><td>0.44</td><td>C</td></tr>
</table>
Due to increase in economic activities, the existing vehicular movements is estimated to rise by 5% at T1 & T2 and by 7% at T3 with the proposed expansion. The increase in traffic load is envisaged due to increase in transportation of Ash, Limestone & Gypsum, water treatment chemicals, auxiliary fuel, and increased employee movement (both contractual and permanent) and economic activities in the area due to secondary employment generation.
* Note: Capacity as per IRC-64:1990 Guidelines for capacity for roads.
Conclusion: The level of service (LOS) will be A(T1), A(T2) & C(T3) after including additional traffic due to the proposed project.
</td><td></td></tr>
<tr><td>Soil Quality at 10 Locations</td><td>Bulk density: 1.0 to 1.80 gm/cm^3; pH range 7.01 to 7.65; Electrical Conductivity (EC): 520 to 880 µmhos/cm; calcium content: 5.6 to 24.6 meq/100g; potassium: 177.2 to 229.4 mg/kg; Nitrogen: 105 to 340 mg/kg; Phosphorous: 45 to 74 mg/kg; Cation Exchange Capacity (CEC): 11.7 to 17.8 meq/100gm; Magnesium: 0.9 to 3.94 meq/100gm;; Organic Matter: 0.98 to 1.46 %.</td><td></td></tr>
<tr><td>Flora & Fauna</td><td>List of schedules I fauna and endangered Flora if any.: Yes
If yes, status of site-specific wildlife conservation plan.
<table>
<tr><th rowspan="2">S. N.</th><th rowspan="2">Scientific Name</th><th rowspan="2">Core Zone</th><th rowspan="2">Buffer Zone</th><th rowspan="2">Common Name</th><th colspan="2">Status</th></tr>
<tr><th>WPA Amendment 2022</th><th>IUCN</th></tr>
<tr><td colspan="7">Mammals</td></tr>
<tr><td>1</td><td>Antilope cervicarpa</td><td>-</td><td>+</td><td>Black Buck</td><td>Schedule I</td><td>LC</td></tr>
<tr><td>2</td><td>Canis aureus</td><td>-</td><td>+</td><td>Jackal</td><td>Schedule I</td><td>LC</td></tr>
<tr><td>3</td><td>Herpestes edwardsii</td><td>-</td><td>+</td><td>Indian Grey Mongoose</td><td>Schedule I</td><td>LC</td></tr>
<tr><td colspan="7">Reptiles & Amphibians</td></tr>
<tr><td>4</td><td>Python molurus</td><td>-</td><td>+</td><td>Indian Python</td><td>Schedule I</td><td>NT</td></tr>
<tr><td>5</td><td>Naja naja</td><td>-</td><td>+</td><td>Indian Cobra</td><td>Schedule I</td><td>LC</td></tr>
<tr><td colspan="7">Birds</td></tr>
<tr><td>6</td><td>Bubo bubo</td><td>-</td><td>+</td><td>Eurasian Eagle</td><td>Schedule I</td><td>LC</td></tr>
</table>
</td><td>Wildlife and Biodiversity Study and conservation plan prepared by M/s. Greencindia Consulting Pvt. Ltd.- Ghaziabad</td></tr>
</table>

<table>
<tr><th>Period</th><th>From March 2024 to May 2024</th><th>Additional study (if any)</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td></td><td></td><td></td><td>Owl</td><td></td><td></td></tr>
<tr><td>7</td><td>Pavo cristatus</td><td>-</td><td>+</td><td>Peafowl</td><td>Schedule I</td><td>LC</td></tr>
<tr><td>8</td><td>Tachy spizabadia</td><td>-</td><td>+</td><td>Shikra</td><td>Schedule I</td><td>LC</td></tr>
</table>
Wildlife Conservation Plan has been prepared for Schedule-I species and it has been submitted to Chief Wildlife Warden for approval vide letter no. 1049/EMG/2025/016 dated 07/02/2025, 1049/EMG/2025/017, dated: 24/02/2025 & 1049/EMG/2025/034 dated: 05/04/2025.
Approval of the Wildlife conservation plan is in process.</td><td></td></tr>
<tr><td>Hydrogeology study</td><td>Recommendations of the Hydrogeology study:
<table>
<tr><th>S.N.</th><th>NIH Recommendation</th><th>NTPC Gadarwara Action Plan</th><th>Estimated Expenditure & Target Date</th></tr>
<tr><td>1)</td><td>Regular monitoring of the mentioned surface water bodies may be carried out (both for pre and post monsoon seasons</td><td>a) a) Regular monitoring of surface water bodies surrounding NTPC Gadarwara is being done through NABL accredited laboratory, both for pre and post monsoon seasons).
b) Contract for monitoring of Hydrogeology of the area has also been initiated in which the locations according to scientific methodology shall be covered for both pre and post monsoon seasons.
Thus, pre-monsoon and post-monsoon monitoring shall be done annually.</td><td>§ Rs.1.29 Lakhs for Surface and Groundwater monitoring
§ Approx. Rs.26 lakhs for Hydrogeology Study and Rs.1.29 Lakhs for Surface and Groundwater monitoring</td></tr>
<tr><td>2)</td><td>To analyse the possible impact of the operation of STPP Gadarwara on the ground water quality of the study area, through long term changes in ground water quality, ground water quality may be regularly monitored both in pre and post monsoon seasons for the mentioned locations.</td><td>a) Regular monitoring of ground water quality of area surrounding NTPC Gadarwara is being done through NABL accredited laboratory, for both for pre and post monsoon seasons.
b) Ground water impact assessment study covered in the scope of work of the hydrogeology study as mentioned at Sl. no 1(a).</td><td>§ Covered in point no. 1</td></tr>
<tr><td>3)</td><td>In order to study the impact of the STPP Gadarwara on changes in ground water levels in the study area, ground water levels may be regularly monitored both in pre and</td><td>a) Monitoring of Ground water levels is being done around ash dyke area during pre and post-monsoon seasons through institute of repute during hydrogeology study of the area.
b) Twelve (12) piezometers</td><td>§ Approx. Rs.24 lakhs, Target for Completion by December 2025</td></tr>
</table>
</td><td>NIH Roorkee</td></tr>
</table>

Period	From March 2024 to May 2024				Additional study (if any)
	S.N.	**NIH Recommendation**	**NTPC Gadarwara Action Plan**	**Estimated Expenditure & Target Date**	
		post monsoon seasons for the various locations mentioned.	shall be installed around ash dyke, plant and township area to monitor the ground water level as well as quality around NTPC Gadarwara Plant premises.		
	4)	It is recommended that piezometers may be developed at about 5-6 locations around the ash pond areas for regular monitoring of the water levels and water quality, as has already been recommended in the study for the year 2022.	Actions have been initiated for procurement of 12 nos. of new piezometers out of which 06 nos. will be installed in the water contour path around the ash pond areas for regular monitoring of the water levels and water quality by December 2025.	§ Covered in Point no. 3	
	5)	Restoration of Ponds in the study area	Restoration work in 4 degraded ponds (Chor-Baretha, Gangai, Chirriya, Sukri) according to recommended methodology of the study area of Watershed Development Study conducted by Guru Ghasidas Vishwavidyalaya in the 10 Km radius of NTPC Gadarwara shall be taken up.	§ Approx. Rs.35 Lakhs § Target date of Completion – December-26	
	6)	A detailed study on rainwater harvesting needs to be carried out assessing not only the rainwater harvesting potential of the study area but also assessing the existing recharge and storing potential of the present recharge and storage structures present in the study area and their adequacy for recharging the whole rainwater harvesting potential. Additional rainwater harvesting structures, if needed, can be suggested only then.	a) Rainwater Harvesting Study has already been carried out and the rainwater harvesting scheme suggested in its report has been approved by CGWB. RWH study recommendations have been implemented by construction of 30 rainwater harvesting pits to recharge the rainwater directly. b) Scheme is being implemented to redirect the rainwater in the plant area to the raw water reservoir which can be reused in the Power Generation Cycle. Further study will be carried out at an interval of 5 years according to the changing landscape / catchment area, groundwater regime.	§ Rs 3.4 Lakh for study of RWH § Rs 41 Lakh for construction & implementation of 30 nos RWH pits. § Rs. 50 Lakhs (approx.) contracts awarded for diversion of all the stormwater falling in the plant area Raw Water reservoir inside plant. § Target for completion- December 2025 § Rs 10 Lakh for future RWH studies.	
Impact study on	The study concluded that the proposed project would have only minimal impact on the				*Consultant*

