सत्यमेव जयते

**Government of India**
**Ministry of Environment, Forest and Climate Change**
**IA Division**
**(Thermal Projects)**
***

**Minutes of AGENDA FOR 30th MEETING OF THE EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL POWER PROJECTS) TO BE HELD ON 26TH SEPTEMBER, 2025 DURING 10:00 - 17.00 HRS THROUGH PHYSICAL MODE. meeting Thermal Projects held from 26/09/2025 to 26/09/2025**

**Date:** 10/10/2025

**MoM ID:** EC/MOM/EAC/214296/9/2025

**Agenda ID:** EC/AGENDA/EAC/214296/9/2025

**Meeting Venue:** Narmada Hall, IPB, MOEF&CC, New Delhi

**Meeting Mode:** Physical

**Date & Time:**

| | | |
|---|---|---|
| 26/09/2025 | 10:00 AM | 05:00 PM |

**1. Opening remarks**

At the outset, Shri. Inder Pal Singh Matharu (I.F.S Retd.), Chairman, Expert Appraisal Committee (Thermal Power & Coal Mining) welcomed the Expert members & other participants and requested to start the proceeding as per the agenda listed for this meeting. The list of members who participated in the meeting is at **Annexure – I**. The Standard/Generic ToR conditions shall be system generated through the PARIVESH Portal.

**[The main PDF of MoM is enclosed at Page no. 140 - 272]**

**2. Confirmation of the minutes of previous meeting**

Confirmation of the Minutes of the 29th Meeting of the EAC (Thermal): The minutes of the 27th meeting of the EAC (Thermal) held on 29/08/2025 has been confirmed by the EAC as uploaded on Parivesh.

**3. Details of proposals considered by the committee**

**Day 1 -26/09/2025**

**3.1. Agenda Item No 1:**

**3.1.1. Details of the proposal**

| **Expansion of 2x800 MW (Stage-I) Darlipali Supercritical Coal Based Thermal Power Plant by Addition of One Unit of 800 MW [1x800MW(Stage-II) Darlipali Super Thermal Power Project] at Village Darlipali, Rai dihi, in Lephripara Tehsil, Village Chuabahal, Kalamegha, Laikera, Bihajor, Kanaktura in Hemgir Tehsil of S undergarh District and Village Tileimal, Chichinda, Kechobahal, in Jharsuguda Tehsil and Village Chhadar ama in Lakhanpur Tehsil of Jharsuguda District in Odisha** by **NTPC LIMITED** located at **SUNDARGARH,ODI SHA** | | | |
|---|---|---|---|
| **Proposal For** | | Fresh EC | |
| **Proposal No** | **File No** | **Submission Date** | **Activity (Schedule Item)** |
| IA/OR/THE/551120/2025 | J-13012/65/2008-IA.II(T) | 11/09/2025 | Thermal Power Plants (1(d)) |

**3.1.2. Project Salient Features**

**Agenda No 30.1**

**30.1** Expansion of 2x800 MW (Stage-I) Darlipali Supercritical Coal Based Thermal Power Plant by Addition of One Unit of 800 MW [1x800MW(Stage-II) Darlipali Super Thermal Power Project] by **M/s. NTPC Limited** located at Village Darlipali, Raidihi, in Lephripara Tehsil, Village Chuabahal, Kalamegha, Laikera, Bihajor, Kanaktura in Hemgir Tehsil, **District Sundergarh and Village Tileimal, Chichinda, Kechobahal, in Jharsuguda Tehsil and Village Chhadarama in Lakhanpur Tehsil of Jharsuguda District, Odisha – Environmental Clearance– regarding**.

**[Proposal No. IA/OR/THE/551120/2025; F. No. J-13012/65/2008-IA.II(T)]**

**30.1.1**: M/s. NTPC Limited has made an online application vide proposal no. IA/OR/THE/551120/2025 dated 11/09/2025 along with copy of EIA/EMP report, Form and Certified compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at item no. *1(d)* Under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level and does not attract the general condition of the EIA Notification, 2006.

**Name of the EIA consultant:** M/s. Mantec Consultants Pvt. Ltd [S. No138, List of ACOs with their Certificate no:NABET/EIA/2326/RA0305_Rev.01; Valid up to 20.04.2026.

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.1.2:** Darlipali Super Thermal Power Project, Stage-II (1 x 800 MW) by M/s. NTPC Limited, located in Darlipali, Raidhi Village in Lephripara Tehsil & Chuabahl, Kalamegha, Laikera, Bihajor, Kanakturan village in Hemgir Tehsil of Sundergarh District and village Tileimal, Chichinda, Kechobahal in Jharsuguda Tehsil and village Chhadarama in Lakhanpur Tehsil of Jharsuguda District in Odisha State is for enhancement of power generation capacity from 1600 MW to 2400 MW with addition of 1 unit of 800 MW based on Ultra Super Critical Technology & Air Cooled Condenser.

**30.1.3:** The existing project of 2x800 MW was accorded environmental clearance vide letter no. J-13012/65/2008-IA.1(T) dated 17.02.2014 from Ministry of Environment & Forests. The Environment Clearance was amended vide letter dated 12.02.2019, 11.08.2020 & 24.12.2021. The project has been implemented and units are under operation. Consent to Operate for the existing units was accorded by Odisha State Pollution Control Board vide Letter No. 6565 dated 28.03.2025. The validity of CTO is up to 31.03.2026.

**30.1.4**: Implementation status of the existing EC

| S. No. | Configuration | Capacity (MW) | Date of EC | Implementation Status | Production as per CTO |
|---|---|---|---|---|---|
| 1 | 2×800 | 1600 MW (2 x 800 W) | 17.02.2014 | 2×800 | 1600 MW |

***The details of the present compliance status as submitted by the project proponent is given as below***:

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| **As per the MoEF&CC letter no. J-13012/65/2008-IA. II (T) dated 12.02.2019 (Additional conditions)** | | | | |
| 1 | Details of submission of coal linkage to Ministry has not been furnished **(Condition No.1)** The coal linkage is available only for 3.8 MTPA. Copy of the linkage for remaining quantity shall be submitted to Ministry as and when it is granted. | Details have not been furnished. During visit PP stated that Dulanga coal mines belongs to M/s NTPC only for coal linkage arrangement not required. Ministry may like to take a view in the matter. | Coal is sourced from NTPC Captive Dulanga Coal Mine for which linkage is not required. However, coal allotment letter issued from Ministry of Coal, Govt of India is submitted. **The condition may kindly be considered as complied.** | Out of total coal requirement of 8 MTPA for Stg# I, 7 MTPA Coal is sourced from NTPC's Captive Dulanga Coal Mine and 1 MTPA is sourced form NTPC Captive mine Talaipalli. The mine allotment letter for Dulanga mine from Ministry of coal, Govt of India is submitted in RO compliance report. **It is to submit that as the coal is sourced from NTPC's own mines, coal linkage is not required for the same.** |
| 2 | During visit transportation through rail mode has been observed, Road transportat | During visit on 09.05.2025 coal transportation through | The coal transportation through road from Dulanga to D | It is to submit that no Coal is being transported through r |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| | ion has not been observed. A certificate regarding the completeness and adequacy of the road as per the condition has not been furnished.<br>**(condition no.2)**<br>Route No.2 from Dulanga mines to the Power plant site shall not be used at present as it is under widening. The transportation shall be commenced only after widening the road to cater to the proposed transportation. A certificate regarding the completeness and adequacy of the road shall be submitted provided by the PWD or the custodian of the road. | truck has been observed. PP submitted that coal are being source from NLC-Talabera. As stipulated in the amendment environmental clearance certificate from PWD for route no.2 i.e. from Dulanga mines to power plant has not been furnished. PP also submitted that presently road transportation is being done as per the O.M. of Ministry dated 29.10.2020. Ministry may like to take a view in the matter. | arlipali has been completely stopped and at present, coal is being transported through dedicated rail mode only. However, additional coal is being transported through public road from NLC Talbira mine to Darlipali STPP for meeting the coal requirement.<br>Copy of MOU & its extension is submitted.<br>**The condition may kindly be considered as complied.** | oad since 22/06/2025.<br>Total coal requirement is being met through rail mode only from NTPC's own captive mines. |
| 3 | Air quality monitoring report of 6 locations has been furnished. Air quality monitoring data as per the condition has not been furnished<br>**(condition no.3)**<br>Air quality monitoring shall be carried out at 19 census points indicated in the report along all routes once in quarter. | Air quality monitoring data as per the condition has not been furnished. The condition may be treated as partially complied. | Ambient air quality monitoring report up to March 2020 for the 19 locations stipulated in amended EC dated 12.02.2019 is submitted. Monitoring was suspended after March 2020 due to Corona pandemic.<br>**The Condition may kindly be considered as complied.** | Ambient air quality monitoring report for the period April 2019 to March 2020 was carried out at 19 locations as stipulated in the amended EC. Thereafter, monitoring could not be continued due to Corona Pandemic.<br>The Monitoring report for above mentioned period has been submitted to RO Bhubaneshwar vide latter dated.28.06.2025.<br>It is to further mention that the coal transportation through Dulanga road route for which the monitoring was prescribed at 19 location |

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|---|---|---|---|---|
| | | | | s, was stopped w.e.f April 2020 and the transportation started through rail mode. |
| 4 | Details of plantation along the road been furnished. **(condition no.4)** Plantation shall be carried out along the road in consultation with State Social Forestry Department. | Details of plantation in the road as stipulated in the condition has not been furnished. The condition may be treated as partially complied. | This condition was stipulated in amended EC dated 12.02.2019. for transportation of coal by road. Permission for coal transportation was given till Oct 2020 but due to Corona Pandemic plantation along the Road could not done. Presently no coal is being transported through road from Dulanga Coal mine with respect to plantation along Talabira road route, it is to mention that there is limited scope for plantation. along the public road. However, in consultation with DFO Jharsuguda plantation of 40000 trees has been planned. The copy of the Project proposal submitted by DFO Jharsuguda is submitted. Further, Gap plantation on the route to NLC Talabira will be carried with the help of forest department. The request letter dated 13.06.2025 has been submitted to Divi | Plantation activity could not be taken up because of limited scope along the roads and onset of Corona pandemic in 2020. Further, it is to humbly submit that the coal transportation through road on the said route was stopped in Apr 2020. However, during IRO visit & as per advice block plantation has been carried out in Jharsuguda and Sundargargh District. About 70000 sapling have been planted. Photographs of plantations have been submitted in the IRO compliance report. |

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|---|---|---|---|---|
| | | | sional Manager, CGRVVN LTD, Raigarh | |
| 5 | During visit road transportation has not been observed, only rail transportation observed for coal, water sprinkling observed near the ash pond road during ash transportation details of water sprinkling on coal transportation road has not been furnished<br>**(Condition no. 5)**<br>Regular water sprinkling shall be done on the unpaved roads during transportation. | During visit water sprinkling observed on road near the ash pond. However, details of water sprinkling on coal transportation road has not been furnished. The condition may be treated as partially complied. It is also to mention that present road for coal transportation from Darlipali to Barapali chock (22001'33.7 N 83047'19.9"E) is black topped/cemented except in few patches. | Regular sprinkling of water on road for transportation of ash and coal is being done regularly. The photographs of the same is submitted.<br>**The condition may kindly be considered as complied.** | Regular sprinkling of water is being done in the ash corridor and there is no coal transportation through road route. |
| **As per the MoEF&CC letter no. J-13012/65/2008-IA. II (T) dated 17.02.2014** | | | | |
| 1 | The condition has been amended vide letter dated 24.12.2021. During the visit single stack has been observed. As per the data submitted the flue gas velocity is less than 22m/s. Online continuous monitoring facility for PM, SO2, and NO2 has been provided. Mercury monitored on periodic basis, SO2 exceeds the norms.<br>**(Condition no. viii)**<br>The two Stacks of 275m height with flue gas velocity not less than 22 m/s shall be installed and provided with continuous online monitoring equipments for SOX, NOX, and PM 2.5 & PM 10. Mercury emissions fro | During visit on 09.05.2025 FGD for both unit1 and unit II was in operation. However, flue gas velocity reported to be 22.6 m/s for unit 1 and 21.3 m/s for unit II. Considering this the condition may be treated as partially complied. | Stack Monitoring is being carried out on fortnightly basis, the reports of second fortnight of May 2025 & first fortnight of June,2025 by M/s Vibrant Techno Lab Private Limited Jaipur (MOEF&CC accredited lab) are submitted. The reported flue gas velocities are 23.72 m/s, 24.13m/s & 22.56 m/s, 22.29 m/s for Unit-1 & Unit-2 respectively.<br>**The condition may kindly be consid** | Stack Monitoring is being carried out on fortnightly basis, the reports of second fortnight of May 2025 & first fortnight of June,2025 by M/s Vibrant Techno Lab Private Limited Jaipur (MOEF&CC accredited lab) are submitted in RO compliance report. The reported flue gas velocities are 23.72 m/s, 24.13m/s & 22.56 m/s, 22.29 m/s for Unit-1 & Unit-2 respectively.<br>The flue gas velocity in subsequent rep |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| | m Stack may also be monitored on periodic basis. | | **ered as complied.** | orts is also above the minimum requirement of 22m/s. |
| 2 | Ash utilization for the period 2023-24 reported to be 55.82%.<br>**(condition no. xi)**<br>Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time. | PP reported in the submitted six monthly compliances for the period of Oct 24-Mar 25 for fly ash utilization during 2024-25 as 85.06%. The condition may be treated as partially complied. (Six monthly compliance submitted) | As per MOEF&CC notification dated 31.12.2021 for ash utilization, Darlipali STPP falls under category C. The target of 100% fly ash utilization is to be achieved by 31st March 2027. There has been significant improvement in ash utilization which has increased from 55.82% (2023-24) to 85.06 % (2024-25). The ash utilization for 2025-26 (till 31.05.2025) is 143%. Present ash utilisation of Darlipali STPP is in compliance with MOEF&CC notification dated 31.12.2021 & Annual Ash Compliance Report (ACR) for FY 2024-25 is submitted).<br>**The condition may kindly be considered as being complied** | As per MOEF&CC notification dated 31.12.2021 for ash utilization, Darlipali STPP falls under category C. The target of 100% fly ash utilization is to be achieved by 31st March 2027. There has been significant improvement in ash utilization which has increased from 55.82% (2023-24) to 85.06 % (2024-25). The ash utilization for 2025-26 (till 31.08.2025) is 159.92%. Present ash utilisation of Darlipali STPP is in compliance with MOEF&CC notification dated 31.12.2021. |
| 3 | During visit partially constructed fly ash silo observed. Unutilized fly ash disposed off to the ash pond in the form of slurry. Mercury and other heavy metal analysis data as per the condition has not been furnished.<br>**Condition no. xiii)**<br>Fly ash shall be collected in dry form and storage facilit | PP submitted that trial operation completed for one silo. However, operation of silo yet to be started. PP furnished raw coal and coal ash analysis data for heavy metal carried out by NIT, Rourkerela, by ele | The dry ash Silo no. 4 has been commissioned. There is no effluent discharge from the ash dyke. Ash Water Recycling System (AWRS) is in operation and all supernatant water from ash pond is recy | The dry ash Silo no. 3 & 4 have been commissioned & are under operation. Silo 1 & 2 will be commissioned in December, 2025.<br>Heavy metals analysis including As, Hg, Cr, Pb of seepage water is being do |

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|---|---|---|---|---|
| | y (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area | mental analysis. Data indicate Zr, Tia and Fe as heavy metal in coal and Zr, The Ti and Fe also in coal ash sample. Mercury and other heavy metal analysis data (As, Hg, Cr, Pb) effluent has not been furnished. The condition may be treated as partially complied. | cled back to the plant and reused for ash slurry making. Seepage water from ash dyke is also recycle back. Heavy metals analysis including As, Hg, Cr, Pb of seepage water is being done on a regular basis and latest report is submitted. **The condition may kindly be considered as complied.** | ne on a regular basis and the reports are being shared with regional office MoEF & CC and OSPCB. |
| 4 | PP submitted that 18 No. of piezometers, settlement marker has been installed for regular monitoring of groundwater level in and around ash pond area. It was also reported that heavy metal analysis data submitted to SPCB on monthly basis. Heavy metal analysis data has not been furnished to regional office **(condition no. xxii)** Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project. | Heavy metal analysis data in ground water sample around the ash pond area has not been furnished. The condition may treated as partially complied. | Latest Heavy Metal analysis report of ground water from ash pond area is being done through third party approved by MOEF&CC. **The condition may kindly be considered as complied.** | Heavy metal analysis in ground water around ash pond area is being done through NABET accredited lab on a regular basis and the reports are being shared with regional office MoEF & CC and OSPCB. |

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|---|---|---|---|---|
| 5 | Effluent from ash pond has been found to be discharged outside<br>**(condition no. xxiv)**<br>Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB. | During visit on 09.05.2024 discharge of ash laden water has not been observed. Water flow observed in the toe drain of the ash pond. PP submitted it to be seepage water. Discharge of seepage water has been observed. Monitoring data of seepage water has not been furnished. | Monthly Monitoring report is being submitted to OSPCB & same has been submitted to IRO MOEF&CC Bhubaneswar with ATR dated 28.10.2024 which covers seepage water analysis. However, the latest seepage water quality analysis report for May 2025 was attached in ATR.<br>**The condition may kindly be considered as complied** | Monitoring data of seepage water analysis in toe drain is being furnished to regional office MoEF & CC and OSPCB regularly. |
| 6 | PP reported that institutional setup at NTPC project/Regional HQ/Corporate centre is in place for monitoring R&R/CSR activity of Darlipali project. Details of annual social audit from nearest government institute yet to be done. The activities yet to be uploaded on Companies website.<br>**(condition no. xxxii)**<br>It shall be ensured that an in-built monitoring mechanism for the CSR schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time. The achievements should be put on company's website. | PP reported internal social audit carried out in 2023. However, annual social audit from nearest government institute yet to be carried out. The condition may be treated as partially complied. | Social audit has been conducted through internal resources in 2024. Report has been submitted. Further, a social impact evaluation is also planned to be taken up in 2025 through reputed institution & the report thereof shall be submitted in due course of time. | Social audit has been conducted through internal resources in 2024. Further, a social impact evaluation is planned through reputed institution in 2025.The status of implementation of various schemes recommended as part of the social audit report , shall be submitted alongwith half yearly compliance report. |
| 7 | During visit water from ash pond found to be discharged outside without re-circula | During visit on 09.05.2025 ash laden water has not bee | Permanent Seepage water Pump House is in operation a | Permanent Seepage water Pump House is in operation an |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| | tion<br>**(General condition no. 1)**<br>The treated effluents conforming to the prescribed standards only shall be re- circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed. | n observed. During visit water flow observed on the toe drain of the ash pond. PP stated it to be seepage water. However, during visit seepage water found to be discharge and system provided to recycle back seepage water in unable to return back all the collected water. The condition may treated as partially complied. | nd all seepage water is being recycled back into the system and reused for ash slurry purpose. No water is going outside into the natural water bodies or any other agricultural field. The Photographs of seepage water pump House is submitted.<br>**The condition may kindly be considered as complied.** | d all seepage water is being recycled back into the system and reused for ash slurry purpose. No water is going outside into the natural water bodies or any other agricultural field. |
| 8 | Plantation has been observed at the site. However, 3 tier plantation of 100 m width around plant yet to be developed. Green belt around ash pond yet to be developed. **(Condition no. xxxiii)**<br>Green Belt consisting of 3 tiers of plantations of native species around plant not less than 100m width shall be raised (except in areas not feasible). The density of trees shall not less than 2500per ha with survival rate not less than 80%. Additional green belt of appropriate density and width not less than 50 m at-least, shall be developed between the ash pond and the village facing the ash pond. | Plantation has been observed at site and in part at the ash pond area. However, green belt of 100 m width consisting of 3 tire plantations of native spaces along the plant and 50 m width between ash pond and the village facing the ash pond yet to be developed. The condition may be treated as partially complied. | A total of 92 Ha ( 2.27 Lakhs trees) area has been developed as green belt. The photographs of plantation is submitted. Further, the green belt around ash pond has been developed. A total of 8400 tress have been planted & in remaining patches around ash dyke plantation is being carried out. | A total of 92 Ha (2.27 Lakhs trees) area has been developed as green belt which accounts for 41% of plant and ash dyke area.<br>A green belt of approx. 10-15 m has already been developed between ash dyke and the village site and gap plantation will be carried out to maximum extent possible to increase the density and area coverage. |
| 9 | Ambient air quality level monitoring data of six locations has been which includes PM10, PM2.5, SO2 and NO2. However, Hg values has not been included. Data rep | Monitoring data has been uploaded on the website. However, Hg parameter yet to be monitored and uploaded. | The monitoring is done for Hg parameter in the month of May,2025 and same will be continued. | The monitoring of Hg parameters in ambient air is being carried out & report was submitted vide letter dated 28.0 |

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|---|---|---|---|---|
| | orted was within norms. Monitoring data yet to be uploaded on the company web site.<br>**(General Condition no. vii)**<br>Regular monitoring of ambient air ground level concentration of SO2, NOx, PM2.5 & PM10 and Hg shall be carried out in the impact zone and record maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional office of this Ministry. The data shall also be put on the web site of the company. | The condition may be treated as partially complied. | **The condition may kindly be considered as complied.** | 6.2025. Regular monitoring report of all parameters including Hg is being submitted to regional office and is uploaded on company website. |
| 10 | PP reported· that information of environmental clearance was published in Times of India on 22.02.2014 and Samaj on 23.02.2014However, advertisement in vernacular language has not been furnished.<br>**(General condition no. ix)**<br>The project proponent shall advertise in at least two local news papers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Co | The advertisement in newspaper of vernacular language (Samaj) has been published in English considering that the condition may be treated as partially complied. | The advertisement for Environment Clearance was published in Local Odia Daily Newspaper and in National Newspaper Times of India.<br>**The condition may kindly be considered as complied**. | The publication in vernacular paper was done in English language inadvertently in 2014.<br>As it is one time activity, no corrective action can be taken at this juncture. |

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|---|---|---|---|---|
| | mmittee and may seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in. | | | |

**30.1.6: Status regarding $SO_2$ emission standards as per the MoEF&CC Notification dated 11/07/2025**:

i. Categorization details of TPP : **C** ( Other than those included in Category A and B)
ii. Sulfur content of the coal to be fired in the boiler: 0.4%-0.55%
iii. Status of FGD installation for existing unit: Wet Flue gas desulphurization (FGD) System has been installed for both the units of Darlipali STPP Stage-I and are in operation.
iv. Action plan for installation of new stack in compliance to the notification number GSR 742 (E) dated the 30/08/1990 for the proposed expansion : Installation of 275m high stacks envisaged for the proposed expansion project in compliance to the notification GSR 742(E) dated 30.08.1990.

| Proposal No with date | Consideration | Details | Date of accord | ToR Validity |
|---|---|---|---|---|
| IA/OR/THE/417290/2023 | 38th EAC meeting held on 06.03.2024 | Terms of reference | 17.04.2023 | 16.04.2027 |
| IA/OR/THE/441147/2023 | 47th EAC meeting held on 26.09.2023 | Amendment | 13.11.2023 | - |
| IA/OR/THE/544298/2025 | 28th EAC meeting held on 12.08.2025 | Amendment | 09.09.2025 | - |

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1</td><td>Total land</td><td>Existing area is 675.780 Ha. Total land requirement for Stage II i.e., 1x800 MW is 159.912 Ha. Total area of the project is 835.692 Ha. Out of 159.912 Ha, 39.278 Ha will be met from the existing area and remaining 120.64 Ha of additional land is proposed to be acquired.</td><td>-</td></tr>
<tr><td>2</td><td>Land use break up<br>(Page 56 Final EIA report)</td><td>
<table>
<tr><th>Description</th><th>Existing (Ha)</th><th>Area Proposed (Ha)</th><th>Total (Ha)</th></tr>
<tr><td>Main Plant</td><td>92.24</td><td>46.592</td><td>138.832</td></tr>
<tr><td>Ash Pond</td><td>160.00</td><td>60.000</td><td>220.000</td></tr>
<tr><td>Sub Total (Plant & ash Dyke)</td><td>252.24 (A)</td><td>106.592 (B)</td><td>358.832 (C)</td></tr>
<tr><td>Green Belt</td><td>116.47</td><td>39.660</td><td>156.13</td></tr>
</table>
</td><td>The additional unit(1x800MW) of Stage-II are proposed to be established adjacent to Stage-I units. However, approx. 120.64 Ha of additional land is propo</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>Green Belt (%) of Main Plant & Ash Dyke Area</td><td>46.17 % of (A)</td><td>37.20 % of (B)</td><td>43.51 % of (C)</td></tr>
<tr><td>Township</td><td>55.210</td><td>0</td><td>55.210</td></tr>
<tr><td>Railway siding, MGR, Outside drains etc.</td><td>159.150</td><td>0</td><td>159.150</td></tr>
<tr><td>Raw water Reservoir</td><td>12.000</td><td>13.660</td><td>25.660</td></tr>
<tr><td>Others (Misc. areas in roads/periphery, office/Stores, make up water pump House etc.)</td><td>80.610</td><td>0</td><td>80.610</td></tr>
<tr><td>Total</td><td>675.780</td><td>159.912</td><td>835.692</td></tr>
</table>
</td><td>sed to be acquired out of total land requirement of 159.912 Ha for Stage II.</td></tr>
<tr><td>3</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 & 19/02/2025</td><td>
Darlipali STPP has acquired total 715.059 Ha out of which 675.780 ha of land has been utilized for Stage-I, with the provision of 39.278 Ha to be utilized for proposed Stage-II (1x800 MW). Land required for acquisition towards the proposed Darlipali Stage- II (1x800 MW) expansion project is 120.64 Ha, out of total land requirement of 159.912 Ha.<br>
Breakup of the Land use of TPP site is as follow
<table>
<tr><th>Nature of land involved (in Ha)</th><th>Area existing (in Ha)</th><th>Additional area proposed (in Ha)</th><th>Total area required after expansion ( in Ha)</th></tr>
<tr><td>Non-Forest Land</td><td>622.700</td><td>94.611</td><td>717.311</td></tr>
<tr><td>Forest Land</td><td>53.080*</td><td>65.301</td><td>118.381</td></tr>
<tr><td>Total</td><td>675.780</td><td>159.912</td><td>835.692</td></tr>
</table>
*25.56 ha of forest land for laying of Make Up Water (MUW) pipeline and 132 KV Electric Transmission lines by NTPC Ltd. on ROU/ROW basis are not included in above table.
<table>
<tr><th colspan="2">Land Category</th><th>Stage – II (1 x 800 MW)</th></tr>
<tr><td rowspan="2">Non-Forest land to be acquired /alienated (In Ha.)</td><td>Pvt.</td><td>38.85</td></tr>
<tr><td>Govt.</td><td>16.49</td></tr>
<tr><td>Forest Area (In Ha.)</td><td></td><td>65.301</td></tr>
<tr><td>Total (Ha)</td><td></td><td>120.64</td></tr>
</table>
Status of land acquisition: Out of 120.64 Ha, 65.301 Ha is a forest land for which application for Stage I
</td><td>Land details for existing land and proposed acquisition are available and submitted with EC application.</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>FC has been submitted vide proposal no.FP/OR/THE/ 446413/2023. The remaining 55.34 Ha, is under the process of acquisition by the project proponent throu gh Revenue Department of Government of Odisha.</td><td></td></tr>
<tr><td>4</td><td>Existence of habi tation & involve ment of R&R, if any.</td><td>Project site: Nil<br>Study Area: Details of the nearby villages are as follows:
<table>
<tr><th>Village</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Tileimal</td><td>2.31</td><td>SE</td></tr>
<tr><td>Darlipali</td><td>0.05</td><td>E</td></tr>
<tr><td>Chichinda</td><td>3.28</td><td>S</td></tr>
<tr><td>Kanaktora</td><td>2.65</td><td>SSW</td></tr>
<tr><td>Naudihi</td><td>4.02</td><td>E</td></tr>
<tr><td>Raidihi</td><td>1.25</td><td>W</td></tr>
<tr><td>Raibaga</td><td>2.35</td><td>NE</td></tr>
<tr><td>Kechhobahal</td><td>4.56</td><td>S</td></tr>
<tr><td>Loising</td><td>6.64</td><td>SE</td></tr>
<tr><td>Rajpur</td><td>7.91</td><td>SSE</td></tr>
<tr><td>Jogimal</td><td>7.18</td><td>ENE</td></tr>
<tr><td>Mundagaon</td><td>4.66</td><td>ENE</td></tr>
<tr><td>Jhargaon</td><td>4.12</td><td>NNE</td></tr>
<tr><td>Badbanga</td><td>5.41</td><td>NE</td></tr>
<tr><td>Laikera</td><td>5.38</td><td>W</td></tr>
<tr><td>Chaubahal</td><td>2.22</td><td>WSW</td></tr>
<tr><td>Dambahal</td><td>9.39</td><td>E</td></tr>
</table></td><td>The R&R plan shall be finalised in con sultation with the State Governmen t.</td></tr>
<tr><td>5</td><td>Existence of scho ol and hospitals i f any</td><td>Project site: Darlipali STPP Stage-II<br>Details of the schools in nearby area are as below:
<table>
<tr><th>School</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Bal Bharati public scho ol</td><td>0.76 km</td><td>N</td></tr>
<tr><td>Lochan High School</td><td>0.18 km</td><td>E</td></tr>
<tr><td>Blue Swan Public Scho ol</td><td>0.21 km</td><td>E</td></tr>
<tr><td>Chandra Susama Degre e College</td><td>0.58 km</td><td>NNW</td></tr>
<tr><td>Damodar Naik junior Co llege</td><td>0.58 km</td><td>NNW</td></tr>
<tr><td>Government Polytechn ic College</td><td>1.58 km</td><td>ESE</td></tr>
<tr><td>Saraswati Shishu Vidya Mandir</td><td>1.81 km</td><td>E</td></tr>
<tr><td>Anganwadi School</td><td>2.40 Km</td><td>NW</td></tr>
</table>
Hospital details near the project site are as follow s:
<table>
<tr><th>Hospital</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Niramay hospital</td><td>Project site</td><td>Nil</td></tr>
<tr><td>Darlipali Primary H</td><td>0.58 km</td><td>E</td></tr>
</table></td><td></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>ealth Center</td><td></td><td></td></tr>
<tr><td>Raidihi Hospital</td><td>1.47 km</td><td>NW</td></tr>
<tr><td>Primary Health Center Loisingh</td><td>1.48 km</td><td>WW</td></tr>
</table>
Protection measures to be adopted are as follows:<br>
Control of Air Emissions:<br>
Provision of High Efficiency ESP, Low NOx Burner & Over Fire Air System, Dust Extraction, Dust Suppression, Dry Fog Dust Suppression, Fog Cannons at Ash Dyke, Water Sprinkling on Hauling Roads·<br>
Noise: Acoustic Enclosures & barriers<br>
Greenbelt Development: Development of dense greenbelt in the periphery of plant as well as towards the side of villages/ habitations, Afforestation/ Miyawaki Plantation on available land.<br>
Wastewater: ETP, STP, Ash water recycling system, Zero Liquid Discharge, Rainwater Harvesting, Watershed Development in the vicinity.<br>
Safety: Display signages, speed breakers, and crossing guard's provision; optimization of heavy vehicle movement near villages, Disaster Management Plan & Provisions.<br>
Health & Awareness: Regular health camps, distribution of masks, and environmental awareness programs for surrounding community. Native species greenbelt development along the forest boundary. Downcast, low-intensity lighting will be used near forest areas. Night-time construction near sensitive zones will be minimized. Awareness programs on forest and wildlife protection Implementation of Wildlife Conservation Plan in consultation with Forest Dept.<br>
CSR & Monitoring: Support for infrastructure and development, air and noise monitoring in the nearby.
</td><td></td></tr>
<tr><td>6</td><td>Latitude and Longitude of all corners of the project site.</td><td>
Main Plant site
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>21°58'28.43"</td><td>83°53'25.63"</td></tr>
<tr><td>B</td><td>21°57'55.87"</td><td>83°54'27.29"</td></tr>
<tr><td>C</td><td>21°57'29.79"</td><td>83°53'35.00"</td></tr>
<tr><td>D</td><td>21°58'5.02"</td><td>83°52'43.15"</td></tr>
</table>
Existing Ash Pond
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>21°57'23.52"</td><td>83°54'52.27"</td></tr>
<tr><td>B</td><td>21°57'2.15"</td><td>83°55'28.21"</td></tr>
<tr><td>C</td><td>21°56'42.57"</td><td>83°55'13.22"</td></tr>
<tr><td>D</td><td>21°57'10.66"</td><td>83°54'23.44"</td></tr>
</table>
Existing Township
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>21°59'5.40"</td><td>83°54'7.34</td></tr>
</table>
</td><td></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>B</td><td>21°59'5.73"</td><td>83°54'27.39"</td></tr>
<tr><td>C</td><td>21°58'37.43"</td><td>83°54'27.22"</td></tr>
<tr><td>D</td><td>21°58'40.45"</td><td>83°53'56.12"</td></tr>
</table>
Proposed Ash Pond
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>21°57'3.98"</td><td>83°54'7.86"</td></tr>
<tr><td>B</td><td>21°56'39.29"</td><td>83°54'36.57"</td></tr>
<tr><td>C</td><td>21°56'19.77"</td><td>83°54'26.47"</td></tr>
<tr><td>D</td><td>21°56'36.70"</td><td>83°54'0.21"</td></tr>
</table>
</td><td></td></tr>
<tr><td>7</td><td>Elevation of the project site</td><td>Elevation of plant is approx. 235-246 m (msl), Elevation of Existing Ash dyke of Stage-I is approx. 223-245 m (msl) and Elevation of Proposed Ash dyke of Stage-II is approx. 225-245 m (msl).</td><td></td></tr>
<tr><td>8</td><td>Involvement of Forest land if any.</td><td>Total forest land involved: 143.941 Ha<br>Status of Forest Clearance for Darlipali STPP Stage-I (2 x800 MW):<br>Area of the forest land involved: 78.64 Ha (13.95 Ha+19.70 Ha +19.43 Ha +25.56 Ha)<br>Details of existing forest diversion are as follows:<br>1. Diversion of 13.95 ha of forest land for setting up of Darlipali Super Thermal Power Project in Darlipali and Raidihi village under Sundergarh Forest Division of Sundergarh district<br>• Stage-I FC accorded vide letter No. 5-ORC158/2013-BHU dated-14.08.2013.<br>• Stage-II FC accorded vide letter No.5-ORC158/2013-BHU dated-13.10.2014.<br>2. Diversion of 19.70 ha of forest land in village Darlipali, Raidihi, Chuabahal and Kalamegha in Sundergarh district, Odisha for construction of MGR-Rail Corridor for transportation of coal from their Dulanga Coal Mines to Darlipali Super Thermal Power Plant in Sundergarh district, Odisha<br>• Stage-I FC vide letter No.5-ORC240/2015-BHU dated17.06.2015.<br>• Stage-II FC accorded vide letter No.5-ORC240 /2015-BHU dated-16.11.2016.<br>3. FC (Stage-I) Diversion of 19.43 ha of forest land in village Laikera, Chuabahal, Kalamegha, Bihajore and Kanktora in Hemgir Tahasil of Sundergarh district, Odisha for construction of Railway Siding Corridor by Darlipali STPS to connect their MGR line (drawn between Darlipali STPP and their Dulanga Coal Mines) with MCL Railway stations at Laiikera and Kechobahal to transport coal from Basundhara, Garjanbahal area of MCL and also for transport of oil rakes of the Darlipali STPS</td><td></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>
• Stage-I FC accorded vide letter No.5-ORC349 /2018-BHU dated18.06.2018.<br>
• Stage-II FC accorded vide letter No.5- ORC349 /2018-BHU dated:26.06.2024.<br>
4. Diversion of 25.56 ha of forest kisam land (originally proposed 25.76 ha) in Jharsuguda and Sundergarh district of Odisha for laying of Make Up Water (MUW) pipeline and 132 KV Electric Transmission lines by NTPC Ltd. for drawal of water from Hirakud reservoir for its Darlipali Super Thermal Power Project in Sundergarh district on ROU/ROW Basis.<br>
• Stage-I FC accorded vide letter No.5-ORC279/2016-BHU dated 01.11.2016.<br>
• Stage-II FC: accorded vide letter No.5-No.5-ORC279 /2016-BHU dated-24.04.2025<br>
Project involved 65.301 Ha of forest land in the proposed Stage-II project.<br>
65.301 Ha is a forest land is involved for which application for Stage I FC has been submitted vide proposal no.FP/OR/THE/446413/2023.
</td><td></td></tr>
<tr><td>9</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area.</td><td>
Project site: Nil<br>
Study area: 10 km radius from the project area
<table>
<tr><th>Water body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Basundahara River</td><td>1.82 km</td><td>SW</td></tr>
<tr><td>IB river</td><td>9.03 km</td><td>SE</td></tr>
<tr><td>Ichha River</td><td>9.20 km</td><td>NE</td></tr>
</table>
Plant site (at an elevation of 235-246 m) is at higher elevation than the HFL of IB and Basundhara River (209 m MSL).
</td><td>As per the Main Dam Division letter of Irrigation and Water Resource deptt. Odisha dated: 04.03.2025 HFL of IB river and Basundhara river is 200.9m</td></tr>
<tr><td>10</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>
Study area Name of the ESZ/ESA: Nil<br>
Status of Notification: Distance of project from ESZ/ESA: Not applicable<br>
Authenticated map of ESZ projecting distance of ESZ from project site: Not applicable<br>
Status of NBWL approval: Not applicable<br>
List of Reserved and protected forests:
<table>
<tr><th>Name of Forest</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Barabanga PF</td><td>7.00</td><td>N</td></tr>
<tr><td>Panikholia RF</td><td>8.00</td><td>NW</td></tr>
<tr><td>Balijori RF</td><td>8.00</td><td>W</td></tr>
<tr><td>Kalamegha RF</td><td>4.7</td><td>WSW</td></tr>
<tr><td>Satparlia RF</td><td>6.2</td><td>WSW</td></tr>
<tr><td>Makarachata RF</td><td>3.8</td><td>S</td></tr>
<tr><td>Rajpur RF</td><td>9.3</td><td>S</td></tr>
<tr><td>Katangbubi RF</td><td>4.4</td><td>S</td></tr>
<tr><td>Balangibahal RF</td><td>4.6</td><td>E</td></tr>
</table>
</td><td></td></tr>
</table>

| S. No. | Particulars | Details | Remarks |
|---|---|---|---|
| | | Ghatmal PF 2.14 E<br>Bursipatra RF 0.9 ENE<br>No. National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes/wildlife corridor, available within 10 km of the project site. No Environment sensitive area is within 10 Km. | |
| 11 | Archaeological sites monuments/ historical temples etc. | No Archaeological sites within 10km of study area. | - |
| 12 | Facility envisaged in CRZ area (Only for coastal power plant) | Not applicable | - |
| 13 | Involvement of Critically Polluted Area/Severely Polluted area as per 2018 CEPI score | No involvement of Critically Polluted area/severely polluted area | - |

| S. No. | Existing power plant configuration and capacity | Proposed power Plant configuration and capacity | Total | Technology adopted* |
|---|---|---|---|---|
| 1 | 2X800MW=1600MW | 1x800 MW=800MW | 2400MW | Ultra-Super Critical Technology |

| Details | Fuel requirement MTPA | Source | Distance from site (Kms) | Mode of Transportation | Coal characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| Existing TPP | 8.0 | Dulanga; However, coal is also supplemented from other domestic sources such as MCL, NLC Talabira, NTPC Talaipalli, etc., as per requirement. | 12 Km Other sources:10 to 150 Km | MGR Other sources: 10 to 150 Km | Ash - 43(%) Sulphur – 0.55(%) Moisture -17 (%) GCV -3100 Kcal/Kg | Linkage document is submitted with EC application |
| Proposed TPP | 3.82 | Tentative linkage source c | Tentative linkage sou | Transportation of Coal from Co | Ash - 42 % (%) Sulphur - Max. | Linkage documents is s |

| Details | Fuel requ ire -ment MTPA | Source | Distance from site (Kms) | Mode of Transportation | Coal characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| | | ommunicated by CIL: MCL | rce: MCL: 10 to 300 KMs (Pg 90 Final EIA report) | al Mines to the project is proposed by MGR/Indian Railway. The permanent railway siding at Laikera and Kechobahal are sufficient to meet the coal requirement of Stage-II in addition to Stage-I (2X800MW + 1X800MW). | 0.55 (%) Moisture-17 %0 GCV - 3400 kcal/kg Kcal/Kg (Pg 90 Final EIA report) | ubmitted with EC application |

**30.1.11: Water requirement:** Existing Water requirement is 1,15,200 $m^3$ /day, water requirement is obtained from Hirakud Reservoir and permission for the same has been obtained from Main Dam division Burla/Dept. of Water resources Odisha vide letter no. MDD/157 dated 9.02.2023 (permission for 55 cusec water allocation is given). The water requirement for the proposed project is estimated as 18,000 $m^3$ /day will be obtained from Hirakund reservoir. The permission for drawl of surface water is obtained from Department of Water resources, Odisha vide Lr. No. 1799 Dated 21.01.2025 for additional water requirement of 7.42 Cusec. The water will be transported to the plant site through pipeline. The specific water consumption for the power plant is less than 3.0 $m^3$ /MWhr.