<table>
<tr><th>Period</th><th>From March 2024 to May 2024</th><th>Additional study (if any)</th></tr>
<tr><td>bio-diversity and aquatic ecology</td><td>nearby area. The location where Power Plant is proposed has no habitat for any critical species. The biodiversity indices show good diversity in and around area. Low species reported in some groups during survey may be due to off season variability, which can be higher during peak season.
Recommendations of study report with action plan are as given below:
<table>
<tr><th rowspan="2">S. N.</th><th rowspan="2">Potential Location/Selection of location for activity</th><th rowspan="2">Action Plan</th><th rowspan="2">Estimated Cost (in Rs.)</th><th colspan="3">Implementation in Year(s)</th></tr>
<tr><th>1st Yr</th><th>2nd Yr</th><th>3rd Yr</th></tr>
<tr><td colspan="7">Activity: Development of a Biodiversity Park</td></tr>
<tr><td>1.</td><td>Large Spaces/areas in the vicinity of the thermal plant, which are not used for any plant activity but are part of the plant area.</td><td>1. Cleaning of the projected area. Preparation of the land (area) according to the need.
2. After settlement prepare it for digging for major constructions;
such as pathways, ponds, pond outer lining, etc.
3. Last stage cleaning for final establishments.
4. Planting of endangered plant species.
5. Creating ponds and development of pathways.
6. Establishment of Information boards, maps,etc.
7. Establishments of path lightings, related wirings, and connections and Final cleaning</td><td>60,00,000/-</td><td></td><td></td><td>√</td></tr>
<tr><td colspan="7">Activity: Development of a Butterfly Garden</td></tr>
<tr><td>2.</td><td>In any degraded part of plant, an area with high invasive plants, in the residential campus as well as in the gardens of working plant</td><td>1. Cleaning of the projected area. Preparation of the land (area)
2. Plantation of host and nectar plants such as curry tree, lemon, oleander, tropical</td><td>2,00,000/-</td><td>√</td><td></td><td></td></tr>
</table></td><td>details:
Department of Zoology, University of Lucknow</td></tr>
</table>

Period	From March 2024 to May 2024							Additional study (if any)
			milkweed, Mussaenda, Ixora, Oxalis etc. 3. Preparing an area for mud puddling, shade, and moist areas/small ponds. 4. Continuous maintenance and sustenance of the garden area					
	Activity: Survey and protect heritage trees in the area							
	3.	The area around temples, in sacred groves in the 10km radius of the plant area.	1. Surveying the area to find the heritage tree. (Heritage Trees are trees that the City Council has formally recognized for their unique size, age, historical or horticultural significance, and Eligibility criteria). The main criteria for considering a tree as a heritage tree are its size, form, shape, age (more than 100 years old trees), color, and rarity 2. Identification of the trees and documenting the details of heritage trees in the area. 3. Providing interventions such as metal fencing of the Tree and, an information board (with details of the importance of the tree) for protection of the heritage trees.	40,000/- per tree (cost will be based on the number of trees)		√		

<table>
<tr><th>Period</th><th>From March 2024 to May 2024</th><th>Additional study (if any)</th></tr>
<tr><td></td><td>
Activity: Restoration of wetlands of selected villages in a radius of 10km of the thermal plant
<table>
<tr><td>4.</td><td>4 (a).Chirriya Talaab and
4 (b). Bada Talaab near Raja ka Mahal</td><td>1. Restoration of the wetland by removal of water Hyacinth, and planting native aquatic plants.
2. Stopping drainage openings in wetlands,
3. Beautification (putting information boards, seating bench) for tourism.</td><td>10,000,00/- (for one wetland)</td><td></td><td></td><td>√</td></tr>
</table>
</td><td></td></tr>
<tr><td>Risk assessment study</td><td>Recommendations of Risk assessment report with mitigation measures:
<table>
<tr><th rowspan="2">S. N.</th><th rowspan="2">Items Proposed</th><th colspan="5">Financial Outlay (in Cr.)</th><th rowspan="2">Total Financial Outlay (in Cr.)</th></tr>
<tr><th>1st Yr</th><th>2nd Yr</th><th>3rd Yr</th><th>4th Yr</th><th>5th Yr</th></tr>
<tr><td>1</td><td>Fire service facility including
· Smoke and fire detection alarm system
· Water supply
· Fire hydrant and nozzle installation
· Foam system
· Water fog and sprinkler system
· Mobile Firefighting equipment
· First aid appliances</td><td>10.5</td><td>8</td><td>2</td><td>2</td><td>2</td><td>24.5</td></tr>
<tr><td>2</td><td>Periodic maintenance of all protective and safety equipment</td><td>1.5</td><td>1.5</td><td>1.5</td><td>1.5</td><td>1.5</td><td>7.5</td></tr>
<tr><td>3</td><td>Installation of Windsocks/wind cock</td><td>0.01</td><td>--</td><td>--</td><td>--</td><td>--</td><td>0.01</td></tr>
<tr><td>4</td><td>Periodical training/awareness to work force</td><td>0.25</td><td>0.25</td><td>0.25</td><td>0.30</td><td>0.30</td><td>1.35</td></tr>
<tr><td>5</td><td>Periodic mock drills</td><td>0.05</td><td>0.05</td><td>0.05</td><td>0.05</td><td>0.05</td><td>0.25</td></tr>
<tr><td>6</td><td>Signboards including emergency phone numbers and no smoking signs</td><td>0.12</td><td>0.12</td><td>0.12</td><td>0.12</td><td>0.20</td><td>0.68</td></tr>
<tr><td>7</td><td>Proper earthing</td><td>2.5</td><td>2.5</td><td>1.5</td><td>0.5</td><td>0.5</td><td>7.5</td></tr>
<tr><td>8</td><td>Emergency lighting</td><td>2.5</td><td>2.5</td><td>1.5</td><td>0.5</td><td>0.5</td><td>7.5</td></tr>
</table>
</td><td>Consultant details:
NABET Accredited EIA Consultant M/s Greencindia Consulting (P) Ltd, Ghaziabad, Uttar Pradesh.</td></tr>
</table>

Period	From March 2024 to May 2024						Additional study (if any)
	S. N.	Items Proposed	Financial Outlay (in Cr.) 1st Yr	2nd Yr	3rd Yr	4th Yr 5th Yr	Total Financial Outlay (in Cr.)	
	Total (Fifty-Two Crores Twenty-Nine Lakhs)						52.29	
	Details of Hazards and mitigations measures given in Chapter-7.							

16. The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

S.N.	Type of Waste	Source	Quantity Generated in FY 2024-25	Mode of Treatment	Disposal	Remarks
Hazardous Waste						
1	Empty barrels/container / liners contaminated	Operation and Maintenance works (O&M works)	806 Nos.	-	Disposal through Registered Recycler, TSDF	-
2	Used or spent Oil	O&M works	10 MT	-	Through authorized recycler	
3	Insulation waste	(O&M works)	100 MT	-	Disposal through TSDF	-
Non-Hazardous Waste						
1.	Ferrous (iron Steel Scrap)	Main Plant	480 MT	-	Through scrap recyclers	-
2.	Biodegradable waste	Township	110 MT	-	Composting	

17. **Public Consultation**:

Details of advertisement given	26/11/2024 & 28/11/2024
Date of public consultation	30/12/2024
Venue	Near by Police Station Dongargaon, village Mehrakheda, NTPC Station Bhawan, near Gadarwara, Narsinghpur
Presiding Officer	Sub Divisional Magistrate
Major issues raised	Employment to local people, skill development, women empowerment, renovation of school building, village Road construction, bridge on Shakkar and Sitarewa river, check dam, plantation in villages and pollution from ash and coal dust.
No. of people attended	435

Action plan as per MoEF&CC O.M. dated 30/09/2020 to address the concerns of public consultation:

Sr. No	Key Area Identification for Activities Based on Public Needs Highlighted During Public Hearing	Proposed Expenditures year wise (Rs. In Crores) 1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr	Total Proposed Expenditure (Rs. In Crores)	Physical Targets
A	**Educational Initiatives**							
1	Scholarships for meritorious students	0.10	0.12	0.16	0.12	-	0.50	Identify and award scholarships to at least 10 deserving students

Sr. No	Key Area Identification for Activities Based on Public Needs Highlighted During Public Hearing	Proposed Expenditures year wise (Rs. In Crores)					Total Proposed Expenditure (Rs. In Crores)	Physical Targets
		1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr		
								annually from nearby villages to encourage higher education. Scholarships to be continued every academic year till project completion.
2	Support for extracurricular activities							Organize annual sports tournaments, yoga events, debate, and cultural programs across primary schools. Provide necessary kits and awards to encourage student participation of PAVs.
3	Construction of Additional Classrooms							Construct 4 standard classrooms (each ~600–700 sq. ft) in primary government schools with complete furnishing. Target to complete within 4 years.
4	Principal Room + Staff Room Construction							Construct 1 principal office and 1 staff common room (~250–300 sq. ft each) in each identified school to improve administration and teacher facilities.
5	Library + Computer Room Setup							Establish 1 well-equipped library (books, shelves) and 1 computer lab (5–10 computers) in targeted schools to enhance digital learning and reading habits.
6	Toilets (Boys & Girls separately)							Construct 2 separate toilet blocks (Boys & Girls) with safe sanitation facilities in each identified school, ensuring hygiene and gender safety.
7	Assembly Hall/ Multipurpose Room							Develop 1 semi-open/covered multipurpose assembly hall (~1000 sq. ft) in selected school for morning assemblies, events, and indoor activities.
8	Playground Development							Level and develop playgrounds (~5000–7000 sq. ft) with basic sports facilities like football posts, volleyball court, and swings for students' physical development.
		0.10	0.12	0.16	0.12	-	0.50	
B	**Community Health Initiatives**							
9	Organization of Health Camps (Regular, Quarterly) in 07 PAVs	0.10	0.14	0.16	0.20	-	0.60	Conduct 4 health camps annually in each of the 7 PAV villages. Basic checkups, free medicines, and specialist consultations will be

Sr. No	Key Area Identification for Activities Based on Public Needs Highlighted During Public Hearing	Proposed Expenditures year wise (Rs. In Crores)					Total Proposed Expenditure (Rs. In Crores)	Physical Targets
		1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr		
								provided till December 2029.
10	Medical Facilities/Support to Nearby Hospitals (equipment/aid)							Provide essential medical equipment (wheelchairs, stretchers, BP monitors) to 2–3 identified nearby hospitals. Strengthen basic healthcare delivery infrastructure by 2026.
11	Swachhta Pakhwara Awareness Campaigns (Cleanliness Drives, Posters, Wall Paintings)							Organize cleanliness drives and awareness events twice a year in all 7 villages. Cover schools, panchayat areas, and market places with educational wall paintings and posters.
12	Maternal and Child Health Awareness Programs (nutrition, immunization drives)							Conduct focused nutrition and immunization awareness camps quarterly for pregnant women, new mothers, and children in all 7 villages. Target at least 100+ beneficiaries annually.
13	Safe Menstrual Hygiene Awareness and Distribution of Sanitary Kits							Organize bi-annual sessions for adolescent girls and women across all 7 villages. Distribute free sanitary kits and educate about menstrual hygiene management.
14	Preventive Health Posters, IEC Material Distribution (leaflets, banners)							Print and distribute preventive healthcare leaflets and banners every year. Door-to-door outreach and campaign coverage for over 5000+ people across villages.
		0.10	0.14	0.16	0.20	-	0.60	
C	**Sustainable Livelihood and Women Empowerment**							
15	Skill Development Training for Youths (Technical and Non-Technical Courses)							Conduct 6–8 batches of technical and soft skills training covering 300+ youths across 7 villages. Courses include electrician, tailoring, computer basics, hospitality, etc., completed by 2030.
16	Capacity Building Workshops for SHGs (Entrepreneurship, Financial Literacy)	0.05	0.10	0.12	0.17	0.11	0.55	Organize 12–15 workshops for SHG groups focused on entrepreneurship skills, financial literacy, digital transactions, and business startup training.
17	Agricultural Training Programs for Farmers (Modern Farming, Drip Irrigation,							Conduct at least 8 agricultural camps and field demonstrations targeting 200+ farmers. Topics include modern crop practices, drip

Sr. No	Key Area Identification for Activities Based on Public Needs Highlighted During Public Hearing	Proposed Expenditures year wise (Rs. In Crores)					Total Proposed Expenditure (Rs. In Crores)	Physical Targets
		1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr		
	Organic Farming Techniques)							irrigation, and organic farming techniques.
18	Tools, Equipment, and Starter Kits for SHGs and Farmers							Distribute starter kits like sewing machines, vegetable seed kits, and drip sets to 100+ trained beneficiaries (SHGs and farmers) for immediate livelihood activities.
19	Exposure Visits / Field Tours for SHGs and Farmers to Model Villages / Krishi Vigyan Kendras							Arrange 2 exposure visits per year for selected SHGs and farmers to model villages, farms, and Krishi Vigyan Kendras to showcase best practices.
20	Mobilization, IEC Activities (Banners, Pamphlets, Motivation Sessions)							Organize mobilization drives and distribute over 5000+ leaflets, banners, and pamphlets in villages to ensure maximum participation in trainings and awareness sessions.
		0.05	0.10	0.12	0.17	0.11	0.55	
D	**Community Rural Infrastructure Development**							
21	Pitching and Retaining Wall at Ghatpipariya (100 meters)							Construction of a 100-meter-long pitching and retaining wall at Ghatpipariya. Target completion by July 2028.
22	Cow Sheds (03) at Dongargaon, Chichli & Gangai	0.2	0.8	0.4	1.0	1.0	3.40	Construction of 3 cow sheds at Dongargaon, Chichli, and Gangai. Target completion by July 2028.
23	Ponds (02) at Chorbarheta & Dongargaon							Construction of 2 ponds at Chorbarheta and Dongargaon. Target completion by July 2028.
24	Check dams on Shakkar River & Sitarewa River							Construction of check dam (approx.100m width) on Shakkar and Sitarewa rivers. Target completion by:Apr-2030
25	**Road Construction:** Ghatpipariya to Kahartola (1.5 km)							Construction of a 1.5 km road connecting Ghatpipariya to Kahartola. Target completion by April 2030.
26	Manakwara to Adiwasi Tola (950 m)	0.20	0.60	1.20	1.20	0.65	3.85	Construction of a 950-meter road connecting Manakwara to Adiwasi Tola. Target completion by April 2030.
27	Gangai to NTPC Main Road (300 m)							Construction of a 300-meter road from Gangai to the NTPC main road. Target completion by April 2030.
28	Construction of Drainage (200 meters)							Construction of a 200-meter drainage system at Village