**30.1.12: Existing power requirement:** Existing power requirement of 98.4 MW is obtained from Darlipali STPP Stage I. The power requirement for the proposed project is estimated as 58 MW, will be obtained from the own generation.

**30.1.13: Baseline Environmental Studies:**

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| AAQ parameters at 10 Locations (min and max) | $PM_{2.5}$ = 22 To 37 μg/$m^3$<br>$PM_{10}$ = 40 To 59 μg/$m^3$<br>$SO_2$ = 6 to 18 μg/$m^3$<br>$NO_x$ = 14 To 30 μg/$m^3$<br>CO =0.45 To 0.84 mg/$m^3$ | --- |
| Incremental GLC level | $PM_{10}$ =0.10 μg/$m^3$ (Level at 5.83.km In E Direction)<br>$PM_{2.5}$ = 0.01 μg/$m^3$ (Level at 1.54 km In NW Direction)<br>$SO_2$ = 15.47 μg/$m^3$ (Level at 0.63 km in E Direction) | ---- |

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| | $NO_x$ = 0.69 µg/$m^3$ (Level at 0.63 km In E Direction) (@100m g/$nm^3$)<br>**Proposed measures for monitoring and Control of Air Pollution:**<br>· High efficiency Electrostatic Precipitator (ESP) to control PM<br>· Emissions with 275 m high stack for wider dispersion.<br>· Use of Low-NOx burners and Over Fire Air to control $NO_x$ emissions.<br>· Dust Suppression system in coal handling and ash handling areas.<br>· Regular maintenance of Pollution control equipment's to ensure efficient functioning.<br>· Continuous Emission & Ambient Air Quality monitoring systems. | |
| Ground water quality at 06 locations | pH: 6.84 to 7.38,<br>Total Hardness: 264 to 442 mg/l,<br>Fluoride: 0.18 to 0.22 mg/l.<br>Heavy metals Zn: 0.071-0.407 mg/l<br>Ca: 76-118.4 mg/l<br>Mg:17.98-35.43 mg/l | |
| Surface water quality at 06 locations | pH: 6.99 to 7.42;<br>DO: 5.7 to 6.7 mg/l and BOD: 5 to 7 mg/l.<br>COD-36 mg/l to 56mg/l<br>Chloride:18-40mg/l<br>Fluoride:0.15-0.68mg/l<br>TSS:06-14 mg/l<br>TDS: 180-225 mg/l<br>Total Hardness: 102-149 mg/l<br>Heavy metal Zn:0.024-0.54 mg/l<br>Fe: 0.034-0.072 mg/l<br>Total coliform: 1876-2851 MPN/100ml | |
| Effluent generation details | **Stage-I: Existing**<br>***Plant Effluent generation***: 54360 KLD | |

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| and its treatment | ***ETP Capacity***: 7200 KLD (Lamella clarifiers) + 120 KLD (DM wastewater neutralization) + 72000 KLD (Coal slurry settling pits) [Total- 79320 KLD]<br><br>***Mode of treatment & reuse***: Neutralization for DM plant regeneration wastewater, Coal settling pit for Coal laden waste water, Oil Removal & Lamella clarifier/Tube settler for service water. Treated Wastewater utilization in Cooling water makeup, dust suppression, ash handling, horticulture etc. within the plant maintaining, 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).<br><br>***Domestic Effluent Generation Stage I***: 875 KLD<br><br>***STP Capacity Stage I***: 1275 KLD<br><br>***Technology***: STP (MBBR Technology) and Tertiary Treatment and treated effluent recycling in horticulture maintaining Zero Liquid discharge (ZLD) to cater entire sewage generated.<br><br>**Stage-II: Proposed (1 x 800 MW)**<br><br>***Plant Effluent generation***: 15600 KLD<br><br>***ETP Capacity***: 3600 KLD (Lamella clarifier) + 120 KLD (DM wastewater neutralization) [Total- 3720 KLD]<br><br>Additional- 48000 KLD (Clarifier system in existing CSSP pits)<br><br>***Mode of treatment & reuse***: Neutralization for DM plant regeneration wastewater, Coal settling pit (existing) along with Clarifier system for Coal laden wastewater, Oil Removal & Lamella clarifier/Tube settler for service water and Wastewater UF-RO system.<br><br>Treated Wastewater utilization in Aux. Cooling water makeup, dust suppression, ash handling, horticulture etc. within the plant maintaining Zero Liquid discharge (ZLD).<br><br>Rest quantity of effluents like 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).<br><br>***Domestic Effluent Generation St-II*** : 175 KLD<br><br>***STP Capacity***: Existing: 1275 KLD, Proposed 75 KLD,<br><br>***Mode of treatment & reuse***: Technology: STP (MBBR technology) with Tertiary Treatment and effluent recycling in horticulture maintaining Zero Liquid discharge (ZLD) for existing capacity STP. Packaged type STP proposed with primary, Secondary and tertiary treatment. | |

<table>
<tr><th>Period</th><th>April -June 2023</th><th>Additional study (if any)</th></tr>
<tr><td>Noise levels Leq (Day and Night)</td><td>43.1dB (A) to 52.3 dB (A) for the daytime and<br>34.3 dB (A) to 40.3 dB (A) for the Night time.</td><td></td></tr>
<tr><td>Traffic assessment study finding</td><td>Traffic study has been conducted at MDR (Darlipali-Ujalpur road) which is approximately 1Km (distance) from the plant site.<br>· Transportation of raw material (Coal) will be done 100% by rail.
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>Traffic load on Darlipali-Ujalpur road</td><td>39.79</td><td>83.33</td><td>39.79/ 83.33</td><td>0.47</td></tr>
</table>
<table>
<tr><th>Road</th><th>V (Volume in PCU/ hr.)</th><th>C (Capacity in PCU/ hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>Traffic load on Darlipali-Ujalpur road</td><td>46.62</td><td>83.33</td><td>46.62/83.33</td><td>0.55</td></tr>
</table>
* Note: Capacity as per IRC-2000 PCU/day (83.33 PCU/hr) Guideline for capacity for roads. (Only for road transport)<br>Conclusion: The level of service will 0.55 after including additional traffic due to proposed project.<br>· Transportation of raw material will be done 100% by rail</td><td></td></tr>
<tr><td>Soil Quality at 06 Locations</td><td>pH range 7.21to 7.44 ; Electrical conductivity (EC); 328 to 374 µmhos/cm; Potassium: 9.27 to 9.99 mg/100 gm (207.65 kg/ha to 223.78 kg/ha); Nitrogen: 13.82 to 15.07 mg/100 gm (309.57 kg/ha to 337.57 kg/ha); Phosphorous: 0.66 to 0.84 mg/100gm (14.78 kg/ha to 18.82 kg/ha); Cation Exchange Capacity (CEC): 13.48 to 17.12 meq/100gm;</td><td></td></tr>
<tr><td>Flora and fauna</td><td>List of schedule I fauna and endangered Flora if any. If yes, status of site specific wildlife conservation plan.</td><td>This Wildlife Conservation plan with budgetary offer Rs. 391.5 lakhs ha</td></tr>
</table>

<table>
<tr><th>Period</th><th>April -June 2023</th><th>Additional study (if any)</th></tr>
<tr><td></td><td>
<table>
<tr><th>S.N</th><th>Class</th><th>Scientific name</th><th>Common name</th><th>IUCN/ IWPA Status</th></tr>
<tr><td rowspan="5">1</td><td rowspan="5">Mammal</td><td>Herpestes edwardsii</td><td>Common Mongoose</td><td>LC/I</td></tr>
<tr><td>Vulpes bengalensis</td><td>Indian Fox</td><td>LC/I</td></tr>
<tr><td>Elephhas maximus</td><td>Harti</td><td>EN/I</td></tr>
<tr><td>Canis aureus</td><td>Siyar</td><td>LC/I</td></tr>
<tr><td>Felis chaus</td><td>Banbiral</td><td>LC/I</td></tr>
<tr><td rowspan="3">2</td><td rowspan="3">Reptilia</td><td>Naja naja</td><td>Nag</td><td>LC/I</td></tr>
<tr><td>Python molurus</td><td>Ajgar</td><td>VU/I</td></tr>
<tr><td>Ptyas mucosa</td><td>Rat snake</td><td>LC/I</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Birds</td><td>Anthracoceros coronatus</td><td>Malabar pied hornbill</td><td>NT/I</td></tr>
<tr><td>Pavo cristatus</td><td>Peacock</td><td>LC/I</td></tr>
</table>
</td><td>s been prepared for Sch -I species and it has bee n submitted to PCCF vid e letter no.<br>DSTPP/emg/27/2024 da ted 17.10.2024.</td></tr>
<tr><td>Hydrogeology study</td><td>
<table>
<tr><th>S. No.</th><th>Recommendations</th><th>Nos.</th><th>Budget (lacs)</th><th>Time Period</th></tr>
<tr><td>1</td><td>Quality of Surface water and ground water</td><td>Surface water at 10 Location Ground water at 08 Location</td><td>14.00</td><td>Six monthly</td></tr>
<tr><td>2</td><td>Construction of piezometer to monitor ground water level</td><td>04 Location near by Ash Dyke</td><td>08</td><td>01 Year</td></tr>
</table>
</td><td>M/s Sujalam Consultants Nagpur-an accredited Ground water Consultant Organisation (GWCO) by QCI NABET (Certificate No. NABET/GWCO/IA/GW002, Dt.23.09.2021 valid upto 05.11.2025</td></tr>
</table>

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| | 3 \| Revival of surface water ponds in surrounding area (Desilting and Cleaning) \| 10 nos. \| 40 \| 0-2 Yrs<br>**Total** \| **62 Lacs** | |
| Impact study on ecology | **Impact on Terrestrial Ecology**:<br>The initial construction works at the project site involves land clearance. The construction of main plant will be within existing plant premises. Since land is already for industrial purpose, during construction phase, there will be minimal disturbance of vegetation. Greenbelt will be developed to screen out the fugitive dust generated during construction and to improve the aesthetic value in the area. As there is minimum soil erosion, so impacts will be confirmed to project site & this will be minimized through water sprinkling & paving.<br>The project involves diversion of 65.301 Ha of forest land with 5964 no. of trees. However, the forest land proposed for diversion in patches, surrounded by NTPC plant area/ intensely cultivated and inhabited area and hence, has no significant wildlife. Compensatory afforestation on equivalent non-forest land shall help in offsetting the impact of forest land diversion, if any. Therefore, the impact on terrestrial ecology shall be marginal.<br>**Impact on Aquatic ecology:**<br>The runoff from construction area may lead to a short-term increase in suspended solids and decrease in dissolved oxygen near the discharge point in the receiving water body. Construction water will pass through a sedimentation tank to arrest sediments and treated water will be reused in water sprinkling. No discharge from construction site will be allowed hence no impact is expected on aquatic ecology. | Mantac consultant Pvt. Ltd. |
| Risk assessment study | 1. Ensure that the facilities should have necessary fire and gas detection system in the Plant as per applicable guidelines. Operators should be well trained about the detection system.<br>2. The Plant would be having necessary provision for emergency stop of critical equipment from control room in the event of any incident.<br>3. Routine checks should be carried to ensure proper working of firefighting equipment. | Mantac consultant Pvt. Ltd. |

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| | 4. Clearly defined escape and evacuation routes along with proper sign board to guide personnel to escape in case of an emergency.<br>5. Well defined assembly points in safe locations shall be identified for personnel in case of an emergency.<br>6. Windsocks visible from all direction would be provided. This will assist people to escape in upwind or cross wind direction from flammable releases.<br>7. In order to further reduce the probability of failure of pipeline & equipment, critical equipment shall be identified and inspection methodologies to be finalized for continuous monitoring during operation and shutdown maintenance.<br>8. Mock drills to be well rehearsed to ensure readiness to handle emergency.<br>9. All the valves and pipeline should be periodically maintained and inspected to prevent the failures.<br>10. Ensure periodic safety trainings in firefighting, escape, operation of emergency switches etc. should be provided to the officials.<br>11. Calibration of all instruments to be ensure periodically.<br>12. The company shall train all employees in Emergency Response, Fire Fighting and First Aid.<br>13. Proper lighting arrangements and CCTV as per applicable OISD guidelines should be provided at Plant.<br>14. The adjacent population is to be made aware of the risk associated with the pipeline and the mitigation measures to be taken care of in case of Emergency. | |
| Marine impact assessment study (Only for coastal based TPPs) | Not applicable | ----- |

**30.1.14: Solid and hazardous waste management**: The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

**A. Non-Hazardous waste**

| S. No. | Type of Waste | Source | Estimated Quantity | Mode of Treatment | Disposal |
|---|---|---|---|---|---|
| 1 | Municipal Solid waste | Township | 18 MT | Composting | Manure to plants |

**B. Hazardous waste**

| S. No. | Type of Waste | Source | Estimated Quantity | Mode of Treatment | Disposal |
|---|---|---|---|---|---|
| 1 | Used oil | Plant | 35KL | Nil | Through SPCB Authorised agency |
| 2 | Barrels | Plant | 180 nos. | Nil | Through SPCB Authorised agency |
| 3 | Spent resin | Plant | 3 MT | Nil | TSDF |
| 4 | Glass Wool | Plant | 30 MT | Nil | TSDF |
| 5 | Battery waste | Plant | 2.5 MT | Nil | Buyback to supplier |
| 6. | E-waste | Plant area | 0.07 MT | Nil | Buyback & Sale to Authorised dealer |
| 7. | Biomedical Waste | Hospital | 0.20 MT | Nil | Through authorised agency (Medical Waste) |

**30.1.15: Public Consultation**:

**A. Jharsuguda District**

| | |
|---|---|
| Details of advertisement given | 01.10.2024 |
| Date of public consultation | 22.10.2024 |
| Venue | Tileimal Village, Jharsuguda, Dist. |
| Presiding Officer | Additional District Magistrate |
| Major issues raised | The major issues raised during public hearing were regarding employment to local people, skill development, infrastructure, village road construction and pollution from ash dyke etc. |
| No. of people attended | Approx. 500 people attended the public hearing meeting, whereas only 196 of them have signed their attendance sheet. |

**Action plan as per MoEF&CC O.M. dated 30/09/2020**

| S. 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 | | |
| A | **Educational Initiatives** | | | | | | | |
| 1 | Upgradation of infra structure in 10 schools and Anganwadis | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.60 | Infrastructure upgradation in terms of providing Benches and Desks, Smart Boards, Cycle Shed, Area lighting etc, shall be taken up in 10 schools and Anganwadis in Luising, Chandnimal and Rajpur GP. |
| 2 | Distribution of drinking Water filter/ Water Coolers in schools | | 0.0375 | 0.0375 | | | 0.075 | Providing Water Coolers/Water Filters in 15 schools in Jharsuguda District. |
| 3 | Providing Computers/Smart Boards in Schools | | | 0.0375 | 0.0375 | | 0.075 | Procurement and providing Computers/Smart boards to 5 Schools |
| | **Sub Total** | 0.12 | 0.1575 | 0.195 | 0.1575 | 0.12 | 0.75 | |
| B | **Community Health Initiatives** | | | | | | | |
| 1 | Providing doorstep medical services through Mobile Medical Unit | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 1.25 | Deployment of Medical Mobile Unit and extending door step medical services, to 16 villages in Luising and Chandnimal Gram Panchayats |

| S. 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 | | |
| 2 | Conducting Mega Medical Camps | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | Conducting 04 Mega Medical camps @ 150 patients annually in villages of Luising, Rajpur and Chandnimal GPs. |
| 3 | Conducting Eye check-up/ Cataract operation camps | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.075 | Conducting 1 cataract operation camp annually for 5 years. Per camp- 30 patients |
| | **Sub Total** | 0.275 | 0.275 | 0.275 | 0.275 | 0.275 | 1.375 | |
| C | **Sustainable Livelihood and Women Empowerment** | | | | | | | |
| 1 | Skill Development Training to Youth through CIPET/Other agencies | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.85 | Providing Skill Development Training to 40 unemployed youths to improve their employability through CIPET/Accredited Skill Devt. Agency |
| 2 | Skill Development Training for Women in villages of Jharsuguda District | | 0.075 | | 0.075 | | 0.15 | Skill Development on Income generation activities to be taken up covering 6o women based on need assessment and market linkage. |
| | **Sub Total** | 0.17 | 0.245 | 0.17 | 0.245 | 0.17 | 1.00 | |
| D | **Community Rural Infrastructure Development** | | | | | | | |

| S. 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 | | |
| 1 | Repairing, strengthening & Maintenance of Existing roads in consultation with Gram Panchayats. | 2.0 | 4.0 | 5.0 | 3.0 | 3.0 | 17.00 | Bituminous/CC road about 7500 meters length in villages of Luising Gram Panchayat and 7000 meters length in Chandnimal and Rajpur Gram Panchayats will be constructed, through district administration. |
| 2 | Installation of Solar High Mast Lights in villages of Jharsuguda District in consultation with Gram Panchayats | | 0.48 | 0.40 | 0.40 | | 1.28 | 32 nos. of Solar High Mast Lights shall be installed in prominent locations based on need assessment. |
| 3 | Installation of Solar Street Lights in villages of Jharsuguda District | 0.08 | 0.12 | 0.06 | 0.08 | 0.06 | 0.40 | 200 nos. of Solar Street Lights shall be installed in Luising, Chandnimal and Rajpur Gram Panchayats, at prominent locations based on need assessment. |
| 4 | Construction of 2 nos of Kirtan Mandaps in Luising and Chandnimal Gram Panchayat | 0.10 | | | 0.10 | | 0.20 | 02 nos. of Kirtan Mandap of 300 Sq Ft each shall be constructed in 2 Gram Panchayats. |
| 5 | Construction of 2 nos of Community Cen | | 0.14 | 0.14 | 0.14 | | 0.42 | 03 nos. of Community Centers |

| S. 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 | | |
| | ters | | | | | | | of 420 Sq Ft shall be taken up in Koilaga and Saimal |
| 6 | Construction of market Complex | | | 0.18 | | | 0.18 | 1 Market Complex of 600 Sq Fts hall be constructed at Rajpur |
| 7 | Augmentation of Water Supply in Villages through Solar Based Bore Well system | 0.30 | 0.60 | | | | 0.90 | 10 locations in Tileimal, Saimal and Niktimal villages, shall be taken up in consultation with local community, to install Solar based Bore well system. |
| 8 | Renovation of Ponds and construction of bathing ghats | 0.60 | 0.75 | 0.45 | | | 1.80 | Renovation of 12 nos. of Ponds & construction of bathing ghats in Luising, Rajpur and Chandnimal GP. |
| 9 | Construction of 1 no of Temporary Check Dam in Tileimal village (Every year during summer season) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | Construction of Temporary Check Dam across Baghei Nala for Summer Season, to be done on annual basis. |
| 10 | Renovation of Primary Health Center | -- | 0.30 | 0.20 | --- | ---- | 0.50 | Taking up enabling infrastructure works in Luising Primar Health Center. |

| S. 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 | | |
| | **Sub Total** | 3.09 | 6.4 | 6.44 | 3.73 | 3.07 | 22.73 | |
| E | **Development of Playgrounds for Sports** | | | | | | | |
| 1 | Levelling and improvement of Playgrounds in villages | --- | 0.25 | --- | --- | 0.25 | 0.50 | Levelling and infrastructure upgradation shall be taken up in 2 playgrounds each of 4800 Sq Mts in Lusing and Rajpur Gram Panchayats. |
| 2 | Providing Sports kits to local clubs & Schools | 0.32 | 0.36 | 0.24 | -- | ---- | 0.92 | Providing Sports Kits to 8 Local Clubs and 15 Schools in Chandnimal and Telenpali |
| | Sub Total | 0.32 | 0.61 | 0.24 | 0.00 | 0.25 | 1.42 | |
| F | Promoting local Culture and Sports/Need Based activities | | | | | | | |
| 1 | Support for Cultural Events/ Rural Sports in villages of Jharsuguda District | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.75 | Support for Cultural Events/ Rural Sports to local clubs and village committees on annual basis based on events. |
| 2 | Procurement of Need Based items ( Blankets/Mosquito nets/ Assistive Aids/ Furniture) for distribution in villages or supply to Public Utility building | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 1.50 | Procurement of need based items viz. mosquito nets, blankets, assistive Aids etc for distribution to villagers. |

| S. 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 | | |
| 3 | Providing seedlings for plantation drive in villages | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.15 | Procurement, distribution and organizing mass tree plantation events in schools during Van Mahotsav, Greening Fallow lands identified by the Gram Panchayat bodies. |
| 4 | Providing critical drinking water supply to villages in Summer Months annually for 5 years | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 1.00 | Providing critical drinking water supply to villages, during summer season annually for 5 years covering 14 habitations in Jharsuguda district. |
| 5 | Taking up additional plantation in and around the periphery villages | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 3.00 | Taking up additional plantation in and around the periphery villages |
| 6 | Deployment of Fog Canons in the periphery areas to tackle pollution by fugitive dust | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 3.50 | Deployment of 2 nos. of Fog Canons on daily basis |
| | **Sub Total** | **1.98** | **1.98** | **1.98** | **1.98** | **1.98** | **9.90** | |
| | **Total (A+B+C+D+E+F)** | **5.955** | **9.667** | **9.30** | **6.387** | **5.865** | **37.175** | |

**Action plan as per MoEF&CC O.M. dated 30/09/2020**

| | |
|---|---|
| Details of advertisement given | 18.10.2024 |
| Date of public consultation | 04.11.2024 |
| Venue | Raidihi, under Lephripara tehsil, Sundergarh Dist. |
| Presiding Officer | Additional District Magistrate |
| Major issues raised | The major issues raised during public hearing were regarding employment to local people, skill development, infrastructure, village road construction and pollution from ash dyke etc. |
| No. of people attended | Approx. 300 people attended the public hearing meeting, whereas only 131 of them have signed their attendance sheet. |

| S. 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 | | |
| A | Educational Initiatives | | | | | | | |
| 1 | Upgradation of infrastructure in 15 schools and Anganwadis | 0.18 | 0.18 | 0.30 | 0.24 | | 0.90 | Infrastructure upgradation in terms of providing Benches and Desks, Smart Boards, Cycle Shed, Area lighting etc, shall be taken up in 15 schools and Anganwadis in Darlipali, Raidihi, J-Raiboga and Badbanga GP. |
| 2 | Distribution of drinking Water filter/ Water Coolers in schools | 0.05 | | 0.05 | | | 0.10 | Providing Water Coolers/Water Filters in 20 schools in schools of Sundargarh District. |
| 3 | Providing Computers/Smart Boards in Schools | ---- | 0.0375 | -- | 0.0375 | -- | 0.075 | Procurement and providing Computers/Smart boards to 5 Schools |

| S. 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 | | |
| | **Sub Total** | **0.23** | **0.2175** | **0.35** | **0.2775** | **0** | **1.075** | |
| B | **Community Health Initiatives** | | | | | | | |
| 1 | Providing doorstep Medical services through Mobile Medical Unit | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 1.25 | Deployment of Medical Mobile Unit and extending doorstep medical services, to 22 villages in Darlipali Raidhi and J Raiboga Gram Panchayats |
| 2 | Conducting Mega Medical Camps | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | Conducting 04 Mega Medical camps @ 150 patients annually in villages of Darlipali , Raidhi, J Raiboga GPs. |
| 3 | Conducting Eye check up/ Cataract operation camps | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.075 | Conducting 1 cataract operation camp annually for 5 years. Per camp- 30 patients |
| | **Sub Total** | **0.275** | **0.275** | **0.275** | **0.275** | **0.275** | **1.375** | |
| C | **Sustainable Livelihood and Women Empowerment** | | | | | | | |
| 1 | Skill Development Training to Youth through CIPET/Other agencies | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.85 | Providing Skill Development Training to 40 unemployed youths to improve their employability through CIPET/Accredited Skill Devt Agency |
| 2 | Skill Development Training for Women in villag | | 0.075 | | 0.075 | | 0.15 | Skill Development on Income generation activities to be taken |

| S. 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 | | |
| | es of Sundergarh District | | | | | | | up covering 6o women based on need assessment and market linkage. |
| | **Sub Total** | **0.17** | **0.245** | **0.17** | **0.245** | **0.17** | **1.00** | |
| D | **Community Rural Infrastructure Development** | | | | | | | |
| 1 | Repairing, strengthening & Maintenance of Existing roads in consultation with Gram Panchayats. | 1.0 | 3.0 | 4.0 | 2.0 | 2.0 | 13.00 | Bituminous/CC road about 6500 meters length (Podmundi to Ainlabahal), 2500 Mts (Darlipali Khagesh market to ASH dyke), 5000 mts (Ash Dyke to Tileimal Chowk), 2000 mts in Periphery villages on requirement basis through district administration. |
| 2 | Installation of Solar High Mast Lights in villages of Sundergarh District in consultation with Gram Panchayats | 0.60 | 0.60 | --- | 0.72 | --- | 1.92 | 48 nos of Solar High Mast Lights shall be installed in prominent locations based on need assessment. |
| 3 | Installation of Solar Street Lights in villages of Sundergarh District | 0.20 | 0.20 | 0.20 | --- | --- | 0.60 | 300 nos. of Solar Street Lights shall be installed in Darlipali, Badbanga, Raidihi and J-Raibaga Gram Panchayats, at prominent locations based on need assessment. |
| 4 | Construction of | 0.10 | ---- | ----- | 0.10 | ---- | 0.20 | 02 nos. of Kirtan Ma |

| S. 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 | | |
| | 2 nos of Kirtan Mandaps in Darlipali & Raidhi Gram Panchayat | | | | | | | ndap of 300 Sq Ft each shall be constructed in 2 Gram Panchayats. |
| 5 | Construction of 2 nos of Community Centers | ---- | 0.14 | 0.14 | 0.14 | ---- | 0.42 | 03 nos. of Community Centers of 420 Sq Ft shall be taken up- 2 in Raidihi and 1 in Nuadihi village. |
| 6 | Construction of market Complex | --- | --- | 0.18 | --- | --- | 0.18 | 1 Market Complex of 600 Sq Ft shall be constructed at Raidhi. |
| 7 | Renovation works in Chandli Temple | --- | 0.30 | ---- | --- | --- | 0.30 | Construction of Rest Shed and Stairs for Chandli Temple |
| 8 | Augmentation of Water Supply in Villages through Solar Based Bore Well system | 0.30 | 0.60 | --- | --- | --- | 0.90 | 10 locations in Raidhi, Badbanga and Sargipali villages, shall be taken up in consultation with local community, to install Solar based Bore well system. |
| 9 | Renovation of Ponds and construction of bathing ghats | 0.60 | 0.75 | 0.45 | ---- | ---- | 1.80 | Renovation of 12 nos of Ponds & construction of bathing ghats in Luising, Rajpur and Chandnimal GP. |
| 10 | Construction of 1 no of Temporary Check Dam in Tileimal village ( Every year during summer season) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.15 | Construction of Temporary Check Dam across Basundhara Nala for Summer Season, to be done on annual basis. |

| S. 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 | | |
| 11 | Renovation of Darlipali Primary Health Center | ---- | 0.30 | 0.20 | ---- | ---- | 0.50 | Taking up enabling infrastructure works in Darlipali Primar Health Center viz, repair of Boundary wall, Tiles repairing inside premises, Construction of Vehicle Parking Shed, Painting works, Lighting inside Campus. |
| | **Sub Total** | **2.81** | **5.9** | **5.18** | **2.97** | **2.01** | **18.87** | |
| E | **Development of Playgrounds for Sports** | | | | | | | |
| 1 | Levelling and improvement of Playgrounds in villages | --- | 0.25 | ---- | ---- | 0.25 | 0.50 | Levelling and infrastructure upgradation shall be taken up in 2 playgrounds each of 4800 Sq Mts in Kheradega and Nuadihi villages. |
| 2 | Providing Sports kits to local clubs & Schools | 0.32 | 0.36 | 0.24 | ---- | ---- | 0.92 | Providing Sports Kits to 8 Local Clubs and 15 Schools in Darlipali, Raidhi GPs and other local clubs. |
| | Sub Total | 0.32 | 0.61 | 0.24 | 0.00 | 0.25 | 1.42 | |
| F | **Promoting local Culture and Sports/Need Based activities** | | | | | | | |
| 1 | Support for Cultural Events/ Rural Sports in villages of Sundergarh District | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.80 | Support for Cultural Events/ Rural Sports to local clubs and village committees on annual basis based on events. |

| S. 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 | | |
| 2 | Procurement of Need Based items ( Blankets/Mosquito nets/ Assistive Aids/ Furniture) for distribution in villages or supply to Public Utility building | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 1.50 | Procurement of need based items viz. mosquito nets, blankets, assistive Aids etc for distribution to villagers. |
| 3 | Providing seedlings for plantation drive in villages | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.10 | Procurement, distribution and organizing mass tree plantation events in schools during Van Mahotsav, Greening Fallow lands identified by the Gram Panchayat bodies. |
| 4 | Providing critical drinking water supply to villages in Summer Months annually for 5 years | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 1.00 | Providing critical drinking water supply to villages, during summer season annually for 5 years covering 14 habitations in Darlipali and Raidihi GPs |
| 5 | Taking up additional plantation in and around the periphery villages | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 10.00 | Taking up additional plantation in and around the periphery villages |
| 6 | Deployment of Fog Canons in the periphery areas to tackle pollution by fugitive dust | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | 1.75 | Deployment of 1 no of Fog Canons on daily basis |

| S. 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 | | |
| 7 | Compensation to villages for Crop loss due to pollution | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.80 | Crop Compensation to Alupada villagers owing to crop loss due to pollution |
| 8 | Intervention regarding Waste Disposal | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 | 0.16 | Awareness Generation programs for Waste segregation and waste disposal in villages. |
| 9 | Cleaning of roads through deployment of tankers | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.50 | Regular water sprinkling on roads to arrest fugitive dust on roads in periphery villages throughout the year. |
| | Sub Total | 3.802 | 3.802 | 3.802 | 3.802 | 3.802 | 3.802 | |
| | **Total (A+B+C+D+E+F)** | **7.607** | **11.0495** | **10.017** | **7.569** | **6.507** | **42.75** | |
| | | | | | | | | |

**30.1.16: Project cost**: Capital cost of Existing project was Rs. 14822.27 Crores. The capital cost of the proposed project is Rs11130.98 Crores and the capital cost for environmental protection measures is proposed as Rs1082.62 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 21.85 Crores. The employment generation from the proposed project / expansion is During construction phase of Stage – II the no. of temporary and permanent persons are 1200-1500 & 100, respectively, and during operation phase of Stage – II the no. of temporary and permanent persons are 500 & 100 respectively. The details of cost for environmental protection measures are as follows:

| S.No | EMPs: (Eg.: Air Environment, Water Environment) | Capital Cost (Lakhs) | Recurring cost (Lakhs) |
|---|---|---|---|
| 1 | Electrostatic Precipitator | 17325.52 | 346.51 |
| 2 | Chimney | 6370.29 | 127.41 |

| S.No | EMPs: (Eg.: Air Environment, Water Environment) | Capital Cost (Lakhs) | Recurring cost (Lakhs) |
|---|---|---|---|
| 3 | Cooling Towers incl. Civil Works | 341284 | 68.29 |
| 4 | Ash Handling | 37051.46 | 741.03 |
| 5 | Ash Disposal Area | 38706.51 | 774.13 |
| 6 | Ash Water Recirculation Incl. ETP | 1829.00 | 36.58 |
| 7 | Dust extraction & suppression System. | 42.00 | 0.84 |
| 8 | DM plant waste treatment systems | 260.00 | 5.20 |
| 9 | Online monitoring equipments CEMS | 640 | 12.8 |
| 10 | Solar Rooftop | 364.55 | 7.30 |
| 11 | Sewerage collection, treatment & disposal | 210.00 | 4.20 |
| 12 | Green Belt, Afforestation & Landscaping | 1278.00 | 20.00 |
| 13 | Wildlife Conservation plan | 391.55 | - |
| 14 | Watershed management. | 177.20 | - |
| 15 | River Protection | 38.55 | - |
| 16 | Environment Lab equipment | 50 | 10 |
| 17 | Environment monitoring | 1.40 | 31.68 |
| 18 | Hydrology study | 62 | 0 |
| 19 | Risk Assessment action plan | 39.58 | 0 |
| 20 | Rainwater Harvesting | 12 | |
| **Total** | | **108262.50** | **2185.91** |
| Cost provisions for addressing the issues raised in Environmental Public hearing as per time bound action Plan for Sundergarh District | | 4275.00 | |
| Cost provisions for addressing the issues raised in Environmental Public hearing as per time bound action Plan for Jharsuguda District | | 3717.00 | |

| Year | Quantity generated (L | Quantity utilized (LM | % of utilization | Balance quantity (LM | No of storage silos with capacity |
|---|---|---|---|---|---|

| | MT) | T) | | T) | |
|---|---|---|---|---|---|
| FY 2022-23 | 38.85 | 10.24 | 26.37 | 54.74 | Dry Fly Ash Silos Main silos: 4x1500 MT with truck & Wagon loading facilities HCSD Silo: 3x 700 MT with truck loading |
| FY 2023-24 | 43.10 | 24.01 | 55.71 | 73.82 | |
| FY 2024-25 | 39.88 | 33.93 | 85.06 | 79.78 | |

**A. Fly ash Details for last three years:** 97.464 LMT

| Financial Year | Total Ash Production (LMT) | Fly Ash Production (LMT) | Total Ash Utilization (LMT) | Total Ash Utilization (%) |
|---|---|---|---|---|
| 2022-23 | 38.85 | 31.08 | 10.24 | 26.37 |
| 2023-24 | 43.10 | 34.48 | 24.01 | 55.71 |
| 2024-25 | 39.88 | 31.90 | 33.93 | 85.06 |

| S.No. | Activity (as applicable) | Quantity | Percentage | Remarks (Prior approval of SPCB details to be mentioned) |
|---|---|---|---|---|
| 1 | Fly ash based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels) | 0.003 | 0.003 | Only ash bricks manufactured. |
| 2 | Construction of roads, road and fly over embankment | 57.08 | 58.56% | |
| 3 | Use in overburden dumps | 0.42 | 0.43% | |
| | **Total** | **57.503** | **58.993%** | |

**B. Bottom ash details for last three years:** 24.368 LMT

| Financial Year | Total Ash Production (LMT) | Bottom Ash Production (LMT) | Total Ash Utilization (LMT) | Total Ash Utilization (%) |
|---|---|---|---|---|
| 2022-23 | 38.85 | 7.76 | 10.24 | 26.37 |
| 2023-24 | 43.10 | 8.62 | 24.01 | 55.71 |
| 2024-25 | 39.88 | 7.976 | 33.93 | 85.06 |

| S.No. | Activity (as applicable) | Quantity | Percentage | Remarks (Prior approval of SPCB details to be mentioned) |
|---|---|---|---|---|
| 1 | Filling up of low lying area | 9.59 | 39.36% | |
| 2 | Filling of mine voids: | 1.06 | 4.35% | |

| | | | | |
|---|---|---|---|---|
| | **Total** | **10.65** | **43.71%** | |

**C. Legacy ash details:** There is no legacy ash

**D. Ash Pond details**: Stage I (existing ash pond)

| S.No. | Details of Ash Pond | Lagoon 1: Fly ash lagoon (FA) | Lagoon 2: Bottom ash lagoon (BA) | Lagoon 3: Bottom ash lagoon (BA) | OFL | Total |
|---|---|---|---|---|---|---|
| 1. | Status of ash pond (Active / Exhausted (yet to be reclaimed)/ Reclaimed) | Active | Active | Active | - | |
| 2. | Area (Ha) | 80.93 | 36.42 | 38.44 | 4.21 | 160 |
| 3. | Dyke height (m) | 8 | 8 | 8 | - | |
| 4. | Volume ($m^3$) | 42.96LMT | 19.33LMT | 20.41LMT | - | |
| 5. | Quantity of ash disposed (Metric Tons) | 78.5 LMT | | | | |
| 6. | Available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons) | 4.2 LMT | | | | |
| 7. | Expected life of ash pond (number of years and months | 01-month capacity | | | | |
| 8. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HCSD Lining which is impervious. | HCSD Lining which is impervious. | Bentonite lining | - | |
| 9. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | HCSD | LCSD | LCSD | - | |
| 10 | Ratio of ash: water in slurry mix : | 1:2/3 | 1:3 | 1:3 | - | |
| 11 | Ash water recycling system (AWRS) | Yes | Yes | Yes | - | |

**E. Proposed ash utilization plan for expansion project**

| Details | Existing generation (LMTPA) | Proposed generation (LMTPA) | Total LMTPA | Utilization (LMTPA) | % of utilization | Balance quantity (LMTPA) | No. of storage silos with capacity |
|---|---|---|---|---|---|---|---|
| Ash( Fly Ash & Botto Ash) | 40 | 20 | 60 | 60 | 100 | -- | HCSD cum Dry Fly Ash Silos Main silos: 2x2000 MT & Fine Fly Ash Silo : 1x1500 MT with truck & Wagon loading facilities No separate HCSD silos Dry Bottom Ash Silo : 1x2000T with truck & Wagon loading facilities (In case of dry bottom ash system) Dry bottom ash intermediate silo : 1x500MT with truck loading facility only (In case of dry bottom ash system). |

**Proposed year wise Ash Utilization for Existing Stage-I & Proposed Stage-II**

| MoEF&CC Compliance Cycle | Year | Ash Generation (LMT) | Land Development (LMT) | Outside Bricks (LMT) | Own Brick plant (LMT) | Cement & Other Industries (LMT) | Roads Construction (LMT) | Ash based products/ Others (LMT) | Mines Fillings (LMT) | Total Ash Utilized ( LMT) | Ash Utilization (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Operation from existing 2x800 MW(St-1) | | | | | | | | | | |
| First | 2022-23 | 38.86 | 1.25 | 0.02 | 0.00 | 0.00 | 8.93 | 0.00 | 0.04 | 10.24 | 26.37 |
| | 202 | 43.10 | 2.50 | 0.00 | 0.00 | 0.00 | 21.09 | 0.00 | 0.42 | 24.0 | 55.71 |

| MoEF&CC Compliance Cycle | Year | Ash Generation (LMT) | Land Development (LMT) | Outside Bricks (LMT) | Own Brick plant (LMT) | Cement & Other Industries (LMT) | Roads Construction (LMT) | Ash based products/ Others (LMT) | Mines Fillings (LMT) | Total Ash Utilized ( LMT) | Ash Utilization (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3-24 | | | | | | | | | 1 | |
| | 2024-25 | 39.88 | 5.84 | 0.00 | 0.00 | 0.00 | 27.06 | 0.00 | 1.02 | 33.93 | 85.06 |
| | 2025-26 | 40.00 | 12.00 | 1.00 | 0.00 | 0.00 | 40.00 | 0.00 | 12.00 | 65.00 | 162.5 |
| | 2026-27 | 40.00 | 10.00 | 1.00 | 0.00 | 0.00 | 42.00 | 0.00 | 15.00 | 68.00 | 170 |
| Second | 2027-28 | 40.00 | 10.00 | 1.00 | 0.00 | 0.00 | 42.00 | 0.00 | 15.00 | 68.00 | 170 |
| | 2028-29 | 40.00 | 10.00 | 1.00 | 0.00 | 0.00 | 42.00 | 0.00 | 15.00 | 68.00 | 170 |
| | 2029-30 | 40.00 | 10.00 | 1.00 | 0.00 | 0.00 | 42.00 | 0.00 | 15.00 | 68.00 | 170 |
| | **With Commissioning of St-2 1x800 MW Unit & Operation from 2x800 MW(St-1) + 1x800 (St-2)** | | | | | | | | | | |
| Third | 2030-31 | 60.00 | 12.50 | 5.00 | 0.00 | 15.00 | 20.00 | 3.00 | 4.50 | 60.00 | 100 |
| | 2031-32 | 60.00 | 12.50 | 5.00 | 0.00 | 15.00 | 20.00 | 3.00 | 4.5 | 60.00 | 100 |
| | 2032-33 | 60.00 | 11.50 | 5.50 | 0.00 | 15.00 | 20.00 | 2.00 | 6.00 | 60.00 | 100 |
| Fourth | 2033-34 | 60.00 | 11.50 | 5.50 | 0.00 | 12.00 | 20.00 | 5.00 | 6.00 | 60.00 | 100 |

| MoEF&CC Compliance Cycle | Year | Ash Generation (LMT) | Land Development (LMT) | Outside Bricks (LMT) | Own Brick plant (LMT) | Cement & Other Industries (LMT) | Roads Construction (LMT) | Ash based products/ Others (LMT) | Mines Fillings (LMT) | Total Ash Utilized ( LMT) | Ash Utilization (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2034-35 | 60.00 | 11.50 | 5.50 | 0.00 | 12.00 | 20.00 | 5.00 | 6.00 | 60.00 | 100 |
| | 2035-36 | 60.00 | 11.50 | 5.50 | 0.00 | 12.00 | 20.00 | 5.00 | 6.00 | 60.00 | 100 |