Sr. No	Key Area Identification for Activities Based on Public Needs Highlighted During Public Hearing	Proposed Expenditures year wise (Rs. In Crores)					Total Proposed Expenditure (Rs. In Crores)	Physical Targets
		1st Yr	2nd Yr	3rd Yr	4th Yr	5th Yr		
	at Village Dongargaon							Dongargaon. Target completion by April 2030.
29	No. of Solar High-mast Lights (07 nos.) and Streetlights (70 nos.)	0.30	0.30	-	-	-	0.6	Installation of 7 Solar High-mast Lights and 70 nos. streetlights across various villages. Areas to be covered: Gangai, Chorbarheta, Dongargaon, Kudari, Mehrakheda, Umariya, Ghatpipariya, and Manakwara.
		0.7	**0.7**	**1.6**	**2.2**	**1.65**	**7.85**	
E	**Development of Playgrounds for Sports**							
30	Construction of an open gym at village Gangai and a playground at villages Chorbarheta and Manakwara.	0.50	0.50	-	-	-	1.0	Construction of an open gym at village Gangai. Construction of playgrounds at Chorbarheta and Manakwara. Target completion by October 2027.
31	Providing sports materials at Chorbarheta and promoting cultural sports in nearby villages.							Providing sports materials at Chorbarheta and promoting cultural sports in nearby villages. Target completion by October 2027.
		0.50	0.50	-	-	-	1.0	
F	**Community Development for various activities at village level**							
32	Construction of a welcome gate, welfare activities, renovation of school buildings, drainage systems, and culverts.	0.20	0.20	0.20	0.20	0.20	1.0	Construction of a welcome gate, renovation of school buildings, drainage systems, and culverts. Target completion by October 2030.
33	Welfare activities for community development in the village							Implementation of welfare activities aimed at community development in the village. Target completion by October 2030.
		0.20	0.20	0.20	0.20	0.20	1.0	
Total (A+B+C+D+E+F)		**2.25**	**3.06**	**3.19**	**2.04**	**0.96**	**11.50**	

18. **Cost of project**: Existing capital cost of project was Rs. 15,105.22 Crores. The capital cost of the proposed project is Rs. 20,445.69 Crores and the capital cost for environmental protection measures is proposed as Rs. 2,015.44 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 40.16 Crores. The employment generation from the proposed project / expansion is approx. 96 nos. & 186 nos. permanent employment during construction and operation phases respectively and approx. 2000 nos. & 1500 nos. contractual employment during construction and operation phases respectively. The details of cost for environmental protection measures are as follows:

S. No.	Item Description	Capital Cost, Rs. in Crores	Recurring Cost, Rs. in Crores

	Electrostatic Precipitator	356.67	7.13
	Chimney	224.15	4.48
	Aux. Cooling Towers incl. Civil Works	26.92	0.53
4.	Ash Handling incl. AWRS	702.12	14.04
5.	Ash Dyke	100	2.0
6.	Dust extraction & suppression System	6.1	0.12
7.	DM plant, Waste treatment systems	5.0	0.1
8.	Sewerage collection, treatment & disposal	2.0	0.04
9.	Rainwater Harvesting	1.0	0.02
10.	Green Belt, Afforestation & Landscaping	10.0	0.2
11.	Flue Gas Desulfurization (FGD)	566.25	11.32
12.	Solar Power harnessing	4.59	0.09
13.	Environmental Lab Equipment	0.50	0.01
14.	Environmental Monitoring Systems	4.30	0.08
15.	**Provision for Implementation of study recommendation**		
a.	Wildlife Conservation through Forest Dept.	2.52	--
b.	Watershed Development and River conservation	0.70	--
c.	Biodiversity Analysis Report Recommendation	0.72	--
d.	Hydrogeology Study Report Recommendation	1.90	--
	TOTAL	**2015.44**	**40.16**

19. **Green belt development**: Existing green belt has been developed in 66.368 ha area, which is about 14.01 % of the total plant area of 473.570 ha with total sapling of 83,639 Trees. Proposed greenbelt will be developed in 90.412 ha which is about 19.09 % of the total plant area. Thus total of 156.780 ha area (33.10% of total plant area) will be developed as greenbelt. A 5 m - 50 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Total no. of 2,26,025 saplings will be planted and nurtured in 90.412 hectares in 7 years.

20. **Ash management**:

A. Ash Pond Details: - Stage-I (Existing Ash Dyke)

S.No	Details of Ash pond	HCSD Lagoon	BA Lagoon 2	BA Lagoon 3	Total
1.	Status of ash pond (Active/Exhausted, yet to be reclaimed/ Reclaimed)	Active	Active	Active	3 nos. Active
2.	Area (Ha)	52.12 Ha	BA-II-38.25 Ha	33.56 Ha	Total – 157.020 Ha. 1. HCSD: 52.12 Ha 2. BA-II :38.25 Ha 3. BA-III: 33.56 Ha 4. Overflow lagoon : 3.88 Ha 5. Lagoon- 1A: 12.64 Ha Ash evacuation road + drain =16.57 Ha
3.	Dyke height (m)	Avg. height: 10.0 meter	Avg. height: 10.0 meter	Avg. height: 10.0 meter	Avg. height : 10.0 meter
4.	Volume (m^3)	31.87 LCM	21.48 LCM	25.39 LCM	78.74 LCM
5.	Quantity of ash disposed (Metric Tons)	74.22% and 23.65 LCM	20.22% and 4.34 LCM	6.18% 1.57 LCM	29.57 LCM
6.	Available volume in percentage and quantity of ash can be further disposed (Metric Tons)	25.77% 8.22 LCM	79.77% and 17.14 LCM	93.82% and 23.82 LCM	62.44 % 49.17 LCM

S.No	Details of Ash pond	HCSD Lagoon	BA Lagoon 2	BA Lagoon 3	Total
7.	Expected life of ash pond (number of years and months)	8 years	8 years	8 years	8years
8.	Type lining carried in ash pond: HDPE lining of LDPE Inning or clay Inning or No lining	Thick High Concentration Slurry disposal gets solidified and work as impervious liner.	HCSD lining	Clay & bentonite	
9.	Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	Wet Slurry HCSD	Wet Slurry LCSD	Wet Slurry LCSD	
10.	Ratio of ash: water in slurry mix (1:..):	1:1	1:6	1:6	
11.	Ash water recycling system (AWRS) installed and functioning: Yes or No	Yes	Yes	Yes	
12.	Quantity of wastewater from ash pond discharged into land or water body (m^3)	NA	NA	NA	NA
13.	Last date when the dyke stability study was conducted and name of organization who conducted the study:	Stability study conducted through IIT Hyderabad in Dec 2021 and the observations have been addressed.			
14.	Last date when the audit was conducted and name of the organization who conducted the audit:	Last Audit conducted through MNNIT-Allahabad in October 2024.			

B. Proposed ash utilization plan for expansion project:

Details	Existing generation (MTPA)	Proposed generation (MTPA)	Total (MTPA)	Utilization (MTPA)	% of utilization	Balance quantity (MTPA)	No. of storage silos with capacity
Ash (Fly & Bottom)	2750000	2750000	5500000	5512000	100.22	-	Main Silos:04 nos.,9500MT (3x2500MT+1X2000MT) HCSD Silos:03 nos., 2100 MT (3x700MT) Bottom Ash Silos: 2 nos., 3000MT (2x1500 MT) for dry bottom ash system

Ash Pond details- For existing ash pond

S. No.	Details of Ash Pond (existing)	Ash Pond
1.	Area (Ha)	Total – 157.020 Ha. · HCSD – 52.12 Ha · BA-II -38.25 Ha · BA-III – 33.56 Ha

S. No.	Details of Ash Pond (existing)	Ash Pond
		· Overflow lagoon – 3.88 Ha · Lagoon- 1A: 12.64 Ha · Ash evacuation road + drain =16.57 Ha
2.	Dyke height (m)	Avg. height – 10.0 meter
3.	Volume (m^3)	Total – 78.74 LCM.
4.	Quantity of ash to be disposed (Metric Tons)	Total – 49.17 LCM
5.	Expected life of ash pond (number of years and months)	8 years
6.	Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining	· OFL: Clay & Bentonite
7.	Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	Wet slurry disposal. 1. HCSD Lagoon: HCSD 2. BA-II&III: LCSD
8.	Ratio of ash: water in slurry mix (1:..)	HCSD - 1:1 BA Lagoon-II – 1:6 BA Lagoon-III – 1:6
9.	Ash water recycling system (AWRS): Yes or No	Yes
10.	Quantity of wastewater from ash pond to be discharged into land or water body (m^3)	No wastewater discharge. Zero Liquid Discharge system implemented.
11.	Details regarding dyke stability study and name of the organization who conducted the study.	Stability study conducted through IIT Hyderabad in December 2021 and the observations have been addressed.