Ash pond details: If existing ash pond is to be utilized details may be mentioned. If not, new ash pond details may be provided as below:

| S.No. | Details of Ash pond | Ash pond |
|---|---|---|
| 1 | Area (Ha) | 60 Ha<br>(including 30% space for non-storage purpose i.e. overflow lagoon, dyke embankment, toe drains, peripheral roads, ash pipe corridor, AWRS pump house and other facilities etc.). |
| 2 | Dyke height (m) | Average Height:10 m (Starter Dyke)<br>(Additionally, two subsequent Raisings of 3.0 M height is envisaged in each lagoon design for uncertainties in ash utilisation) |
| 3 | Volume (m3 ) | Approx. 3.8 million $m^3$ (Ash disposal in Starter Dyke) |
| 4 | Quantity of ash to be disposed (Metric Tons) | Approx 3.8 Million Metric Ton (considering density as 1.0T/Cum) |
| 5 | Expected life of ash pond (number of years and months) | 7.5 years |
| 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) | Bottom Ash in lean slurry and Fly Ash in High Concentration Slurry Disposal (HCSD) form |
| 8 | Ratio of ash: water in slurry mix : | Bottom Ash: Water ratio- 25:75 Fly ash: Water ratio- 60:40 |

| S.No. | Details of Ash pond | Ash pond |
|---|---|---|
| 9 | Ash water recycling system (AWRS): Yes or No | Yes<br>Ash water recycling system has been envisaged for the proposed project. |
| 10 | Quantity of wastewater from ash pond to be discharged into land or water body (m3 ) | No ash water discharge is envisaged. AWRS and ZLD system envisaged hence no ash water discharge from Ash Dyke. |
| 11 | Details regarding dyke stability study and name of the organization who conducted the study | As already done in all past ash dyke stability design, this will also be done by NTPC, (in-house design) in line with "CEA and CPCB Guidelines for Design, Construction, O&M and Annual certification of Coal Ash Ponds". |

**A. Summary of court cases:** There are total 9 cases related with Darlipali STPP Stage-I, out of these 04 cases are related to Land Acquisition, 03 Cases related to Contractual disputes, 01 Injunction Suit, 01 case related to Environment Matter which pertains to Orissa Human Rights Commission and its details are as given bellow:

| S.N | Case No/ Title | Name of the Court | Brief summary of the case | Last Date of Hearing | Next date of Hearing | Direction/Action taken by the PP |
|---|---|---|---|---|---|---|
| 1. | OHRC Case No. 3888 of 2024 (2952/ OHRC, dated 18.02.2025) | Orissa Human Rights Commission | The complainant alleges that NTPC is violating human rights by polluting the environment in the Sundargarh district, causing health hazards due to emissions from vehicles and chimneys of the power plant. Complaint states that there is no development in the area since the establishment of project. | 22.07.2025 | 30.10.2025 | Comprehensive Reply has been submitted by NTPC on all the issues raised by the complainant along with documentary evidence.<br>On last date, i.e. 22.07.2025, petitioner has submitted its reply on NTPC written submission. Now, NTPC has to file reply on petitioner's submission. |

**B. Summary of Show Cause Notices:** Show case Notice no. 13591/IND-I-CON-6631 dated 19.07.2025, issued by OSPCB, Bhubaneswar for illegal dumping of Ash in unauthorised area.

| S.N. | Issuing authority | Date | Reasons for issuance of SCN | Status of reply to submission | Present status |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 1 | Odisha Pollution Control Board | 19.07.2025 | Illegal dumping of Ash | Reply submitted to OSPCB on 23.07.2025 | Case is under consideration for personal Hearing in OSPCB. |

**C. Summary of violation**

| | |
|---|---|
| Any violation case pertaining to the project following,<br>The Environmental Protection Act, 1986<br>Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980<br>The Wildlife (Protection) Act, 1972 | No Violation<br>Observations on violation have been raised by the MOEF & CC, regarding taking up construction of Make-up Water Pipeline and the 132 KV Transmission line without obtaining Stage-II approval/ working permission for diversion of 25.56 ha of forest land. It is submitted that the Stage-I approval was accorded on 01.11.2016 and after compliance of the conditions laid down under Stage-I approval, the final (Stage-II) approval, has been accorded by the MOEF &CC on 24th April 2025, vide letter no. 5-ORC279/2016-BHU.<br>No Violation |

**30.1.20:** Compliance to the observations of sub-committee site visit report (Only in case of site visit by the sub-committee) – Nil

**30.1.21: Written submissions:** Project proponent submitted the following written submission during the meeting:

1. ***Queries raised: Forest Clearances Details***

**Reply:**

| FOREST CLEARANCES ALREADY ACCORDED FOR DARLIPALI STAGE-1 | | | |
|---|---|---|---|
| **Purpose of Forest Diversion** | **Forest Area Diverted (Ha)** | **Purpose for which used** | **Remarks** |
| Setting up of Darlipali Super Thermal Power project | 13.95 Ha | Main Plant and associated infrastructure and Township | Stage-II Forest Clearance accorded on 13.10.2014 |
| Construction of MGR-Rail Corridor for transportation of coal from Dulanga Coal Mines to Darlipali Super Thermal Power Plant | 19.70 Ha | Construction of MGR- rail corridor, connecting Dulanga coal mines with the Darlipali Power Plant | Stage-II Forest Clearance accorded on 16.11.2016 |
| Construction of Railway Siding Corridor by NTPC Darlipali STPP to connect their MGR line | 19.43 Ha | Construction of Railway Siding Corridor by NTPC Darlipali STPP to connect to the MGR line | Stage-II Forest Clearance accorded on 26.06.2024 |

| FOREST CLEARANCES ALREADY ACCORDED FOR DARLIPALI STAGE-1 | | | |
|---|---|---|---|
| **Purpose of Forest Diversion** | **Forest Area Diverted (Ha)** | **Purpose for which used** | **Remarks** |
| Laying of Make Up Water Pipeline and 132 KV Electric transmission lines by NTPC for drawl of water from Hirakud reservoir for Darlipali Super Thermal Power Project | 25.56 Ha | Laying of Make Up Water Pipeline and 132 KV Electric transmission lines by NTPC. | Stage-II Forest Clearance accorded on 24.04.2025 |
| **Proposal For Diversion of Forest Land for Darlipali Stage-II** | | | |
| Construction of Additional reservoir and Unit-III of NTPC Darlipali | 65.301 Ha | Construction of Main Plant, Reservoir and Ash Dyke.<br>The area for the proposed Ash Dyke, is a combination of Private Land, Non Forest Govt land and Forest land as the requirement of land for the Ash Dyke is required<br>in contiguity. | Under consideration in FAC on 26.09.2025 |

**2.** ***Action taken Report Show cause notice*** **(**Notice No. - 13591/IND-I-CON-6631 dated 19.07.2025, issued by OSPCB, Bhubaneswar for illegal dumping of Ash in unauthorised area**)**

**Reply:** NTPC has submitted detailed reply to OSPCB, Bhubaneswar vide Letter dated 23.07.2025, with the following action taken:

Post submission of the above, site visit has been conducted by Regional Officer- SPCB- Rourkela and inspection report has been submitted on 25.09.2025, which mentions that all the ash has been completed evacuated by the user agency and plantation has been carried out on the mentioned land. The photographic evidence is also enclosed along with the Inspection report. (Copy of inspection report is submitted)

| **Details of Proposed Ash Dyke** | |
|---|---|
| Area | 60 Ha (including 30% space for non-storage purpose i.e. overflow lagoon, dyke embankment, toe drains, peripheral roads, ash pipe corridor, AWRS pump house and other facilities etc.). |
| Volume | Approx. 3.8 million $m^3$ (Ash disposal in Starter Dyke) |
| Height of the Ash Dyke | Average Height:10m (Starter Dyke) |
| Life of the ash pond | 7.5 years |

***4. CPCB Recognition and NABL Accreditation certificate for Consultant Laboratory***

**Reply:** Recognition letter w.r.t recognition of M/s. Mantec Consultants Pvt. Ltd., D-36, Sector-6, Noida, Gautam Budh Nagar, Noida-201 301, Uttar Pradesh has been submitted by CPCB vide letter dated 7th July 2025.

**5. Green Belt details around ash dyke**

**Reply: Action plan for 50000 Sapling plantation around proposed ash dyke of Stage-II**: Tree plantation is one of the effective remedial measures to control the Air pollution/dust emission and noise pollution. It also causes aesthetics and climatologically improvement of area as well as sustains and supports the biosphere. It is an established fact that trees and vegetation acts as a vast natural sink for the gaseous as well as particulate air pollutants due to enormous surface area of leaves. Plantation around proposed ash dyke towards Basundhara River will act barrier for dust pollution sources which will control the air pollution by filtering the air particulate before it reaches to the Basundhara River.

| Year of plantation | Total no of Seedling | Area in Ha | Budget in Lakhs Rs. |
|---|---|---|---|
| 2025-26 | 15000 | 6.0 | 150 |
| 2026-27 | 20000 | 8.0 | 160 |
| 2027-28 | 15000 | 6.0 | 150 |
| **Total** | **50000** | **20** | **460** |

**Selection of Plant species:** Native/local plant species will be selected in the proposed greenbelt and plantation areas in consultation with local forest department. Species composition of plantation area will be heterogeneous in nature.

**Proposed Greenbelt of Darlipali plant Stage – II**: A total of 1,10,000 nos. of saplings will be planted in an area of approx. 44 Ha with a tentative budget of Rs. 935 lakhs. Details are summarized in following table:

| **Proposed Green Belt Development Action Plan** | | | |
|---|---|---|---|
| **Financial Year** | **Area in Ha** | **Number of Plants** | **Tentative Budget (In L akhs Rupees)** |
| 2025-26 | 08 | 20000 | 160 |
| 2026-27 | 14 | 35000 | 280 |
| 2027-28 | 08 | 20000 | 170 |
| 2028-29 | 08 | 20000 | 175 |
| 2029-30 | 06 | 15000 | 150 |
| **Total** | **44** | **1,10000** | **G35** |

**Plant to Plant distance** = 2 meters.

**Row to Row distance** = 2 meters.

**6. *Existing Ash Pond available capacity details***

**Reply:**

| S.No. | Details of Ash Pond | Lagoon 1: Fly ash lagoon (FA) | Lagoon 2: Bottom ash lagoon (BA) | Lagoon 3: Bottom ash lagoon (BA) | OFL | Total |
|---|---|---|---|---|---|---|
| 1. | Status of ash pond ( Active / Exhausted (yet to be reclaimed)/ Reclaimed) | Active | Active | Active | - | |
| 2. | Area (Ha) | 80.93 | 36.42 | 38.44 | 4.21 | 160 |
| 3. | Dyke height (m) | 8 | 8 | 8 | - | |
| 4. | Volume (m3 ) | 42.96LMT | 19.33LMT | 20.41LMT | - | |
| 5. | Quantity of ash disposed (Metric Tons) | 78.5 LMT | | | | |
| 6. | Available volume in percentage (per cent) and quantity of ash can be further disposed ( Metric Tons) | 4.2 LMT | | | | |
| 7. | Expected life of ash pond (number of years and months | 01-month capacity | | | | |
| 8. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HCSD Lining which is impervious. | HCSD Lining which is impervious. | Bentonite lining | - | |
| 9. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | HCSD | LCSD | LCSD | - | |
| 10 | Ratio of ash: water in slurry mix : | 1:2/3 | 1:3 | 1:3 | - | |
| 11 | Ash water recycling System (AWRS) | Yes | Yes | Yes | - | |

**7. *RO Compliance status***

**Reply:** PP has submitted the IRO compliance report status as on 26.09.2025

**3.1.3. Deliberations by the committee in previous meetings**

N/A

**3.1.4. Deliberations by the EAC in current meetings**

**Observations and deliberation of the EAC**

**30.1.23:** The Committee observed and noted the following:

**Recommendations of the Committee:**

**30.1.24:** In view of the foregoing and after detailed deliberations, the committee ***recommended*** the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 **subject to uploading of written submission** on PARIVESH Portal and stipulation of the following specific conditions and general conditions based on project specific requirements:

**3.1.5. Recommendation of EAC**

Recommended (Subject to submission of requisite information/ documents)

**3.1.6. Details of Environment Conditions**

**3.1.6.1. Specific**

| **[A] Environmental Management** | |
|---|---|
| 1. | Project proponent shall submit the Stage – I Forest Clearance for diversion of forestland of 65.301 Ha of forest land involved in the project for non-forestry activity prior to grant of Environment Clearance. |
| 2. | The project proponent shall abide by all orders and judicial pronouncements, made from time to time by the OA No. 3888 of 2024 (2952/OHRC, dated 18.02.2025) Orissa Human Rights Commission. |
| 3. | Project proponent shall ensure that 100% utilization of ash generated from the proposed project in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendment. Area for the expansion project ash pond shall not exceed 60 Ha as committed. |
| 4. | Project proponent shall comply with the recommendations made in the biodiversity assessment report and Hydrogeology report in a time bound manner. Compliance status in this regard shall be submitted to the Regional Office of MoEF&CC along with the six monthly compliance report. |
| 5. | The water requirement for proposed expansion (Stage-II) unit is estimated as 750 m3 /hr and the same shall be met from Hirakund reservoir. The specific water consumption for proposed unit shall be less than 3.0 m3/MWhr. |
| 6. | The entire coal requirement for proposed TPP shall be transported by rail network only and no road |

| | |
|---|---|
| | transportation is permitted. |
| 7. | 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. |
| 8. | Project proponent shall implement the protective measure proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs. 1082.62 crores 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. |
| 9. | 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. |
| 10. | Project proponent shall ensure that diesel operated vehicles will be switched over to E-Vehicles / CNG vehicles in a time bound manner, replace the passenger vehicles to E/ CNG vehicle in phased manner. Further, for local movement of officials, Contract of Vehicles deployment shall be awarded to Project affected people and all efforts for adopting heavy E-vehicles/ CNG Vehicles like Bulkers for ash transportation for short distance subject to availability of such E-vehicle and adequate charging infrastructure in the surrounding area shall be provided. PP shall submit the action taken report to concerned RO with amount spent, photographs (before & after), number of such non diesel vehicles deployed etc. in six monthly compliance report. |
| 11. | The Project Proponent shall provide stack of 275 meters height and shall abide by the provisions of the notification number G.S.R 465 (E) dated 11/07/2025 related to SO2 emission standards. |
| 12. | Project proponent shall ensure that pipelines carrying the fly ash and effluent shall be inspected regularly for any leakages. |
| 13. | Effluent of 15600 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. |
| 14. | PP shall implement the concurrent plantation plan in a time bound manner. Total of 156.130 ha area (43.51% of total Main plant and Ash dyke area of 358.832 Ha) will be developed as greenbelt. A 30-50m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 2 years 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 1,60,000 saplings will be planted and nurtured in an area of approx. 64 Ha (44 Ha within the plant premises +20 Ha in the Ash Dyke area). The budget earmarked for the green belt plantation including 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 geo-location 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. |
| 15. | 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 (sanitary napkin vending machines) and shall also develop green belt around the nearby schools. Further, PP shall organize quarterly awareness programs for |

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| | school students to educate them on the significance and preservation of trees. |
| 16. | 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 a government account. |
| 17. | 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 be done regularly. |
| 18. | 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. |
| 19. | PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM. |
| 20. | Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry. |
| 21. | 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. |
| 22. | Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers. |
| 23. | 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. |
| 24. | 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. |
| 25. | 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. |
| 26. | 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. |

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| **[B] Socio-economic** | |
| 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. | 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. |
| 3. | The budget proposed for PH is Rs. 37.175 crores and 42.75 crores to address the said concerns for Jharsuguda and Sundargarh Districts. 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. |
| 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. |
| **[C] Miscellaneous** | |
| 1. | An Environmental Cell headed by the Environment Manager 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. |
| 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. | All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity. |

**3.1.6.2. Standard**

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| 1(d) | **Thermal Power Plants** |
| **Statutory compliance** | |
| 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. |
| 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. |

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| 3. | 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. |
| 4. | The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable. |
| 5. | No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance. |
| **Air quality monitoring and Management** | |
| 1. | Project proponent shall abide by the provisions of the notification number G.S.R 465(E) dated 11/07/2025 related to SO2 emission standards. |
| 2. | Low NOX Burners with Over Fire Air (OFA) system shall be installed to achieve NOX emission standard of 100 mg/Nm3. |
| 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. |
| 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. |
| 5. | Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically. |
| 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 at three locations. 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. |
| 7. | Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions. |
| 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. |
| **Noise pollution and its control measures** | |
| 1. | The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000. |
| 2. | Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc. |
| 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. |
| **Human Health Environment** | |

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| 1. | Bi-annual Health check-up of all the workers is to be conducted. The Occupational health 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. |
| 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. |
| **Water quality monitoring and Management** | |
| 1. | Project proponent shall use air cooled condensers in the power plants to reduce the fresh water consumption and achieve specific water consumption of 3.0 m3/MWhr. |
| 2. | In case of the water withdrawal from river, a minimum flow 15% of the average flow of 120 consecutive leanest days should be maintained for environmental flow whichever is higher, to be released during the lean season after water withdrawal for proposed power plant. |
| 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. |
| 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. |
| 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. | 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. |
| 7. | Wastewater generation of 15600 KLD from various sources (viz. cooling tower blow down, 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. |
| 8. | Sewage generation of 175 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). |
| 9. | Action plan by the TPPs located within 50 km of a municipality or any Urban Local Body (ULB) to use the treated sewage water produced by the municipality/Urban Local Body (ULB) to reduce fresh water consumption shall be submitted. |
| **Risk Mitigation and Disaster Management** | |
| 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. |

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| 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%. |
| 3. | Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase. |
| 4. | Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary. |
| 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. |
| **Green belt and Biodiversity conservation** | |
| 1. | Green belt shall be developed in an area of 33% of the total plant area with indigenous native tree species in accordance with CPCB guidelines. |
| 2. | In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented. |
| 3. | A 3 tier plantation with saplings of native and fruit species of 2 meter height shall be done on both side of the roads which will be used for the transportation of coal and fly ash. |
| **Waste management** | |
| 1. | Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016. |
| 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. |
| 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. |
| 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 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. |
| 5. | Unutilized ash if any shall be disposed off in the ash pond in the form of High Concentration Slurry method. |
| **Monitoring of compliance** | |
| 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. |
| 2. | Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable. |
| 3. | Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report. Renewable Energy |

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| | Purchase Obligation as set by MoP/State Government shall be met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy Certificates. |
| 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. |
| 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. |
| **Corporate Environmental Responsibility (CER) activities** | |
| 1. | CER activities will be carried out as per Ministry's OM F.No.22- 65/2017- IA.III dated 30th September, 2020 and 22-65/2017- IA.III dated 25.02.2021 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. |
| **Ash content/mode of transporatation of coal** | |
| 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. |

**3.2. Agenda Item No 2:**

**3.2.1. Details of the proposal**

| | | | |
|---|---|---|---|
| **Proposed Expansion of Kawai Thermal Power Plant under Phase-II by adding 3200 (4x800) MW Ultra Super Critical Thermal Power Plant to Existing 1320 (2x660) MW at Village Kawai, Tehsil Atru, District Baran, Rajasthan by Adani Power Limited, Kawai** by **Adani Power Limited** located at **BARAN,RAJASTHAN** | | | |
| **Proposal For** | | Expansion EC | |
| **Proposal No** | **File No** | **Submission Date** | **Activity** |

| | | | |
|---|---|---|---|
| | | | **(Schedule Item)** |
| IA/RJ/THE/549347/2025 | J-13012/154/2008-IA.II ( T) | 10/09/2025 | Thermal Power Plants (1(d)) |

**3.2.2. Project Salient Features**

**Agenda No 30.2**

**30.2** Proposed Expansion of Kawai Thermal Power Plant under Phase–II by adding 3200 (4x800) MW Ultra Super Critical Thermal Power Plant to Existing 1320 (2x660) MW by **M/s. Adani Power Limited** located at Village Kawai, Tehsil Atru, **District Baran, Rajasthan –Environmental Clearance – regarding.**

**[Proposal no. IA/RJ/THE/549347/2025, F.No. J-13012/154/2008-IA.II (T)]**

**Name of the EIA consultant:** M/s Gaurang Environmental Solutions Pvt. Ltd. [S. No. 98 List of ACOs with their Certificate No. NABET/EIA/2326/RA 0338 Valid up to: 07.12.2026.

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.2.2:** The project of M/s. Adani Power Limited located in Kawai Village, Atru Tehsil, Baran District, Rajasthan State is enhancement of power generation capacity from 1320 MW to 4520 MW.

**30.2.3:** The existing project was accorded environmental vide lr. no. J-13012/154/2008-IA.II(T) dated 04.05.2011 from MoEF&CC. Subsequently, EC amendment was granted on 13.03.2014 and later EC was transferred to Adani Power Limited (APL, Kawai) from M/s Adani Power Rajasthan Ltd on 24.04.2023. Consent to Operate for the existing unit 1320 (2x660) MW was accorded by Rajasthan State Pollution Control Board (RSPCB) vide lr. No.-F(CPM)/Baran(Atru)/1028(1)/2020-2021/7187-7189 dated 20.02.2024. The validity of CTO is up to 28.02.2029.

**30.2.4**: Implementation status of the existing EC

| S.No. | Configuration | Capacity (MW) | As per EC dated | Condition No. | Implementation Status as on date | Re-assessment by RO | Response by PP |
|---|---|---|---|---|---|---|---|
| 01. | 2 x 660 MW | 1320 MW | J-13012/154/2008-IA.II(T) dated 04.05.2011, EC Amendment dated 13.03.2014 and EC Transferred to APL dated 24.03.2023 | Specific | Unit is Operational (Since 2013) | | 1320 MW |
| | Minimum required water flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/Rivers (as applicable) even in lean seaso | No details submitted. | **EC I. No. J-13012/154/2008-IA.II (T) dated; 04.05.2011, EC amendment dated; 13.03.2014 & Transferred EC dated; 24.04.2023.** | | | | **Complied.** APL, Kawai has no role in the distribution of water from Parvan River (irrigation Project). Water Resource Department, Govt. of Rajasthan are maintaining the minimum wa |
| 1 | | | | Specific Condition no. XII | NA | | |

| S.No. | Non- Compliance details | Observation of RO (abridged) | Condition No. | | | Re-assessment by RO / Response by PP |
|---|---|---|---|---|---|---|
| | | | EC date | Specific | General | |
| | n. | | | | | ter flow required during lean season.<br>We have conducted Water Source Sustainability Study by reputed Govt. Institute (IISWBM Kolkata), the report concludes that even after utilization of water by Kawai TPP still 16 MCM water will be left with Govt. of Rajasthan for down stream users and can be used to maintain the river's ecological flow. |
| 2 | A long-term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter, mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place. | PP has submitted the Test results of coal samples for radioactivity and heavy metal. | | Specific condition no. **xxix** | NA | **Being Complied.**<br>Radioactivity analysis in Coal and Ash is being carried out by the **Department of Atomic Energy, Board of Radiation and Isotope Technology (BRIT) Government of India.** Analytical results show that the measurement values are below the clearance level for radionuclides of natural origin in bulk solid materials.<br>For provision mechanism for an in-built continuous monitoring for radioactivity and heavy metals in c |

| S.No. | Non- Compliance details | Observation of RO (abridged) | Condition No. | | | Re-assessment by RO / Response by PP |
|---|---|---|---|---|---|---|
| | | | EC date | Specific | General | |
| | | | | | | oal and fly ash (including bottom ash), the technology and monitoring instruments are not available with the suppliers in the Country and is also technically not feasible to monitor in this mechanism. The amendment will be made of this EC condition on Parivesh Portal. |

**30.2.6: Status of $SO_2$ emission standards as per the MoEF&CC Notification dated 11/07/2025**:

i. Categorization details of TPP : **C** ( Other than those included in Category A and B)
ii. Sulfur content of the coal to be fired in the boiler: < 0.5%
iii. Status of FGD installation for existing unit: Not applicable as per MoEFCC Notification dated 11.07.2025
iv. Action plan for installation of new stack in compliance to the notification number GSR 742 (E) dated the 30/08/1990 for the proposed expansion.: Two Chimneys with 275 m height (Twin flue) is proposed. MoEFCC Notification dated 11.07.2025 shall be followed.

| Proposal No with date | Consideration | Details | Date of accord | ToR Validity |
|---|---|---|---|---|
| IA/RJ/THE/467570/2024 dated 13.04.2024 | 9th &11th meeting of EAC held on 07.05.2024 & 27-28. 05. 2024. | Terms of Reference | 29.07.2024 | 28.07.2028 |

| S. No. | Particulars | Details | Remarks |
|---|---|---|---|
| 1. | Total land | 820.7 ha (Existing: 350 ha + Proposed: 470.7ha) [Private: 140.8 ha; Govt.: 679.9 ha; Agriculture --NA--ha;] | Land use: Industrial. The land is already under possession with Adani Power Limited |

| S. No. | Particulars | Details | | | | Remarks |
|---|---|---|---|---|---|---|
| 2. | Land use break up | **Facilities** | **Existing Area (In Ha) (Phase-I)** | **Proposed Area (In Ha) (Phase-II)** | **Total (Ph I & Ph-II)** | |
| | | Main Plant | 70 | 138 | 208 | |
| | | Coal Handling System | 40 | 65.2 | 105.2 | |
| | | Water System | 65 | - | 65 | |
| | | Switch Yard | NIL* | | | |
| | | Green Belt | 79 | 169.44 | 289.44 | |
| | | | **Additional 41 Ha, Greenbelt and plantation have already been completed in the Phase II Area and all around the plant boundary. (79+41+169.44= 289.44 Ha)** | | | |
| | | Roads | NIL* | | | |
| | | Ash Pond | 60 | 57.06 | 117.06 | |
| | | Railway Siding | NIL* | | | |
| | | Water Supply Pipeline | NIL* | | | |
| | | Ash Transport Pipeline | NIL* | | | |
| | | **Others** | | | | |
| | | Ash based Industries | 6 | - | 6 | |
| | | Township | 30 | - | 30 | |
| | | **Total** | **350** | **470.7** | **820.7** | |
| | | **** Included in Main Plant Area*** | | | | |

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>3.</td><td>Land acquisition details as per MoEF&CC O.M, dated 7/10/2014</td><td>The land is already in possession with Kawai TPP.<br>The expansion project is proposed within the existing plant area.</td><td>Land Documents are submitted along with EC application.</td></tr>
<tr><td>4.</td><td>Existence of habitation & involvement of R&R, if any.</td><td><u>Project site</u>: Name of village (if any): No habitation and no R&R.<br>Study Area: As below
<table>
<tr><th>Habitation / village</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Nimoda</td><td>Adjoining</td><td>N</td></tr>
<tr><td>Dara</td><td>Adjoining</td><td>N</td></tr>
<tr><td>Baldevpura</td><td>Adjoining</td><td>NNW</td></tr>
<tr><td>Salpura</td><td>0.150</td><td>S</td></tr>
<tr><td>Kherli Gaddiyan</td><td>0.350</td><td>E</td></tr>
<tr><td>Kawai</td><td>1.0</td><td>SW</td></tr>
<tr><td>Chhatrapura</td><td>1.0</td><td>NNW</td></tr>
<tr><td>Sagora</td><td>1.40</td><td>NE</td></tr>
<tr><td>Phulbaroda</td><td>1.50</td><td>SSE</td></tr>
<tr><td>Karikheri</td><td>1.50</td><td>NNE</td></tr>
<tr><td>Kolukhera</td><td>1.60</td><td>ESE</td></tr>
<tr><td>Bilkera</td><td>1.70</td><td>E</td></tr>
<tr><td>Barlan</td><td>3.0</td><td>NW</td></tr>
<tr><td>Hani Hera</td><td>3.0</td><td>W</td></tr>
</table></td><td>R&R Not applicable/ not involved.</td></tr>
<tr><td>5</td><td>Existence of school and hospital if any.</td><td>A. <u>School</u><br>Project site: Nil<br>Study Area: As below
<table>
<tr><th>School</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Government Primary School, Salpura Station</td><td>0.20</td><td>S</td></tr>
<tr><td>Govt. Higher Secondary School, Salpura</td><td>0.23</td><td>S</td></tr>
<tr><td>Eklavya Model Residential School, Chhatrapura</td><td>0.25</td><td>NNW</td></tr>
<tr><td>Govt. Upper Primary School, Nimoda</td><td>1.07</td><td>E</td></tr>
<tr><td>Govt. High Sr. Sec. School, Dara</td><td>1.12</td><td>N</td></tr>
<tr><td>Swami Vivekanand Govt. Model School, Atru</td><td>1.50</td><td>NNW</td></tr>
<tr><td>Govt. S. S. School, Kolhukheras</td><td>1.75</td><td>E</td></tr>
<tr><td>Govt. S.S. School, Phulbaroda</td><td>2.0</td><td>SSE</td></tr>
<tr><td>Govt. School, Bilkhera</td><td>2.0</td><td>E</td></tr>
<tr><td>Government primary school Atru,</td><td>4.0</td><td>NW</td></tr>
</table>
B. <u>Hospital</u><br>Project site: Nil<br>Study Area: As below
<table>
<tr><th>Hospital</th><th>Distance (Km)</th><th>Direction</th></tr>
</table></td><td></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>Sub Health Centre, Dara</td><td>0.10</td><td>N</td></tr>
<tr><td>Govt. Hospital Kawai</td><td>0.90</td><td>S</td></tr>
<tr><td>CHC, Kawai</td><td>0.90</td><td>S</td></tr>
<tr><td>Rajasthan Ayush Ayurved, Kawai</td><td>1.00</td><td>S</td></tr>
<tr><td>Pravya Health Care Centre, Salpura</td><td>4.80</td><td>S</td></tr>
</table>
</td><td></td></tr>
<tr><td>6.</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>1</td><td>24°48'49.45"</td><td>76°43'52.90"</td></tr>
<tr><td>2</td><td>24°49'52.57"</td><td>76°43'13.78"</td></tr>
<tr><td>3</td><td>24°49'18.09"</td><td>76°43'9.64"</td></tr>
<tr><td>4</td><td>24°50'16.91"</td><td>76°42'16.70"</td></tr>
<tr><td>5</td><td>24°50'17.26"</td><td>76°41'49.49"</td></tr>
<tr><td>6</td><td>24°48'52.21"</td><td>76°42'36.87"</td></tr>
<tr><td>7</td><td>24°48'12.53"</td><td>76°43'23.90"</td></tr>
<tr><td>8</td><td>24°48'7.23"</td><td>76°43'44.16"</td></tr>
<tr><td>9</td><td>24°47'20.05"</td><td>76°43'34.43"</td></tr>
<tr><td>10</td><td>24°47'17.07"</td><td>76°43'58.42"</td></tr>
<tr><td>11</td><td>24°47'2.40"</td><td>76°44'42.01"</td></tr>
<tr><td>12</td><td>24°45'43.52"</td><td>76°44'29.90"</td></tr>
</table>
B. Ash Pond
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>24°49'6.50"N</td><td>76°42'31.91"E</td></tr>
<tr><td>2</td><td>24°49'15.24"N</td><td>76°43'5.05"E</td></tr>
<tr><td>3</td><td>24°48'51.15"N</td><td>76°43'19.67"E</td></tr>
<tr><td>4</td><td>24°48'47.00"N</td><td>76°42'43.15"E</td></tr>
<tr><td>5</td><td>24°48'55.27"N</td><td>76°42'44.09"E</td></tr>
</table>
</td><td></td></tr>
<tr><td>7.</td><td>Elevation of the project site</td><td>Average site elevation of TPP: 315 m AMSL<br>Maximum Elevation – 328 m AMSL<br>Minimum Elevation – 302 m AMSL</td><td></td></tr>
<tr><td>8.</td><td>Involvement of Forest land if any.</td><td>NA<br>No Forest land is involved.</td><td>NOC has been issued for no involvement of forest land by DCF, Baran vide Letter no. 5356 dated 29.08.2025</td></tr>
<tr><td>9.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drai</td><td>Project Site:<br>Name: NA<br>Study area:
<table>
<tr><th>Water body</th><th>Distance (in km)</th><th>Direction</th></tr>
<tr><td>Pond, Baldevpura</td><td>0.18</td><td>NNW</td></tr>
</table>
</td><td>HFL letter from WRD received, vide letter no Spl 01 Dated 1</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td>nage, Canal etc.) exists within the project site as well as study area</td><td>
<table>
<tr><td>Lhasi Nadi</td><td>0.20</td><td>SSE</td></tr>
<tr><td>Andheri Nadi</td><td>0.25</td><td>SSE</td></tr>
<tr><td>Pond 1, Kawai</td><td>0.80</td><td>S</td></tr>
<tr><td>Pond 2, Kawai</td><td>1.0</td><td>S</td></tr>
<tr><td>Parbati River</td><td>2.93</td><td>NE</td></tr>
<tr><td>Pond, Barlan</td><td>3.0</td><td>NW</td></tr>
<tr><td>Pond, Atru</td><td>4.0</td><td>NNW</td></tr>
<tr><td>Rhupsi Nala</td><td>5</td><td>W</td></tr>
<tr><td>Kukar Talav</td><td>6.9</td><td>WSW</td></tr>
<tr><td>Pond, Moosal Gujran</td><td>7.0</td><td>SW</td></tr>
<tr><td>Ghoghra Nala</td><td>7.5</td><td>W</td></tr>
<tr><td>Parbati Canal</td><td>7.7</td><td>NNW</td></tr>
</table>
*Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.*
</td><td>9.08.2025. The HFL of Andheri River is 304.85 meters.</td></tr>
<tr><td>10.</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>
<u>Study area</u><br>
Name of the ESZ/ESA: NA<br>
Status of Notification: NA<br>
Distance of project from ESZ/ESA: NA<br>
Authenticated map of ESZ projecting distance of ESZ from project site: NA<br>
Status of NBWL approval: NA<br>
List of Reserved and protected forests:
<table>
<tr><th>Reserve Forest (R.F), Protected Forest (P.F)</th><th>Distance (In km)</th><th>Direction</th></tr>
<tr><td>Kheldi Birdagaddiyan Block Forest</td><td>Adjoining</td><td>E</td></tr>
<tr><td>Kawai Kalan Block Forest</td><td>Adjoining</td><td>SSE</td></tr>
<tr><td>Dara Block Forest</td><td>Adjoining</td><td>W</td></tr>
<tr><td>Bir Daranimoda Block (R.F.)</td><td>Adjoining</td><td>N</td></tr>
<tr><td>Kawai Block Forest</td><td>0.12</td><td>W</td></tr>
<tr><td>Bir Sunda Umriwala Block (R.F.)</td><td>0.4</td><td>E</td></tr>
<tr><td>Baldevpura Block</td><td>0.55</td><td>N</td></tr>
<tr><td>Chhatarpura Block Forest</td><td>0.85</td><td>WNW</td></tr>
<tr><td>Bir Parlya Block Forest</td><td>3</td><td>WSW</td></tr>
<tr><td>Ratan Block Forest</td><td>3.1</td><td>NNW</td></tr>
<tr><td>Dilod Block (P.F.)</td><td>3.2</td><td>N</td></tr>
<tr><td>Narsinghpura (P.F.)</td><td>3.2</td><td>ENE</td></tr>
<tr><td>Ugrapura (P.F.)</td><td>6.3</td><td>WSW</td></tr>
<tr><td>Bir Govindpura Block</td><td>7.8</td><td>NNW</td></tr>
<tr><td>Sigri Block (P.F.)</td><td>7.9</td><td>N</td></tr>
</table>
No National Park, Sanctuary, Elephant/Tiger Reserve, or migratory routes/wildlife corridor exists within 10 km of the TPP. NOC from Forest Department, Baran has been obtained vide Letter no. कमांक – एफ()/FCA/उ व सं./2025-26/4222 dated 26.06.2025 state that there is no Wildlife Sanctuary / National Park, Elephant / Tiger Reserve Present within 10 km of project area.
</td><td></td></tr>
<tr><td>11.</td><td>Archaeological sites</td><td>There are no Archeological Sites present within the study area.</td><td></td></tr>
</table>

| S. No. | Particulars | Details | Remarks |
|---|---|---|---|
| | monuments/ historical temples etc. | | |
| 12. | Facility envisaged in CRZ area (Only for coastal power plant) | **Name of the facility in CRZ area** – NA<br>**Recommendations of CZMA** – NA<br>**Status of CRZ clearance – NA** | |
| 13. | Involvement of Critically Polluted Area/Severely Polluted area as per 2018CEPI score | **Involvement of CPA/SPA:** - NA<br>**Proximity to CPA/SPA:** - NA | There is no CPA/SPA as per CPCB Index. |

| S. No. | Existing power plant configuration and capacity | Proposed power plant configuration and capacity | Total | Technology adopted |
|---|---|---|---|---|
| 1 | 1320 (2x660) MW | 3200 (4x800) MW | **4520 MW (1320+3200)** | Super Critical & Ultra Super Critical |

| Details | Fuel requirement ( MTPA) | Source | Distance from site (Kms) | Mode of Transportation | Coal /LDO characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| Coal (Existing TPP) | 5.50 | FSA with NCL/ SECL | 700-800 km | Rail | Ash <40 (%)<br>Sulphur <0.40 (%)<br>Moisture-17 (%)<br>GCV - 3200-4300 Kcal/Kg | FSA |
| Coal (Proposed TPP) | 12.9 (85% PLF) | Coal from Coal Mines of Jitpur, Rampia, Ujheni & e-auction for | 700-1200 km | Rail | Ash <40 (%)<br>Sulphur <0.50 (%)<br>Moisture-17 (%) | FSA and E-auction |

| Details | Fuel requirement ( MTPA) | Source | Distance from site (Kms) | Mode of Transportation | Coal /LDO characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| | | proposed project. | | | GCV - 3200-4300 Kcal/Kg | |
| LDO/HSD (Existing TPP) | 23000 KL/Annum | LDO/HSD from Local Market/Vendor | 50-100 km | Road | Low Sulphur (3-5% mass) | Local Vendor |
| LDO/HSD (Proposed TPP) | 30,000 Kl/Annum | LDO/HSD from Local Market/Vendor | 50-100 km | Road | Low Sulphur (3-5% mass) | Local Vendor |

**30.2.11: Water requirement:** Existing Water requirement is 93151 $m^3$/day, water requirement is obtained from Parwan River and permission for the same has been obtained from WRD vide letter no. CEWR/TA (W)/1482 dated 11.08.2009. The water requirement for the proposed project is estimated as 153425 $m^3$/day, which will be obtained from Parwan River. In this regard, Bureau of Investment Promotion Vide Lr. No. BIP UKS Energy/2024/364 Dated 16.11.2024 asked the Water Resources Department, Government of Rajasthan for allocation of 52 MCM water from Parwan Dam based on the application submitted by the proponent vide letter dated 03/06/2024. The final approval from Water Resources Department, Government of Rajasthan is awaited. The water will be transported to plant site through existing water pipeline The specific water consumption for the proposed power plant will be < 2.5 m3/MWhr.

**30.2.12: Existing power requirement:** Existing power requirement of 42 MW is obtained from self-generation, i.e, AUX consumption. The power requirement for the proposed project is estimated as 180 MW, and will be obtained from the existing TPP, i.e, AUX consumption.