C. Ash Pond details: For Proposed ash pond

S. N.	Details of Ash Pond (proposed)	Earlier	Optimised
1.	Area (Ha)	107.242	99
2.	Dyke height (m)	7.5 m (Starter dyke)	7.5 m (Starter dyke)+ 1 Raising
3.	Volume (m^3)	4.6 Million m^3	6.2 Million m^3
4.	Quantity of ash to be disposed (Metric Tons)	4.6 Million Metric Tons (considering density as 1T/Cum)	6.2 Million Metric Tons (considering density as 1T/Cum)
5.	Expected life of ash pond (number of years and months)	1 Years 6 Months (w.r.t. total ash generation of Stage-II) (in case of nil ash utilization)	2 Years 0 months (w.r.t. total ash generation of Stage-II) (in case of nil ash utilization)
6.	Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining	Suitable impervious lining as per actual site conditions meeting the imperviousness requirements as per standard "Guidelines for Design, Construction, O&M and Annual certification of Coal Ash Ponds-June 2023". HDPE lining system is envisaged in OFL and Bentonite blended lining in all ash storage lagoons.	
7.	Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	Fly Ash: HCSD. Bottom Ash: LCSD	
8.	Ratio of ash: water in slurry mix	Maximum 25% ash on dry ash basis, rest is water for LCSD Slurry· 55% to 65% (Average - 60%) of ash on dry ash basis for HCSD slurry.	
9.	Ash water recycling system (AWRS):	Yes	
10.	Quantity of wastewater from ash pond to be discharged into land or water body (m3)	Zero Liquid Discharge (ZLD) system envisaged for the proposed expansion project. No wastewater discharge is envisaged.	
11.	Details regarding dyke stability study and name of the organization who conducted the	As already done in all past ash dyke stability design, this will also be done by NTPC, (in-house design) in line with standard "Guidelines for Design, Construction, O&M and Annual certification of Coal Ash Ponds-June 2023".	

	study.	Adequate measures for safety and stability of the Ash dyke are considered from design stage.

21. **Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration are furnished as below-**

A. Summary of court cases: Summary of Court cases pending as on 16.04.2025 is as given below:
Details pertaining to Pollution / Environmental related Court case:

S.N.	Category of cases	Case No.	Name of the Court	Name of the Advocate	Petitioner	Respondent	Description of the case	Present Status/ Remarks	Present Status/ Remarks as on date
1	High Court	WP/ 12708/ 2019	High Court, Jabalpur	R.C Srivastava	Pappu Kaurav	UOI & Oth.	Petitioner has raised Environmental issues/ concerns w.r.t unloading of coal at Gadarwara Railway siding for use of Gadarwara Super Thermal Power Project and has prayed for necessary precautionary me asurers at the time of unloading of coal.	Case is pending before High Court, Jabalpur and presently not scheduled for listing. Further, the railway line up to Gadarwara STPP has been commissioned and No Coal Unloading is being done at Gadarwara railway siding.	Not listed

B. Summary of Show Cause Notices: Nil

C. Summary of violation: There is no violation cases under the Environmental Protection Act, 1986; Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and the Wildlife (Protection) Act, 1972: Nil

22. Written submissions: Project proponent submitted the following written submissions during the meeting:

S. N.	EAC Meeting observations and point-wise reply
1	Justification for requirement of Proposed Ash Dyke Area
	The proposed Ash dyke area (99 Ha.) for Stage-II is essential to sustain plant operation due to following reasons. i.) The avenues of ash utilisation at Gadarwara STPS are limited due to its geographic location and at present the sectors in which ash utilisation is being done are road construction and low-lying filling, although Station is putting all out efforts for utilisation of ash in all possible avenues. It is pertinent to mention that, in future, the utilization in the above-mentioned avenues may taper down and contingent arrangement of space is required for ash dumping, in absence of other utilization avenues on sustainable basis. ii) With the envisaged Wet disposal of bottom ash, the existing Stage-I ash dyke is not sufficient for decantation and recirculation requirements. iii) In order to ensure sustained power generation, requirement of ash dyke for proposed Stage -II units is felt necessary to meet any contingency that may arise out of poor ash utilisation. Furthermore, space for stowing of ash is required to handle the situation of poor ash utilisation vis-à-vis demand of power generation specifically during monsoon period. In view of the above, NTPC Gadarwara shall put its sincere efforts to comply the stipulated norm prescribed

	under applicable ash utilization notifications and considering the Ash utilization trend and potential, will review the requirement of the area mentioned for the existing and proposed ash dyke and accordingly will put best efforts to convert approx. 70 Ha. exhausted ash dyke area, into Greenbelt in phased manner after 5 years from the start of Commercial operation of the last unit. The greenbelt area so developed shall be in addition to the greenbelt area of 156.78 Ha. proposed in the application.
2	**Revised action plan for issues raised in Public Hearing**
	Necessary corrections have been incorporated and revised action plan is submitted herewith.
3	**Ash Utilization avenues to be explored other than NHAI Road projects**
	NTPC Gadarwara STPP will strive to increase utilization of Ash in following avenues: a) Construction of road and embankments etc under State Government. b) Construction of road by PWD and other agencies. c) Road development under Pradhan Mantri Gram Sadak Yojana d) Ash utilisation in Cement sector e) Low lying area filling, mine void/ quarries back filling and reclamation, f) In-situ Ash brick manufacturing and issue of ash to FAB manufacturing units. g) New initiatives like manufacturing of pre-fab interlocking blocks/tiles, Nano-Concrete h) Aggregates (NACA), construction of Geo-polymer road and effort for use of Bottom Ash as a substitute to sand etc.
4	**Mitigation measures during transportation of ash by road**
	a) All ash transportation through bulker or vehicles covered with tarpaulin/ HDPE sheet of suitable thickness. b) Sprinkling of water at regular interval along the peripheral hauling roads/ approach roads. c) Washing of Bulkers before leaving the silo area. d) Inspection of ash transportation vehicles before entering the dyke to ensure healthiness of base/ body to avoid spillage during transportation. e) Loading of the conditioned ash in transportation vehicles to control fugitive emission during ash transportation. f) Use of fog cannons (under procurement) for fugitive dust control g) Ensuring water ponding and sprinkling in dyke to control fugitive emission from the dyke. h) Strengthening of Avenue plantation along the route from Ash Dyke to connecting road up to Gadarwara.

Observations and deliberation of the EAC

23. The Committee observed and noted the following:

i. Instant proposal is for expansion of Gadarwara STPP by adding Stage- II 1600 MW (2x800 MW) with UltraSuper Critical technology having Air Cooled Condenser system to the existing Stage- I 1600 MW (2x800 MW) by M/s. NTPC Limited at Villages Gangai, Mehrakheda, Chorbarheta, Dongergaon and Kudari, Tehsil Gadarwara, District Narsinghpur, Madhya Pradesh.

ii. The existing Stage- I project for 1600 MW (2x800 MW) was accorded environmental clearance on 22/03/2013 and subsequently amended by the Ministry vide letters dated vide letter dated 01.09.2017, 07.02.2019, 22.10.2019, 11.08.2020 & 24.12.2021. Consent to Operate for the existing Unit was accorded by Madhya Pradesh Pollution Control Board (MPPCB), Bhopal vide Letter dated 22.07.2024 and the same is valid up to 30.09.2026. Both units of the existing Project has been implemented and is under operation.

iii. Compliance report submitted by RO, Bhopal on dated 21.04.2025 for the existing unit along with the action taken by the proponent was deliberated by the Committee and found it satisfactory.

iv. ToR for the proposed expansion project was obtained on 30/09/2024.

v. Total land of 910.706 ha is required for the proposed project (289.232 ha) including existing Unit (621.474 ha), out of which, 854.56 ha has been acquired and is under possession of M/s. NTPC Limited. Out of total project area of 910.706 Ha, an area of 56.146 Ha land is under Right of Use (ROU) for makeup water pipeline. Overall, the proposed expansion is within the plant premises area and no additional land acquisition is envisaged for the proposed expansion project.

vi. There is no involvement of forest land in the proposed project.

vii. The EAC also took into consideration the drone survey of the project site and KML file on the Google Earth presented by the project proponent along with DSS of the project site on PARIVESH portal.

viii. There are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site as ascertained from DSS.

ix. The project site is not located within the Critically Polluted Area (CPA) / Severally Polluted Area (SPA) as per CEPI assessment 2018 of CPCB.

x. Shakkar River is located at distance of 600 m (NE-N) from the project site. Water Resource Department vide letter dated 15/10/2024 has given certificate regarding HFL level of Shakkar River at Gadarwara, which is 332.47 m as recorded on 08.09.1999.

xi. As per the Survey of India Toposheet and the Census of India 2011 data, total 125 villages are present within 10 km radius from the project site. Some Schools are located within 2-3 Km of the project site. A dense greenbelt shall be developed around the Gadarwara STPP/ boundary wall of the Schools and along the roadsides as a barrier between the school, village and project boundary to mitigate noise and dust pollution.

xii. Coal requirement for Stage-I (2x800 MW) & Stage II (2x800 MW) project will be met through Rail. There will be no road transportation of coal for Stage- I & II. The coal unloading shall be done through Wagon Tippler/ Track Hopper.

xiii. Existing Water requirement is 1,12,200 m3/day, which is obtained from Narmada River. The water requirement for the proposed project is estimated as 48,000 m3/day for which additional water allocation has been obtained from Water Resources Department, Govt. of Madhya Pradesh, vide letter dated 19.02.2024. Total Water Requirement of the project will be 1,60,200 m3/day, which is well within the existing permission limit. The water will be transported to the plant site through pipeline.

xiv. Existing power requirement for the existing stage-I and proposed stage-II project is 100 MW and 124 MW, respectively, which shall be obtained from own Gadarwara STPP.

xv. The Committee deliberated on the baseline data and incremental GLC due to the proposed project and observed that AAQ levels are within NAAQS.

xvi. The Stage-II units (2x800 MW) will incorporate high-efficiency (with 99.99%) Electrostatic Precipitators (ESP) to control ash particle emissions. These ESPs will design to limit particulate emissions < 30 mg/Nm3. A wet limestone-based Flue Gas Desulphurization (FGD) system will be installed behind ESP, at the tail end of the steam generator downstream in which SO2 gas shall be captured in limestone slurry (to limit SO2 emission below 100 mg/Nm3) to produce gypsum. Besides, Low NOx Burner, Over Fire Air, Dust Extraction and Dust Suppression system shall be implemented to minimize the pollution.

xvii. Zero Liquid Discharge system is envisaged for the proposed expansion project. No wastewater discharge is proposed.

xviii. Eight (8) Schedule I Species has been reported in the buffer zone. Wildlife Conservation & Management Plan (WLCP) has been prepared and submitted to Principal Chief Conservator of Forest (Wildlife), Govt. of Madhya Pradesh for the approval.

xix. Committee deliberated on the action plan of Hydrogeology study; Bio-diversity/aquatic ecology study and Risk assessment study and found it satisfactory.

xx. Public hearing for the project was held on 30/12/2024. The Committee looked in to the videography of the public hearing proceedings, deliberated on the public hearing issues along with action plan submitted by the proponent to address the issues raised during the public hearing and found it satisfactory. The committee advised the PP to implement the PH action plan in a time bound manner.

xxi. Capital cost of the existing project was Rs. 15,105.22 Crores. The capital cost of the proposed Stage-II project is Rs.

20,445.69 Crores and the capital cost for environmental protection measures is proposed as Rs 2,015.44 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 40.16 Crores. The employment generation from the proposed project / expansion project is approx. 96 nos. & 186 nos. permanent employment during construction and operation phases, respectively, and approx. 2000 nos. & 1500 nos. contractual employment during construction and operation phases, respectively.

xxii. Existing green belt has been developed in 66.368 ha area, which is about 14.01 % of the total plant area of 473.570 ha with total sapling of 83,639 Trees. Proposed greenbelt shall be developed in 90.412 ha which is about 19.09 % of the total plant area. Thus total of 156.780 ha area (33.10% of total plant area) will be developed as greenbelt.

xxiii. Committee deliberated on the existing ash management and observed that percentage of ash utilization for the year 2024-25 is observed to be only 82.19 %. Committee asked the proponent to achieve 100 % ash utilization. Further, with respect to the proposed new ash pond, the committee asked the proponent to optimize the land area. Accordingly, PP optimized the area from 107.242 Ha to 99 Ha.

xxiv. The committee noted that there 18 court cases with respect to the instant project. Out of 18 cases, only one case bearing Original Application No. WP/ 12708/ 2019 is related to the environment and the same is pending at High Court, Jabalpur.

xxv. The Committee noted that the EIA report is in compliance of the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components.

xxvi. The EAC also deliberated on the written submission of the project proponent, and found it satisfactory.

xxvii. The EAC noted that the Project Proponent has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

Recommendations of the Committee

24. The EAC after detailed deliberations on the information submitted and as presented during the meeting **recommended** for grant of Environmental Clearance to the proposed "*Expansion of Gadarwara STPP by adding Stage- II: 1600 MW (2x800 MW) with UltraSuper Critical technology having Air Cooled Condenser system to the existing Stage- I: 1600 MW (2x800 MW) by M/s. NTPC Limited at Villages Gangai, Mehrakheda, Chorbarheta, Dongergaon and Kudari, Tehsil Gadarwara, District Narsinghpur, Madhya Pradesh*", under the provisions of EIA Notification, 2006 subject to the stipulation of specific conditions and standard/general conditions (**Annexure 1**).

25. The MoEF&CC has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and based on the recommendations of the EAC hereby accords Environmental Clearance to **M/s. NTPC Limited** for "*Expansion of Gadarwara STPP by adding Stage-II: 1600 MW (2x800 MW) with UltraSuper Critical technology having Air Cooled Condenser system to the existing Stage-I: 1600 MW (2x800 MW) located at Villages Gangai, Mehrakheda, Chorbarheta, Dongergaon and Kudari, Tehsil Gadarwara, District Narsinghpur, Madhya Pradesh*" subject to compliance of the Specific/General environmental conditions (**Annexure 1**).

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

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

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

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

30. General Instructions:

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

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

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

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

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

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

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

32. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

33. This issue with an approval of the Competent Authority

Yours faithfully,

(Sundar Ramanathan)
Scientist ‘F’
Tel: 011- 20819378
Email- r.sundar@nic.in

Copy To

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.

2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
3. Deputy Director General of Forests (C),Ministry of Environment, Forest and Climate Change, Regional Office, Kendriya Paryavaran Bhawan, E-5 Arera Colony, Link Road-3, Ravishankar Nagar, Bhopal – 462016.
4. The Chairman, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
5. The Regional Director, Central Ground Water Board, North Central Region, Block-1, 4th Floor, Paryawas Bhawan Area Hills, Jail Road, Bhopal - 462011, Madhya Pradesh.
6. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 32.
7. The Chairman, Madhya Pradesh Pollution Control Board, E-5, Main Rd No. 3, Ekant Park, Arera Colony, Bhopal, Madhya Pradesh 462 016.
8. The Member Secretary, Madhya Pradesh Pollution Control Board, E-5, Main Rd No. 3, Ekant Park, Arera Colony, Bhopal, Madhya Pradesh 462 016.
9. The District Collector, Narsinghpur, Government of M.P.
10. PARIVESH Portal.