**30.2.13: Baseline Environmental Studies:**

<table>
<tr><th>Period</th><th>October' 2024 to December' 2024</th><th>Addition study (if any)</th></tr>
<tr><td>AAQ parameters at 11 Locations (min and max)</td><td>
<table>
<tr><th>Parameter</th><th>Min (µg/m$^3$)</th><th>Max (µg/m$^3$)</th></tr>
<tr><td>$PM_{10}$</td><td>42.5</td><td>69.5</td></tr>
<tr><td>$PM_{2.5}$</td><td>24.2</td><td>48.3</td></tr>
<tr><td>$SO_2$</td><td>2.1</td><td>10.9</td></tr>
<tr><td>NOx</td><td>2.0</td><td>13.4</td></tr>
<tr><td>CO</td><td>0.021</td><td>0.261</td></tr>
</table>
</td><td>--</td></tr>
<tr><td>Incremental GLC level</td><td>$PM_{10}$= Max. GLC: 0.663 µg/m$^3$ within project site in SSW direction<br>$SO_2$ = Max GLC: 13.8 µg/m$^3$ within project site in SSW direction<br>$NO_x$ = Max GLC: 4.08 µg/m$^3$ within project site in SSW direction<br>Note:<br>● High Efficiency Electrostatic Precipitator (ESP) is proposed to install to meet PM emission as per the norms.<br>● For $SO_2$, 275m high Chimney is proposed. MoEFCC Notification dated 11.07.2025 shall be followed.</td><td>--</td></tr>
</table>

<table>
<tr><th>Period</th><th>October' 2024 to December' 2024</th><th>Addition st udy (if any)</th></tr>
<tr><td></td><td>● SCR/SOFA with low NOx burner to meet NOx emission as per the norm s.</td><td></td></tr>
<tr><td>Ground water quality at 08 l ocations</td><td>pH: 7.65 to 7.76, total Hardness (as CaCO3): 408 mg/l – 477 mg/l; Chlor ides: 120–170 mg/l; Fluoride: (0.16-0.24 mg/l; Heavy metals like Copper (as Cu) - BDL(DL-0.001) - BDL(DL-0.01), Lead (as Pb) - BDL(DL-0.005)- BDL(DL-0.01), Cadmium (as Cd) - BDL(DL-0.005), Chromium (as Cr) - B DL(DL-0.005), and Arsenic (as As)- BDL(DL-0.005).</td><td>--</td></tr>
<tr><td>Surface water quality at 07 l ocations</td><td>pH 6.78 to 7.11, Dissolved Oxygen: 5.2 to 6 mg/lit; BOD:2-3mg/L; COD: 3-15 mg/l</td><td>--</td></tr>
<tr><td>Effluent gener ation details a nd its treatme nt</td><td></td><td>The project is b ased on Zero Li quid Discharge (ZLD).</td></tr>
<tr><td>Noise levels L eq (Day and Nig ht) at 11 loca tions</td><td>The Leq values for daytime was observed to be 45.1 to 48.9 dB (A), while during night time 35.8 to 39.5 dB (A).</td><td>--</td></tr>
<tr><td>Traffic assess ment study fi ndings</td><td>· Traffic study has been conducted at SH 37 which is approximately 0.2 km from the plant site.<br>· Transportation of raw material (coal) will be done 100 % by Rail.<br>· Existing PCU is 96.94 PCU/hr on SH37 and Existing level of service (LOS) is A.
<table>
<tr><th>Road</th><th>V (Volume in PC U/hr)</th><th>C (Capacity in PCU/hr)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>SH-37</td><td>82.62</td><td>625</td><td>0.13</td><td>A</td></tr>
</table>
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr)</th><th>C (Capacity i n PCU/hr)</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
<tr><td>SH-37</td><td>107.5</td><td>625</td><td>0.17</td><td>A</td></tr>
</table>
* Note: Capacity as per IRC 64:1990 Guideline for capacity of roads. (Only for road transport)<br>· Conclusion: The level of service will be "A- Excellent" after including additi onal traffic due to proposed project.</td><td>--</td></tr>
<tr><td>Soil Quality at 10 Locatio ns</td><td>pH range 7.41 to 7.65; Electrical conductivity (EC); 190 to 240 mhos/cm; Calcium: 88 to 195 mg/kg; Sodium:80 to 119 mg/kg; potassium: 160 to 210 kg/Ha; Total Kjehdahl Nitrogen: 10.4 to 12.6 kg/Ha mg/kg; Phospho rous: 10.8 to 14.8 kg/Ha; Cation Exchange Capacity (CEC): 3.9 to 6.4 me g/100gm; Magnesium: 38 to 48 mg/kg; Organic Matter: 0.73% to 0.94 %</td><td>--</td></tr>
<tr><td>Flora and fau</td><td>09 Schedule I Species observed in the buffer zone of study area during</td><td>The List of Flor</td></tr>
</table>

<table>
<tr><th>Period</th><th>October' 2024 to December' 2024</th><th>Addition st udy (if any)</th></tr>
<tr><td>na</td><td>field survey. Out of 09 Schedule I Species, 07 are mammals, 01 are avif auna and 01 herpeto-fauna.</td><td>a & Fauna is dul y certified by D CF, Baran letter No 4221 dated 26.06.2025 .<br>Wildlife Conser vation Plan has been prepared and submitted f or further appr oval from Fores t office.</td></tr>
<tr><td>Hydrogeology study</td><td>The action plan to address the Recommendation of the Hydrogeology re port and Watershed management plan are as below:
<table>
<tr><th>S. No</th><th>NIT Recommendations</th><th>Action Plan</th></tr>
<tr><td>1.</td><td>Since, the groundwater sample from Dilod (WS-24) shows a T DS level of 998 ppm, which ex ceeds the acceptable limit but i s well below the permissible li mit as per IS 10500:2012, it is recommended to ensure some preliminary treatment in order t o avoid scaling, corrosion, and fouling in boilers, cooling towe rs, and other plant equipment, reducing efficiency of the plant' s operations.</td><td>Water quality monitoring sh all be done once a month th rough NABL accredited labo ratory to monitor TDS Leve l.</td></tr>
<tr><td>2.</td><td>As the levels of total hardness as CaCO3 exceeds the permissi ble limit in Neemoda (WS-1) sa mple, it is essential to impleme nt effective water treatment to protect plant equipment and m aintain operational efficiency, p otential remediation efforts can be suggested in the report to e nsure that the plant has a sche duled descaling and maintenan ce plan for equipment where sc aling is a concern.</td><td>Water quality monitoring sh all be done once a month e ngaging NABL accredited la boratory to track hardness as CaCO3 content and corr ective/preventive actions wi ll be taken based on finding s in the report.</td></tr>
<tr><td>3.</td><td>While the maximum calcium lev el at Neemoda (WS-1) is withi n the permissible limit of 200 p pm as per IS 10500:2012, it ex ceeds the acceptable limit of 7 5 ppm, which may lead to encr ustation and scaling in water su pply systems, causing blockage s and reduced efficiency. Poten</td><td>Regular monitoring of grou ndwater quality, particularly calcium concentration, will be conducted to track any t rends or deterioration. Insta llation of suitable water sof tening systems, such as ion exchange units/RO, can be considered to reduce hardn</td></tr>
</table></td><td>Consultant det ails:<br>The hydrogeo logy study rep ort has been p repared by M/ s. Akshar Geo Services Pvt. L td & Vetted b y NIT Delhi.</td></tr>
</table>

| Period | October' 2024 to December' 2024 | Addition st udy (if any) |
|---|---|---|
| | tial remedial measures can be s uggested in report to control t he calcium levels. ess at the source. Periodic maintenance and descaling of pipelines, storage system s, and water-handling equip ment will be done. | |
| Impact study on bio-diversi ty and aquatic ecology | Recommendations of study report: | Indian Institute of Social Welf are and Busine ss Manageme nt (University of Calcutta), K olkata in 202 4. |
| Risk Assessm ent Study | Project specific risk assessment with respect to storage of LDO & Coal s torage and other hazardous chemicals is included in Final EIA-EMP Repor t.<br>The appropriate preventive measures and necessary safeguards such as t oxic and flammable gas detectors, alarm / interlock systems, breathing a pparatus for working personnel, fire protection systems such as fire exti nguishers, water curtain, fire water hydrants in place, the untoward cons equences and the major risk due to the same could be eradicated | Gaurang Envir onmental Solu tions Pvt. Ltd. |
| Marine Impac t Assessment Study (Only f or coastal bas ed TPPs) | Not Applicable | -- |

| S. No. | Type of W aste | Source | Quantity g enerated (T PA) | Mode of Treat ment | Disposal | Remark s |
|---|---|---|---|---|---|---|
| 1 | Municipal S olid Waste | Plant Cant een | 114 | Collected; segr egated using c olor coded wa ste bin, Organi c waste conver ters (OWC) | Inorganic will be dis posed via local mun icipal authorized ve ndor & Organic/ Bi odegradable waste by OWC. | - |
| 2 | E-waste | IT & Telec om Equip ment | 3.5 | Collected; segr egated | Registered Recycler vendor | |
| 3 | Battery wa ste from U PS | Automotiv e & Indust rial | 7 | Collected; segr egated | Authorized Vendor | |
| 4 | Bio medical | First aid c | 0.12 | Collected; segr | Authorized vendor | |

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment | Disposal | Remarks |
|---|---|---|---|---|---|---|
| | waste | enter | | egated | | |
| 5 | Hazardous Waste | Plant Operation | Used/Spent Oil – 90 TPA, Waste or residues Empty Barrels/ Containers/ Contaminated Liners – 15 TPA contaminated cotton – 5.0 TPA | - | Registered Recyclers/Pre-processors with SPCB & Authorized Recyclers | |

**30.2.15: Public Consultation**: The public hearing was conducted on 07.07.2025 at Project Site, Near Nimoda Anganwadi, Village Nimoda, Gram Panchayat Dara, Tehsil Atru, Baran.

| | |
|---|---|
| Details of advertisement given | 1. Times of India dated 05.06.2025<br>2. Dainik Bhaskar dated 05.06.2025<br>3. Rajasthan Patrika dated 05.06.2025 |
| Date of public consultation | Date: 07.07.2025, Monday, 11:00 AM |
| Venue | At Proposed Project Site, Near Nimoda Aanganwaadi, Village Nimoda, Gram Panchayat Dara, Tehsil Atru, Baran |
| Presiding Officer | 1. Sri Om Prakash Chandelia, Sub Divisional Magistrate, Baran<br>2. Sri Anurag Yadav, Regional Officer, Rajasthan Pollution Control Board, Jhalawar |
| Major issues raised | Employment to Local People, Community Rural Infrastructure Development, Dust generation issue, Education, Community Health & infrastructure, Job to locals |
| No. of people attended | Attended: About.800 (Signed in RSPCB attendance sheet– About 220 Nos.) |

**Action plan as per MoEF&CC O.M. dated 30/09/2020**

| S. No | Physical activity and action plan | | Year of implementation (Budget in Crores) | | | | | Recuring Budget (Rs. in Crores) through CSR | Total Budget (Rs. in Crores) |
|---|---|---|---|---|---|---|---|---|---|
| | Name of the Activity | Physical Targets | 1st | 2nd | 3rd | 4th | 5th | 6th-10th | |
| A | Educational Initiatives | 5 years | **3.6** | **3.6** | **3.6** | **3.6** | **3.6** | **2.15** | 20.15 |
| B | Community Health Initiatives | 5 Years | **2.7** | **2.7** | **2.7** | **3.2** | **3.2** | **2.45** | 16.95 |
| C | Sustainable Livelihood and Women Empowerment | 5 Years | **1.30** | **1.30** | **1.30** | **1.30** | **1.30** | **1.70** | 8.20 |
| D | Community Rural Infrastructure Development | 5 Years | **3.81** | **3.81** | **3.81** | **3.81** | **3.81** | **3.45** | 22.5 |
| E | Sports & Culture Development | 5 Years | **0.5** | **0.5** | **0.5** | **0.5** | **0.5** | **1.0** | 3.5 |
| F | Tree plantation in Govt. School and Community Health Centre | 5 Years | **0.64** | **0.64** | **0.64** | **0.64** | **0.64** | **1.0** | 4.2 |
| Total | | | 12.55 | 12.55 | 12.55 | 13.05 | 13.05 | 11.75 | 75.5 |

**30.2.16: Project cost**: Existing capital cost of project was Rs. 8264.59 Crore. The capital cost of the proposed project is Rs. 36,600 Crores and the capital cost for environmental protection measures is proposed as Rs. 2608 Crores (Excluding cost towards addressal of Public Consultation). The annual recurring cost towards the environmental protection measures is proposed as Rs. 39.69 Crores (Excluding cost towards addressal of Public Consultation). The employment generation from the proposed project (Construction Phase) is 350 (Permanent) and 8,000 (Contractual) and during Operational phase; (300 – Permanent & 1500 Contractual). The details of cost for environmental protection measures are as follows:

| S. No. | Item Description | Existing (Rs. In Crore) | | Proposed (Rs. In Crore) | |
|---|---|---|---|---|---|
| | | Cost (Rs. in Crores) | Recurring Cost (Rs. in Crores) | Cost (Rs. in Crores) | Recurring Cost (Rs. in Crores) |
| 1 | Air Pollution Control | 612.1 | 22.23 | 1528 | 25 |
| 2 | Noise Control | | | 8 | 2 |

| | | | | | |
|---|---|---|---|---|---|
| 3 | Water Pollution Control | | | 493 | 0.49 |
| 4 | Ash Management | | | 510 | 10 |
| 5 | Environmental Monitoring & Management | | 0.30 | 23 | 0.2 |
| 6 | Green Belt Development | | 1.29 | 24 | 1 |
| 7 | Others (Rainwater Harvesting & Solar) | | - | 22 | 1 |
| | **Total (Crores)** | **612.1** | **23.66** | **2608** | **39.69** |
| 8 | Addressal of Public Consultation | | | **75.5 (CER budget for 05 years)** | |

**30.2.17: Green belt development**: Existing green belt has been developed in 120 ha area which is about 34 % of the total project area of 350 ha with total sapling of 1,41,240 Trees. The proposed greenbelt will be developed in 169.44 Ha which is about 36% of the total proposed project area of 470.7 Ha with a total proposed sapling of 4,23,600 nos. Hence, total area under green belt development will be 289.44 Ha (35.2 % of 820.7 Ha). A 20 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 2 yers 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 4,23,600 proposed saplings will be planted and nurtured in 169.44 hectares in 5 years.

**30.2.18: Ash management for last three years (Only for expansion cases)**

| Year | Quantity generated (MTPA) | Quantity utilized (MTPA) | % of utilization | Balance quantity (MTPA) | No. of storage silos with capacity |
|---|---|---|---|---|---|
| FY 2022-23 | 1.36 | 1.38 | 101.47 | ... | **Existing (3x2200 MT)** |
| FY 2023-24 | 1.42 | 1.29 | 91.13 | 0.13 | |
| FY 2024-25 | 1.41 | 1.41 | 100.00 | ... | |

**A. Fly ash Details for last three years: 3.12 MT** (Fly Ash Utilization details as below)

| S.No. | Activity (as applicable) | Quantity | Percentage | Remarks (Prior approval of SPCB details to be mentioned) |
|---|---|---|---|---|
| 1 | Fly ash based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels) | 0.0017 | 0.06 | |
| 2 | Cement manufacturing | 2.8 | 90.54 % | |
| | Filling up of low lying area | 0.29 | 9.41 | |

| | | | | |
|---|---|---|---|---|
| 3 | Use in overburden dumps | 0.42 | 0.43% | |
| | **Total** | **3.12** | **100%** | |

**B. Bottom ash details for last three years:** 0.97 MTPA

| S.No. | Activity (as applicable) | Quantity | Percentage | Remarks (Prior approval of SP CB details to be mentioned) |
|---|---|---|---|---|
| 1 | Fly ash based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels) | 0.75 | 77.23% | |
| 2 | Construction of roads, road and fly over embankment | 0.004 | 0.41% | |
| | Filling up of low lying area | 0.22 | 22.35 % | |
| | **Total** | 0.97 | ~ 100**%** | |

**C. Legacy ash details:** There is no legacy ash

**D. Ash Pond details**: Stage I (existing ash pond)

| S.No. | Details of Ash pond | Ash pond 1 | Ash pond 2 | Ash pond 3 | Total |
|---|---|---|---|---|---|
| 1. | Status of ash pond (Active/Exhausted (yet to be reclaimed)/ Reclaimed) | Active | -- | --- | Active |
| 2. | Area (Ha) | 60 | -- | --- | 60 |
| 3. | Dyke height (m) | 7 | -- | --- | 7 |
| 4. | Volume ($m^3$) | 4249350 | -- | --- | 4249350 |
| 5. | Quantity of ash disposed (Million Metric Tons) as on 31st March 2025. | 0.256104 | -- | --- | 0.256104 |
| 6. | Available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons) | 93.97% 3993246 MT | -- | --- | 93.97% 3993246 MT |
| 7. | Expected life of ash pond (number of years and months) | 20 Years | -- | --- | 20 Years |
| 8. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HDPE | -- | --- | HDPE |
| 9. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | LCSD | -- | --- | LCSD |

| S.No. | Details of Ash pond | Ash pond 1 | Ash p ond 2 | Ash pond 3 | Total |
|---|---|---|---|---|---|
| 10. | Ratio of ash: water in slurry mix ( 1:_): | 1:5 | -- | --- | 1:5 |
| 11. | Ash water recycling system (AWRS) installed and functioning : Yes or No | Yes | -- | --- | Yes |
| 12. | Quantity of wastewater from ash pon d discharged into land or water body ( $m^3$) | 0 | -- | --- | 0 |
| 13. | Last date when the dyke stability stud y was conducted and name of the org anization who conducted the study: | -- | -- | --- | -- |
| 14. | Last date when the audit was conduct ed and name of the organization who conducted the audit: | October'2 4 NIT Delhi | -- | --- | October'24 NIT Delhi |

**E. Proposed ash utilization plan for expansion project**

| Details | Existin g gener ation (Phase-1) (MT PA) | Propos ed gen eration (Phase-II) (MTPA) | Tot al | Utilizati on (M TPA) | % of utilizati on | Balan ce qu antity (MTP A) | No. of st orage silo s with ca pacity |
|---|---|---|---|---|---|---|---|
| **Ash** (Fly & Botto m) | 1.65 | 5.16 | 6.81 | 6.81 | 100 | 0 | Existing ( 3x2200 MT) Proposed (5x2500 MT) |

| S. No. | Details of Ash pond | Ash pond |
|---|---|---|
| 1. | Area (Ha) | 57.06 |
| 2. | Dyke height (m) | 15 |
| 3. | Volume ($m^3$) | 85.6 Lakh m3 |
| 4. | Quantity of ash to be disposed (Metric Tons) | 94.0 Lakh MT |
| 5. | Expected life of ash pond (number of years and months) | 20 Years |
| 6. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HDPE |
| 7. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry ple ase specify whether HCSD or MCSD or LCSD) | HCSD/MCSD |

| S. No. | Details of Ash pond | Ash pond |
|---|---|---|
| 8. | Ratio of ash: water in slurry mix (1:_): | 65:35 |
| 9. | Ash water recycling system (AWRS): Yes or No | Yes |
| 10. | Quantity of waste water from ash pond to be discharged into land or water body (m3) | 0 |
| 11. | Details regarding dyke stability study and name of the organization who conducted the study: | NA |

**30.2.19: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration**: There are Nine (09) court cases related to Land and other arbitrations. However, there are no court cases pertaining to the Environment & Forest. There are no Show Cause Notices pertaining to Environment & Forest. There is no any violation case pertaining to the project wrt the Environment Protection Act, 1986; Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and The Wildlife (Protection) Act, 1972.

**30.2.20: Compliance to the observations of sub-committee site visit report** (Only in case of site visit by the sub-committee)

**Date of site visit**: 6th January'2025 – 7th January'2025**.** Point wise action plan for compliance of Sub-Committee recommendations are as below**:**

| Sl. No. | Observations by Sub-Committee | Compliance Status |
|---|---|---|
| 1 | Implementation of phase wise plan for the green belt development all along the internal roads, residential colony and gap area. | Green belt being developed all along the internal roads, residential colony. Plantation in identified gap areas shall be developed as per the recommendations. Phase wise plan for green belt development is prepared and submitted along with EC Application. |
| 2 | Ensure proper maintenance of ash pond/dyke, as per the guidelines issued by the CPCB/CEA. | Proper maintenance of the ash pond/dyke is being ensured in compliance with the guidelines issued by CPCB/CEA. Regular inspections and maintenance activities are conducted to ensure the structural integrity and environmental safety of the ash pond/dyke. |
| 3 | Construction of bund and proper fencing, sign boards and plantations all around the boundary of ash ponds. | Agreed and compliance assured.<br>Bund, proper fencing and signage ensured at ash Pond.<br>Plantation along the ash dyke has been done and further gap filling shall be done to enhance the plantation density. |
| 4 | Provision of Wheel Washing System at the entry and exit to the plant and Ash Pond. | Wheel cleaning and bulker washing facility is available in ash silo area. |
| 5 | Regular monitoring system to check groundwater quality in surrounding areas and also at ash ponds. | Regular monitoring of groundwater quality in surrounding villages and around ash pond is being conducted by NABL accredited third party testing laboratory M/s IRCLAS |

| Sl. No. | Observations by Sub-Committee | Compliance Status |
|---|---|---|
| | | S Systems and Solutions Pvt. Ltd. Test report also being submitted to MoEFCC along with Six Monthly EC Compliance report. |
| 6 | Approaching road to Ash pond shall be made concrete and regular spraying of water through fog canons/fixed sprinkler to check re-suspension of dust during transportation. | Approach road for the ash pond is already pucca and few patches are stone-pitched which will be made pucca. Regular water sprinkling is being done through mobile water tankers to prevent re-suspension of dust during transportation. |
| 7 | Adequate environmental safety measures must be planned for the health and safety of the school children and villagers located in Buffer Zone. | Adequate environmental safety measures have already been considered and taken care with respect to the Existing TPP and continuous efforts to strengthen the safety measures along with Phase II Construction and Operation. |
| 8 | As per the request of staff of Govt. Adarsh Sr. Secondary School, Dara, two classrooms and girl's toilet are required under CSR activity. | We have already considered in the budget provision to provide classroom and girl's toilet with basic facilities and regular water supply is already started. |
| 9 | CAAQMS and CEMS to be connected to the server of SPCB and CPCB. | CAAQMS and CEMS are connected to the server of SPCB and CPCB. |
| 10 | The lean slurry disposal of ash and overflowing of ash pond was observed. The PP should submit the action plan for improvement in concentrated slurry disposal system and utilization of legacy ash. | Ash dyke bund strengthening has been done to prevent overflow and enhance the structural integrity of the dyke. Our efforts are to utilize maximum dry ash to reduce water consumption in slurry disposal system.<br>The dyke is operational and there is no legacy ash, and the ash is stored about 2.56 LMT same will be disposed off within 3 years. |
| 11 | The EIA report shall cover the aspect of Intake well and water supply pipeline. | Intake well and water supply pipeline has been addressed in Chapter 4 of EIA report. |
| 12 | The action plan for carbon sequestration be submitted for proposed 4 x 800 MW plan. | 423600 nos. of saplings are proposed to be planted in 5 years which shall have $CO_2$ sequestration potential of 23 418.95 ton/year. Action plan for plantation and carbon sequestration is enclosed. |

| S. No. | Additional Information Sought | Pointwise Reply/clarification |
|---|---|---|
| | PP shall re-visit and submit revised KML file. | The total land 820.7 ha is already under possession with TPP, and boundary wall is already constructed. The 820.7 ha land area has been verified and confirmed by the DFO office and local administration. The updated KML and Land confirmation letters (vide lr. No. Sr. F/ FCA/ उ |

| S. No. | Additional Information Sought | Pointwise Reply/clarification |
|---|---|---|
| | | वस/2024-25/ 5356 dated 29/08/2025) is submitted. |
| | PP shall submit the copy of water permission for the project. | Bureau of Investment Promotion Vide Lr. No. BIP UKS Energy/2024/364 Dated 16.11.2024 asked the Water Resources Department, Government of Rajasthan for allocation of 52 MCM water from Parwan Dam based on the application submitted by the proponent vide letter dated 03/06/2024. The final approval from Water Resources Department, Government of Rajasthan is awaited. |
| | PP shall submit the letters & undertaking regarding withdrawal application of the forest proposal. | |
| | PP shall submit communication from railways for development of railway infrastructure facility for the expansion project. | |
| | Pp shall submit revised Brief Information format. | The updated brief information is submitted. |
| | PP shall submit the measures adopted for water optimization for proposed TPP. | Water requirement has been optimized to < 2.5 m3/MWh which is well within the 3.0 m3/MWh stipulated by MoEF&CC prescribed standard. Details of water optimization measures for proposed TPP are submitted. |
| | PP shall submit the recent photographs of plantation done during Monsoon period. | Photographs of Plantation during Monsoon are submitted. |
| | PP shall update the statuts regarding wildlife Conservation Plan | A detailed study of Wildlife Conservation Plan for existing TPP (2X660 MW) has already conducted (Document no. EES/AG/001/259-Biological study) by consultant in consultation with forest department & conservation plan already submitted to Chief Wildlife Warden, Jaipur and DFO Baran for approval. We are regularly follow up with the DFO and PCCF Office regarding approval and WLCP payment (Demand Note).<br>The Wildlife Conservation and Management Plan (WLCP) for phase II (4X800 MW) is prepared by reputed gov. institute and submitted to DFO Office for further approval and will be implemented as per directions/recommendations received from Forest Office. Acknowledgement copy is submitted. |
| | Installation of 2.5 MW Solar Power. | We undertake and confirm that Solar power of 2.5 MW will be installed in the project site/available land in the district through CER/CSR. |

**3.2.3. Deliberations by the committee in previous meetings**

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| N/A |

**3.2.4. Deliberations by the EAC in current meetings**

**Observations and deliberation of the EAC**

**30.2.23:** The Committee observed and noted the following:
**Recommendations of the Committee:**

**30.2.24:** In view of the foregoing and after detailed deliberations, the committee ***recommended*** the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 **subject to uploading of written submission** on PARIVESH Portal and stipulation of the following specific conditions and general conditions based on project specific requirements:

**3.2.5. Recommendation of EAC**

| |
|---|
| Recommended (Subject to submission of requisite information/ documents) |

**3.2.6. Details of Environment Conditions**

**3.2.6.1. Specific**

| **[A] Environmental Management** | |
|---|---|
| 1. | Project proponent shall ensure that 100% utilization of ash generated from the proposed project in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendment. Area for the proposed ash dyke shall not exceed 57 Ha as committed. |
| 2. | Project proponent shall comply with the recommendations made in the biodiversity assessment report and Hydrogeology report in a time bound manner. Compliance status in this regard shall be submitted to the Regional Office of MoEF&CC along with the six monthly compliance report. |
| 3. | Project proponent shall comply with the recommendations made by the sub-committee during the site visit of the proposed project and compliance status in this regard shall be submitted to the Regional Office of MoEF&CC along with the six monthly compliance report. |
| 4. | The water requirement for proposed expansion (Phase-II) project is estimated as 153425 m3/day and the same shall be met from Parwan River. The specific water consumption for proposed unit shall be less than 2.5 m3/MWhr. |
| 5. | The entire coal requirement for proposed TPP shall be transported by rail network only and no road transportation is permitted. |
| 6. | 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. |

| | |
|---|---|
| 7. | Project proponent shall implement the protective measure proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs. 2608 crores 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. |
| 8. | 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. |
| 9. | Project proponent shall ensure that diesel operated vehicles will be switched over to E-Vehicles / CNG vehicles in a time bound manner, replace the passenger vehicles to E/ CNG vehicle in phased manner. Further, for local movement of officials, Contract of Vehicles deployment shall be awarded to Project affected people and all efforts for adopting heavy E-vehicles/ CNG Vehicles like Bulkers for ash transportation for short distance subject to availability of such E-vehicle and adequate charging infrastructure in the surrounding area shall be provided. PP shall submit the action taken report to concerned RO with amount spent, photographs (before & after), number of such non diesel vehicles deployed etc. in six monthly compliance report. |
| 10. | The Project Proponent shall provide stack of 275 meters height and shall abide by the provisions of the notification number G.S.R 465 (E) dated 11/07/2025 related to FGD. |
| 11. | Project proponent shall ensure that pipelines carrying the fly ash and effluent shall be inspected regularly for any leakages. |
| 12. | Effluent of 2160 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. |
| 13. | PP shall implement the concurrent plantation plan in a time bound manner. Total of 169.44 Ha area (36% of the total proposed project area of 470.7 Ha) will be developed as greenbelt. with a total proposed sapling of 4,23,600 nos. A 20 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 2 years 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 4,23,600 proposed saplings will be planted and nurtured in 169.44 hectares in 5 years. The budget earmarked for the green belt plantation including 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 geo-location 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. |
| 14. | 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 (sanitary napkin vending machines) and shall also develop green belt around the nearby schools. Further, PP shall organize quarterly awareness programs for school students to educate them on the significance and preservation of trees. |
| 15. | 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 a government account. |

| | |
|---|---|
| 16. | 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 be done regularly. |
| 17. | 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. |
| 18. | PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM. |
| 19. | Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry. |
| 20. | 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. |
| 21. | Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers. |
| 22. | 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. |
| 23. | 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. |
| 24. | 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. |
| 25. | 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. |
| **[B] Socio-economic** | |
| 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. | 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. |
| 3. | The budget proposed for PH is Rs. 75.5 crores to address the said concerns. 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. |
| 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. |
| **[C] Miscellaneous** | |
| 1. | An Environmental Cell headed by the Environment Manager 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. |
| 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. | All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity. |

**3.2.6.2. Standard**

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| 1(d) | **Thermal Power Plants** |
| **Statutory compliance** | |
| 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. |
| 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. |
| 3. | 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. |
| 4. | The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable. |
| 5. | No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance. |
| **Ash content/mode of transporatation of coal** | |

| | |
|---|---|
| 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. |
| **Air quality monitoring and Management** | |
| 1. | Project proponent shall abide by the provisions of the notification number G.S.R 465(E) dated 11/07/2025 related to SO2 emission norms. |
| 2. | Low NOX Burners with Over Fire Air (OFA) system shall be installed to achieve NOX emission standard of 100 mg/Nm3. |
| 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. |
| 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. |
| 5. | Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically. |
| 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 at five locations. 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. |
| 7. | Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions. |
| 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. |
| **Noise pollution and its control measures** | |
| 1. | The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000. |
| 2. | Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc. |
| 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. |
| **Human Health Environment** | |
| 1. | Bi-annual Health check-up of all the workers is to be conducted. The Occupational health 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. |

| | |
|---|---|
| 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. |
| **Water quality monitoring and Management** | |
| 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. |
| 2. | In case of the water withdrawal from river, a minimum flow 15% of the average flow of 120 consecutive leanest days should be maintained for environmental flow whichever is higher, to be released during the lean season after water withdrawal for proposed power plant. |
| 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. |
| 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. |
| 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. | 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. |
| 7. | Wastewater generation of 2160 KLD from various sources (viz. cooling tower blow down, 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. |
| 8. | Sewage waste generation of 32 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). |
| 9. | Action plan by the TPPs located within 50 km of a municipality or any Urban Local Body (ULB) to use the treated sewage water produced by the municipality/Urban Local Body(ULB) to reduce fresh water consumption shall be submitted. |
| **Risk Mitigation and Disaster Management** | |
| 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. |
| 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%. |

| | |
|---|---|
| 3. | Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase. |
| 4. | Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary. |
| 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. |
| **Green belt and Biodiversity conservation** | |
| 1. | Green belt shall be developed in an area of 35.26% of the total area of 820.7 Ha with indigenous native tree species in accordance with CPCB guidelines. |
| 2. | In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented. |
| 3. | A 3 tier plantation with saplings of native and fruit species of 2 meter height shall be done on both side of the roads within 3 years which will be used for the transportation of coal and fly ash. |
| **Waste management** | |
| 1. | Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016. |
| 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. |
| 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. |
| 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 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. |
| 5. | Unutilized ash if any shall be disposed off in the ash pond in the form of High Concentration Slurry method. |
| **Monitoring of compliance** | |
| 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. |
| 2. | Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable. |
| 3. | Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report. Renewable Energy Purchase Obligation as set by MoP/State Government shall be met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy Certificates. |
| 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. |

| | |
|---|---|
| 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. |
| **Corporate Environmental Responsibility (CER) activities** | |
| 1. | CER activities will be carried out as per Ministry's OM F.No.22- 65/2017- IA.III dated 30th September, 2020 and 22-65/2017- IA.III dated 25.02.2021 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. |

**3.3. Agenda Item No 3:**

**3.3.1. Details of the proposal**

**Proposal for Revival of Environment Clearance (as more than 75% of TPP construction activities have be en completed) of Expansion Project 1320 (2x660) MW Super Critical Coal Based Thermal Power Plant to the existing 600 (2x300) MW at Village Pathadi, District Korba, Chhattisgarh by Korba Power Limited.** by **Adani Power Limited** located at **KORBA,CHHATTISGARH**

| **Proposal For** | | Amendment in EC | |
|---|---|---|---|
| **Proposal No** | **File No** | **Submission Date** | **Activity (Schedule Item)** |
| IA/CG/THE/550285/2025 | J-13011/3/2009-IA.II(T) | 04/09/2025 | Thermal Power Plants (1(d)) |

**3.3.2. Project Salient Features**

**Agenda No 30.3**

**30.3** Expansion of existing 600 MW (2x300 MW) project by addition of 1320 MW (2x660 MW) Super Critical Coal Based Thermal Power Plant **by M/s. Korba Power Limited** located at Village Pathadi, **District Korba, Chhattisgarh – Amendment in Environmental Clearance – regarding.**

**[Proposal No. IA/CG/THE/550285/2025; F. No. J-13011/3/2009-IA. II(T)]**

**30.3.1:** M/s. Korba Power Limited has made an online application vide proposal no. IA/CG/THE/550285/2025 dated 04.09.2025 along with Form 4 seeking for amendment in Environmental Clearance accorded by the Ministry vide letter no. J-13011/3/2009-IA. II(T) dated 22.07.2025 under the provisions of the EIA Notification, 2006 for the project mentioned above.

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.3.2:** The existing project of 600 (2x300) MW (Phase I) was granted Environmental Clearance from Ministry vide letter no. J- 13012/21/2004- IA. I (T) dated 19.11.2004. Project has been implemented and is under operation. Subsequently, EC transfer was accorded in the name of M/s. KPL on 13.01.2025. Consent to Operate (CTO) has been obtained from Chhattisgarh Environment Conservation Board vide letter no. 443/TS/CECB/2024 Nava Raipur Atal Nagar, Raipur dated 15.04.2024 has validity till 31.05.2027 and CTO name change vide letter no. 582/RO/CECB/2025 dated: 15.04.2025.Thereafter, MoEF&CC has accorded another expansion EC under the provisions of EIA Notification, 2006 to M/s. Korba Power Limited on 22/07/2025 for 1320 (2x660) MW (Phase II) Thermal Power Plant located at Village Pathadi, District Korba, Chhattisgarh.

**30.3.3:** The Implementation status of the existing ECs:

| S. No. | Product | As per EC dated 19.11.2004, 13.01.2025 (EC transfer) & 22.07.2025 | As per CTO/CFO dated 15.04.2024 has valid till 31.05.2027 | Balance Quantity |
|---|---|---|---|---|
| 1. 1. | **Electricity Generation** | **1920 MW**<br>Phase I: 600 (2x300) MW<br>& Phase II: 1320 (2x660) MW | **600 MW**<br>(CTO received from CECB Raipur *vide* order no. 443/TS/CECB/2024 Nava Raipur Atal Nagar, Raipur dated 15.04.2024 has valid till 31.05.2027) | **1320 MW**<br>(2x660 MW)<br>**Is Under Construction.** |

**30.3.4:** The details of the condition for which amendment is sought and justification for the same is as follows:

<table>
<tr><th>Conditions/ Points/ S. No. of EC</th><th>Details of Conditions as per Existing EC (22.07.2025) conditions</th><th>Amendment Sought</th><th>Justification for Amendment</th></tr>
<tr><td>Point no. 11, S.no 2.</td><td>
<table>
<tr><th>Facilities</th><th>Area for Unit 1 & 2 (In Ha.)</th><th>Area for Unit 3 & 4 (In Ha.)</th><th>Total Area (In Ha.)</th></tr>
<tr><td>Main Plant</td><td>114.94</td><td>137.81</td><td>252.75</td></tr>
<tr><td>Coal Handling System</td><td>7.01</td><td>7.40</td><td>14.41</td></tr>
<tr><td>Water System</td><td>10.52</td><td>0.00</td><td>10.52</td></tr>
<tr><td>Switch Yard</td><td colspan="2">Included in Main plant area</td><td></td></tr>
<tr><td>Green belt</td><td>85.21</td><td>84.07</td><td>169.28</td></tr>
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<tr><th>Facilities</th><th>Phase- I (In Ha.)</th><th>Phase-II (In Ha.)</th><th>Area for future expansion (In Ha.)</th></tr>
<tr><td>Main Plant</td><td>71.12</td><td>65.00</td><td>127.04</td></tr>
<tr><td>Coal Handling System</td><td>20.00</td><td>26.00</td><td></td></tr>
<tr><td>Water System</td><td>10.52</td><td>-</td><td></td></tr>
<tr><td>Switch Yard</td><td colspan="2">Included in Main plant area</td><td></td></tr>
<tr><td>Green belt</td><td>85.21</td><td>42.07</td><td></td></tr>
<tr><td>Roads</td><td colspan="2">Included in Main plant area</td><td></td></tr>
</table>
</td><td>The Adani Power Limited, Engineering and Management department conducted a Comprehensive Land Optimization Study and revisited the Layout of the Korba Thermal Power Plant. The Ash Dyke area has been r</td></tr>
</table>

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<td>
<table>
<tr><td>Roads</td><td colspan="3">Included in Main plant area</td></tr>
<tr><td>Township</td><td>9.31</td><td>0.00</td><td>09.31</td></tr>
<tr><td>Ash pond</td><td>30.21</td><td>19.10</td><td>49.31</td></tr>
<tr><td>Railway Siding (inside Plant boundary)</td><td colspan="3">Included in Coal Handling System (Outside ROU)</td></tr>
<tr><td>Water Supply Pipeline (inside Plant boundary)</td><td colspan="3">Included in Water System (Outside ROU)</td></tr>
<tr><td>Ash Transport Pipeline</td><td colspan="3">Included in Main plant area</td></tr>
<tr><td>Others</td><td>--</td><td>--</td><td>--</td></tr>
<tr><td>Total</td><td colspan="3">505.58 Ha.</td></tr>
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Total land for the Korba TPP is 505.58 Ha.
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<tr><td>Others</td><td>--</td><td>--</td><td></td></tr>
<tr><td>Sub Total</td><td>226.37</td><td>152.17</td><td>127.04</td></tr>
<tr><td>Total</td><td colspan="2"></td><td>505.58 Ha.</td></tr>
</table>
Note: -<br>
The total area is 505.58 Ha. will be unchanged.<br>
Total land of 505.58 ha is required for the project including 71.12 Ha for existing units 1 & 2 (Phase-I) & 65.00 Ha for unit 3 & 4 (Phase-II). The land is already under the possession of Korba Power Limited.
</td>
<td>evisited, the area allocated for FGD has been reduced, and ancillary facilities have been strategically optimized and proposed to use the existing common facilities for Phase I, II & III, thereby eliminating the need for additional infrastructure.<br>The Land area has been optimized based on the Engineering revisit to accommodate Phase III within the existing land area.<br>Korba Power Limited has the total Land Area of 505.58 Ha. Considering the growing electricity demand in the Country, KPL is planning for future expansion of 2x800 MW under Phase III within the existing land through optimization and use of Common Facilities.</td>
</tr>
<tr>
<td>Point no. 26, S.no. X.</td>
<td>“Total land of 505.58 ha is required for the project including 114.94 ha for existing units 1 & 2 and 137.81 ha for unit 3</td>
<td>Total land of 505.58 ha is required for the project including 71.12 Ha for existing units 1 & 2 (Phase-I) & 65.00 Ha for unit 3 & 4 (Phase-II). The land is already</td>
<td>Land area required for Future expansion within the existin</td>
</tr>
</table>

<table>
<tr><th>Conditions/ Points/ S. No. of EC</th><th>Details of Conditions as per Existing EC (22.07.2025) conditions</th><th>Amendment Sought</th><th>Justification for Amendment</th></tr>
<tr><td></td><td>& 4. The land is already under the possession of M/s Korba Power Limited. Out of total project area of 505.58 ha, an area of 169.28 Ha land is for green belt. Overall, the proposed expansion is within the plant premises area and no additional land acquisition is envisaged for the proposed expansion project”</td><td>under the possession of Korba Power Limited. Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area). Overall, the proposed expansion is within the plant premises area and no additional land acquisition is envisaged for the future expansion project.</td><td>g plant premises /area of 505.58 Ha.</td></tr>
<tr><td>Point No. 20</td><td>“Green belt development: Existing green belt has been developed in 85.21 ha area which is about 33.13 % of the total project area of 257.20 ha with total sapling of 2,48,000 nos. trees. The proposed greenbelt will be developed in 84.07 Ha<br>which is about 33.84% of the total proposed project area of 505.58 Ha. Thus, total of 169.28 ha area (33.48 % of total project area) will be developed as greenbelt. A 10m 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 458175 saplings will be planted and nurtured in 169.28 hectares in 5 years. The following five-year action plan for proposed plantation and Green belt development is submitted by PP.”</td><td>Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt ( about 33.6 % of Phase I & II Area). A 10 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 318200 saplings will be planted and nurtured in 127.28 hectares in 5 years. The following five-year action plan for proposed plantation and Greenbelt development is submitted by PP.
<table>
<tr><th rowspan="2">Year</th><th colspan="2">Plantation Area</th><th colspan="2">Cost of sapling with maintenance</th></tr>
<tr><th>Area (Ha.)</th><th>Plantation Target</th><th>Capital cost</th><th>Recuring cost/Annum</th></tr>
<tr><td>2025-26</td><td>8</td><td>20000</td><td rowspan="4">Proposed 3.75 Cr.</td><td rowspan="4">Maintenance Cost Rs. 1.05 Cr. (Rs. 100/Plant)</td></tr>
<tr><td>2026-27</td><td>10</td><td>25000</td></tr>
<tr><td>2027-28</td><td>12</td><td>30000</td></tr>
<tr><td>2028-29</td><td>12.07</td><td>30175</td></tr>
<tr><td>2029-30</td><td colspan="2">Maintenance and Casual replacement</td><td></td><td>Rs. 0.20 Cr</td></tr>
</table></td><td>Land area required for Future expansion within the existing plant premises /area of 505.58 Ha.</td></tr>
</table>

| Conditions/ Points/ S. No. of EC | Details of Conditions as per Existing EC (22.07.2025) conditions | Amendment Sought | Justification for Amendment |
|---|---|---|---|
| | | <table><tr><td>Total</td><td>42.07</td><td>105175</td><td>3.75 Crore</td><td>1.25 Crore</td></tr><tr><td colspan="5">Local Species will be preferred for plantation</td></tr></table> | |
| **Specific Condition No. 1.13** | *"PP shall implement the concurrent plantation plan in a time bound manner. Total of 169.28 ha area (33.5% of total plant area of 505.58 ha) will be developed as greenbelt. A 5 m - 50 m wide (min 25 m) 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 m height of the saplings in upcoming monsoon season in an area of 4 Ha by planting 10,000 trees per hectare i.e. approx. 40,000 native tree saplings. The budget earmarked for the green belt plantation including 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."* | PP shall implement the concurrent plantation plan in a time bound manner. Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area).<br>A 5 m - 50 m wide (min 25 m) green belt, 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 m height of the saplings in upcoming monsoon season in an area of 4 Ha by planting 10,000 trees per hectare i.e. approx. 40,000 native tree saplings. The budget earmarked for the green belt plantation including 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. | Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area). |

**30.3.5: Justification for the Proposed EC amendment**:

Adani Power Limited, Engineering and Management department conducted a Comprehensive Land Optimization Study and revisited the Layout of the Korba Thermal Power Plant. The Ash

Dyke area has been revisited, the area allocated for the Flue Gas Desulfurization (FGD) has been reduced, and ancillary facilities have been strategically optimized and proposed to use the existing common facilities for Phase I, II & III, thereby eliminating the need for additional infrastructure. The Land area has been optimized on the basis of the Engineering revisit to accommodate future expansion within the existing land area.