Annexure 1

Specific EC Conditions for (Thermal Power Plants)

1. [A] Environmental Management

S. No	EC Conditions
1.1	Project proponent shall adopt 100% utilization of ash generated as a result of the expansion project in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendment. Area for the additional ash pond proposed under the expansion project shall not exceed 99 Ha as committed
1.2	In addition to the existing 4 Continuous Ambient Air Quality Monitoring Stations (CAAQMS), Project proponent shall install additional two continuous ambient air quality monitoring at suitable location within the project site in consultation with MPPCB as committed
1.3	The water requirement for the proposed project is estimated as 48,000 KLD and the same shall be met from Narmada River. Air Cooled Condenser System shall be used in STPP Stage-II as committed
1.4	Project proponent shall store harvested rainwater in the project boundary and utilize the same for plantation, recharging water in the pond and domestic utilization in colonies. A record shall be maintained of water collected through rainwater and its supply system. PP shall get the water audit done every year to optimize the water requirement.
1.5	Project proponent shall implement the protective measure proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs. 2,015.44 Crores (Capital) and Rs. 40.16 crores (recurring) and should be kept in separate accounts and audited annually. The implementation status along with the amount spent with documentary proof shall be submitted to the concerned Regional Office for the activities carried out during the previous year.
1.6	Project proponent shall assess the carbon footprint of the project and develop carbon sink/carbon sequestration resources using modern technologies. The implementation report shall be submitted to the concerned Regional Office of the MoEF&CC.

S. No	EC Conditions
1.7	Project proponent shall install and commission the FGD for the existing 2x800 MW & and proposed 2x800 MW unit as per the Ministry's notification dated 05/09/2022 and its subsequent amendments.
1.8	Ash pond area and fly ash utilization shall be as per Fly Ash Notification issued by Ministry/ CPCB from time to time.
1.9	Project proponent shall ensure that pipelines carrying the fly ash and effluent shall be inspected regularly for any leakages.
1.10	Effluent of 4920 KLD will be treated through Effluent Treatment Plant. As committed by the Project proponent, Zero liquid discharge shall be adopted for the existing and the proposed plant. No wastewater will be discharged outside the project site.
1.11	PP shall implement the concurrent plantation plan in a time bound manner. Total of 156.780 ha area (33.10% of total plant area of 473.570 ha) will be developed as greenbelt. A 5 m - 50 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB guidelines. PP shall also adopt Miyawaki plantation technique and plantation with minimum 2 meter height of the saplings in upcoming monsoon season. The budget earmarked for the green belt, plantation inside and outside the plant area, along the transportation route and Miyawaki Plantation area shall be kept in a separate account and audited annually. PP should annually submit the audited statement of expenditure along with proof of activities viz. photographs (before & after with geolocation date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC and on PARIVESH Portal as the case may be for the activities carried out during previous year.
1.12	Project proponent shall carry out community plantation with incentive scheme by distributing 50,000 saplings per year for a period of five years. Further, PP shall provide basic facilities to the nearby schools such as drinking water, sanitation facilities and shall also develop green belt around the nearby schools. Regular watering of saplings planted in the nearby schools will be carried out by Project Proponent to mitigate the air and noise pollution. Further, PP shall organize quarterly awareness programs for school students to educate them on the significance and preservation of trees.
1.13	Project proponent shall review the requirement of the area mentioned for the existing and proposed ash dyke and accordingly will put best efforts to convert approx. 70 Ha exhausted ash dyke area of Stage I into Greenbelt in phased manner after 5 years from the start of Commercial operation of the Stage II units. The greenbelt area so developed shall be in addition to the greenbelt area of 156.78 Ha as proposed under the instant proposal.
1.14	Wildlife conservation plan as approved by the competent authority shall be implemented. Additional, budget shall be added in the plan, in case additional measures suggested by state wildlife department. The final Wildlife conservation plan duly approved by the CWLW shall be submitted to RO, MoEF&CC within a time frame of three months from the date of grant of EC and the budget approved by the concerned authority shall be deposited in government account.
1.15	Project proponent shall install LED display of air quality (Continuous AAQ monitoring) and stack emission (Continuous emission monitoring) at prominent locations preferably outside the plant's main entrance for public viewing and in administrative complex and maintenance of devices shall

S. No	EC Conditions
	be done regularly.
1.16	Project proponent shall carry out Water Sprinkling on roads inside the plant area/ administrative/ residential areas and outside the plant area at least for 2 KM on a regular basis to control the air pollution. A logbook shall be maintained for the activity and be in six-monthly compliance report.
1.17	PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM.
1.18	Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.
1.19	A detailed action plan regarding leachate handling shall be prepared and implemented in consultation with SPCB and the same shall be submitted to the Regional Office of the Ministry. Leachate shall be treated and reused. No treated leachate shall be discharged in any circumstances. Characteristics of Leachate and the treated leachate shall be monitored once in quarter and records shall be maintained.
1.20	Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
1.21	Monitoring of surface water quality and Ground Water quality shall also be regularly conducted in and around the project site and records to be maintained. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall also be undertaken and results/findings submitted along with half yearly monitoring report. The monitored data shall be submitted regularly on PARIVESH portal as part of Half Yearly compliance report.
1.22	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
1.23	PP shall ensure that all types of plastic waste generated from the plant shall be stored separately in isolated area and disposed of strictly adhering to the Plastic Waste Management Rules 2016 (as amended). In pursuant to the Ministry's OM dated 18/07/2022. PP shall also create awareness among the people working in the project area as well as in its surrounding area on the ban on Single Use Plastic (SUP) in order to ensure compliance of Ministry's Notification published by the Ministry on 12/08/2021. A report along with photograph on the measures taken shall also be included in the six monthly compliance report submitted by PP.
1.24	PP is advised to implement the 'Ek Ped Maa Ke Naam' Campaign which was launched on 5th June 2024 on the occasion of the World Environment Day to increase the forest cover across the Country. This plantation drive is other than Green belt development. The action in this regard shall be submitted concerned RO in six monthly report.

2. [B] Socio-economic

S. No	EC Conditions
2.1	A vision document comprising prospective plan for implementation of various CER activities, plantation programme outside the project cover area, rejuvenation and conservation of water bodies within 5 km radius of the project cover area shall be prepared and submitted to the Regional Office of the Ministry within 6 months. Implementation status of the same shall be reported to the Regional office in 6 monthly compliance report.
2.2	Epidemiological Study among population within 5 km radius of project cover area shall be carried out on regular interval (Once in two year) through independent agency. Necessary measures shall be taken as per findings of study in consultation with district administration. Action taken report shall be submitted to the Regional Office of the Ministry.
2.3	The budget proposed for PH is Rs. 11.50 Crores. The budget proposed shall be kept in a separate account and audited annually. Project proponent shall implement the action plan to address the issues raised during public hearing within a time frame of 5 years from the date of grant of EC. In addition to this, PP shall strengthen the existing Primary Health Center (PHC) & Community Health Center (CHC) in the study area for better public health as committed. Compliance status in this regard shall be submitted along with the six monthly compliance to the concerned Regional Office of MoEF&CC.
2.4	The establishment of a robust public grievance redressal mechanism to address concerns and complaints from local communities regarding the power plant's operations, environmental impacts, or social issues shall be developed. A Senior Officer shall review the functioning of the mechanism twice in a month.

3. [C] Miscellaneous

S. No	EC Conditions
3.1	An Environmental Cell headed by the Environment Manger with postgraduate qualification in environmental science/environmental engineering, shall be created. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
3.2	Consent for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
3.3	All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.

Standard EC Conditions for (Thermal Power Plants)

1. Statutory Compliance

S. No	EC Conditions
1.1	Emission Standards for Thermal Power Plants as per Ministry’s Notification S.O. 3305(E) dated 7.12.2015, G.S.R.593(E) dated 28.6.2018 and as amended from time to time shall be complied.

S. No	EC Conditions
1.2	Part C of Schedule II of Municipal Solid Wastes Rules, 2016 dated 08.04.2016 as amended from time to time shall be complied for power plants based on Municipal Solid Waste.
1.3	MoEF&CC Notifications on Fly Ash Utilization S.O. 763(E) dated 14.09.1999, S.O. 979(E) dated 27.08.2003, S.O. 2804(E) dated 3.11.2009, S.O. 254(E) dated 25.01.2016 as amended from time to time shall be complied.
1.4	MoEF&CC Notifications on Water Consumption vide Notification No. S.O. 3305 (E) dated 07.12.2015 read with G.S.R 593 (E) dated 28.6.2018 as amended from time to time shall be complied.
1.5	The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
1.6	No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance.