Korba Power Limited has the total Land Area of 505.58 Ha. Considering the growing electricity demand in the Country, KPL is planning for future expansion within the existing land through optimization and use of Common Facilities. The details of which are listed below:

· Ash Dyke: The Ash Dyke area allocated for Phase I & II will be utilized for Future Expansion and no additional Ash Dyke is proposed considering 100% Ash Utilization.

· Water Reservoir: Water shall be sourced from the Existing Source and facilities. Hence No Additional Reservoir is proposed for future expansion.

· Railway Siding: The existing Railway line will be utilized, and tap-off will be taken from this line for the Coal Handling System (Wagon Tippler) for Future Expansion Project.

· Reduced Piping and Cabling Facilities and Optimization in Structural Design.

· Optimization in Basic Infrastructure Facilities: Basic Infrastructure facilities of Phase I & II such as Project Site Office, Administrative Building, Temporary workmen residential facility, Construction Power Systems, Hostels, Stores, Security System, Workshop, Health Center (Dispensary), Laydown Area, physical storage of spare parts and inventory, Roads & Drains are the Common Facilities for all phases.

**30.3.6: Summary of Court Cases:** There are no pending court cases with respect to environment related matters. However, there are 4 cases pending in different courts with respect to civil and labor laws related matter.

**3.3.3. Deliberations by the committee in previous meetings**

N/A

**3.3.4. Deliberations by the EAC in current meetings**

**Observations and deliberation of the EAC**

**30.3.7:** The Committee observed and noted the following:

i. Instant proposal is for seeking amendment in various conditions prescribed in the EC dated 22/07/2025 accorded for the project titled “Expansion of existing 600 MW (2x300 MW) project by addition of 1320 MW (2x660 MW) Super Critical Coal Based Thermal Power Plant by M/s. Korba Power Limited located at Village Pathadi, District Korba, Chhattisgarh” regarding land use of the existing and proposed expansion project.

ii. Due to the proposed change in the land use for the existing and proposed expansion project arising out of the Comprehensive Land Optimization Study, there is a reduction in green belt area from 169.28 ha to 127.28 ha. Further, proponent is conserving an area of 127.04 ha which is planned to be utilized for future expansion projects. However, total area remains the same i.e., 505.58 Ha.

iii. Committee deliberated on the justification provided by the proponent for the instant amendment proposal and found it satisfactory.

iv. 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 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:**

**30.3.8:** In view of the foregoing and after the detailed deliberations, the Committee ***recommended*** the instant proposal for grant of amendment in the EC dated 22/07/2025 as detailed below**.** All other terms and conditions prescribed in EC dated 22/07/2025 shall remain unchanged.

<table>
<tr><th>S. No.</th><th>Conditions/ Points/ S.No. of EC</th><th>Details of Conditions as per Existing EC (22.07.2025) conditions</th><th>Amendment Sought</th><th>Recommendations of the EAC</th></tr>
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<td>1.</td>
<td>Point no.11, S. no2.</td>
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<td>Agreed</td>
</tr>
</table>

| S. No. | Conditions/ Points/ S.No. of EC | Details of Conditions as per Existing EC (22.07.2025) conditions | Amendment Sought | Recommendations of the EAC |
|---|---|---|---|---|
| 2. | Point no. 26, S.no. X. | *"Total land of 505.58 ha is required for the project including 114.94 ha for existing units 1 & 2 and 137.81 ha for unit 3 & 4. The land is already under the possession of M/s Korba Power Limited. Out of total project area of 505.58 ha, an area of 169.28 Ha land is for green belt. Overall, the proposed expansion is within the plant premises area and no additional land acquisition is envisaged for the proposed expansion project"* | Total land of 505.58 ha is required for the project including 71.12 Ha for existing units 1 & 2 (Phase-I) & 65.00 Ha for unit 3 & 4 (Phase-II). The land is already under the possession of Korba Power Limited. Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area). Overall, the proposed expansion is within the plant premises area and no additional land acquisition is envisaged for the future expansion project. | **Agreed** |
| 3. | Point No. 20 | *"Green belt development: Existing green belt has been developed in 85.21 ha area which is about 33.13 % of the total project area of 257.20 ha with total sapling of 2,48,000 nos. trees. The proposed greenbelt will be developed in 84.07 Ha which is about 33.84% of the total proposed project area of 505.58 Ha. Thus, total of 169.28 ha area (33.48 % of total project area) will be developed as greenbelt. A 10m 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 458175 saplings will be planted and nurtured in 169.28 hectares in 5 years. The following five-year action plan for proposed plantation and Green belt development is submitted by PP."* | Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area). A 5 m - 50 m wide (min 25 m) greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 3 years 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 318200 saplings will be planted and nurtured in 127.28 hectares in 5 years. The following five-year action plan for proposed plantation and Greenbelt development is submitted by PP. | **Agreed** |

<table>
<tr><th>S. No.</th><th>Conditions/ Points/ S.No. of EC</th><th>Details of Conditions as per Existing EC (22.07.2025) conditions</th><th>Amendment Sought</th><th>Recommendations of the EAC</th></tr>
<tr><td>4.</td><td>Specific Condition No. 1.13</td><td>“PP shall implement the concurrent plantation plan in a time bound manner. Total of 169.28 ha area (33.5% of total plant area of 505.58 ha) will be developed as greenbelt. A 5 m - 50 m wide (min 25 m) 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 m height of the saplings in upcoming monsoon season in an area of 4 Ha by planting 10,000 trees per hectare i.e. approx. 40,000 native tree saplings. The budget earmarked for the green belt plantation including 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.”</td><td>PP shall implement the concurrent plantation plan in a time bound manner. Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area).<br>A 5 m - 50 m wide (min 25 m) greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 3 years as greenbelt and green cover as per CPCB guidelines. PP shall also adopt Miyawaki plantation techniqueue and plantation with minimum 2 m height of the saplings in upcoming monsoon season in an area of 4 Ha by planting 10,000 trees per hectare i.e. approx. 40,000 native tree saplings. The budget earmarked for the green belt plantation including 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.
<table>
<tr><th rowspan="2">Year</th><th colspan="2">Plantation Area</th><th colspan="2">Cost of sapling with maintenance</th></tr>
<tr><th>Area (Ha.)</th><th>Plantation Target</th><th>Capital cost</th><th>Recuring cost/Annum</th></tr>
<tr><td>2025-26</td><td>8</td><td>20000</td><td rowspan="2">Proposed 3.75 Cr.</td><td rowspan="2">Maintenance Cost Rs.</td></tr>
<tr><td>2026-27</td><td>10</td><td>25000</td></tr>
</table>
</td><td>Agreed</td></tr>
</table>

| S. No. | Conditions/ Points/ S.No. of EC | Details of Conditions as per Existing EC (22.07.2025) conditions | Amendment Sought | Recommendations of the EAC |
|---|---|---|---|---|
| | | | <table><tr><td>2027-28</td><td>12</td><td>30000</td><td></td><td>1.05 Cr. (Rs. 100/ Plant)</td></tr><tr><td>2028-29</td><td>12.07</td><td>30175</td><td></td><td></td></tr><tr><td>2029-30</td><td colspan="2">Maintenance and Casual replacement</td><td></td><td>Rs. 0.20 Cr</td></tr><tr><td>Total</td><td>42.07</td><td>105175</td><td>3.75 Crore</td><td>1.25 Crore</td></tr><tr><td colspan="5">Local Species will be preferred for plantation</td></tr></table> | |

**3.3.5. Recommendation of EAC**

| |
|---|
| Recommended |

**3.3.6. Details of Environment Conditions**

**3.3.6.1. Specific**

| **Additional specific condition** | |
|---|---|
| 1. | All other terms and conditions prescribed in EC dated 22/07/2025 shall remain unchanged. |

**3.4. Agenda Item No 4:**

**3.4.1. Details of the proposal**

| **Proposed 2400 (3x800)MW Coal Based Ultra Super Critical Thermal Power Project at Sirmatpur & adjacent villages in Tehsil/block Pirpainti, District Bhagalpur, Bihar by Adani Power Limited** by **Adani Power Limited** located at **BHAGALPUR,BIHAR** | | | |
|---|---|---|---|
| **Proposal For** | | Fresh ToR | |
| **Proposal No** | **File No** | **Submission Date** | **Activity (Schedule Item)** |
| IA/BR/THE/550207/2025 | J-13012/08/2025-IA.I(T) | 12/09/2025 | Thermal Power Plants (1(d)) |

**3.4.2. Project Salient Features**

**Agenda No 30.4**

**30.4**: Proposed 2400 (3x800) MW Coal Based Ultra Super Critical Thermal Power Project by **M/s Adani Power Limited**, located at Sirmatpur & adjacent villages in Tehsil/block Pirpainti, **District Bhagalpur, Bihar - Prescribing of Terms of Reference (ToR) – reg. [Proposal no. IA/BR/THE/550207/2025, F.No. J-13012/08/2025-IA.I(T)]**

**30.4.1**: M/s Adani Power Limited has made an application online vide proposal no. **IA/BR/THE/550207/2025** dated **05.09.2025** along with the application in prescribed format (CAF, Form – I Part A & B), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at item no. *1(d)* Under Category "**A** " of the schedule of the EIA Notification, 2006 and appraised at Central Level.

**Name of the EIA consultant**: **M/s Gaurang Environmental Solutions Pvt. Ltd**. [NABET/EIA /23-26/RA 0338 dated 16.07.2024 valid up to 07.12.2026].

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.4.2:** The proposed greenfield project is for 2400 (3x800) MW Coal Based Ultra Super Critical Thermal Power project coming up at Sirmatpur & adjacent villages in Tehsil/block Pirpainti, District Bhagalpur, Bihar by M/s.Adani Power Limited.

**30.4.3: Environmental site settings**:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Total land</td><td>479 ha [Private: 400 ha; Govt 79 ha; Agriculture ---NA--- ha;]</td><td>Land use: Industrial (The land is allotted by BSPGCL, Govt. of Bihar)</td></tr>
<tr><td>2.</td><td>Land use break up</td><td>
<table>
<tr><th>Particular</th><th>Area (in Ha.)</th></tr>
<tr><td>Main Plant</td><td>67</td></tr>
<tr><td>Coal Handling System</td><td>57</td></tr>
<tr><td>Water System</td><td>75</td></tr>
<tr><td>Switch Yard</td><td>NIL*</td></tr>
<tr><td>Green belt</td><td>124</td></tr>
<tr><td>Roads</td><td>NIL*</td></tr>
<tr><td>Ash pond</td><td>46</td></tr>
<tr><td>Railway Siding</td><td>Outside plant boundary</td></tr>
<tr><td>Water supply pipeline (inside plant boundary)</td><td>NIL*</td></tr>
<tr><td>Ash transport pipeline</td><td>NIL*</td></tr>
<tr><td>Others:</td><td></td></tr>
<tr><td>Township</td><td>5</td></tr>
<tr><td>Land for Future Expansion</td><td>105</td></tr>
<tr><td>Total</td><td>479</td></tr>
</table>
* Included in Main Plant Area
</td><td></td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>3.</td><td>Land acquisition details as per MoEF&CC O.M.dated 7/10/2014 & 20/2/2025</td><td>The land is allotted to the proponent by Bihar State Power Generation Company Limited (BSPGCL).</td><td>LoA submitted along with ToR application.</td></tr>
<tr><td>4.</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project site: Sirmatpur, Harinkol, Raipura and Mundwa & Tundwa.<br>Study Area: As Below
<table>
<tr><th>Habitation / village</th><th>Distance ( Km)</th><th>Direction</th></tr>
<tr><td>Sirmatpur</td><td>Adjacent</td><td>W</td></tr>
<tr><td>Harinkol</td><td>Adjacent</td><td>S</td></tr>
<tr><td>Raipura</td><td>Adjacent</td><td>S</td></tr>
<tr><td>Mundwa & Tundwa</td><td>Adjacent</td><td>E</td></tr>
<tr><td>Sundarpur</td><td>Adjacent</td><td>S</td></tr>
<tr><td>Duldulhiya</td><td>0.75</td><td>SE</td></tr>
<tr><td>Imamnagar</td><td>0.62</td><td>SW</td></tr>
<tr><td>Vasanthpur</td><td>1.45</td><td>SW</td></tr>
<tr><td>Maheshram</td><td>0.14</td><td>S</td></tr>
<tr><td>Shermari</td><td>1.3</td><td>S</td></tr>
<tr><td>Olapur</td><td>1.6</td><td>SE</td></tr>
<tr><td>Ramnagar</td><td>1.7</td><td>N</td></tr>
</table></td><td>Status of R&R.<br>No R & R is involved.<br>The land is allotted by Bihar State Power Generation Company Limited (BSPGCL) to set up the Power Project as per the agreement with the State Government</td></tr>
<tr><td>5</td><td>Existence of school and hospital if any.</td><td>A. <u>School</u><br>Project site: NIL<br>Study Area: As below
<table>
<tr><th>School</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Anganwadi School</td><td>0.5</td><td>S</td></tr>
<tr><td>St. Xaviers Convent School</td><td>0.54</td><td>S</td></tr>
<tr><td>Middle School Sundarpur</td><td>0.63</td><td>S</td></tr>
<tr><td>Laxminarayan plus 2 School</td><td>0.78</td><td>ENE</td></tr>
<tr><td>Ujwal Public School</td><td>0.95</td><td>NE</td></tr>
</table></td><td></td></tr>
</table>

| S. No. | Particulars | Details | Remarks |
|---|---|---|---|

| | | |
|---|---|---|
| Middle High School | 1.0 | NE |
| Saraswati Shishu Mandir | 1.2 | NE |
| Shermari High School | 1.25 | SSW |
| Shri Shyam Public School | 1.5 | NE |
| Delhi Public School | 1.8 | S |
| Happy Valley School | 1.6 | S |

**B. Hospital**

**Project site:** NIL

**Study Area:** As below

| Hospital | Distance (Km) | Direction |
|---|---|---|
| Dr Ramakrishna Arunodaya hospital | 0.6 | E |
| Multi-Star Speciality hospital | 0.77 | SSW |
| Yashpal Ayurvedic hospital | 0.82 | NE |
| Ujwal Narayan Hospital | 1.44 | S |
| Referral Hospital | 1.54 | SSW |

**Protection measures to be adopted are as follows :**

**Control of Air Emissions:**
Provision of High Efficiency ESP, Low NOx Burner & Over Fire Air System, Dust Extraction, Dust Suppression, Dry Fog Dust Suppression, Fog Cannons at Ash Dyke, Water Sprinkling on Hauling Roads·

**Noise:** Acoustic Enclosures & barriers

**Greenbelt Development**: Development of dense greenbelt in the periphery of plant as well as towards the side of villages/ habitations, Afforestation/ Miyawaki Plantation on available land.

**Wastewater:** ETP, STP, Ash water recycling system, Zero Liquid Discharge, Rainwater Harvesting, Watershed Development in the vicinity.

**Safety:** Display signages, speed breakers, and crossing guard's provision; optimization of heavy vehicle movement near villages, Disaster Management Plan & Provisions.

**Health & Awareness:** Regular health camps, distribution of masks, and environmental awareness programs for surrounding community.

**CSR & Monitoring**: Support for infrastructure and development, and regular monitoring of air and noise pollution.

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>6.</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>1</td><td>25°18'19.07"N</td><td>87°23'46.48"E</td></tr>
<tr><td>2</td><td>25°18'36.63"N</td><td>87°23'42.56"E</td></tr>
<tr><td>3</td><td>25°18'56.13"N</td><td>87°23'54.63"E</td></tr>
<tr><td>4</td><td>25°19'18.97"N</td><td>87°24'9.74"E</td></tr>
<tr><td>5</td><td>25°19'11.25"N</td><td>87°24'56.64"E</td></tr>
<tr><td>6</td><td>25°18'58.06"N</td><td>87°24'57.78"E</td></tr>
<tr><td>7</td><td>25°18'48.41"N</td><td>87°25'26.67"E</td></tr>
<tr><td>8</td><td>25°18'25.96"N</td><td>87°25'20.04"E</td></tr>
<tr><td>9</td><td>25°18'18.24"N</td><td>87°26'6.46"E</td></tr>
<tr><td>10</td><td>25°17'57.60"N</td><td>87°25'47.14"E</td></tr>
<tr><td>11</td><td>25°17'54.33"N</td><td>87°25'27.54"E</td></tr>
<tr><td>12</td><td>25°17'51.11"N</td><td>87°25'20.55"E</td></tr>
<tr><td>13</td><td>25°17'59.91"N</td><td>87°24'54.39"E</td></tr>
<tr><td>14</td><td>25°18'17.29"N</td><td>87°24'58.18"E</td></tr>
<tr><td>15</td><td>25°18'19.84"N</td><td>87°24'33.82"E</td></tr>
<tr><td>16</td><td>25°18'40.22"N</td><td>87°24'35.90"E</td></tr>
<tr><td>17</td><td>25°18'27.73"N</td><td>87°24'16.24"E</td></tr>
<tr><td>18</td><td>25°18'15.83"N</td><td>87°24'1.17"E</td></tr>
</table>
B. Ash Pond
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>25°18'19.07"N</td><td>87°23'46.48"E</td></tr>
<tr><td>2</td><td>25°18'36.63"N</td><td>87°23'42.56"E</td></tr>
<tr><td>3</td><td>25°18'40.22"N</td><td>87°24'35.90"E</td></tr>
<tr><td>4</td><td>25°18'27.73"N</td><td>87°24'16.24"E</td></tr>
<tr><td>5</td><td>25°18'15.83"N</td><td>87°24'1.17"E</td></tr>
</table></td><td></td></tr>
<tr><td>7.</td><td>Elevation of the project site</td><td>Average site elevation (AMSL): 72 m (Avg)</td><td></td></tr>
<tr><td>8.</td><td>Involvement of Forest land if any.</td><td>Status of stage I Forest Clearance: NA<br>Area of forest land involved: No Forest land involv</td><td></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>ed.</td><td></td></tr>
<tr><td>9.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>Project Site:<br>Name: As Below:<br><table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Singhia Seasonal Nadi</td><td>Through Project Boundary</td><td>--------</td></tr></table>Study area:<table><tr><th>Water body</th><th>Distance (in km)</th><th>Direction</th></tr><tr><td>Mar Ganga</td><td>1.5</td><td>E to N</td></tr><tr><td>Ganga</td><td>7.5</td><td>W to E</td></tr></table>*Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.</td><td>----</td></tr>
<tr><td>10.</td><td>Archaeological sites monuments/ historical temples etc.</td><td>There are no Archeological Sites present within the study area.</td><td></td></tr>
<tr><td>11.</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><u>Study area</u><br>Name of the ESZ/ESA: Vikramshila Gangetic Dolphin Sanctuary (VGDS) about 7.5 km<br>Status of Notification: Notified<br>Distance of project from ESZ/ESA: About 7.5 km<br>Authenticated map of ESZ projecting distance of ESZ from project site: Enclosed DSS Map<br>Status of NBWL approval: Not Applicable, as project is outside ESZ<br>List of Reserved and protected forests:<table><tr><th>Particulars (RF/PF)</th><th>Distance (In km)</th><th>Direction</th></tr><tr><td>Kaushalpur Forest</td><td>8.9</td><td>SE</td></tr></table>No National Park, Elephant/Tiger Reserve, or migratory routes/wildlife corridor exists within 10 km of the proposed TPP. The proposed project does not fall in any Wildlife Corridor</td><td></td></tr>
<tr><td>12.</td><td>Facility envisaged in CRZ area ( Only for coastal power plant)</td><td>Name of the facility in CRZ area – NA<br><br>Recommendations of CZMA – NA<br>Status of CRZ clearance – NA</td><td>CRZ map indicating HTL/ LTL demarketed by the authorized agency in 1:4000 scale: NA</td></tr>
<tr><td>13.</td><td>Involvement of Critically Poll</td><td>Involvement of CPA/SPA: - NA<br>Proximity to CPA/SPA: - NA</td><td>Proposed additional environmental saf</td></tr>
</table>

| S. No. | Particulars | Details | Remarks |
|---|---|---|---|
| | uted Area/Severely Polluted area as per 2018 CEPI score | | eguards as per MoEF&CC OM dated 31/10/2019: **There is no CPA/SPA as per CPCB Index.** |

**30.4.4:** The unit configuration and capacity of the proposed project is given as below:

| S. No. | Proposed power plant configuration and capacity | Total | Technology adopted |
|---|---|---|---|
| 1 | (3x800) MW | 2400 MW | Ultra Super Critical |

**30.4.5:** The details of the fuel (Coal/Gas/LDO) requirement for the proposed project along with its source and mode of transportation is given as below:

| Details | Fuel requirement | Source | Distance from site (Kms) | Mode of Transportation | Coal characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| Coal | 9.67 MTPA | ECL/SECL/MCL/Nearby Commercial Coal Mines & e-auction | From 70km -400km | Rail | Ash <40 (%)<br>Sulphur <0.5 (%)<br>Moisture-13 (%)<br>GCV- 3200-4300 Kcal/Kg | FSA under Shakti Policy and E-auction |
| LDO/ HSD | 25,000 KL/ Annum | Local Market/Vendors | About 50-100 | Road | Low Sulphur (3-5% mass) | Local Vendors |

**30.4.6: Water requirement**: The water requirement for the proposed project is estimated as 1,15,200 $m^3$ /day (42 MCM), out of which 1,15,200 $m^3$/day fresh water requirement will be obtained from Ganga River. The application has been submitted to WRD for the permission for drawl of surface water Vide Lr. No. पत्रांकः-प्र०/ BSPGCL-06/2024-2875 dated 19.06.2025. The water will be transported to the plant site through water pipeline. The specific water consumption for the power plant will be < 2.5 $m^3$/MWhr.

**30.4.7: Power requirement**: The power requirement for the proposed project is estimated as 120 MW, which will be obtained from the nearby substation.

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

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment | Disposal | Remarks |
|---|---|---|---|---|---|---|
| 1 | Municipal Solid Waste | Plant Canteen | 80.3 | Collected; segregated using color coded waste bin, Organic waste converters (OWC) | Inorganic will be disposed via local municipal authorized vendor & Organic/ Biodegradable waste by OWC. | - |

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment | Disposal | Remarks |
|---|---|---|---|---|---|---|
| 2 | E-waste | IT & Telecom Equipment | 2.5 | Collected; segregated | Registered Recycler vendor | |
| 3 | Battery waste from UPS | Automotive & Industrial | 6 | Collected; segregated | Authorized Vendor | |
| 4 | Bio medical waste | First aid center | 0.1 | Collected; segregated | Authorized vendor | |
| 5 | Hazardous Waste | Plant Operation | Used/ Spent Oil – 90 KL Waste or residues Empty Barrels/ Containers/ Contaminated Liners – 12 TPA contaminated cotton – 4.0 | - | Registered Recyclers/Pre-processors with SPCB & Authorized Recyclers | |

**30.4.9: Cost of project:** The capital cost of the proposed project is Rs. 28,225 Crores and the capital cost for environmental protection measures is proposed as Rs. 1,908. Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 19 Crores. The employment generation from the proposed project / expansion is Construction phase: 300 (permanent) + 7800 (contractual), Operation phase:500 (permanent) + 1800 (contractual).

**30.4.10: Green belt development**: Proposed greenbelt will be developed in 124 ha which is about 33.15 % of the total project area. Thus total 124 ha area (33.15 % of total project area) will be developed as greenbelt. A 20m 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 3,10,000 saplings will be planted and nurtured in 124 hectares in 5 years.

| Details | Annual generation (MTPA) | Utilization (MTPA) | % of utilization | Balance quantity (MTPA) | No of storage silos with capacity |
|---|---|---|---|---|---|
| Ash (Fly & Bottom) | **3.87** | **3.87** | **100** | **0** | **4x2500 MT** |

**Ash Pond details**- PP has proposed an ash pond, details of which are given below:

| S.No. | Details of Ash pond | Ash pond |
|---|---|---|
| 1. | Area (Ha) | 46 |
| 2. | Dyke height (m) | 15 |
| 3. | Volume ($m^3$) | 69 Lac $m^3$ |
| 4. | Quantity of ash to be disposed (Metric Tons) | 75.9 Lakh MT |

| | | |
|---|---|---|
| 5. | Expected life of ash pond (number of years and months) | Life of ash dyke is calculated as 20 years |
| 6. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HDPE |
| 7. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | HCSD/MCSD |
| 8. | Ratio of ash: water in slurry mix (1:_): | 65:35 |
| 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 ($m^3$) | 0 |

**30.4.12**: **Baseline data collection:** March 2025 to May 2025

| **Attributes** | **Parameters** | **Sampling** | | **Remarks** |
|---|---|---|---|---|
| **A. Air** | | **No. of stations** | **Frequency** | |
| a. Meteorological parameters | Wind speed, Wind direction, Relative Humidity, Temperature and Rainfall | 1 | Hourly | Met data logger at site<br>Secondary data from nearest IMD Station, Bhagalpur |
| b. AAQ parameters | $PM_{10}$, $PM_{2.5}$, $SO_2$, $NO_x$, CO & Hg. | 12 | 24 hourly data, twice a week for 12 weeks | As per NAAQS, 2009 by CPCB |
| B. Noise | Hourly equivalent noise levels | 12 | One time sampling for 24 hours | IS: 4954- 1968 as adopted by CPCB |
| **C. Water** | | | | |
| Surface water parameters | Physical parameters – (pH, temp, colour, turbidity, odour, taste),<br>Chemical parameters - ( Total hardness, calcium, total alkalinity, chloride, magnesium, TDS, sulphate, fluoride, nitrate, iron, aluminium, boron, phenolic compounds, chromium, conductivity, BOD, | 03 | Once in a month | During Study Period |

| Attributes | Parameters | Sampling | | Remarks |
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| | COD, DO, TSS, Heavy m etals like Hg, As, Pb, Ni, Mn, Cd) & microbiologic al parameters – (Total c oliforms, E-COli) etc. | | | |
| Ground water parameters | Physical parameters – (p H, temp, colour, turbidit y, odour, taste, TDS), Chemical parameters - ( Total hardness, calcium, total alkalinity, chloride, cyanide, magnesium, sul phate, fluoride, nitrate, i ron, aluminium, boron, p henolic compounds, chr omium, poly aromatic h ydrocarbons, Heavy met als like Hg, As, Pb, Ni, M n, Cd) & microbiological parameters – (Total colif orms, E-coli) etc. | 12 | Once in a month | During Study Perio d |
| **D. Land** | | | | |
| a. Soil qual ity | Particle size distribution; Texture, pH, Electrical c onductivity, cation exch ange capacity (CEC), Alk ali metals, Sodium Abso rption Ratio (SAR), Perm eability, Porosity, availab le nitrogen, available ph osphorous, potassium, h eavy metals like – As, H g etc. | 12 | Once in a month | During Study Perio d |
| b. Land use | Location code, Total pro ject area, Topography, D rainage (natural) Cultiva ted, forest plantations, water bodies, roads and settlements | 10 km radius | --- | During Study Perio d |
| **E. Biological** | | | | |
| a. Aquatic | Primary productivity, Aq uatic weeds, Enumeratio n of phytoplankton, zoo plankton Fisheries Diver sity indices Trophic level s, Rare and endangered | From nearby tri butaries at dow nstream, and al so from dug w ells close to ac tivity site | During t he Study period | One season sampli ng for aquatic biot a, Plankton net, Se diment dredge, De pth sampler |

| Attributes | Parameters | Sampling | | Remarks |
|---|---|---|---|---|
| | species, etc. | | | |
| b. Terrestrial | Vegetation – species, list, economic importance, forest produce, medicinal value Importance value index (IVI) of trees and wild animals | Considering probable impact, sampling points and number of samples on established guidelines on ecological studies based on site eco-environment setting within 10 km radius from the proposed site. | One Time | One season for terrestrial biota. Preliminary assessment.<br>Application of indices, viz. Shannon, similarity, dominance IVI etc. Point quarter plot-less method (random sampling) for terrestrial vegetation survey. |
| | Fauna: Rare and endangered species Sanctuaries / National park / Biosphere reserve<br>Listing of birds, mammals, reptiles, amphibians etc | For forest studies, chronic as well as short- term impacts. | One Time | Secondary data from Government offices, NGOs, published literature Field binocular. |
| **F. Socio-**economic **parameters** | Demographic structure Infrastructure resource based | Socio-economic sample survey | --- | Community/Village Level survey based on personal interviews and questionnaire within 10 KM radius of project site. |

B. **Summary of Show Cause Notices:** Nil

**3.4.3. Deliberations by the committee in previous meetings**

N/A

**3.4.4. Deliberations by the EAC in current meetings**

**Observations and deliberation of the EAC**

**30.4.14:** The Committee observed and noted the following:

i. Instant proposal is for greenfield project of 2400 (3x800) MW Coal Based Ultra Super Critical Thermal Power project located at Sirmatpur & adjacent villages in Tehsil/block Pirpainti, District Bhagalpur, Bihar.

ii. The committee observed that no alternate sites considered by the proponent, since the project area has been allotted specifically for the project by the Bihar State Power Generation Company Limited (BSPGCL), Govt. of Bihar.

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

iv. 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.

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

vi. Mar Ganga Nadi and Ganga River is located at 1.5 (E to N) and 7.5 (W to E) km from the project boundary. A Seasonal Singhia Nadi is flowing through Project Boundary. One Nala diversion is proposed, EAC asked the proponent to submit the certificate from the State Water resource/irrigation department as per MoEF&CC O.M. dated 14/02/2022.

vii. Coal requirement for proposed project will be met through Rail. There will be no road transportation of coal for proposed project. Only LDO/HSD will be transported by road.

viii. The water requirement for the proposed project is estimated as 1,15,200 $m^3$ /day (42 MCM), out of which 1,15,200 $m^3$/day fresh water requirement will be obtained from Ganga River. The application has been submitted to WRD for the permission for drawl of surface water Vide Lr. No. पत्रांकः-प्र०/ BSPGCL-06/2024-2875 dated 19.06.2025. The water will be transported to the plant site through water pipeline. The specific water consumption for the power plant will be < 2.5 $m^3$/MWhr.

ix. The power requirement for the proposed project is estimated as 120 MW, which will be obtained from the nearby substation.

x. The capital cost of the proposed project is Rs 28,225 Crores and the capital cost for environmental protection measures is proposed as Rs 1,908. Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 19 Crores. The employment generation from the proposed project ~~/ expansion~~ is Construction phase: 300 (permanent) + 7800 (contractual), Operation phase:500 (permanent) + 1800 (contractual).

xi. Proposed greenbelt will be developed in 124 ha which is about 33.15 % of the total project area. Thus total 124 ha area (33.15 % of total project area) will be developed as greenbelt. A 20m 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 3,10,000 saplings will be planted and nurtured in 124 hectares in 5 years.

xii. Various schools and hospital are located within 2 km distance from proposed project sit. The project proponent shall maintain the sanitation, and provide the clean water (drinking) facility and toilet facility in all school present within 2 km area from proposed site. PP shall provide the details of environmental receptors present within 10km area and the same will be included in EIA/EMP reports.

xiii. The proposed units (3x800 MW) will incorporate high-efficiency Electrostatic Precipitators (ESP) to control particulate matter and selective catalytic reduction system (SCR) to control the NOx emission. EAC observed that Flue Gas desulphurization (FGD) technology is not proposed, it should be included EIA/EMP reports.

xiv. PP shall carryout Hydrogeology and aquatic biodiversity study and the same shall be incorporated in the EIA/EMP reports.

**Recommendations of the Committee:**

**30.4.15:** The EAC after detailed deliberations on the information submitted and as presented during the meeting ***recommended*** the proposal for grant of ToR for conducting an EIA study for the above project under the provisions of the EIA Notification, 2006, as amended along with the following specific ToR in addition to the generic ToRs.

**3.4.5. Recommendation of EAC**

Recommended

**3.4.6. Details of Terms of Reference**

**3.4.6.1. Specific**

| **[A] Environmental Management and Biodiversity Conservation** | |
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| 1. | Project proponent shall explore the feasibility of using air cooled condenser in place of water cooled condenser and details shall be incorporated in the final EIA/EMP report. |
| 2. | Project proponent shall optimize the land requirement for the proposed ash pond and design details of the same shall submitted in the EIA/EMP report. |
| 3. | Certificate from concerned District Magistrate/Executive Engineer from the State Water Resources department (or) any officer authorized by the State Government in this regard shall be submitted stating that project site is not located within flood plain of Ganga river corresponding to one in 25 years of flood as per Ministry's O.M. dated 14/02/2022. |
| 4. | PP needs to submit NOC/permission from the State Water resource Department/Irrigation Dept. in case of diversion of any Nala/Stream/water bodies. |
| 5. | All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent. |
| 6. | Project proponent shall also obtain recommendations from the State Forest department regarding the impact of project on the nearby Reserved Forests, if any, along with the mitigation measures to be followed. |
| 7. | EIA/EMP study shall take in to consideration the different scenarios arising due to change of coal source, impact on environmental attributes due to change of coal source along with corresponding mitigation measures with EMP budget shall be submitted. |
| 8. | Biodiversity analysis of the project site and study area shall be done through any NABET accredited consultant. The study report shall inter-alia include impact of release of cooling tower water on aquatic life and action plan for complying with the mitigation measures shall be submitted. |
| 9. | Project proponent shall commission a study on Hydrology and Hydrogeology of the project site as well as the study area of the project site through a NABET accredited consultant. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report. |
| 10. | Radioactivity studies along with coal analysis to be provided (Sulphur, ash percentage and heavy metals including Pb, Cr, As and Hg). Details of auxiliary fuel, if any including its quantity, quality, storage, etc. |

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| | should also be given. |
| 11. | PP should submit the detailed plan in tabular format (year-wise) for concurrent afforestation and green belt development in and around the project site covering 33 % of the project area. The PP should submit the number of saplings to be planted, names of native species, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling should be of native and few fruit bearing species mainly, of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided. |
| 12. | Action plan for development of three-tier plantation programme (33 % of total project cover area) along the periphery of the project boundary and the coal transportation route shall be provided. PP shall submit concurrent plantation plan. |
| 13. | Detailed action plan shall be prepared for maintenance of air pollution control equipment for proposed units and shall be incorporated in the EIA/EMP report. |
| 14. | Details of Ash management plan as per MoEF&CC notification dated 31/12/2021 & its subsequent amendment for the proposed project shall be submitted. MoU signed for ash utilization with companies shall be submitted. |
| 15. | Action plan for dry ash collection system (Bottom ash and Fly ash) shall be submitted. |
| 16. | Action plan for disposal of ash through High Concentration Slurry Disposal (only in emergency conditions) shall be submitted. |
| 17. | Proper protection measures like high-density polyethylene (HDPE) lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body (minimum 60 meters) etc. shall be planned to reduce the possibility of mixing leachate with any freshwater body for ash pond. A high-density Slurry disposal plan shall be prepared. |
| 18. | Pond and ground water quality (10 locations within 2 km radius of the plant boundary) shall be studied and report be submitted along with EIA/EMP. Action plan for Ground water monitoring stations on all hotspots like schools/hospitals within 2 km radius of the plant boundary be submitted. Baseline Study for Heavy metals in Groundwater, Surface water and soil to be carried out and incorporated in EIA/EMP report. |
| 19. | Details pertaining to water source, treatment and discharge should be provided. |
| 20. | PP shall provide the details of wastewater treatment facilities to be installed within its capacity, timeline and budget. |
| 21. | Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report. |
| 22. | An action plan shall be prepared for Water shed development within 10 km radius of the plant boundary in consultation with reputed government institution and incorporated in EIA/EMP report. |
| 23. | PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total material handled) and steps to be taken for reduction of the same. The year-wise target for reduction in the |

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| | specific diesel consumption needs to be submitted. PP shall also explore the possibility of using e-vehicles/LNG/CNG-based machinery and trucks for the operation and transportation of Coal and ash and submit an implementation strategy. |
| 24. | PP shall provide the details of transportation of fly ash from the plant, transportation route etc. Further, carry out a traffic study for at least one month and provide the impact of transportation along with the mitigation measures. |
| 25. | PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2016 and to adhere Ministry's OM dated 18/07/2022. |
| 26. | Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted. |
| 27. | The input parameters for the AAQ modelling and the influence of various combinations of these on the AAQ must be reported in the EIA/EMP Report. In addition to the Wind Rose diagram collected for one season during the preparation of the E.I.A., wind rose diagram for all seasons must be provided using secondary data from sources such as IMD/CPCB etc. |
| 28. | Project proponent shall take all necessary steps to control the Air Quality and take additional mitigation measures for proposed TPP to maintain the Ambient Air Quality values within the limits. The action plan regarding maintaining ambient quality standards (Time weighted average for 24 hours and Annual both) be submitted. Further, project proponent shall submit an undertaking to abide by the provisions of the notification number G.S.R 465 (E) dated 11/07/2025 related to FGD, as amended, and any subsequent amendment there of pursuant to the outcome of study carried out by CPCB in this regard. |
| 29. | Details of air pollution control devices to be installed in the proposed 3x800 MW TPP along with its maintenance schedule shall be incorporated in EIA/EMP report. |
| 30. | Carbon emission due to TPP and allied carbon sequestration/ carbon offsetting plan be submitted. |
| 31. | 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. An action plan in this regard shall be submitted. |
| **[B] Disaster Management** | |
| 1. | A Disaster Management Plan shall be prepared and incorporated in the EIA/EMP report. |
| **[C] Socio-economic Study** | |
| 1. | Public Health Action Plan including the provisions for drinking water supply for the local population shall be in the EIA/EMP Report. The status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the needs of the labour force and local populace. |
| 2. | Public consultation (Public Hearing and Written submission) shall be conducted as per the provisions of EIA Notification, 2006 and as amended. As per the Ministry's OM dated 30.09.2020, to address the concern raised during the Public Hearing, the Project Proponent is required to submit the detailed activities proposed with year-wise budgetary provision (Capital and recurring) for 5 years. Activities proposed shall be part of EMP. Tentative no. of project affected families (if any) shall be identified and accordingly appropriate Rehabilitation &Resettlement plan shall be prepared. The recommendation Socio-economic study may also be considered while planning the activities & budget. |

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| 3. | A need based Social Impact Assessment Study shall also be carried out and an action plan on its recommendations may also be submitted with budgetary provisions. |
| 4. | Demographic details and land use change details in 10 km area shall be submitted. |
| **[D] Miscellaneous** | |
| 1. | Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study. The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind. A mathematical model shall be developed for the local site rather than using the standard model available in software for both air & water quality modeling. |
| 2. | PP shall align its activities to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050. PPs shall update the same to the EAC. |
| 3. | PP shall submit the EIA/EMP report after the plagiarism check using authenticated plagiarism software. |
| 4. | Detailed description of all the court cases along with its current status shall be submitted. |
| 5. | PP should provide in the EIA Report details of all the statutory clearances, permissions, no objection certificates, consents etc. obtained for this project under various Acts, Rules and regulations shall be submitted. Further, all the permissions/MoUs obtained for this project shall be revalidated and submitted along with the EIA/EMP report. |
| 6. | The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs, which will analyze the samples. |
| 7. | PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of persons to be engaged for the implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted. |
| 8. | PP should submit the year-wise, activity wise and time-bound budget earmarked for EMP, occupational health surveillance, and activities proposed to address the issues raised during Public Hearing. The capital and recurring expenditure to be incurred needs to be submitted. |
| 9. | Activities shall be prepared based on the issues arise during public hearing conducted and fresh written submission with defined timeline and budgetary provisions. |
| 10. | Aerial view video of project site and coal transportation route proposed for this project shall be recorded through drone and be submitted. Along with this plan of 3 tier plantation on coal transportation route shall be submitted. |
| 11. | The PP should ensure that only NABET-accredited consultants shall be engaged for the preparation of EIA/EMP Reports. PP shall ensure that the accreditation of the consultant is valid during the collection of baseline data, preparation of EIA/EMP report and the appraisal process. The PP and consultant should submit an undertaking the information and data provided in the EIA Report and submitted to the Ministry are factually correct and the PP and consultant are fully accountable for the same. |
| 12. | PP should provide in the EIA Report details of the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after the grant of EC. |

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| 13. | All the certificates viz. involvement of Forest land, distance from the protected area, and list of flora & fauna should be duly authenticated by the Forest Department. The Certificate should bear the name, designation, official seal of the person signing the certificate and dispatch number. |
| 14. | Necessary coordination shall be made with concerned SPCB (who is responsible for Compliance of OM dated 14.01.2025) regarding streamlining the implementation of GSR 702 and GSR 703 dated 12.11.2024 through which projects requiring prior EC were exempted from requirement of CTE. |

**3.4.6.2. Standard**

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| 1(d) | **Thermal Power Plants** |
| **Statutory compliance** | |
| 1. | The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference. |
| 2. | Vision document specifying prospective long term plan of the project shall be formulated and submitted. |
| 3. | Latest compliance report duly certified by the Regional Office of MoEF&CC for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted. |
| **Details of the Project and Site** | |
| 1. | The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted. |
| 2. | Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed. |
| 3. | Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be submitted. |
| 4. | The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them. |
| 5. | Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided. |
| 6. | Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided. |
| 7. | Present land use (including land class/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land |

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| | acquisition and litigation, if any, should be provided. |
| 8. | If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents. |
| 9. | The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report. |
| 10. | Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided. |
| 11. | Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted. |
| **Ecology biodiversity and Environment** | |
| 1. | A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted. |
| 2. | Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him. |
| 3. | A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted. |
| 4. | The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re- circulation of effluents. |
| 5. | Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State. |
| 6. | It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways. |
| 7. | Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted |
| 8. | Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried |

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| | out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea. |
| 9. | Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water. |
| 10. | Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.In addition, wherever ground water is drawn, PP shall submit detailed plan of Water charging activity to be undertaken. |
| 11. | Feasibility of near zero discharge concept shall be critically examined and its details submitted. |
| 12. | Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified. |
| 13. | Plan for recirculation of ash pond water and its implementation shall be submitted. |
| 14. | Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area. |
| 15. | Hazards Characterization: Past incidents of hazard events within 10km radius of project area with detailed analysis of causes and probability of reoccurrence |
| **Environmental Baseline study and mitigation measures** | |
| 1. | One complete season (critical season) site specific meteorological and AAQ data (except monsoon season) as per latest MoEF&CC Notification shall be collected along with past three year's meteorological data for that particular season for wins speed analysisand the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM10, PM2.5, SO2, NOx, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur. |
| 2. | In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs). |
| 3. | A list of industries existing and proposed in the study area shall be furnished. |
| 4. | Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modelling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also |

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| | include impacts on water, soil and socio-economics. |
| 5. | Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports. |
| 6. | Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished. |
| 7. | Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted |
| 8. | Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt. |
| 9. | For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted. |
| 10. | Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished. |
| **Environmental Management Plan** | |
| 1. | EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified. |
| 2. | A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be prepared. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Provision for mock drills shall be suitably incorporated to check the efficiency of the plans drawn. |
| 3. | The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/ Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely. |
| 4. | Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash along with monitoring mechanism. |
| **Green belt development** | |
| 1. | Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary not less than 2000 tree per ha with survival rate of more than 85%shall be submitted. Photographic evidence must be created and submitted periodically |

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| | including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO2 and other gaseous pollutants and hence a stratified green belt should be developed. |
| 2. | Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months |
| **Socio-economic activities** | |
| 1. | Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities. |
| 2. | Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project. |
| 3. | If the area has tribal population, it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land. |
| 4. | A detailed CER plan along with activities wise break up of financial commitment shall be prepared in terms of the provisions OM No. 22-65/2017-IA.III dated 30.09.2020.CER component shall be identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified. |
| 5. | While formulating CER schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CERdetails done in the past should be clearly spelt out in case of expansion projects. |
| 6. | R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them. |
| 7. | Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared. |
| 8. | Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required. |
| **Corporate Environment Policy** | |

| | |
|---|---|
| 1. | Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. |
| 2. | Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA. |
| 3. | What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given. |
| 4. | Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report. |
| **Miscellaneous** | |
| 1. | All the above details should be adequately brought out in the EIA report and in the presentation to the Committee. |
| 2. | Details of litigation pending or otherwise with respect to project in any Court, Tribunal etc. shall invariably be furnished. |
| 3. | In case any dismantling of old plants are envisaged, the planned land use & land reclamation of dismantled area to be furnished. |
| **Additional TOR for Coastal Based Thermal Power Plants Projects (TPPs)** | |
| 1. | Low lying areas fulfilling the definition wetland as per Ramsar Convention shall be identified and clearly demarcated w.r.t the proposed site. |
| 2. | If the site includes or is located close to marshy areas and backwaters, these areas must be excluded from the site and the project boundary should be away from the CRZ line. Authenticated CRZ map from any of the authorized agencies shall be submitted. |
| 3. | The soil levelling should be minimum with no or minimal disturbance to the natural drainage of the area. If the minor canals (if any) have to be diverted, the design for diversion should be such that the diverted canals not only drains the plant area but also collect the volume of flood water from the surrounding areas and discharge into marshy areas/major canals that enter into creek. Major canals should not be altered but their embankments should be strengthened and desilted. |
| 4. | Additional soil required for levelling of the sites should as far as possible be generated within the site itself in such a manner that the natural drainage system of the area is protected and improved. |
| 5. | Marshy areas which hold large quantities of flood water to be identified and shall not be disturbed. |
| 6. | No waste should be discharged into Creek, Canal systems, Backwaters, Marshy areas and seas without appropriate treatment. Wherever feasible, the outfall should be first treated in a Guard Pond and then only discharged into deep sea (10 to 15 m depth). Similarly, the Intake should be from deep sea to avoid aggregation of fish and in no case shall be from the estuarine zone. The brine that comes out from Desalinization Plants (if any) should not be discharged into sea without adequate dilution. |
| 7. | Mangrove conservation and regeneration plan shall be formulated and Action Plan with details of time |

| | |
|---|---|
| | bound implementation shall be specified, if mangroves are present in Study Area. |
| 8. | A common Green Endowment Fund should be created by the project proponents out of EMP budgets. The interest earned out of it should be used for the development and management of green cover of the area. |
| 9. | Impact on fisheries at various socio economic level shall be assessed. |
| 10. | An endowment Fishermen Welfare Fund should be created out of CER grants not only to enhance their quality of life by creation of facilities for Fish Landing Platforms / Fishing Harbour / cold storage, but also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc. |
| 11. | Tsunami Emergency Management Plan shall be prepared wherever applicable and Plan submitted prior to the commencement of construction work. |
| 12. | There should not be any contamination of soil, ground and surface waters (canals & village pond) with sea water in and around the project sites. In other words necessary preventive measures for spillage from pipelines, such as lining of Guard Pond used for the treatment of outfall before discharging into the sea and surface RCC channels along the pipelines of outfall and intake should be adopted. This is just because the areas around the projects boundaries could be fertile agricultural land used for paddy cultivation. |

**3.5. Agenda Item No 5:**

**3.5.1. Details of the proposal**

| **New Zone Thermal Power Plant, Anuppur, 2x800 MW Coal Based Ultra Super Critical Thermal Power Plant at village Raksha, Kolmi and Daikhal, Tehsil Anuppur, Anuppur District, Madhya Pradesh by Torrent Power Limited.** by **TORRENT POWER LIMITED** located at **ANUPPUR,MADHYA PRADESH** | | | |
|---|---|---|---|
| **Proposal For** | | Fresh ToR | |
| **Proposal No** | **File No** | **Submission Date** | **Activity (Schedule Item)** |
| IA/MP/THE/547272/2025 | J-13012/07/2025-IA.I(T) | 16/09/2025 | Thermal Power Plants (1(d)) |

**3.5.2. Project Salient Features**

**Agenda No 30.5**

**30.5**: Proposed **2x800 MW Coal Based Ultra Super Critical Thermal Power Plant** (New Zone Thermal Power Plant, Anuppur,) by **M/s Torrent Power Limited** at village Raksha, Kolmi and Daikhal, Tehsil Anuppur, **Anuppur District, Madhya Pradesh - Prescribing of Terms of Reference (ToR) – reg.**

**[Proposal no. IA/MP/THE/547272/2025, F.No. J-13012/07/2025-IA.I (T)**

**30.5.1**: M/s Torrent Power Limited has made an application online vide proposal no IA/MP/THE/547272/2025 dated 16.09.2025 along with the application in the prescribed format (CAF, Form – I Part A & B), a copy of the pre-feasibility report and proposed ToR for undertaking the detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at item no. 1(d) Under Category "A" of the schedule of the EIA

Notification, 2006, and appraised at Central Level and do not attract the general condition of the EIA Notification, 2006.

**Name of the EIA consultant**: M/s Greencindia Consulting Private Limited [S. No. NABET/EIA/2326/RA 0297, List of ACOs with their Certificate / Extension Letter no. QCI/ NABET/ ENV/ ACO/ 23// 2862; Valid up to 22.02.2026. Rev.]

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.5.2:** The proposed greenfield project is for 1600 (2x800) MW Coal Based Ultra Super Critical Thermal Power project coming up at village Raksha, Kolmi and Daikhal, Tehsil Anuppur, Anuppur District, Madhya Pradesh by M/s Torrent Power Limited.

**30.5.3: Environmental site settings**:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Total land</td><td>341.85 ha [Private: 302.97 ha; Govt.:39.78 ha]</td><td>Main plant (333.78 ha) area taken over from earlier industry.</td></tr>
<tr><td>2.</td><td>Land use break up</td><td>
<table>
<tr><th>Facilities</th><th>Proposed Area (In Hectares)</th></tr>
<tr><td>Boiler, TG building, ESP, Chimney and Facilities</td><td>10.32</td></tr>
<tr><td>Coal Handling Plant</td><td>23.93</td></tr>
<tr><td>Ash Handling Plant</td><td>4.13</td></tr>
<tr><td>Transformer yard, Switchyard, Air washer, DG sets</td><td>10.32</td></tr>
<tr><td>Water system including WTP, DM Plant & ETP</td><td>8.26</td></tr>
<tr><td>CW System- IDCT & CWPH</td><td>4.14</td></tr>
<tr><td>Raw Water Reservoir</td><td>78.63</td></tr>
<tr><td>Ash dyke</td><td>44.43</td></tr>
<tr><td>Miscellaneous (roads, non-plant buildings etc.)</td><td>25.64</td></tr>
<tr><td>Colony and other Facilities</td><td>10.32</td></tr>
<tr><td>Railway Siding</td><td>8.07</td></tr>
<tr><td>Greenbelt</td><td>113.66</td></tr>
<tr><td>Total</td><td>341.85</td></tr>
</table>
</td><td>113.66 Ha (33.25%) land is allocated for Greenbelt.</td></tr>
<tr><td>3.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Total land- 341.85 Ha<br>Non-Forest land – 341.85 Ha, Forest Land- 0 Ha.<br>Govt Land- 39.78 Ha (Under possession of PP)<br>Private Land- 302.97 Ha (294 Ha of pvt. land is under possession of PP, rest 8.07 Ha of Pvt. Land is yet to acquire)</td><td>333.78 Ha land have been taken over from earlier industry. 8.07 ha land identified for railway siding is yet to be acquired.</td></tr>
<tr><td>4.</td><td>Existence of habitation & involvement of R&R, if any.</td><td><u>Project site</u>: Raksha & Kolmi<br>Study Area:
<table>
<tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Raksha</td><td>Adjacent</td><td>N</td></tr>
<tr><td>Kolmi</td><td>0.25 km</td><td>NW</td></tr>
<tr><td>Jartalwa</td><td>1.4 km</td><td>NE</td></tr>
</table>
</td><td>R&R have already been conducted for main plant area. The area proposed for Railway Siding is yet to be acquired. Hence R & R i</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>Protection Measures for existing habitation<br>· In addition to the boundary wall, 3m wind shield will be constructed above the boundary wall, in the portion whi ch is adjacent to village Raksha.<br><br>· The greenbelt proposed in the layout plan of site (in th e northern side along the Ash Pond) varies from 15m to more than 100m. Over and above this greenbelt, it is als o proposed to develop tree plantation outside the boun dary wall towards this village under CSR programme, so as to maintain a minimum green buffer of 50 m between the plant and the village settlements.<br><br>The village Kolmi is located at 0.25km from the proje ct boundary. Within the boundary wall a reservoir ha s been planned towards this village. The reservoir is having a width of 800 m which will be acting as a buf fer between operating plant and the village. Howeve r peripheral greenbelt between the boundary wall an d the reservoir will be provided.</td><td>s pending for the rail way siding area.</td></tr>
<tr><td>5.</td><td>Latitude a nd Longitu de of all c orners of t he project site.</td><td>A. Plant Layout
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>23°9'04.13"N</td><td>81°49'09.43"E</td></tr>
<tr><td>B</td><td>23°8'57.37"N</td><td>81°49'27.27"E</td></tr>
<tr><td>C</td><td>23°9'05.30"N</td><td>81°49'33.44"E</td></tr>
<tr><td>D</td><td>23°9'02.97"N</td><td>81°49'55.73"E</td></tr>
<tr><td>E</td><td>23°8'51.10"N</td><td>81°50'03.88"E</td></tr>
<tr><td>F</td><td>23°8'58.09"N</td><td>81°50'24.49"E</td></tr>
<tr><td>G</td><td>23°8'52.31"N</td><td>81°50'47.27"E</td></tr>
<tr><td>H</td><td>23°8'28.55"N</td><td>81°50'51.27"E</td></tr>
<tr><td>I</td><td>23°8'34.34"N</td><td>81°50'34.11"E</td></tr>
<tr><td>J</td><td>23°8'26.05"N</td><td>81°50'36.52"E</td></tr>
<tr><td>K</td><td>23°8'19.67"N</td><td>81°50'34.25"E</td></tr>
<tr><td>L</td><td>23°8'05.57"N</td><td>81°50'41.76"E</td></tr>
<tr><td>M</td><td>23°7'36.91"N</td><td>81°50'30.27"E</td></tr>
<tr><td>N</td><td>23°7'33.06"N</td><td>81°50'20.20"E</td></tr>
<tr><td>O</td><td>23°7'54.26"N</td><td>81°50'38.82"E</td></tr>
<tr><td>P</td><td>23°8'05.06"N</td><td>81°50'40.22"E</td></tr>
<tr><td>Q</td><td>23°8'17.02"N</td><td>81°50'26.96"E</td></tr>
<tr><td>R</td><td>23°8'18.08"N</td><td>81°50'06.34"E</td></tr>
<tr><td>S</td><td>23°8'26.85"N</td><td>81°49'47.84"E</td></tr>
<tr><td>T</td><td>23°8'18.45"N</td><td>81°49'25.25"E</td></tr>
<tr><td>U</td><td>23°8'16.80"N</td><td>81°49'04.57"E</td></tr>
<tr><td>V</td><td>23°8'40.11"N</td><td>81°48'55.69"E</td></tr>
</table></td><td></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>W</td><td>23°8'54.69"N</td><td>81°48'57.28"E</td></tr>
</table>
B. Ash Pond
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>I</td><td>23° 8'46.74"N</td><td>81°49'57.09"E</td></tr>
<tr><td>II</td><td>23° 8'46.75"N</td><td>81°50'15.25"E</td></tr>
<tr><td>III</td><td>23° 8'50.69"N</td><td>81°50'18.27"E</td></tr>
<tr><td>IV</td><td>23° 8'50.69"N</td><td>81°50'36.22"E</td></tr>
<tr><td>V</td><td>23° 8'35.30"N</td><td>81°50'36.18"E</td></tr>
<tr><td>VI</td><td>23° 8'35.30"N</td><td>81°49'57.10"E</td></tr>
</table>
</td><td></td></tr>
<tr><td>6.</td><td>Elevation of the project s ite</td><td>500m – 520m above mean sea level</td><td></td></tr>
<tr><td>7.</td><td>Involvement of Forest la nd if any.</td><td>Status of stage I Forest Clearance:<br>Area of the forest land involved: Nil</td><td>No forest land is invo lved for the proposed project.</td></tr>
<tr><td>8.</td><td>Water body (Rivers, Lak es, Pond, Nala, Natur al Drainage, Canal etc.) e xists within the project site as well as study are a.</td><td><u>Project site:</u><br>Jhitku Nala a 2nd order perineal stream is crossing ac ross the project site in the Eastern part of the project area. A total of 480 m length of the Nala is falling wit hin the project boundary.<br>Study area
<table>
<tr><th>Waterbody</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Jhitku N</td><td>Adjacent, insi de</td><td>E</td></tr>
<tr><td>Gohirari N</td><td>Adjacent</td><td>S</td></tr>
<tr><td>Sone River</td><td>1.7</td><td>SW</td></tr>
</table>
The plant layout is prepared in such a way so that the natural flow of the water body is not disturbed. It is al so proposed to create a dense greenbelt in the Easter n part of the project to mitigate adverse impact on Jhi tku Nala.</td><td>Application for the ce rtification of HFL dat a for both Gohiari Na di and Sone River are already done to Wate r Resource Departme nt, Anuppur, Madhya Pradesh vide. Letter n o.- TPL/WRD/ANUPP UR/2025/01 dated: 2 1.08.2025<br>As per satellite data t he elevation level of J hitku Nala is 491 m a nd that of Gohirari N adi is 482m and 484 m for Sone River.</td></tr>
<tr><td>9.</td><td>Archaeologi cal sites mo numents/ hi storical tem ples etc.</td><td>No Archaeological sites/ monument/ historical templ es are present in the project site.</td><td></td></tr>
<tr><td>10.</td><td>Existence of ESZ/ ESA/ national par k/ wildlife sa nctuary/ bio sphere reser ve/ tiger re</td><td>Study area<br>Name of the ESZ/ESA: None<br>Status of Notification: None<br>Distance of project from ESZ/ESA: NA<br>Authenticated map of ESZ projecting distance of E SZ from project site:<br>NA</td><td>No Eco-sensitive Zon e notified/ proposed to be notified are pre sent within the 10 k m study area.</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td>serve/ elephant reserve etc. if any within the study area</td><td>Status of NBWL approval: Not Required<br>List of Reserved and protected forests:
<table>
<tr><th>Name</th><th>Distance in Km</th><th>Direction</th></tr>
<tr><td>Kotma RF</td><td>0.14</td><td>E, SE</td></tr>
<tr><td>RF near Thuthi</td><td>2.6</td><td>NW</td></tr>
<tr><td>Kotma RF near Lalmatia</td><td>3.7</td><td>NNE</td></tr>
<tr><td>Mauhari RF near Pasla</td><td>4</td><td>WNW</td></tr>
<tr><td>Kotma RF near Chhohri</td><td>4.2</td><td>ENE</td></tr>
<tr><td>RF near Parasi</td><td>4.3</td><td>ESE</td></tr>
<tr><td>Mauhari RF near Rahilakachhar</td><td>4.7</td><td>SSE</td></tr>
<tr><td>Bamni PF</td><td>4.8</td><td>N, NNW</td></tr>
<tr><td>Kotma RF near Piyari</td><td>5.8</td><td>NE</td></tr>
<tr><td>Mauhari RF</td><td>6</td><td>SW</td></tr>
<tr><td>Mauhari RF near Patauratola</td><td>6.4</td><td>SSE</td></tr>
<tr><td>Deori PF</td><td>6.7</td><td>NNE</td></tr>
<tr><td>Kotma RF near Latar</td><td>7</td><td>ESE, SE</td></tr>
<tr><td>Mauhari RF near Bhagatbandh</td><td>7.1</td><td>W</td></tr>
<tr><td>Mauhari RF near Mairtola</td><td>7.4</td><td>WNW</td></tr>
<tr><td>Rampur PF</td><td>7.9</td><td>NW</td></tr>
<tr><td>Laharpur PF</td><td>8.2</td><td>S</td></tr>
<tr><td>Chhilpa PF</td><td>11</td><td>NNW</td></tr>
<tr><td>Majhauli PF</td><td>11.4</td><td>NW</td></tr>
<tr><td>Lakhanpur RF</td><td>12.1</td><td>SSW</td></tr>
<tr><td>Munda RF</td><td>14.3</td><td>SE</td></tr>
</table></td><td></td></tr>
<tr><td>11</td><td>Involvement of Critical Polluted Area/ Severely Polluted area as per 2018 CEPI score</td><td><u>Involvement of CPA/SPA:</u> NA<br><u>Proximity to CPA/SPA:</u> NA</td><td></td></tr>
</table>

**30.5.4:** The unit configuration and capacity of the proposed project is given as below:

| S. No. | Proposed power plant configuration and capacity | Total | Technology adopted |
|---|---|---|---|
| 1 | 2x800 MW | 1600 MW | Ultra Super Critical Thermal Power Plant |

**30.5.5:** The details of the fuel (Coal/Gas/LDO) requirement for the proposed project along with its source and mode of transportation is given as below:

| Details | Fuel re | Source | Distan | Mode of T | Coal characteristi | Linkage doc |
|---|---|---|---|---|---|---|

| | quire m ent (MT PA) | | ce fro m site ( Kms) | ransportat ion | c s (Worst case scena rio) | ument |
|---|---|---|---|---|---|---|
| Coal | 8.15 | As per all ocation b y Ministry Under Sh akti Sche me | 200 | Rail | Ash – 40.52 % Sulphur – 0.33 % Moisture- 10.1 5 % GCV -3169 Kc al/Kg | As per allocati on by Ministry under Shakti S cheme |
| LDO | 3000 | Nearest O il Depot ( either Rai pur or Na gpur) | 300 | Road | - | LDO will be pr ocured from o pen market. Re lated agreeme nt will be acqu ired once EC is granted for th e project |

**30.5.6: Water requirement**: The water requirement for the proposed project is estimated as 72,456 $m^3$ /day, out of which 70,856 $m^3$/day of fresh water requirement will be obtained from the Sone River and the remaining requirement of. 1600 $m^3$ /day will be met from the Treatment facilities (ETP & STP). The permission for drawl of surface water is obtained from WRD Anuppur Vide Lr. No. 1129 Dated-01.05. 2025.The water will be transported to the plant site through Pipeline.

**30.5.7: Power requirement**: The power requirement for the proposed project is estimated as 5 MW, out of which 5 MW will be obtained from the Nearest Sub-Station at Anuppur.

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

| S. No. | Type of Waste | Source | Quanti ty gen erated (TPA) | Mode of Tre atment | Disposal | Remark s |
|---|---|---|---|---|---|---|
| 1 | Ash | Power Pl ant | 42,04, 800 | Will be utilize d in- 1. Cement Pl ant 2. Abandoned mine back fill ing 3. Low lying a rea reclamati on 4. Fly ash bric ks 5. Road Cons truction | It is proposed t o use Closed W agons / closed t rucks for fly ash transportation, water sprinkling system will be commissioned i n the ash dispo sal area to supp ress the fugitive dust emission. | |
| 2 | MSW | Plant Can teen | 5 | Recyclable w aste will be p rovided to Au thorized recy | Recyclable wast e will be transp orted via collec tion truck by Ro | |

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment | Disposal | Remarks |
|---|---|---|---|---|---|---|
| | | | | cler and biodegradable waste will be composted. | ad. | |
| 3 | Used PVC Bags | Plant | 2 | To be sold to authorized recycler as per Plastic Waste Management Rule, 2022 | Waste will be transported to treatment facility via Road. | |
| 4 | E-waste from IT & Telecom equipment. | IT & Telecom | 3 | Via Registered Recycle Vendor | Waste will be transported to treatment facility via Road. | |
| 5 | Battery waste from UPS | Automotive and Industrial | 3 | Authorized Vendor | Waste will be transported to treatment facility via Road. | |
| 6 | Biomedical Waste | Occupational Health Centre (OHC) | 0.025 | SPCB Authorized Facilities | Waste will be transported to treatment facility via Road. | |
| 7 | Used Oil/ Waste Oil | Plant Operation | 60 | Registered Recycler/ Preprocessor with SPCB | Waste will be transported to treatment facility via Road. | |
| 8 | Waste or residues containing oil | Plant Operation | 10 | Sell to authorized recycler | Waste will be transported to treatment facility via Road. | |
| 9 | Empty barrels/ containers/ contaminated liners | Plant operation | 20 | Sell to authorized recycler | Waste will be transported to treatment facility via Road. | |

**30.5.9: Cost of project:** The capital cost of the proposed project is Rs. 23,740 Crores and the capital cost for environmental protection measures is proposed as Rs 1,285 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 24.22 Crores. The employment generation from the proposed project is 5050 during Construction and 1400 during Operation.

**30.5.10: Green belt development**: Proposed greenbelt will be developed in 113.66 ha which is about 33.25% of the total project area. A 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 2,84,150 saplings will be planted and nurtured in 113.66 hectares in 5 years.

**30.5.11: Ash management**:

| Details | Annual generation ( MTPA) | Utilization (MTPA) | % of utilization | Balance quantity (MTPA) | No of storage silos with capacity |
|---|---|---|---|---|---|
| Ash (Fly & Bottom) | 4.2 | 4.2 | 100 | 0 | 03 Nos of Silos with capacity of 3000 MT each. (3x3000 = 9000 MT) |

**Ash Pond details**- PP has proposed an ash pond, details of which are given below:

| S.No. | Details of Ash pond | Ash pond |
|---|---|---|
| 1. | Area (Ha) | 44.43 |
| 2. | Dyke height (m) | 10 |
| 3. | Volume ($m^3$) | 4 x 10^6 |
| 4. | Quantity of ash to be disposed (Metric Tons) | 3.27 x 10^6 |
| 5. | Expected life of ash pond (number of years and months) | 2 Years 0 Month (Considering Nil ash utilization) |
| 6. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HDPE |
| 7. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | MCSD |
| 8. | Ratio of ash: water in slurry mix (1:_): | Ratio- 1:2.5<br>(40% ash to 60% water.) |
| 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 ($m^3$) | Nil |

**30.5.12**: **Baseline data collection:** March 2025 to May 2025

| Attributes | Parameters | Sampling | | Remarks |
|---|---|---|---|---|
| | | No. of stations | Frequency | |
| A. Air | | | | |
| a. Meteorological parameters | Wind speed, Wind direction, Relative Humidity, Rainfall & Solar radia | 1 | Hourly | IS 5182 Part 1-20 Site-specific primary data is essential |

| Attributes | Parameters | Sampling | | Remarks |
|---|---|---|---|---|
| | | No. of stations | Frequency | |
| | tion, Cloud Cover & Dust Fall | | | Secondary data from IMD, New Delhi for the nearest IMD station. |
| b. AAQ parameters | $PM_{10}$, $PM_{2.5}$, $SO_2$, $NO_2$, CO | 10 | 24 hourly data, twice a week | As per CPCB standards for NAQM, 1994 |
| B. Noise | Hourly equivalent noise levels | 10 | One time sampling | Min: IS: 4954- 1968 as adopted by CPCB |
| C. Water | Ground water- PH, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium salinity, Total nitrogen, total phosphorus, DO, Phenol, Heavy metals, Total coliforms, faecal coliforms | 12 | One time sampling | Samples for water quality will be collected and analysed as per:<br>IS: 2488 (Part 1-5), per standard APHA and IS: 3025 criteria and IS: 10500, 2012. methods for sampling<br>International standard practices for benthos and aquatic flora & fauna. |
| Surface water/Ground water quality parameters | Surface water- Total Carbon; pH; Dissolved Oxygen, Biological Oxygen Demand, COD, DO and Electrical Conductivity | 6 | One time sampling | Surface water samples will be collected from 6 different locations for analysis monthly and are compared to Class-C CPCB Designated Water Quality Criteria and IS 2296. |
| D. Land | | | | |
| a. Soil quality | Physical and chemical characteristics<br>Particle size distribution; Texture, pH, Electrical conductivity, Caution exchange capacity, Alkali metals, Sodium Absorption Ratio (SAR), Permeability, Porosity | 8 | One time sampling | Soil samples will be collected as per BIS specifications) in the study area by Auger up to depth of 30 cm and homogenized samples will be analyzed as per the method |

| Attributes | Parameters | Sampling | | Remarks |
|---|---|---|---|---|
| | | No. of stations | Frequency | |
| | | | | s described in “Soil Chemical Analysis” (M. L. Jackson, 1967), |
| Land use | Location code, Total project area, Topography, Drainage (natural) Cultivated, forest plantations, water bodies, roads and settlements | At least 20 points along with plant boundary and general major land use categories in the study area | - | NRSC Satellite Imagery, 2020 and Census data, 2011 |
| E. Biological<br>a. Aquatic<br>Terrestrial | Terrestrial: Vegetation – species, list, economic importance, forest produce, medicinal value Importance value index (IVI) of trees and wild animals<br>Avifauna: Rare and endangered species Sanctuaries / National park / Biosphere reserve | Considering probable impact, sampling points and number of samples were decided to established guidelines on ecological studies based on site eco- environment setting within 10 km radius from the proposed site<br>For forest studies, chronic as well as short- term impacts should be analysed warranting data on micro climate conditions. | One Time | One season for terrestrial biota. Preliminary assessment.<br>Microscopic analysis of plankton and meiobenthic, studies of macrofauna, aquatic vegetation and application of indices, viz. Shannon, similarity, dominance IVI etc. Point quarter plot-less method (random sampling) for terrestrial vegetation survey.<br>Secondary data to collect from Government offices, NGOs, published literature<br>Field binocular |
| F. Socio-economicparameters | Demographic structure infrastructure resource base. | Socio-economic survey is based on proportionate | Once | |

B. **Summary of Show Cause Notices:** Nil

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

**30.5.14: Undertaking:** Proponent has submitted the following undertaking -

**3.5.3. Deliberations by the committee in previous meetings**

N/A

**3.5.4. Deliberations by the EAC in current meetings**

**30.5.15:** The Committee observed and noted the following:

i. Instant proposal is for greenfield project of 1600 (2x800) MW Coal Based Ultra Super Critical Thermal Power project located at village Raksha, Kolmi and Daikhal, Tehsil Anuppur, Anuppur District, Madhya Pradesh.

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

iii. 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.

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

v. Jhitku Nadi is adjacent inside flowing in East direction and Gohirari Nadi is located adajacent to the project boundary and flowing towards South direction. Sone River is at 1.7 (S-W) km from the project boundary. The elevation level of Jhitku Nala is 491 m and that of Gohirari Nadi is 482m and 484m for Sone River.

vi. Authenticated HFL data of the water body as per MoEF&CC O.M. dated 14/02/2022 shall be furnished.

vii. Coal requirement for proposed project will be met through Rail. There will be no road transportation of coal for proposed project. Only LDO/HSD will be transported by road.

viii. The water requirement for the proposed project is estimated as 72,456 $m^3$ /day, out of which 70,856 $m^3$/day of fresh water requirement will be obtained from the Sone River and the remaining requirement of. 1600 $m^3$ /day will be met from the Treatment facilities (ETP & STP). The permission for drawl of surface water is obtained from WRD Anuppur Vide Lr. No. 1129 Dated-01.05. 2025.The water will be transported to the plant site through Pipeline.

ix. The power requirement for the proposed project is estimated as 5 MW, out of which 5 MW will be obtained from the Nearest Sub-Station at Anuppur.

x. The capital cost of the proposed project is Rs. 23,740 Crores and the capital cost for environmental protection measures is proposed as Rs 1,285 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 24.22 Crores. The employment generation from the proposed project is 5050 during Construction and 1400 during Operation.

xi. Proposed greenbelt will be developed in 113.66 ha which is about 33.25% of the total project area. A 50 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 3 years 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 2,84,150 saplings will be planted and nurtured in 113.66 hectares in 5 years.

xii. Some habitations are located within 2 km distance from proposed project site. PP shall provide the details of environmental receptors present within 10km area and their mitigation measures and the same will be included in EIA/EMP reports.

xiii. The proposed units (2 x 800 MW) will incorporate high-efficiency Electrostatic Precipitators (ESP) to control particulate matter. EAC observed that Flue Gas desulphurization (FGD) technology is not proposed, it should be included in EIA/EMP reports.

xiv. PP shall carryout Hydrogeology and aquatic biodiversity study and the same shall be incorporated in the EIA/EMP reports.

xvi. Waste (Municipal Solid waste, e-waste, Biomedical and Hazardous waste) generated will be handled and processed/recycled by the authorized vendors.

xix. PP has submitted an undertaking that existing natural drainage pattern of the Jhitku Nala will be maintained and will not be diverted.

**Recommendations of the Committee:**

**30.5.16:** In view of the foregoing and after detailed deliberation, the Committee ***recommended*** the above mentioned project for grant of Terms of Reference by prescribing following specific ToRs for undertaking detailed EIA and EMP study and conduct Public Consultation (along with the public hearing) in addition to generic ToR given at Annexure-I, subject to uploading of written submissions:

**3.5.5. Recommendation of EAC**

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| Recommended (Subject to submission of requisite information/ documents) |

**3.5.6. Details of Terms of Reference**

**3.5.6.1. Specific**

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| **[A] Environmental Management and Biodiversity Conservation** | |
| 1. | Project Proponent shall explore the feasibility of using treated sewage from Sewage Treatment Plants located within 50 km radius of the proposed project as an alternative to the fresh water source to minimize the fresh water drawl from surface water bodies. Action plan in this regard shall be submitted. |
| 2. | Project proponent shall optimize the land requirement for the proposed ash pond and design details of the same shall submitted in the EIA/EMP report. |
| 3. | Certificate from concerned District Magistrate/Executive Engineer from the State Water Resources department (or) any officer authorized by the State Government in this regard shall be submitted stating that project site is not located within flood plain of Sone River corresponding to one in 25 years of flood as per Ministry's O.M. dated 14/02/2022. |
| 4. | PP needs to submit NOC/permission from the State Water Resource Department/Irrigation Dept. in case of diversion of any Nala/Stream/water bodies. |
| 5. | All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent. |
| 6. | Project proponent shall also obtain recommendations from the State Forest department regarding the impact of project on the nearby Reserved Forests, if any, along with the mitigation measures to be followed. |
| 7. | EIA/EMP study shall take in to consideration the different scenarios arising due to change of coal source, |

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| | impact on environmental attributes due to change of coal source along with corresponding mitigation measures with EMP budget shall be submitted. |
| 8. | Biodiversity analysis of the project site and study area shall be done through any NABET accredited consultant. The study report shall inter-alia include impact of release of cooling tower water on aquatic life and action plan for complying with the mitigation measures shall be submitted. |
| 9. | Project proponent shall commission a study on Hydrology and Hydrogeology of the project site as well as the study area of the project site through a NABET accredited consultant. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report. |
| 10. | Radioactivity studies along with coal analysis to be provided (Sulphur, ash percentage and heavy metals including Pb, Cr, As and Hg). Details of auxiliary fuel, if any including its quantity, quality, storage, etc should also be given. |
| 11. | PP should submit the detailed plan in tabular format (year-wise) for concurrent afforestation and green belt development in and around the project site covering 33 % of the project area. The PP should submit the number of saplings to be planted, names of native species, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling should be of native and few fruit bearing species mainly, of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided. |
| 12. | Action plan for development of three-tier plantation programme (33 % of total project cover area) within 3 years along the periphery of the project boundary and the coal transportation route shall be provided. PP shall submit concurrent plantation plan. |
| 13. | Detailed action plan shall be prepared for maintenance of air pollution control equipment for proposed units and shall be incorporated in the EIA/EMP report. |
| 14. | Details of Ash management plan as per MoEF&CC notification dated 31/12/2021 & its subsequent amendment for the proposed project shall be submitted. MoU signed for ash utilization with companies shall be submitted. |
| 15. | Action plan for dry ash collection system (Bottom ash and Fly ash) shall be submitted. |
| 16. | Action plan for disposal of ash through High Concentration Slurry Disposal (only in emergency conditions) shall be submitted. |
| 17. | Proper protection measures like high-density polyethylene (HDPE) lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body (minimum 60 meters) etc. shall be planned to reduce the possibility of mixing leachate with any freshwater body for ash pond. A high-density Slurry disposal plan shall be prepared. |
| 18. | Pond and ground water quality (10 locations within 2 km radius of the plant boundary) shall be studied and report be submitted along with EIA/EMP. Action plan for Ground water monitoring stations on all hotspots like schools/hospitals within 2 km radius of the plant boundary be submitted. Baseline Study for Heavy metals in Groundwater, Surface water and soil to be carried out and incorporated in EIA/EMP report. |

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| 19. | Details pertaining to water source, treatment and discharge should be provided. |
| 20. | PP shall provide the details of wastewater treatment facilities to be installed within its capacity, timeline and budget. |
| 21. | Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report. |
| 22. | An action plan shall be prepared for Water shed development within 10 km radius of the plant boundary in consultation with reputed government institution and incorporated in EIA/EMP report. |
| 23. | PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total material handled) and steps to be taken for reduction of the same. The year-wise target for reduction in the specific diesel consumption needs to be submitted. PP shall also explore the possibility of using e-vehicles/LNG/CNG-based machinery and trucks for the operation and transportation of Coal and ash and submit an implementation strategy. |
| 24. | PP shall provide the details of transportation of fly ash from the plant, transportation route etc. Further, carry out a traffic study for at least one month and provide the impact of transportation along with the mitigation measures. |
| 25. | PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2016 and to adhere Ministry's OM dated 18/07/2022. |
| 26. | Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted. |
| 27. | The input parameters for the AAQ modelling and the influence of various combinations of these on the AAQ must be reported in the EIA/EMP Report. In addition to the Wind Rose diagram collected for one season during the preparation of the E.I.A., wind rose diagram for all seasons must be provided using secondary data from sources such as IMD/CPCB etc. |
| 28. | Project proponent shall take all necessary steps to control the Air Quality and take additional mitigation measures for proposed TPP to maintain the Ambient Air Quality values within the limits. The action plan regarding maintaining ambient quality standards (Time weighted average for 24 hours and Annual both) be submitted. Further, project proponent shall submit an undertaking to abide by the provisions of the notification number G.S.R 465 (E) dated 11/07/2025 related to FGD, as amended, and any subsequent amendment there of pursuant to the outcome of study carried out by CPCB in this regard. |
| 29. | Details of air pollution control devices to be installed in the proposed 2x800 MW TPP along with its maintenance schedule shall be incorporated in EIA/EMP report. |
| 30. | Carbon emission due to TPP and allied carbon sequestration/ carbon offsetting plan be submitted. |
| 31. | 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. An action plan in this regard shall be submitted. |
| **[B] Disaster Management** | |
| 1. | A Disaster Management Plan shall be prepared and incorporated in the EIA/EMP report. |

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| **[C] Socio-economic Study** | |
| 1. | Public Health Action Plan including the provisions for drinking water supply for the local population shall be in the EIA/EMP Report. The status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the needs of the labour force and local populace. |
| 2. | Public consultation (Public Hearing and Written submission) shall be conducted as per the provisions of EIA Notification, 2006 and as amended. As per the Ministry's OM dated 30.09.2020, to address the concern raised during the Public Hearing, the Project Proponent is required to submit the detailed activities proposed with year-wise budgetary provision (Capital and recurring) for 5 years. Activities proposed shall be part of EMP. Tentative no. of project affected families (if any) shall be identified and accordingly appropriate Rehabilitation &Resettlement plan shall be prepared. The recommendation Socio-economic study may also be considered while planning the activities & budget. |
| 3. | A need based Social Impact Assessment Study shall also be carried out and an action plan on its recommendations may also be submitted with budgetary provisions. |
| 4. | Demographic details and land use change details in 10 km area shall be submitted. |
| **[D] Miscellaneous** | |
| 1. | Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study. The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind. A mathematical model shall be developed for the local site rather than using the standard model available in software for both air & water quality modeling. |
| 2. | PP shall align its activities to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050. PPs shall update the same to the EAC. |
| 3. | PP shall submit the EIA/EMP report after the plagiarism check using authenticated plagiarism software. |
| 4. | Detailed description of all the court cases along with its current status shall be submitted. |
| 5. | PP should provide in the EIA Report details of all the statutory clearances, permissions, no objection certificates, consents etc. obtained for this project under various Acts, Rules and regulations shall be submitted. Further, all the permissions/MoUs obtained for this project shall be revalidated and submitted along with the EIA/EMP report. |
| 6. | The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs, which will analyze the samples. |
| 7. | PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of persons to be engaged for the implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted. |
| 8. | PP should submit the year-wise, activity wise and time-bound budget earmarked for EMP, occupational health surveillance, and activities proposed to address the issues raised during Public Hearing. The capital and recurring expenditure to be incurred needs to be submitted. |
| 9. | Activities shall be prepared based on the issues arise during public hearing conducted and fresh written |

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| | submission with defined timeline and budgetary provisions. |
| 10. | Aerial view video of project site and coal transportation route proposed for this project shall be recorded through drone and be submitted. Along with this plan of 3 tier plantation on coal transportation route shall be submitted. |
| 11. | The PP should ensure that only NABET-accredited consultants shall be engaged for the preparation of EIA/EMP Reports. PP shall ensure that the accreditation of the consultant is valid during the collection of baseline data, preparation of EIA/EMP report and the appraisal process. The PP and consultant should submit an undertaking the information and data provided in the EIA Report and submitted to the Ministry are factually correct and the PP and consultant are fully accountable for the same. |
| 12. | PP should provide in the EIA Report details of the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after the grant of EC. |
| 13. | All the certificates viz. involvement of Forest land, distance from the protected area, and list of flora & fauna should be duly authenticated by the Forest Department. The Certificate should bear the name, designation, official seal of the person signing the certificate and dispatch number. |
| 14. | Necessary coordination shall be made with concerned SPCB (who is responsible for Compliance of OM dated 14.01.2025) regarding streamlining the implementation of GSR 702 and GSR 703 dated 12.11.2024 through which projects requiring prior EC were exempted from requirement of CTE. |