2. Ash Content/mode Of Transporatation Of Coal

S. No	EC Conditions
2.1	MoEF&CC Notification issued vide S.O. 1561 (E) dated 21.05.2020 and as amended from time to time shall be complied which inter-alia include use of coal by Thermal Power Plants, without stipulations as regards ash content or distance, shall be permitted subject to compliance of conditions prescribed under (1) Setting Up Technology Solution for emission norms, (2) Management of Ash Ponds and (3) Transportation.

3. Air Quality Monitoring And Management

S. No	EC Conditions
3.1	Flue Gas Desulphurisation System shall be installed based on Lime/Ammonia dosing to capture Sulphur in the flue gases to meet the SO2 emissions standard as per G.S.R. 682 (E) dated 05.09.2022 and amended from time to time.
3.2	Selective Catalytic Reduction (SCR) system or the Selective Non-Catalytic Reduction (SNCR) system or Low NOX Burners with Over Fire Air (OFA) system shall be installed to achieve NOX emission standard of 100 mg/Nm3.
3.3	High efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission to meet the stipulated standards of 30 mg/Nm3.
3.4	Stack with a height of 275 meters shall be provided with continuous online monitoring instruments for SO2, Nox and Particulate Matter as per extant rules.
3.5	Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.

S. No	EC Conditions
3.6	Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM10, PM2.5, SO2, NOX within the plant area. The monitoring of other locations (at least three locations outside the plant area covering upwind and downwind directions at an angle of 120° each) shall be carried out manually.
3.7	Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
3.8	Appropriate Air Pollution Control measures (DEs/DSs) be provided at all the dust generating sources including sufficient water sprinkling arrangements at various locations viz., roads, excavation sites, crusher plants, transfer points, loading and unloading areas, etc.

4. Noise Pollution And Its Control Measures

S. No	EC Conditions
4.1	The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
4.2	Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
4.3	Periodical medical examination on hearing loss shall be carried out for all the workers and maintain audiometric record and for treatment of any hearing loss including rotating to non-noisy/less noisy areas.

5. Human Health Environment

S. No	EC Conditions
5.1	Bi-annual Health check-up of all the workers is to be conducted. The study shall take into account of chronic exposure to noise which may lead to adverse effects like increase in heart rate and blood pressure, hypertension and peripheral vasoconstriction and thus increased peripheral vascular resistance. Similarly, the study shall also assess the health impacts due to air polluting agents.
5.2	Impact of operation of power plant on agricultural crops, large water bodies (as applicable) once in two years by engaging an institute of repute. The study shall also include impact due to heavy metals associated with emission from power plant.

6. Water Quality Monitoring And Management

S. No	EC Conditions
6.1	Induced/Natural draft closed cycle wet cooling system including cooling towers shall be set up with minimum Cycles of Concentration (COC) of 5.0 or above for power plants using fresh water to achieve specific water consumption of 3.0 m3/MWhr.
6.2	In case of the water withdrawal from river, a minimum flow 15% of the average flow of 120

S. No	EC Conditions
	consecutive leanest days should be maintained for environmental flow whichever is higher, to be released during the lean season after water withdrawal for proposed power plant.
6.3	Records pertaining to measurements of daily water withdrawal and river flows (obtained from Irrigation Department/Water Resources Department) immediately upstream and downstream of withdrawal site shall be maintained.
6.4	Regular (at least once in six months) monitoring of groundwater quality in and around the ash pond area including presence of heavy metals (Hg, Cr, As, Pb, etc.) shall be carried out as per CPCB guidelines. Surface water quality monitoring shall be undertaken for major surface water bodies as per the EMP. The data so obtained should be compared with the baseline data so as to ensure that the groundwater and surface water quality is not adversely impacted due to the project & its activities.
6.5	The treated effluents emanating from the different processes such as DM plant, boiler blow down, ash pond/dyke, sewage, etc. conforming to the prescribed standards shall be re-circulated and reused. Sludge/ rejects will be disposed in accordance with the Hazardous Waste Management Rules.
6.6	Hot water dispensed from the condenser should be adequately cooled to ensure the temperature of the released surface water is not more than 5 degrees Celsius above the temperature of the intake water.
6.7	Wastewater generation of 4920 KLD from various sources (viz. cooling tower blowdown, boiler blow down, wastewater from ash handling, etc) shall be treated to meet the standards of pH: 6.5-8.5; Total Suspended Solids: 100 mg/l; Oil & Grease: 20 mg/l; Copper: 1 mg/l; Iron:1 mg/l; Free Chlorine: 0.5; Zinc: 1.0 mg/l; Total Chromium: 0.2 mg/l; Phosphate: 5.0 mg/l.
6.8	Sewage generation of 75 KLD will be treated by setting up Sewage Treatment plant to maintain the treated sewage characteristics of pH: 6.5-9.0; Bio-Chemical Oxygen Demand (BOD): 30 mg/l; Total Suspended Solids: 100 mg/l; Fecal Coliforms (Most Probable Number): <1000 per 100 ml.

7. Risk Mitigation And Disaster Management

S. No	EC Conditions
7.1	Adequate safety measures and environmental safeguards shall be provided in the plant area to control spontaneous fires in coal yard, especially during dry and humid season.
7.2	Storage facilities for auxiliary liquid fuel such as LDO and HFO/LSHS shall be made as per the extant rules in the plant area in accordance with the directives of Petroleum & Explosives Safety Organisation (PESO). Sulphur Content in the liquid fuel should not exceed 0.5%.
7.3	Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
7.4	Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.

S. No	EC Conditions
7.5	Regular mock drills for on-site emergency management plan and Integrated Emergency Response System shall be developed for all kind of possible disaster situations.

8. Green Belt And Biodiversity Conservation

S. No	EC Conditions
8.1	Green belt shall be developed in an area of 33% of the total project with indigenous native tree species in accordance with CPCB guidelines. The green belt shall inter-alia cover an entire periphery of the plant.
8.2	In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.

9. Waste Management

S. No	EC Conditions
9.1	Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
9.2	Toxicity Characteristic Leachate Procedure (TCLP) test shall be conducted for any substance, potential of leaching heavy metals into the surrounding areas as well as into the groundwater.
9.3	Ash pond shall be lined with impervious liner as per the soil conditions. Adequate dam/dyke safety measures shall also be implemented to protect the ash dyke from getting breached.
9.4	Fly ash shall be collected in dry form and ash generated shall be used in phased manner as per provisions of the Notification on Fly Ash Utilization issued by the Ministry S.O. 5481 dated 31.12.2021, S.O.6169 (E) dated 30.12.2021, S.O.05 (E) dated 01.01.2024 and amendment thereto.
9.5	Unutilized ash shall be disposed off in the ash pond in the form of High Concentration Slurry/Medium Concentration Slurry/Lean Concentration Slurry method. Ash water recycling system shall be set up to recover supernatant water.

10. Monitoring Of Compliance

S. No	EC Conditions
10.1	Environmental Audit of the project be taken up by the third party for preparation of Environmental Statement as per Form-V & Conditions stipulated in the EC and report be submitted to the Ministry.
10.2	Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
10.3	Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report. Renewable Energy Purchase Obligation as set by MoP/State Government shall be met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy

S. No	EC Conditions
	Certificates.
10.4	Energy and Water Audit shall be conducted at least once in two years and recommendations arising out of the Report should be followed. A report in this regard shall be submitted to Ministry's Regional Office.
10.5	The project proponent shall (Post-EC Monitoring): a. send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government; b. upload the clearance letter on the web site of the company as a part of information to the general public. c. inform the public through advertisement within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment, Forest and Climate Change (MoEF&CC) at http://parviesh.nic.in. d. upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically; e. monitor the criteria pollutants level namely; PM (PM10& PM2.5incase of ambient AAQ), SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company; f. submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB; g. submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company; h. inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project and the date of commencement of the land development work.

11. Corporate Environmental Responsibility (Cer) Activities

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