**3.5.6.2. Standard**

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| 1(d) | **Thermal Power Plants** |
| **Statutory compliance** | |
| 1. | The proposed project shall be given a unique name in consonance with the name submitted to other Government Departments etc. for its better identification and reference. |
| 2. | Vision document specifying prospective long term plan of the project shall be formulated and submitted. |
| 3. | Latest compliance report duly certified by the Regional Office of MoEF&CC for the conditions stipulated in the environmental and CRZ clearances of the previous phase(s) for the expansion projects shall be submitted. |
| **Details of the Project and Site** | |
| 1. | The project proponent needs to identify minimum three potential sites based on environmental, ecological and economic considerations, and choose one appropriate site having minimum impacts on ecology and environment. A detailed comparison of the sites in this regard shall be submitted. |
| 2. | Executive summary of the project indicating relevant details along with recent photographs of the proposed site (s) shall be provided. Response to the issues raised during Public Hearing and the written representations (if any), along with a time bound Action Plan and budgetary allocations to address the same, shall be provided in a tabular form, against each action proposed. |
| 3. | Harnessing solar power within the premises of the plant particularly at available roof tops and other available areas shall be formulated and for expansion projects, status of implementation shall also be |

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| | submitted. |
| 4. | The geographical coordinates (WGS 84) of the proposed site (plant boundary), including location of ash pond along with topo sheet (1:50,000 scale) and IRS satellite map of the area, shall be submitted. Elevation of plant site and ash pond with respect to HFL of water body/nallah/River and high tide level from the sea shall be specified, if the site is located in proximity to them. |
| 5. | Layout plan indicating break-up of plant area, ash pond, green belt, infrastructure, roads etc. shall be provided. |
| 6. | Land requirement for the project shall be optimized and in any case not more than what has been specified by CEA from time to time. Item wise break up of land requirement shall be provided. |
| 7. | Present land use (including land class/kism) as per the revenue records and State Govt. records of the proposed site shall be furnished. Information on land to be acquired including coal transportation system, laying of pipeline, ROW, transmission lines etc. shall be specifically submitted. Status of land acquisition and litigation, if any, should be provided. |
| 8. | If the project involves forest land, details of application, including date of application, area applied for, and application registration number, for diversion under FCA and its status should be provided along with copies of relevant documents. |
| 9. | The land acquisition and R&R scheme with a time bound Action Plan should be formulated and addressed in the EIA report. |
| 10. | Satellite imagery and authenticated topo sheet indicating drainage, cropping pattern, water bodies (wetland, river system, stream, nallahs, ponds etc.), location of nearest habitations (villages), creeks, mangroves, rivers, reservoirs etc. in the study area shall be provided. |
| 11. | Topography of the study area supported by toposheet on 1:50,000 scale of Survey of India, along with a large scale map preferably of 1:25,000 scale and the specific information whether the site requires any filling shall be provided. In that case, details of filling, quantity of required fill material; its source, transportation etc. shall be submitted. |
| **Ecology biodiversity and Environment** | |
| 1. | A detailed study on land use pattern in the study area shall be carried out including identification of common property resources (such as grazing and community land, water resources etc.) available and Action Plan for its protection and management shall be formulated. If acquisition of grazing land is involved, it shall be ensured that an equal area of grazing land be acquired and developed and detailed plan submitted. |
| 2. | Location of any National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes / wildlife corridor, if any, within 10 km of the project site shall be specified and marked on the map duly authenticated by the Chief Wildlife Warden of the State or an officer authorized by him. |
| 3. | A mineralogical map of the proposed site (including soil type) and information (if available) that the site is not located on potentially mineable mineral deposit shall be submitted. |
| 4. | The water requirement shall be optimized (by adopting measures such as dry fly ash and dry bottom ash disposal system, air cooled condenser, concept of zero discharge) and in any case not more than that stipulated by CEA from time to time, to be submitted along with details of source of water and water balance diagram. Details of water balance calculated shall take into account reuse and re- circulation of effluents. |

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| 5. | Water body/Nallah (if any) passing across the site should not be disturbed as far as possible. In case any Nallah / drain is proposed to be diverted, it shall be ensured that the diversion does not disturb the natural drainage pattern of the area. Details of proposed diversion shall be furnished duly approved by the concerned Department of the State. |
| 6. | It shall also be ensured that a minimum of 500 m distance of plant boundary is kept from the HFL of river system / streams etc. and the boundary of site should also be located 500 m away from railway track and National Highways. |
| 7. | Hydro-geological study of the area shall be carried out through an institute/ organization of repute to assess the impact on ground and surface water regimes. Specific mitigation measures shall be spelt out and time bound Action Plan for its implementation shall be submitted |
| 8. | Detailed Studies on the impacts of the ecology including fisheries of the River/Estuary/Sea due to the proposed withdrawal of water / discharge of treated wastewater into the River/Sea etc shall be carried out and submitted along with the EIA Report. In case of requirement of marine impact assessment study, the location of intake and outfall shall be clearly specified along with depth of water drawl and discharge into open sea. |
| 9. | Source of water and its sustainability even in lean season shall be provided along with details of ecological impacts arising out of withdrawal of water and taking into account inter-state shares (if any). Information on other competing sources downstream of the proposed project and commitment regarding availability of requisite quantity of water from the Competent Authority shall be provided along with letter / document stating firm allocation of water. |
| 10. | Detailed plan for rainwater harvesting and its proposed utilization in the plant shall be furnished.In addition, wherever ground water is drawn, PP shall submit detailed plan of Water charging activity to be undertaken. |
| 11. | Feasibility of near zero discharge concept shall be critically examined and its details submitted. |
| 12. | Optimization of Cycles of Concentration (COC) along with other water conservation measures in the project shall be specified. |
| 13. | Plan for recirculation of ash pond water and its implementation shall be submitted. |
| 14. | Detailed plan for conducting monitoring of water quality regularly with proper maintenance of records shall be formulated. Detail of methodology and identification of monitoring points (between the plant and drainage in the direction of flow of surface / ground water) shall be submitted. It shall be ensured that parameter to be monitored also include heavy metals. A provision for long-term monitoring of ground water table using Piezometer shall be incorporated in EIA, particularly from the study area. |
| 15. | Hazards Characterization: Past incidents of hazard events within 10km radius of project area with detailed analysis of causes and probability of reoccurrence |
| **Environmental Baseline study and mitigation measures** | |
| 1. | One complete season (critical season) site specific meteorological and AAQ data (except monsoon season) as per latest MoEF&CC Notification shall be collected along with past three year's meteorological data for that particular season for wins speed analysisand the dates of monitoring shall be recorded. The parameters to be covered for AAQ shall include PM10, PM2.5, SO2, NOx, CO and Hg. The location of the monitoring stations should be so decided so as to take into consideration the upwind |

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| | direction, pre-dominant downwind direction, other dominant directions, habitation and sensitive receptors. There should be at least one monitoring station each in the upwind and in the pre - dominant downwind direction at a location where maximum ground level concentration is likely to occur. |
| 2. | In case of expansion project, air quality monitoring data of 104 observations a year for relevant parameters at air quality monitoring stations as identified/stipulated shall be submitted to assess for compliance of AAQ Standards (annual average as well as 24 hrs). |
| 3. | A list of industries existing and proposed in the study area shall be furnished. |
| 4. | Cumulative impacts of all sources of emissions including handling and transportation of existing and proposed projects on the environment of the area shall be assessed in detail. Details of the Model used and the input data used for modelling shall also be provided. The air quality contours should be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any. The windrose and isopleths should also be shown on the location map. The cumulative study should also include impacts on water, soil and socio-economics. |
| 5. | Radio activity and heavy metal contents of coal to be sourced shall be examined and submitted along with laboratory reports. |
| 6. | Fuel analysis shall be provided. Details of auxiliary fuel, if any, including its quantity, quality, storage etc should also be furnished. |
| 7. | Quantity of fuel required, its source and characteristics and documentary evidence to substantiate confirmed fuel linkage shall be furnished. The Ministry's Notification dated 02.01.2014 regarding ash content in coal shall be complied. For the expansion projects, the compliance of the existing units to the said Notification shall also be submitted |
| 8. | Details of transportation of fuel from the source (including port handling) to the proposed plant and its impact on ambient AAQ shall be suitably assessed and submitted. If transportation entails a long distance it shall be ensured that rail transportation to the site shall be first assessed. Wagon loading at source shall preferably be through silo/conveyor belt. |
| 9. | For proposals based on imported coal, inland transportation and port handling and rail movement shall be examined and details furnished. The approval of the Port and Rail Authorities shall be submitted. |
| 10. | Details regarding infrastructure facilities such as sanitation, fuel, restrooms, medical facilities, safety during construction phase etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase should be adequately catered for and details furnished. |
| **Environmental Management Plan** | |
| 1. | EMP to mitigate the adverse impacts due to the project along with item - wise cost of its implementation in a time bound manner shall be specified. |
| 2. | A Disaster Management Plan (DMP) along with risk assessment study including fire and explosion issues due to storage and use of fuel should be prepared. It should take into account the maximum inventory of storage at site at any point of time. The risk contours should be plotted on the plant layout map clearly showing which of the proposed activities would be affected in case of an accident taking place. Based on the same, proposed safeguard measures should be provided. Measures to guard against fire hazards should also be invariably provided. Provision for mock drills shall be suitably incorporated to check the efficiency of the plans drawn. |

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| 3. | The DMP so formulated shall include measures against likely Fires/Tsunami/Cyclones/Storm Surges/ Earthquakes etc, as applicable. It shall be ensured that DMP consists of both On-site and Off-site plans, complete with details of containing likely disaster and shall specifically mention personnel identified for the task. Smaller version of the plan for different possible disasters shall be prepared both in English and local languages and circulated widely. |
| 4. | Details of fly ash utilization plan as per the latest fly ash Utilization Notification of GOI along with firm agreements / MoU with contracting parties including other usages etc. shall be submitted. The plan shall also include disposal method / mechanism of bottom ash along with monitoring mechanism. |
| **Green belt development** | |
| 1. | Detailed scheme for raising green belt of native species of appropriate width (50 to 100 m) and consisting of at least 3 tiers around plant boundary not less than 2000 tree per ha with survival rate of more than 85%shall be submitted. Photographic evidence must be created and submitted periodically including NRSA reports in case of expansion projects. A shrub layer beneath tree layer would serve as an effective sieve for dust and sink for CO2 and other gaseous pollutants and hence a stratified green belt should be developed. |
| 2. | Over and above the green belt, as carbon sink, plan for additional plantation shall be drawn by identifying blocks of degraded forests, in close consultation with the District Forests Department. In pursuance to this the project proponent shall formulate time bound Action Plans along with financial allocation and shall submit status of implementation to the Ministry every six months |
| **Socio-economic activities** | |
| 1. | Socio-economic study of the study area comprising of 10 km from the plant site shall be carried out through a reputed institute / agency which shall consist of detail assessment of the impact on livelihood of the local communities. |
| 2. | Action Plan for identification of local employable youth for training in skills, relevant to the project, for eventual employment in the project itself shall be formulated and numbers specified during construction & operation phases of the Project. |
| 3. | If the area has tribal population, it shall be ensured that the rights of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land. |
| 4. | A detailed CER plan along with activities wise break up of financial commitment shall be prepared in terms of the provisions OM No. 22-65/2017-IA.III dated 30.09.2020.CER component shall be identified considering need based assessment study and Public Hearing issues. Sustainable income generating measures which can help in upliftment of affected section of society, which is consistent with the traditional skills of the people shall be identified. |
| 5. | While formulating CER schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide Action Plan for the status of implementation of the scheme from time to time and dovetail the same with any Govt. scheme(s). CERdetails done in the past should be clearly spelt out in case of expansion projects. |
| 6. | R&R plan, as applicable, shall be formulated wherein mechanism for protecting the rights and livelihood of the people in the region who are likely to be impacted, is taken into consideration. R&R plan shall be formulated after a detailed census of population based on socio economic surveys who were dependant on land falling in the project, as well as, population who were dependant on land not owned by them. |

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| 7. | Assessment of occupational health and endemic diseases of environmental origin in the study area shall be carried out and Action Plan to mitigate the same shall be prepared. |
| 8. | Occupational health and safety measures for the workers including identification of work related health hazards shall be formulated. The company shall engage full time qualified doctors who are trained in occupational health. Health monitoring of the workers shall be conducted at periodic intervals and health records maintained. Awareness programme for workers due to likely adverse impact on their health due to working in non-conducive environment shall be carried out and precautionary measures like use of personal equipments etc. shall be provided. Review of impact of various health measures undertaken at intervals of two to three years shall be conducted with an excellent follow up plan of action wherever required. |
| **Corporate Environment Policy** | |
| 1. | Does the company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report. |
| 2. | Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA. |
| 3. | What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions. Details of this system may be given. |
| 4. | Does the company has compliance management system in place wherein compliance status along with compliances / violations of environmental norms are reported to the CMD and the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism should be detailed in the EIA report. |
| **Miscellaneous** | |
| 1. | All the above details should be adequately brought out in the EIA report and in the presentation to the Committee. |
| 2. | Details of litigation pending or otherwise with respect to project in any Court, Tribunal etc. shall invariably be furnished. |
| 3. | In case any dismantling of old plants are envisaged, the planned land use & land reclamation of dismantled area to be furnished. |
| **Additional TOR for Coastal Based Thermal Power Plants Projects (TPPs)** | |
| 1. | Low lying areas fulfilling the definition wetland as per Ramsar Convention shall be identified and clearly demarcated w.r.t the proposed site. |
| 2. | If the site includes or is located close to marshy areas and backwaters, these areas must be excluded from the site and the project boundary should be away from the CRZ line. Authenticated CRZ map from any of the authorized agencies shall be submitted. |
| 3. | The soil levelling should be minimum with no or minimal disturbance to the natural drainage of the area. If the minor canals (if any) have to be diverted, the design for diversion should be such that the diverted canals not only drains the plant area but also collect the volume of flood water from the surrounding areas and discharge into marshy areas/major canals that enter into creek. Major canals should not be |

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| | altered but their embankments should be strengthened and desilted. |
| 4. | Additional soil required for levelling of the sites should as far as possible be generated within the site itself in such a manner that the natural drainage system of the area is protected and improved. |
| 5. | Marshy areas which hold large quantities of flood water to be identified and shall not be disturbed. |
| 6. | No waste should be discharged into Creek, Canal systems, Backwaters, Marshy areas and seas without appropriate treatment. Wherever feasible, the outfall should be first treated in a Guard Pond and then only discharged into deep sea (10 to 15 m depth). Similarly, the Intake should be from deep sea to avoid aggregation of fish and in no case shall be from the estuarine zone. The brine that comes out from Desalinization Plants (if any) should not be discharged into sea without adequate dilution. |
| 7. | Mangrove conservation and regeneration plan shall be formulated and Action Plan with details of time bound implementation shall be specified, if mangroves are present in Study Area. |
| 8. | A common Green Endowment Fund should be created by the project proponents out of EMP budgets. The interest earned out of it should be used for the development and management of green cover of the area. |
| 9. | Impact on fisheries at various socio economic level shall be assessed. |
| 10. | An endowment Fishermen Welfare Fund should be created out of CER grants not only to enhance their quality of life by creation of facilities for Fish Landing Platforms / Fishing Harbour / cold storage, but also to provide relief in case of emergency situations such as missing of fishermen on duty due to rough seas, tropical cyclones and storms etc. |
| 11. | Tsunami Emergency Management Plan shall be prepared wherever applicable and Plan submitted prior to the commencement of construction work. |
| 12. | There should not be any contamination of soil, ground and surface waters (canals & village pond) with sea water in and around the project sites. In other words necessary preventive measures for spillage from pipelines, such as lining of Guard Pond used for the treatment of outfall before discharging into the sea and surface RCC channels along the pipelines of outfall and intake should be adopted. This is just because the areas around the projects boundaries could be fertile agricultural land used for paddy cultivation. |

**4. Any Other Item(s)**

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| N/A |

**5. List of Attendees**

| Sr. No. | Name | Designation | Email ID | Remarks |
|---|---|---|---|---|
| 1 | Dr Santoshkumar Hampannavar | Member (EAC) | san**********@yahoo.com | Present |
| 2 | Dr Umesh Jagannathrao Kahalekar | Member (EAC) | uka*******@rediffmail.com | Present |
| 3 | Shri K B Biswas | Member (EAC) | bis*********@gmail.com | Present |
| 4 | Shri Mahi Pal Singh | Member (EAC) | mps********@nic.in | Present |

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|---|---|---|---|---|
| 5 | Sundar Ramanathan | Scientist - F | r.s*****@nic.in | Present |
| 6 | Sh Inder Pal Singh Matharu IFS | Chairman, EAC | mat********@gmail.com | Present |
| 7 | Sh Lalit Kapur | Member (EAC) | lka********@yahoo.com | Present |
| 8 | Sh Savalge Chandrasekhar | Member (EAC) | sav*****@gmail.com | Present |
| 9 | Prof Shyam Shanker Singh | Member (EAC) | sin********@gmail.com | Present |
| 10 | Dr Vinod Agrawal | Member (EAC) | vin*****@yahoo.com | Present |
| 11 | Prof R M Bhattacharjee | Member (EAC) | rmb**********@iitism.ac.in | Present |
| 12 | Shri Harmeet Sahaney | Member (EAC) | har**********@imd.gov.in | Absent |
| 13 | Shri Prasoon Gargava | Scientist F | pra*********@nic.in | Absent |

**Ministry of Environment, Forest and Climate Change**
**Impact Assessment Division**
**(Thermal sector)**

**Date of zero draft MoM sent to Chairman: 08/10/2025**
**Approval by Chairman: 10/10/2025**
**Uploading on PARIVESH: 10/10/2025**

**SUMMARY RECORD OF THE THIRTIETH (30TH) MEETING OF EXPERT APPRAISAL COMMITTEE (EAC) HELD ON 26TH SEPTEMBER, 2025 FOR ENVIRONMENT APPRAISAL OF THERMAL SECTOR PROJECTS THROUGH PHYSICAL MODE.**

**26th September, 2025 [Friday]**

At the outset, Shri. Inder Pal Singh Matharu (I.F.S Retd.), Chairman, Expert Appraisal Committee (Thermal Power & Coal Mining) welcomed the Expert members & other participants and requested to start the proceeding as per the agenda listed for this meeting. The list of members who participated in the meeting is at **Annexure – I**. The Standard/Generic ToR conditions shall be system generated through the PARIVESH Portal.

Confirmation of the Minutes of the 29th Meeting of the EAC (Thermal): The minutes of the 27th meeting of the EAC (Thermal) held on 29/08/2025 has been confirmed by the EAC as uploaded on Parivesh.

**Agenda No 30.1**

**30.1** Expansion of 2x800 MW (Stage-I) Darlipali Supercritical Coal Based Thermal Power Plant by Addition of One Unit of 800 MW [1x800MW(Stage-II) Darlipali Super Thermal Power Project] by **M/s. NTPC Limited** located at Village Darlipali, Raidihi, in Lephripara Tehsil, Village Chuabahal, Kalamegha, Laikera, Bihajor, Kanaktura in Hemgir Tehsil, **District Sundergarh and Village Tileimal, Chichinda, Kechobahal, in Jharsuguda Tehsil and Village Chhadarama in Lakhanpur Tehsil of Jharsuguda District, Odisha – Environmental Clearance– regarding**.

**[Proposal No. IA/OR/THE/551120/2025; F. No. J-13012/65/2008-IA.II(T)]**

**30.1.1**: M/s. NTPC Limited has made an online application vide proposal no. IA/OR/THE/551120/2025 dated 11/09/2025 along with copy of EIA/EMP report, Form and Certified compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at item no. *1(d)* Under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level and does not attract the general condition of the EIA Notification, 2006.

**Name of the EIA consultant:** M/s. Mantec Consultants Pvt. Ltd [S. No138, List of ACOs with their Certificate no:NABET/EIA/2326/RA0305_Rev.01; Valid up to 20.04.2026.

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.1.2:** Darlipali Super Thermal Power Project, Stage-II (1 x 800 MW) by M/s. NTPC Limited, located in Darlipali, Raidhi Village in Lephripara Tehsil & Chuabahl, Kalamegha, Laikera, Bihajor, Kanakturan village in Hemgir Tehsil of Sundergarh District and village Tileimal, Chichinda, Kechobahal in Jharsuguda Tehsil and village Chhadarama in Lakhanpur Tehsil of Jharsuguda District in Odisha State is for enhancement of power generation capacity from 1600 MW to 2400 MW with addition of 1 unit of 800 MW based on Ultra Super Critical Technology & Air Cooled Condenser.

**30.1.3:** The existing project of 2x800 MW was accorded environmental clearance vide letter no. J-13012/65/2008-IA.1(T) dated 17.02.2014 from Ministry of Environment & Forests. The Environment Clearance was amended vide letter dated 12.02.2019, 11.08.2020 & 24.12.2021. The project has been implemented and units are under operation. Consent to Operate for the existing units was accorded by Odisha State Pollution Control Board vide Letter No. 6565 dated 28.03.2025. The validity of CTO is up to 31.03.2026.

**30.1.4**: Implementation status of the existing EC

| S. No. | Configuration | Capacity (MW) | Date of EC | Implementation Status | Production as per CTO |
|---|---|---|---|---|---|
| 1 | 2×800 | 1600 MW (2 x 800 W) | 17.02.2014 | 2×800 | 1600 MW |

**30.1.5: Certified compliance report from Regional Office**: The Status of compliance of earlier EC was obtained from Regional Office Bhubaneswar, vide letter no.101-736/EPE dated 10.09.2024 in the name of M/s. NTPC Darlipali. The Action taken report regarding the partially/non-complied conditions was submitted to Regional office, MoEF&CC Bhubaneswar, vide letter no. DSTPP/EMG-AU/26/2024 dated 21.09.2024. Request letter regarding revisit for closure report has been sent to RO vide letter no: DSTPP/EMG-AU/2024/30 dated 18.10.2024. MoEF&CC (RO), Bhubaneswar evaluated the same after revisiting the site on 09.05.2025 and submitted observations on ATR submitted by Project Proponent dated 21.09.2024 vide letter no. 101-736/EPE/2024 dated 02.06.2025 to MoEF&CC. In this regard, project proponent has submitted the action taken report regarding the partially/non-complied conditions vide letter no: DSTPP/EMG-AU/2025/26 dated 28.06.2025.

***The details of the present compliance status as submitted by the project proponent is given as below***:

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| **As per the MoEF&CC letter no. J-13012/65/2008-IA. II (T) dated 12.02.2019 (Additional conditions)** | | | | |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| 1 | Details of submission of coal linkage to Ministry has not been furnished<br>**(Condition No.1)**<br>The coal linkage is available only for 3.8 MTPA. Copy of the linkage for remaining quantity shall be submitted to Ministry as and when it is granted. | Details have not been furnished. During visit PP stated that Dulanga coal mines belongs to M/s NTPC only for coal linkage arrangement not required. Ministry may like to take a view in the matter. | Coal is sourced from NTPC Captive Dulanga Coal Mine for which linkage is not required. However, coal allotment letter issued from Ministry of Coal, Govt of India is submitted.<br>**The condition may kindly be considered as complied.** | Out of total coal requirement of 8 MTPA for Stg# I, 7 MTPA Coal is sourced from NTPC's Captive Dulanga Coal Mine and 1 MTPA is sourced form NTPC Captive mine Talaipalli.<br>The mine allotment letter for Dulanga mine from Ministry of coal, Govt of India is submitted in RO compliance report.<br>**It is to submit that as the coal is sourced from NTPC's own mines, coal linkage is not required for the same.** |
| 2 | During visit transportation through rail mode has been observed, Road transportation has not been observed. A certificate regarding the completeness and adequacy of the road as per the condition has not been furnished.<br>**(condition no.2)**<br>Route No.2 from Dulanga mines to the Power plant site shall not be used at present as it is under widening. The transportation shall be commenced only after widening the road to cater to the proposed transportation. A certificate regarding the completeness and adequacy of the road shall be submitted provided by the PWD or the | During visit on 09.05.2025 coal transportation through truck has been observed. PP submitted that coal are being source from NLC-Talabera. As stipulated in the amendment environmental clearance certificate from PWD for route no.2 i.e. from Dulanga mines to power plant has not been furnished. PP also submitted that presently road transportation is being done as per | The coal transportation through road from Dulanga to Darlipali has been completely stopped and at present, coal is being transported through dedicated rail mode only. However, additional coal is being transported through public road from NLC Talbira mine to Darlipali STPP for meeting the coal requirement.<br>Copy of MOU & its extension is submitted.<br>**The condition** | It is to submit that no Coal is being transported through road since 22/06/2025.<br>Total coal requirement is being met through rail mode only from NTPC's own captive mines. |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| | custodian of the road. | the O.M. of Ministry dated 29.10.2020. Ministry may like to take a view in the matter. | **may kindly be considered as complied.** | |
| 3 | Air quality monitoring report of 6 locations has been furnished. Air quality monitoring data as per the condition has not been furnished (**condition no.3)** Air quality monitoring shall be carried out at 19 census points indicated in the report along all routes once in quarter. | Air quality monitoring data as per the condition has not been furnished. The condition may be treated as partially complied. | Ambient air quality monitoring report up to March 2020 for the 19 locations stipulated in amended EC dated 12.02.2019 is submitted. Monitoring was suspended after March 2020 due to Corona pandemic. **The Condition may kindly be considered as complied.** | Ambient air quality monitoring report for the period April 2019 to March 2020 was carried out at 19 locations as stipulated in the amended EC. Thereafter, monitoring could not be continued due to Corona Pandemic. The Monitoring report for above mentioned period has been submitted to RO Bhubaneshwar vide latter dated.28.06.2025. It is to further mention that the coal transportation through Dulanga road route for which the monitoring was prescribed at 19 locations, was stopped w.e.f April 2020 and the transportation started through rail mode. |
| 4 | Details of plantation along the road been furnished. (**condition no.4)** Plantation shall be carried out along the road in consultation with State Social Forestry Department. | Details of plantation in the road as stipulated in the condition has not been furnished. The condition may be | This condition was stipulated in amended EC dated 12.02.2019. for transportation of coal by road. Permission for | Plantation activity could not be taken up because of limited scope along the roads and onset of Corona pandemic |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
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| | | treated as partially complied. | coal transportation was given till Oct 2020 but due to Corona Pandemic plantation along the Road could not done. Presently no coal is being transported through road from Dulanga Coal mine with respect to plantation along Talabira road route, it is to mention that there is limited scope for plantation. along the public road. However, in consultation with DFO Jharsuguda plantation of 40000 trees has been planned. The copy of the Project proposal submitted by DFO Jharsuguda is submitted.<br>Further, Gap plantation on the route to NLC Talabira will be carried with the help of forest department. The request letter dated 13.06.2025 has been submitted to Divisional Manager, CGRVVN LTD, Raigarh | in 2020. Further, it is to humbly submit that the coal transportation through road on the said route was stopped in Apr 2020. However, during IRO visit & as per advice block plantation has been carried out in Jharsuguda and Sundargargh District. About 70000 sapling have been planted. Photographs of plantations have been submitted in the IRO compliance report. |
| 5 | During visit road transportation has not been observed, only rail transportation observed for | During visit water sprinkling observed on road near the ash pond. | Regular sprinkling of water on road for transportation of ash and coal is | Regular sprinkling of water is being done in the ash corridor and there |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
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| | coal, water sprinkling observed near the ash pond road during ash transportation details of water sprinkling on coal transportation road has not been furnished<br>**(Condition no. 5)**<br>Regular water sprinkling shall be done on the unpaved roads during transportation. | However, details of water sprinkling on coal transportation road has not been furnished. The condition may be treated as partially complied. It is also to mention that present road for coal transportation from Darlipali to Barapali chock (22001'33.7 N 83047'19.9"E) is black topped/cemented except in few patches. | being done regularly. The photographs of the same is submitted.<br>**The condition may kindly be considered as complied.** | is no coal transportation through road route. |
| **As per the MoEF&CC letter no. J-13012/65/2008-IA. II (T) dated 17.02.2014** | | | | |
| 1 | The condition has been amended vide letter dated 24.12.2021. During the visit single stack has been observed. As per the data submitted the flue gas velocity is less than 22m/s. Online continuous monitoring facility for PM, SO2, and NO2 has been provided. Mercury monitored on periodic basis, SO2 exceeds the norms.<br>**(Condition no. viii)**<br>The two Stacks of 275m height with flue gas velocity not less than 22 m/s shall be installed and provided with continuous online monitoring equipments for SOX, NOX, and PM 2.5 & PM10. Mercury emissions from Stack may also be monitored on periodic | During visit on 09.05.2025 FGD for both unit1 and unit II was in operation.<br>However, flue gas velocity reported to be 22.6 m/s for unit 1 and 21.3 m/s for unit II. Considering this the condition may be treated as partially complied. | Stack Monitoring is being carried out on fortnightly basis, the reports of second fortnight of May 2025 & first fortnight of June,2025 by M/s Vibrant Techno Lab Private Limited Jaipur (MOEF&CC accredited lab) are submitted. The reported flue gas velocities are 23.72 m/s, 24.13m/s & 22.56 m/s, 22.29 m/s for Unit-1 & Unit-2 respectively.<br>**The condition may kindly be considered as complied.** | Stack Monitoring is being carried out on fortnightly basis, the reports of second fortnight of May 2025 & first fortnight of June,2025 by M/s Vibrant Techno Lab Private Limited Jaipur (MOEF&CC accredited lab) are submitted in RO compliance report. The reported flue gas velocities are 23.72 m/s, 24.13m/s & 22.56 m/s, 22.29 m/s for Unit-1 & Unit-2 respectively.<br>The flue gas velocity in subsequent reports is also above the |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| | basis. | | | minimum requirement of 22m/s. |
| 2 | Ash utilization for the period 2023-24 reported to be 55.82%.<br>**(condition no. xi)**<br>Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time. | PP reported in the submitted six monthly compliances for the period of Oct 24-Mar 25 for fly ash utilization during 2024-25 as 85.06%. The condition may be treated as partially complied. (Six monthly compliance submitted) | As per MOEF&CC notification dated 31.12.2021 for ash utilization, Darlipali STPP falls under category C. The target of 100% fly ash utilization is to be achieved by 31st March 2027. There has been significant improvement in ash utilization which has increased from 55.82% (2023-24) to 85.06 % (2024-25). The ash utilization for 2025-26 (till 31.05.2025) is 143%. Present ash utilisation of Darlipali STPP is in compliance with MOEF&CC notification dated 31.12.2021 & Annual Ash Compliance Report (ACR) for FY 2024-25 is submitted).<br>**The condition may kindly be considered as being complied** | As per MOEF&CC notification dated 31.12.2021 for ash utilization, Darlipali STPP falls under category C. The target of 100% fly ash utilization is to be achieved by 31st March 2027. There has been significant improvement in ash utilization which has increased from 55.82% (2023-24) to 85.06 % (2024-25). The ash utilization for 2025-26 (till 31.08.2025) is 159.92%. Present ash utilisation of Darlipali STPP is in compliance with MOEF&CC notification dated 31.12.2021. |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| 3 | During visit partially constructed fly ash silo observed. Unutilized fly ash disposed off to the ash pond in the form of slurry. Mercury and other heavy metal analysis data as per the condition has not been furnished.<br>**Condition no. xiii)**<br>Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area | PP submitted that trial operation completed for one silo. However, operation of silo yet to be started. PP furnished raw coal and coal ash analysis data for heavy metal carried out by NIT, Rourkerela, by elemental analysis. Data indicate Zr, Tia and Fe as heavy metal in coal and Zr, Ti and Fe also in coal ash sample. Mercury and other heavy metal analysis data (As, Hg, Cr, Pb) effluent has not been furnished. The condition may be treated as partially complied. | The dry ash Silo no. 4 has been commissioned. There is no effluent discharge from the ash dyke. Ash Water Recycling System (AWRS) is in operation and all supernatant water from ash pond is recycled back to the plant and reused for ash slurry making.<br>Seepage water from ash dyke is also recycle back. Heavy metals analysis including As, Hg, Cr, Pb of seepage water is being done on a regular basis and latest report is submitted.<br>**The condition may kindly be considered as complied.** | The dry ash Silo no. 3 & 4 have been commissioned & are under operation. Silo 1 & 2 will be commissioned in December, 2025.<br><br>Heavy metals analysis including As, Hg, Cr, Pb of seepage water is being done on a regular basis and the reports are being shared with regional office MoEF & CC and OSPCB. |
| 4 | PP submitted that 18 No. of piezometers, settlement marker has been installed for regular monitoring of groundwater level in and around ash pond area. It was also reported that heavy metal analysis data submitted to SPCB on monthly basis. Heavy metal analysis data has not been furnished to regional office<br>**(condition no. xxii)**<br>Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new | Heavy metal analysis data in ground water sample around the ash pond area has not been furnished. The condition may treated as partially complied. | Latest Heavy Metal analysis report of ground water from ash pond area is being done through third party approved by MOEF&CC.<br>**The condition may kindly be considered as complied.** | Heavy metal analysis in ground water around ash pond area is being done through NABET accredited lab on a regular basis and the reports are being shared with regional office MoEF & CC and OSPCB. |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| | piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project. | | | |
| 5 | Effluent from ash pond has been found to be discharged outside **(condition no. xxiv)** Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB. | During visit on 09.05.2024 discharge of ash laden water has not been observed. Water flow observed in the toe drain of the ash pond. PP submitted it to be seepage water. Discharge of seepage water has been observed. Monitoring data of seepage water has not been furnished. | Monthly Monitoring report is being submitted to OSPCB & same has been submitted to IRO MOEF&CC Bhubaneswar with ATR dated 28.10.2024 which covers seepage water analysis. However, the latest seepage water quality analysis report for May 2025 was attached in ATR. **The condition may kindly be considered as complied** | Monitoring data of seepage water analysis in toe drain is being furnished to regional office MoEF & CC and OSPCB regularly. |
| 6 | PP reported that institutional setup at NTPC project/Regional HQ/Corporate centre is in place for monitoring R&R/CSR activity of Darlipali project. Details of annual social audit from nearest government institute yet to be done. The activities yet to be uploaded on Companies website. **(condition no. xxxii)** | PP reported internal social audit carried out in 2023. However, annual social audit from nearest government institute yet to be carried out. The condition may be treated as partially complied. | Social audit has been conducted through internal resources in 2024. Report has been submitted. Further, a social impact evaluation is also planned to be taken up in 2025 through reputed institution & the report | Social audit has been conducted through internal resources in 2024. Further, a social impact evaluation is planned through reputed institution in 2025.The status of implementation of various schemes recommended as part of the social |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| | It shall be ensured that an in-built monitoring mechanism for the CSR schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time. The achievements should be put on company's website. | | thereof shall be submitted in due course of time. | audit report , shall be submitted alongwith half yearly compliance report. |
| 7 | During visit water from ash pond found to be discharged outside without re-circulation **(General condition no. 1)** The treated effluents conforming to the prescribed standards only shall be re- circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed. | During visit on 09.05.2025 ash laden water has not been observed. During visit water flow observed on the toe drain of the ash pond. PP stated it to be seepage water. However, during visit seepage water found to be discharge and system provided to recycle back seepage water in unable to return back all the collected water. The condition may treated as partially complied. | Permanent Seepage water Pump House is in operation and all seepage water is being recycled back into the system and reused for ash slurry purpose. No water is going outside into the natural water bodies or any other agricultural field. The Photographs of seepage water pump House is submitted. **The condition may kindly be considered as complied.** | Permanent Seepage water Pump House is in operation and all seepage water is being recycled back into the system and reused for ash slurry purpose. No water is going outside into the natural water bodies or any other agricultural field. |
| 8 | Plantation has been observed at the site. However, 3 tier plantation of 100 m width around plant yet to be developed. Green belt around ash pond yet to be developed. **(Condition no. xxxiii)** | Plantation has been observed at site and in part at the ash pond area. However, green belt of 100 m width consisting of 3 tire | A total of 92 Ha (2.27 Lakhs trees) area has been developed as green belt. The photographs of plantation is submitted. | A total of 92 Ha (2.27 Lakhs trees) area has been developed as green belt which accounts for 41% of plant and ash dyke area. |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| | Green Belt consisting of 3 tiers of plantations of native species around plant not less than 100m width shall be raised (except in areas not feasible). The density of trees shall not less than 2500per ha with survival rate not less than 80%. Additional green belt of appropriate density and width not less than 50 m at-least, shall be developed between the ash pond and the village facing the ash pond. | plantations of native spaces along the plant and 50 m width between ash pond and the village facing the ash pond yet to be developed. The condition may be treated as partially complied. | Further, the green belt around ash pond has been developed. A total of 8400 tress have been planted & in remaining patches around ash dyke plantation is being carried out. | A green belt of approx. 10-15 m has already been developed between ash dyke and the village site and gap plantation will be carried out to maximum extent possible to increase the density and area coverage. |
| 9 | Ambient air quality level monitoring data of six locations has been which includes PM10, PM2.5, SO2 and NO2. However, Hg values has not been included. Data reported was within norms. Monitoring data yet to be uploaded on the company website. **(General Condition no. vii)** Regular monitoring of ambient air ground level concentration of SO2, NOx, PM2.5 & PM10 and Hg shall be carried out in the impact zone and record maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional office of this Ministry. The data shall also be put on the website of the company. | Monitoring data has been uploaded on the website. However, Hg parameter yet to be monitored and uploaded. The condition may be treated as partially complied. | The monitoring is done for Hg parameter in the month of May,2025 and same will be continued. **The condition may kindly be considered as complied.** | The monitoring of Hg parameters in ambient air is being carried out & report was submitted vide letter dated 28.06.2025. Regular monitoring report of all parameters including Hg is being submitted to regional office and is uploaded on company website. |
| 10 | PP reported· that | The advertisement | The advertisement | The publication in |

| S.No. | Non-compliance/partially compliance reported RO, MoEF&CC, BBSR in the monitoring report dated 10.09.2024 | Comment of the Regional office, MoEF& CC, Bhuvneshwar | NTPC reply/Action taken report dated 28.06.2025 | Status as on 26.09.2025 |
|---|---|---|---|---|
| | information of environmental clearance was published in Times of India on 22.02.2014 and Samaj on 23.02.2014However, advertisement in vernacular language has not been furnished.<br>**(General condition no. ix)**<br>The project proponent shall advertise in at least two local news papers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in. | in newspaper of vernacular language (Samaj) has been published in English considering that the condition may be treated as partially complied. | for Environment Clearance was published in Local Odia Daily Newspaper and in National Newspaper Times of India.<br>**The condition may kindly be considered as complied**. | vernacular paper was done in English language inadvertently in 2014.<br><br>As it is one time activity, no corrective action can be taken at this juncture. |

**30.1.6: Status regarding $SO_2$ emission standards as per the MoEF&CC Notification dated 11/07/2025**:

i. Categorization details of TPP : **C** ( Other than those included in Category A and B)
ii. Sulfur content of the coal to be fired in the boiler: 0.4%-0.55%
iii. Status of FGD installation for existing unit: Wet Flue gas desulphurization (FGD) System has been installed for both the units of Darlipali STPP Stage-I and are in operation.
iv. Action plan for installation of new stack in compliance to the notification number GSR 742 (E) dated the 30/08/1990 for the proposed expansion : Installation of 275m high stacks envisaged for the proposed expansion project in compliance to the notification GSR 742(E) dated 30.08.1990.

**30.1.7:** The detail of the ToR is furnished as below:

| Proposal No with date | Consideration | Details | Date of accord | ToR Validity |
|---|---|---|---|---|
| IA/OR/THE/417290/2023 | 38th EAC meeting held on 06.03.2024 | Terms of reference | 17.04.2023 | 16.04.2027 |
| IA/OR/THE/441147/2023 | 47th EAC meeting held on 26.09.2023 | Amendment | 13.11.2023 | - |
| IA/OR/THE/544298/2025 | 28th EAC meeting held on 12.08.2025 | Amendment | 09.09.2025 | - |

**30.1.8: Environmental site settings**

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1</td><td>Total land</td><td colspan="3">Existing area is 675.780 Ha. Total land requirement for Stage II i.e., 1x800 MW is 159.912 Ha. Total area of the project is 835.692 Ha. Out of 159.912 Ha, 39.278 Ha will be met from the existing area and remaining 120.64 Ha of additional land is proposed to be acquired.</td><td>-</td></tr>
<tr><td>2</td><td>Land use break up (Page 56 Final EIA report)</td><td colspan="3"><table>
<tr><th>Description</th><th>Existing (Ha)</th><th>Area Proposed (Ha)</th><th>Total (Ha)</th></tr>
<tr><td>Main Plant</td><td>92.24</td><td>46.592</td><td>138.832</td></tr>
<tr><td>Ash Pond</td><td>160.00</td><td>60.000</td><td>220.000</td></tr>
<tr><td>Sub Total (Plant & ash Dyke)</td><td>252.24 (A)</td><td>106.592 (B)</td><td>358.832 (C)</td></tr>
<tr><td>Green Belt</td><td>116.47</td><td>39.660</td><td>156.13</td></tr>
<tr><td>Green Belt (%) of Main Plant & Ash Dyke Area</td><td>46.17 % of (A)</td><td>37.20 % of (B)</td><td>43.51 % of (C)</td></tr>
<tr><td>Township</td><td>55.210</td><td>0</td><td>55.210</td></tr>
<tr><td>Railway siding, MGR, Outside drains etc.</td><td>159.150</td><td>0</td><td>159.150</td></tr>
<tr><td>Raw water Reservoir</td><td>12.000</td><td>13.660</td><td>25.660</td></tr>
<tr><td>Others (Misc. areas in roads/periphery, office/Stores, make up water pump House etc.)</td><td>80.610</td><td>0</td><td>80.610</td></tr>
<tr><td>Total</td><td>675.780</td><td>159.912</td><td>835.692</td></tr>
</table></td><td>The additional unit(1x800 MW) of Stage-II are proposed to be established adjacent to Stage-I units. However, approx. 120.64 Ha of additional land is proposed to be acquired out of total land requirement of 159.912 Ha for Stage II.</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>3</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 & 19/02/2025</td><td>Darlipali STPP has acquired total 715.059 Ha out of which 675.780 ha of land has been utilized for Stage-I, with the provision of 39.278 Ha to be utilized for proposed Stage-II (1x800 MW). Land required for acquisition towards the proposed Darlipali Stage– II (1x800 MW) expansion project is 120.64 Ha, out of total land requirement of 159.912 Ha.<br>Breakup of the Land use of TPP site is as follow
<table>
<tr><th>Nature of land involved (in Ha)</th><th>Area existing (in Ha)</th><th>Additional area proposed (in Ha)</th><th>Total area required after expansion (in Ha)</th></tr>
<tr><td>Non-Forest Land</td><td>622.700</td><td>94.611</td><td>717.311</td></tr>
<tr><td>Forest Land</td><td>53.080*</td><td>65.301</td><td>118.381</td></tr>
<tr><td>Total</td><td>675.780</td><td>159.912</td><td>835.692</td></tr>
</table>
*25.56 ha of forest land for laying of Make Up Water (MUW) pipeline and 132 KV Electric Transmission lines by NTPC Ltd. on ROU/ROW basis are not included in above table.
<table>
<tr><th colspan="2">Land Category</th><th>Stage – II (1 x 800 MW)</th></tr>
<tr><td rowspan="2">Non-Forest land to be acquired /alienated (In Ha.)</td><td>Pvt.</td><td>38.85</td></tr>
<tr><td>Govt.</td><td>16.49</td></tr>
<tr><td colspan="2">Forest Area (In Ha.)</td><td>65.301</td></tr>
<tr><td colspan="2">Total (Ha)</td><td>120.64</td></tr>
</table>
Status of land acquisition: Out of 120.64 Ha, 65.301 Ha is a forest land for which application for Stage I FC has been submitted vide proposal no.FP/OR/THE/446413/2023. The remaining 55.34 Ha, is under the process of acquisition by the project proponent through Revenue Department of Government of Odisha.</td><td>Land details for existing land and proposed acquisition are available and submitted with EC application.</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>4</td><td>Existence of habitation & involvement of R&R, if any.</td><td>Project site: Nil<br>Study Area: Details of the nearby villages are as follows:
<table>
<tr><th>Village</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Tileimal</td><td>2.31</td><td>SE</td></tr>
<tr><td>Darlipali</td><td>0.05</td><td>E</td></tr>
<tr><td>Chichinda</td><td>3.28</td><td>S</td></tr>
<tr><td>Kanaktora</td><td>2.65</td><td>SSW</td></tr>
<tr><td>Naudihi</td><td>4.02</td><td>E</td></tr>
<tr><td>Raidihi</td><td>1.25</td><td>W</td></tr>
<tr><td>Raibaga</td><td>2.35</td><td>NE</td></tr>
<tr><td>Kechhobahal</td><td>4.56</td><td>S</td></tr>
<tr><td>Loising</td><td>6.64</td><td>SE</td></tr>
<tr><td>Rajpur</td><td>7.91</td><td>SSE</td></tr>
<tr><td>Jogimal</td><td>7.18</td><td>ENE</td></tr>
<tr><td>Mundagaon</td><td>4.66</td><td>ENE</td></tr>
<tr><td>Jhargaon</td><td>4.12</td><td>NNE</td></tr>
<tr><td>Badbanga</td><td>5.41</td><td>NE</td></tr>
<tr><td>Laikera</td><td>5.38</td><td>W</td></tr>
<tr><td>Chaubahal</td><td>2.22</td><td>WSW</td></tr>
<tr><td>Dambahal</td><td>9.39</td><td>E</td></tr>
</table></td><td>The R&R plan shall be finalised in consultation with the State Government.</td></tr>
<tr><td>5</td><td>Existence of school and hospitals if any</td><td>Project site: Darlipali STPP Stage-II<br>Details of the schools in nearby area are as below:
<table>
<tr><th>School</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Bal Bharati public school</td><td>0.76 km</td><td>N</td></tr>
<tr><td>Lochan High School</td><td>0.18 km</td><td>E</td></tr>
<tr><td>Blue Swan Public School</td><td>0.21 km</td><td>E</td></tr>
<tr><td>Chandra Susama Degree College</td><td>0.58 km</td><td>NNW</td></tr>
<tr><td>Damodar Naik junior College</td><td>0.58 km</td><td>NNW</td></tr>
<tr><td>Government Polytechnic College</td><td>1.58 km</td><td>ESE</td></tr>
<tr><td>Saraswati Shishu Vidya Mandir</td><td>1.81 km</td><td>E</td></tr>
<tr><td>Anganwadi School</td><td>2.40 Km</td><td>NW</td></tr>
</table>
Hospital details near the project site are as follows:
<table>
<tr><th>Hospital</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Niramay hospital</td><td>Project site</td><td>Nil</td></tr>
<tr><td>Darlipali Primary Health Center</td><td>0.58 km</td><td>E</td></tr>
<tr><td>Raidihi Hospital</td><td>1.47 km</td><td>NW</td></tr>
<tr><td>Primary Health Center Loisingh</td><td>1.48 km</td><td>WW</td></tr>
</table>
Protection measures to be adopted are as follows:</td><td></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>Control of Air Emissions:<br>Provision of High Efficiency ESP, Low NOx Burner & Over Fire Air System, Dust Extraction, Dust Suppression, Dry Fog Dust Suppression, Fog Cannons at Ash Dyke, Water Sprinkling on Hauling Roads·<br>Noise: Acoustic Enclosures & barriers<br>Greenbelt Development: Development of dense greenbelt in the periphery of plant as well as towards the side of villages/ habitations, Afforestation/ Miyawaki Plantation on available land.<br>Wastewater: ETP, STP, Ash water recycling system, Zero Liquid Discharge, Rainwater Harvesting, Watershed Development in the vicinity.<br>Safety: Display signages, speed breakers, and crossing guard's provision; optimization of heavy vehicle movement near villages, Disaster Management Plan & Provisions.<br>Health & Awareness: Regular health camps, distribution of masks, and environmental awareness programs for surrounding community. Native species greenbelt development along the forest boundary. Downcast, low-intensity lighting will be used near forest areas. Night-time construction near sensitive zones will be minimized. Awareness programs on forest and wildlife protection Implementation of Wildlife Conservation Plan in consultation with Forest Dept.<br>CSR & Monitoring: Support for infrastructure and development, air and noise monitoring in the nearby.</td><td></td></tr>
<tr><td>6</td><td>Latitude and Longitude of all corners of the project site.</td><td>Main Plant site<br><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>21°58'28.43"</td><td>83°53'25.63"</td></tr><tr><td>B</td><td>21°57'55.87"</td><td>83°54'27.29"</td></tr><tr><td>C</td><td>21°57'29.79"</td><td>83°53'35.00"</td></tr><tr><td>D</td><td>21°58'5.02"</td><td>83°52'43.15"</td></tr></table>Existing Ash Pond<br><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>21°57'23.52"</td><td>83°54'52.27"</td></tr><tr><td>B</td><td>21°57'2.15"</td><td>83°55'28.21"</td></tr><tr><td>C</td><td>21°56'42.57"</td><td>83°55'13.22"</td></tr><tr><td>D</td><td>21°57'10.66"</td><td>83°54'23.44"</td></tr></table>Existing Township<br><table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>21°59'5.40"</td><td>83°54'7.34</td></tr><tr><td>B</td><td>21°59'5.73"</td><td>83°54'27.39"</td></tr></table></td><td></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>C</td><td>21°58'37.43"</td><td>83°54'27.22"</td></tr>
<tr><td>D</td><td>21°58'40.45"</td><td>83°53'56.12"</td></tr>
</table>
Proposed Ash Pond
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>21°57'3.98"</td><td>83°54'7.86"</td></tr>
<tr><td>B</td><td>21°56'39.29"</td><td>83°54'36.57"</td></tr>
<tr><td>C</td><td>21°56'19.77"</td><td>83°54'26.47"</td></tr>
<tr><td>D</td><td>21°56'36.70"</td><td>83°54'0.21"</td></tr>
</table>
</td><td></td></tr>
<tr><td>7</td><td>Elevation of the project site</td><td>Elevation of plant is approx. 235-246 m (msl), Elevation of Existing Ash dyke of Stage-I is approx. 223-245 m (msl) and Elevation of Proposed Ash dyke of Stage-II is approx. 225-245 m (msl).</td><td></td></tr>
<tr><td>8</td><td>Involvement of Forest land if any.</td><td>Total forest land involved: 143.941 Ha<br><br>Status of Forest Clearance for Darlipali STPP Stage-I (2 x800 MW):<br>Area of the forest land involved: 78.64 Ha (13.95 Ha+19.70 Ha +19.43 Ha +25.56 Ha)<br>Details of existing forest diversion are as follows:<br>1. Diversion of 13.95 ha of forest land for setting up of Darlipali Super Thermal Power Project in Darlipali and Raidihi village under Sundergarh Forest Division of Sundergarh district<br>● Stage-I FC accorded vide letter No. 5-ORC158/2013-BHU dated-14.08.2013.<br>● Stage-II FC accorded vide letter No.5-ORC158/2013-BHU dated-13.10.2014.<br>2. Diversion of 19.70 ha of forest land in village Darlipali, Raidihi, Chuabahal and Kalamegha in Sundergah district, Odisha for construction of MGR-Rail Corridor for transportation of coal from their Dulanga Coal Mines to Darlipali Super Thermal Power Plant in Sundergarh district, Odisha<br>● Stage-I FC vide letter No.5-ORC240/2015-BHU dated17.06.2015.<br>● Stage-II FC accorded vide letter No.5-ORC240 /2015-BHU dated-16.11.2016.<br>3. FC (Stage-I) Diversion of 19.43 ha of forest land in village Laikera, Chuabahal, Kalamegha, Bihajore and Kanktora in Hemgir Tahasil of Sundergarh district, Odisha for construction of Railway Siding Corridor by Darlipali STPS to connect their MGR line (drawn between Darlipali STPP and their Dulanga Coal Mines) with MCL Railway stations at Laiikera and Kechobahal to transport coal from Basundhara, Garjanbahal area of MCL and also for transport of oil rakes of the Darlipali STPS</td><td></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>● Stage-I FC accorded vide letter No.5-ORC349 /2018-BHU dated18.06.2018.<br>● Stage-II FC accorded vide letter No.5- ORC349 /2018-BHU dated:26.06.2024.<br>4. Diversion of 25.56 ha of forest kisam land (originally proposed 25.76 ha) in Jharsuguda and Sundergarh district of Odisha for laying of Make Up Water (MUW) pipeline and 132 KV Electric Transmission lines by NTPC Ltd. for drawal of water from Hirakud reservoir for its Darlipali Super Thermal Power Project in Sundergarh district on ROU/ROW Basis.<br>● Stage-I FC accorded vide letter No.5-ORC279/2016-BHU dated 01.11.2016.<br>● Stage-II FC: accorded vide letter No.5-No.5-ORC279 /2016-BHU dated-24.04.2025<br>Project involved 65.301 Ha of forest land in the proposed Stage-II project.<br>65.301 Ha is a forest land is involved for which application for Stage I FC has been submitted vide proposal no.FP/OR/THE/446413/2023.</td><td></td></tr>
<tr><td>9</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area.</td><td>Project site: Nil<br>Study area: 10 km radius from the project area
<table>
<tr><th>Water body</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Basundahara River</td><td>1.82 km</td><td>SW</td></tr>
<tr><td>IB river</td><td>9.03 km</td><td>SE</td></tr>
<tr><td>Ichha River</td><td>9.20 km</td><td>NE</td></tr>
</table>
Plant site (at an elevation of 235-246 m) is at higher elevation than the HFL of IB and Basundhara River (209 m MSL).</td><td>As per the Main Dam Division letter of Irrigation and Water Resource deptt. Odisha dated: 04.03.2025 HFL of IB river and Basundhara river is 200.9m</td></tr>
<tr><td>10</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>Study area Name of the ESZ/ESA: Nil<br>Status of Notification: Distance of project from ESZ/ESA: Not applicable<br>Authenticated map of ESZ projecting distance of ESZ from project site: Not applicable<br>Status of NBWL approval: Not applicable<br>List of Reserved and protected forests:
<table>
<tr><th>Name of Forest</th><th>Distance (km)</th><th>Direction</th></tr>
<tr><td>Barabanga PF</td><td>7.00</td><td>N</td></tr>
<tr><td>Panikholia RF</td><td>8.00</td><td>NW</td></tr>
<tr><td>Balijori RF</td><td>8.00</td><td>W</td></tr>
<tr><td>Kalamegha RF</td><td>4.7</td><td>WSW</td></tr>
<tr><td>Satparlia RF</td><td>6.2</td><td>WSW</td></tr>
</table></td><td></td></tr>
</table>

| S. No. | Particulars | Details | Remarks |
|---|---|---|---|
| | | <table><tr><td>Makarachata RF</td><td>3.8</td><td>S</td></tr><tr><td>Rajpur RF</td><td>9.3</td><td>S</td></tr><tr><td>Katangbubi RF</td><td>4.4</td><td>S</td></tr><tr><td>Balangibahal RF</td><td>4.6</td><td>E</td></tr><tr><td>Ghatmal PF</td><td>2.14</td><td>E</td></tr><tr><td>Bursipatra RF</td><td>0.9</td><td>ENE</td></tr></table> No. National Park, Sanctuary, Elephant/Tiger Reserve (existing as well as proposed), migratory routes/wildlife corridor, available within 10 km of the project site. No Environment sensitive area is within 10 Km. | |
| 11 | Archaeological sites monuments/ historical temples etc. | No Archaeological sites within 10km of study area. | - |
| 12 | Facility envisaged in CRZ area (Only for coastal power plant) | Not applicable | - |
| 13 | Involvement of Critically Polluted Area/Severel y Polluted area as per 2018 CEPI score | No involvement of Critically Polluted area/severely polluted area | - |

**30.1.9**: The unit configuration and capacity of existing and proposed project is given as below:

| S. No. | Existing power plant configuration and capacity | Proposed power Plant configuration and capacity | Total | Technology adopted* |
|---|---|---|---|---|
| 1 | 2X800MW=1600MW | 1x800 MW=800MW | 2400MW | Ultra-Super Critical Technology |

**30.1.10:** The details of the fuel (coal/LDO) requirement for the proposed project/ expansion cum proposed project along with its source and mode of transportation is given as below:

| Details | Fuel require -ment MTPA | Source | Distance from site (Kms) | Mode of Transportation | Coal characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| Existing TPP | 8.0 | Dulanga; However, coal is also supplemente d from other domestic sources such as MCL, | 12 Km Other sources:1 0 to 150 Km | MGR Other sources: 10 to 150 Km | Ash - 43(%) Sulphur – 0.55(%) Moisture -17 (%) GCV -3100 Kcal/Kg | Linkage document is submitted with EC application |

| Details | Fuel require -ment MTPA | Source | Distance from site (Kms) | Mode of Transportation | Coal characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| | | NLC Talabira, NTPC Talaipalli, etc., as per requirement. | | | | |
| Propose d TPP | 3.82 | Tentative linkage source communicate d by CIL: MCL | Tentative linkage source: MCL: 10 to 300 KMs (Pg 90 Final EIA report) | Transportation of Coal from Coal Mines to the project is proposed by MGR/Indian Railway. The permanent railway siding at Laikera and Kechobahal are sufficient to meet the coal requirement of Stage-II in addition to Stage-I (2X800MW + 1X800MW). | Ash - 42 % (%) Sulphur - Max. 0.55 (%) Moisture-17 %0 GCV - 3400 kcal/kg Kcal/Kg (Pg 90 Final EIA report) | Linkage documents is submitted with EC application |

**30.1.11: Water requirement:** Existing Water requirement is 1,15,200 $m^3$ /day, water requirement is obtained from Hirakud Reservoir and permission for the same has been obtained from Main Dam division Burla/Dept. of Water resources Odisha vide letter no. MDD/157 dated 9.02.2023 (permission for 55 cusec water allocation is given). The water requirement for the proposed project is estimated as 18,000 $m^3$ /day will be obtained from Hirakund reservoir. The permission for drawl of surface water is obtained from Department of Water resources, Odisha vide Lr. No. 1799 Dated 21.01.2025 for additional water requirement of 7.42 Cusec. The water will be transported to the plant site through pipeline. The specific water consumption for the power plant is less than 3.0 $m^3$ /MWhr.

**30.1.12: Existing power requirement:** Existing power requirement of 98.4 MW is obtained from Darlipali STPP Stage I. The power requirement for the proposed project is estimated as 58 MW, will be obtained from the own generation.

**30.1.13: Baseline Environmental Studies:**

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| AAQ parameters at 10 | $PM_{2.5}$ = 22 To 37 µg/$m^3$<br>$PM_{10}$ = 40 To 59 µg/$m^3$ | --- |

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| Locations (min and max) | $SO_2$ = 6 to 18 µg/$m^3$<br>$NO_x$ = 14 To 30 µg/$m^3$<br>CO =0.45 To 0.84 mg/$m^3$ | |
| Incremental GLC level | $PM_{10}$ =0.10 µg/$m^3$ (Level at 5.83.km In E Direction)<br>PM $_{2.5}$ = 0.01 µg/$m^3$ (Level at 1.54 km In NW Direction)<br>$SO_2$ = 15.47 µg/$m^3$ (Level at 0.63 km in E Direction)<br>$NO_x$ = 0.69 µg/$m^3$ (Level at 0.63 km In E Direction) (@100mg/$nm^3$)<br>**Proposed measures for monitoring and Control of Air Pollution:**<br>• High efficiency Electrostatic Precipitator (ESP) to control PM<br>• Emissions with 275 m high stack for wider dispersion.<br>• Use of Low-NOx burners and Over Fire Air to control $NO_x$ emissions.<br>• Dust Suppression system in coal handling and ash handling areas.<br>• Regular maintenance of Pollution control equipment's to ensure efficient functioning.<br>• Continuous Emission & Ambient Air Quality monitoring systems. | ---- |
| Ground water quality at 06 locations | pH: 6.84 to 7.38,<br>Total Hardness: 264 to 442 mg/l,<br>Fluoride: 0.18 to 0.22 mg/l.<br>Heavy metals Zn: 0.071-0.407 mg/l<br>Ca: 76-118.4 mg/l<br>Mg:17.98-35.43 mg/l | |
| Surface water quality at 06 locations | pH: 6.99 to 7.42;<br>DO: 5.7 to 6.7 mg/l and BOD: 5 to 7 mg/l.<br>COD-36 mg/l to 56mg/l<br>Chloride:18-40mg/l<br>Fluoride:0.15-0.68mg/l<br>TSS:06-14 mg/l<br>TDS: 180-225 mg/l<br>Total Hardness: 102-149 mg/l<br>Heavy metal Zn:0.024-0.54 mg/l<br>Fe: 0.034-0.072 mg/l | |

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| | Total coliform: 1876-2851 MPN/100ml | |
| Effluent generation details and its treatment | **Stage-I: Existing**<br>***Plant Effluent generation***: 54360 KLD<br>***ETP Capacity***: 7200 KLD (Lamella clarifiers) + 120 KLD (DM wastewater neutralization) + 72000 KLD (Coal slurry settling pits) [Total- 79320 KLD]<br>***Mode of treatment & reuse***: Neutralization for DM plant regeneration wastewater, Coal settling pit for Coal laden wastewater, Oil Removal & Lamella clarifier/Tube settler for service water. Treated Wastewater utilization in Cooling water makeup, dust suppression, ash handling, horticulture etc. within the plant maintaining, 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).<br>***Domestic Effluent Generation Stage I***: 875 KLD<br>***STP Capacity Stage I***: 1275 KLD<br>***Technology***: STP (MBBR Technology) and Tertiary Treatment and treated effluent recycling in horticulture maintaining Zero Liquid discharge (ZLD) to cater entire sewage generated.<br><br>**Stage-II: Proposed (1 x 800 MW)**<br><br>***Plant Effluent generation***: 15600 KLD<br>***ETP Capacity***: 3600 KLD (Lamella clarifier) + 120 KLD (DM wastewater neutralization) [Total- 3720 KLD]<br>Additional- 48000 KLD (Clarifier system in existing CSSP pits)<br>***Mode of treatment & reuse***: Neutralization for DM plant regeneration wastewater, Coal settling pit (existing) along with Clarifier system for Coal laden wastewater, Oil Removal & Lamella clarifier/Tube settler for service water and Wastewater UF-RO system.<br>Treated Wastewater utilization in Aux. Cooling water makeup, dust suppression, ash handling, horticulture etc. within the plant maintaining Zero Liquid discharge (ZLD).<br>Rest quantity of effluents like 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).<br>***Domestic Effluent Generation St-II*** : 175 KLD<br>***STP Capacity***: Existing: 1275 KLD, Proposed 75 KLD,<br>***Mode of treatment & reuse***: Technology: STP (MBBR technology) with Tertiary Treatment and effluent recycling in horticulture | |

<table>
<tr><th>Period</th><th>April -June 2023</th><th>Additional study (if any)</th></tr>
<tr><td></td><td>maintaining Zero Liquid discharge (ZLD) for existing capacity STP. Packaged type STP proposed with primary, Secondary and tertiary treatment.</td><td></td></tr>
<tr><td>Noise levels Leq (Day and Night)</td><td>43.1dB (A) to 52.3 dB (A) for the daytime and<br>34.3 dB (A) to 40.3 dB (A) for the Night time.</td><td></td></tr>
<tr><td>Traffic assessment study finding</td><td>Traffic study has been conducted at MDR (Darlipali-Ujalpur road) which is approximately 1Km (distance) from the plant site.<br>• Transportation of raw material (Coal) will be done 100% by rail.<br>• Existing PCU is 39.79 PCU/hr on MDR (Darlipali-Ujalpur road) and existing level of service (LOS) is: 0.47
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>Traffic load on Darlipali-Ujalpur road</td><td>39.79</td><td>83.33</td><td>39.79/ 83.33</td><td>0.47</td></tr>
</table>
• PCU load after proposed project will be 46.62 (39.79 (Existing) + 6.83 (Additional) PCU/hr and level of service (LOS) will be: 0.55
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr.)</th><th>C (Capacity in PCU/hr.)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>Traffic load on Darlipali-Ujalpur road</td><td>46.62</td><td>83.33</td><td>46.62/83.33</td><td>0.55</td></tr>
</table>
* Note: Capacity as per IRC-2000 PCU/day (83.33 PCU/hr) Guideline for capacity for roads. (Only for road transport)<br><br>Conclusion: The level of service will 0.55 after including additional traffic due to proposed project.</td><td></td></tr>
</table>

<table>
<tr><th>Period</th><th>April -June 2023</th><th>Additional study (if any)</th></tr>
<tr><td></td><td>• Transportation of raw material will be done 100% by rail</td><td></td></tr>
<tr><td>Soil Quality at 06 Locations</td><td>pH range 7.21to 7.44 ; Electrical conductivity (EC); 328 to 374 µmhos/cm; Potassium: 9.27 to 9.99 mg/100 gm (207.65 kg/ha to 223.78 kg/ha); Nitrogen: 13.82 to 15.07 mg/100 gm (309.57 kg/ha to 337.57 kg/ha); Phosphorous: 0.66 to 0.84 mg/100gm (14.78 kg/ha to 18.82 kg/ha); Cation Exchange Capacity (CEC): 13.48 to 17.12 meq/100gm;</td><td></td></tr>
<tr><td>Flora and fauna</td><td>List of schedule I fauna and endangered Flora if any. If yes, status of site specific wildlife conservation plan.
<table>
<tr><th>S.N</th><th>Class</th><th>Scientific name</th><th>Common name</th><th>IUCN/ IWPA Status</th></tr>
<tr><td rowspan="2">1</td><td rowspan="2">Mammal</td><td>Herpestes edwardsii</td><td>Common Mongoose</td><td>LC/I</td></tr>
<tr><td>Vulpes</td><td>Indian Fox</td><td>LC/I</td></tr>
</table></td><td>This Wildlife Conservation plan with budgetary offer Rs. 391.5 lakhs has been prepared for Sch -I species and it has been submitted to</td></tr>
</table>

<table>
<tr><th>Period</th><th colspan="5">April -June 2023</th><th>Additional study (if any)</th></tr>
<tr><td></td><td colspan="5"><table>
<tr><td></td><td></td><td>bengalensis</td><td></td><td></td></tr>
<tr><td></td><td></td><td>Elephhas maximus</td><td>Harti</td><td>EN/I</td></tr>
<tr><td></td><td></td><td>Canis aureus</td><td>Siyar</td><td>LC/I</td></tr>
<tr><td></td><td></td><td>Felis chaus</td><td>Banbiral</td><td>LC/I</td></tr>
<tr><td>2</td><td>Reptilia</td><td>Naja naja</td><td>Nag</td><td>LC/I</td></tr>
<tr><td></td><td></td><td>Python molurus</td><td>Ajgar</td><td>VU/I</td></tr>
<tr><td></td><td></td><td>Ptyas mucosa</td><td>Rat snake</td><td>LC/I</td></tr>
<tr><td>3</td><td>Birds</td><td>Anthracoceros coronatus</td><td>Malabar pied hornbill</td><td>NT/I</td></tr>
<tr><td></td><td></td><td>Pavo cristtatus</td><td>Peacock</td><td>LC/I</td></tr>
</table></td><td>PCCF vide letter no. DSTPP/emg /27/2024 dated 17.10.2024.</td></tr>
<tr><td>Hydrogeology study</td><td colspan="5"><table>
<tr><th>S. No.</th><th>Recommendations</th><th>Nos.</th><th>Budget (lacs)</th><th>Time Period</th></tr>
<tr><td>1</td><td>Quality of Surface water and ground water</td><td>Surface water at 10 Location Ground water at 08 Location</td><td>14.00</td><td>Six monthly</td></tr>
<tr><td>2</td><td>Construction of piezometer to monitor ground water level</td><td>04 Location near by Ash Dyke</td><td>08</td><td>01 Year</td></tr>
<tr><td>3</td><td>Revival of surface water ponds in surrounding area (Desilting and Cleaning)</td><td>10 nos.</td><td>40</td><td>0-2 Yrs</td></tr>
<tr><td></td><td>Total</td><td></td><td>62 Lacs</td><td></td></tr>
</table></td><td>M/s Sujalam Consultants Nagpur-an accredited Ground water Consultant Organisation (GWCO) by QCI NABET (Certificate No. NABET/GWCO/IA/GW002, Dt.23.09.2021 valid upto 05.11.2025</td></tr>
<tr><td>Impact study on ecology</td><td colspan="5">Impact on Terrestrial Ecology:<br>The initial construction works at the project site involves land clearance. The construction of main plant will be within existing plant premises. Since land is already for industrial purpose, during construction phase, there will be minimal disturbance of vegetation. Greenbelt will be developed to screen out the fugitive dust generated</td><td>Mantac consultant Pvt. Ltd.</td></tr>
</table>

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| | during construction and to improve the aesthetic value in the area. As there is minimum soil erosion, so impacts will be confirmed to project site & this will be minimized through water sprinkling & paving.<br><br>The project involves diversion of 65.301 Ha of forest land with 5964 no. of trees. However, the forest land proposed for diversion in patches, surrounded by NTPC plant area/ intensely cultivated and inhabited area and hence, has no significant wildlife. Compensatory afforestation on equivalent non-forest land shall help in offsetting the impact of forest land diversion, if any. Therefore, the impact on terrestrial ecology shall be marginal.<br><br>**Impact on Aquatic ecology:**<br><br>The runoff from construction area may lead to a short-term increase in suspended solids and decrease in dissolved oxygen near the discharge point in the receiving water body. Construction water will pass through a sedimentation tank to arrest sediments and treated water will be reused in water sprinkling. No discharge from construction site will be allowed hence no impact is expected on aquatic ecology. | |
| Risk assessment study | 1. Ensure that the facilities should have necessary fire and gas detection system in the Plant as per applicable guidelines. Operators should be well trained about the detection system.<br><br>2. The Plant would be having necessary provision for emergency stop of critical equipment from control room in the event of any incident.<br><br>3. Routine checks should be carried to ensure proper working of firefighting equipment.<br><br>4. Clearly defined escape and evacuation routes along with proper sign board to guide personnel to escape in case of an emergency.<br><br>5. Well defined assembly points in safe locations shall be identified for personnel in case of an emergency.<br><br>6. Windsocks visible from all direction would be provided. This will assist people to escape in upwind or cross wind direction from flammable releases.<br><br>7. In order to further reduce the probability of failure of pipeline & equipment, critical equipment shall be identified and inspection methodologies to be finalized for continuous monitoring during operation and shutdown maintenance.<br><br>8. Mock drills to be well rehearsed to ensure readiness to handle emergency.<br><br>9. All the valves and pipeline should be periodically maintained and inspected to prevent the failures.<br><br>10. Ensure periodic safety trainings in firefighting, escape, operation of emergency switches etc. should be provided to the officials. | Mantac consultant Pvt. Ltd. |

| Period | April -June 2023 | Additional study (if any) |
|---|---|---|
| | 11. Calibration of all instruments to be ensure periodically.<br>12. The company shall train all employees in Emergency Response, Fire Fighting and First Aid.<br>13. Proper lighting arrangements and CCTV as per applicable OISD guidelines should be provided at Plant.<br>14. The adjacent population is to be made aware of the risk associated with the pipeline and the mitigation measures to be taken care of in case of Emergency. | |
| Marine impact assessment study (Only for coastal based TPPs) | Not applicable | ----- |

**30.1.14: Solid and hazardous waste management**: The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

**A. Non-Hazardous waste**

| S. No. | Type of Waste | Source | Estimated Quantity | Mode of Treatment | Disposal |
|---|---|---|---|---|---|
| 1 | Municipal Solid waste | Township | 18 MT | Composting | Manure to plants |

**B. Hazardous waste**

| S. No. | Type of Waste | Source | Estimated Quantity | Mode of Treatment | Disposal |
|---|---|---|---|---|---|
| 1 | Used oil | Plant | 35KL | Nil | Through SPCB Authorised agency |
| 2 | Barrels | Plant | 180 nos. | Nil | Through SPCB Authorised agency |
| 3 | Spent resin | Plant | 3 MT | Nil | TSDF |
| 4 | Glass Wool | Plant | 30 MT | Nil | TSDF |
| 5 | Battery waste | Plant | 2.5 MT | Nil | Buyback to supplier |
| 6. | E-waste | Plant area | 0.07 MT | Nil | Buyback & Sale to Authorised dealer |

| | | | | | |
|---|---|---|---|---|---|
| 7. | Biomedical Waste | Hospital | 0.20 MT | Nil | Through authorised agency (Medical Waste) |

**30.1.15: Public Consultation**:

**A. Jharsuguda District**

| | |
|---|---|
| Details of advertisement given | 01.10.2024 |
| Date of public consultation | 22.10.2024 |
| Venue | Tileimal Village, Jharsuguda, Dist. |
| Presiding Officer | Additional District Magistrate |
| Major issues raised | The major issues raised during public hearing were regarding employment to local people, skill development, infrastructure, village road construction and pollution from ash dyke etc. |
| No. of people attended | Approx. 500 people attended the public hearing meeting, whereas only 196 of them have signed their attendance sheet. |

**Action plan as per MoEF&CC O.M. dated 30/09/2020**

| S. 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 | | |
| **A** | **Educational Initiatives** | | | | | | | |
| 1 | Upgradation of infrastructure in 10 schools and Anganwadis | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.60 | Infrastructure upgradation in terms of providing Benches and Desks, Smart Boards, Cycle Shed, Area lighting etc, shall be taken up in 10 schools and Anganwadis in Luising, Chandnimal and Rajpur GP. |
| 2 | Distribution of drinking Water filter/ Water Coolers in schools | | 0.0375 | 0.0375 | | | 0.075 | Providing Water Coolers/Water Filters in 15 schools in Jharsuguda District. |
| 3 | Providing Computers/Smart | | | 0.0375 | 0.0375 | | 0.075 | Procurement and providing |

| S. 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 | | |
| | Boards in Schools | | | | | | | Computers/Smart boards to 5 Schools |
| | **Sub Total** | 0.12 | 0.1575 | 0.195 | 0.1575 | 0.12 | 0.75 | |
| B | **Community Health Initiatives** | | | | | | | |
| 1 | Providing doorstep medical services through Mobile Medical Unit | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 1.25 | Deployment of Medical Mobile Unit and extending door step medical services, to 16 villages in Luising and Chandnimal Gram Panchayats |
| 2 | Conducting Mega Medical Camps | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | Conducting 04 Mega Medical camps @ 150 patients annually in villages of Luising, Rajpur and Chandnimal GPs. |
| 3 | Conducting Eye check-up/ Cataract operation camps | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.075 | Conducting 1 cataract operation camp annually for 5 years. Per camp-30 patients |
| | **Sub Total** | 0.275 | 0.275 | 0.275 | 0.275 | 0.275 | 1.375 | |
| C | **Sustainable Livelihood and Women Empowerment** | | | | | | | |
| 1 | Skill Development Training to Youth through CIPET/Other agencies | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.85 | Providing Skill Development Training to 40 unemployed youths to improve their employability through CIPET/Accredited Skill Devt. Agency |
| 2 | Skill Development Training for Women in villages of | | 0.075 | | 0.075 | | 0.15 | Skill Development on Income |

| S. 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 | | |
| | Jharsuguda District | | | | | | | generation activities to be taken up covering 6o women based on need assessment and market linkage. |
| | **Sub Total** | 0.17 | 0.245 | 0.17 | 0.245 | 0.17 | 1.00 | |
| D | **Community Rural Infrastructure Development** | | | | | | | |
| 1 | Repairing, strengthening & Maintenance of Existing roads in consultation with Gram Panchayats. | 2.0 | 4.0 | 5.0 | 3.0 | 3.0 | 17.00 | Bituminous/CC road about 7500 meters length in villages of Luising Gram Panchayat and 7000 meters length in Chandnimal and Rajpur Gram Panchayats will be constructed, through district administration. |
| 2 | Installation of Solar High Mast Lights in villages of Jharsuguda District in consultation with Gram Panchayats | | 0.48 | 0.40 | 0.40 | | 1.28 | 32 nos. of Solar High Mast Lights shall be installed in prominent locations based on need assessment. |
| 3 | Installation of Solar Street Lights in villages of Jharsuguda District | 0.08 | 0.12 | 0.06 | 0.08 | 0.06 | 0.40 | 200 nos. of Solar Street Lights shall be installed in Luising, Chandnimal and Rajpur Gram Panchayats, at prominent locations based on need assessment. |
| 4 | Construction of 2 nos of Kirtan Mandaps in Luising | 0.10 | | | 0.10 | | 0.20 | 02 nos. of Kirtan Mandap of 300 Sq Ft each shall |

| S. 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 | | |
| | and Chandnimal Gram Panchayat | | | | | | | be constructed in 2 Gram Panchayats. |
| 5 | Construction of 2 nos of Community Centers | | 0.14 | 0.14 | 0.14 | | 0.42 | 03 nos. of Community Centers of 420 Sq Ft shall be taken up in Koilaga and Saimal |
| 6 | Construction of market Complex | | | 0.18 | | | 0.18 | 1 Market Complex of 600 Sq Ftshall be constructed at Rajpur |
| 7 | Augmentation of Water Supply in Villages through Solar Based Bore Well system | 0.30 | 0.60 | | | | 0.90 | 10 locations in Tileimal, Saimal and Niktimal villages, shall be taken up in consultation with local community, to install Solar based Bore well system. |
| 8 | Renovation of Ponds and construction of bathing ghats | 0.60 | 0.75 | 0.45 | | | 1.80 | Renovation of 12 nos. of Ponds & construction of bathing ghats in Luising, Rajpur and Chandnimal GP. |
| 9 | Construction of 1 no of Temporary Check Dam in Tileimal village (Every year during summer season) | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | Construction of Temporary Check Dam across Baghei Nala for Summer Season, to be done on annual basis. |
| 10 | Renovation of Primary Health Center | -- | 0.30 | 0.20 | --- | ---- | 0.50 | Taking up enabling infrastructure works in Luising Primar Health |

| S. 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 | | |
| | | | | | | | | Center. |
| | **Sub Total** | 3.09 | 6.4 | 6.44 | 3.73 | 3.07 | 22.73 | |
| E | **Development of Playgrounds for Sports** | | | | | | | |
| 1 | Levelling and improvement of Playgrounds in villages | --- | 0.25 | --- | --- | 0.25 | 0.50 | Levelling and infrastructure upgradation shall be taken up in 2 playgrounds each of 4800 Sq Mts in Luising and Rajpur Gram Panchayats. |
| 2 | Providing Sports kits to local clubs & Schools | 0.32 | 0.36 | 0.24 | -- | ---- | 0.92 | Providing Sports Kits to 8 Local Clubs and 15 Schools in Chandnimal and Telenpali |
| | Sub Total | 0.32 | 0.61 | 0.24 | 0.00 | 0.25 | 1.42 | |
| F | Promoting local Culture and Sports/Need Based activities | | | | | | | |
| 1 | Support for Cultural Events/ Rural Sports in villages of Jharsuguda District | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.75 | Support for Cultural Events/ Rural Sports to local clubs and village committees on annual basis based on events. |
| 2 | Procurement of Need Based items ( Blankets/Mosquito nets/ Assistive Aids/ Furniture) for distribution in villages or supply to Public Utility building | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 1.50 | Procurement of need based items viz. mosquito nets, blankets, assistive Aids etc for distribution to villagers. |
| 3 | Providing seedlings for plantation drive in villages | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.15 | Procurement, distribution and organizing mass tree plantation events in schools during Van Mahotsav, Greening Fallow lands identified |

| S. 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 | | |
| | | | | | | | | by the Gram Panchayat bodies. |
| 4 | Providing critical drinking water supply to villages in Summer Months annually for 5 years | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 1.00 | Providing critical drinking water supply to villages, during summer season annually for 5 years covering 14 habitations in Jharsuguda district. |
| 5 | Taking up additional plantation in and around the periphery villages | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 3.00 | Taking up additional plantation in and around the periphery villages |
| 6 | Deployment of Fog Canons in the periphery areas to tackle pollution by fugitive dust | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 3.50 | Deployment of 2 nos. of Fog Canons on daily basis |
| | **Sub Total** | **1.98** | **1.98** | **1.98** | **1.98** | **1.98** | **9.90** | |
| | **Total (A+B+C+D+E+F)** | **5.955** | **9.667** | **9.30** | **6.387** | **5.865** | **37.175** | |

**B. Sundargarh District**

| | |
|---|---|
| Details of advertisement given | 18.10.2024 |
| Date of public consultation | 04.11.2024 |
| Venue | Raidihi, under Lephripara tehsil, Sundergarh Dist. |
| Presiding Officer | Additional District Magistrate |
| Major issues raised | The major issues raised during public hearing were regarding employment to local people, skill development, infrastructure, village road construction and pollution from ash dyke etc. |
| No. of people attended | Approx. 300 people attended the public hearing meeting, whereas only 131 of them have signed their attendance sheet. |

**Action plan as per MoEF&CC O.M. dated 30/09/2020**

| S. 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 | | |
| A | Educational Initiatives | | | | | | | |
| 1 | Upgradation of infrastructure in 15 schools and Anganwadis | 0.18 | 0.18 | 0.30 | 0.24 | | 0.90 | Infrastructure upgradation in terms of providing Benches and Desks, Smart Boards, Cycle Shed, Area lighting etc, shall be taken up in 15 schools and Anganwadis in Darlipali, Raidihi, J-Raiboga and Badbanga GP. |
| 2 | Distribution of drinking Water filter/ Water Coolers in schools | 0.05 | | 0.05 | | | 0.10 | Providing Water Coolers/Water Filters in 20 schools in schools of Sundargarh District. |
| 3 | Providing Computers/Smart Boards in Schools | ---- | 0.0375 | -- | 0.0375 | -- | 0.075 | Procurement and providing Computers/Smart boards to 5 Schools |
| | **Sub Total** | **0.23** | **0.2175** | **0.35** | **0.2775** | **0** | **1.075** | |
| B | **Community Health Initiatives** | | | | | | | |
| 1 | Providing doorstep Medical services through Mobile Medical Unit | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 1.25 | Deployment of Medical Mobile Unit and extending doorstep medical services, to 22 villages in Darlipali Raidhi and J Raiboga Gram Panchayats |
| 2 | Conducting Mega Medical Camps | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | Conducting 04 Mega Medical camps @ 150 patients annually in villages of Darlipali , Raidhi, J Raiboga GPs. |
| 3 | Conducting Eye check up/ Cataract operation camps | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.075 | Conducting 1 cataract operation camp annually for 5 years. Per camp- 30 patients |
| | **Sub Total** | **0.275** | **0.275** | **0.275** | **0.275** | **0.275** | **1.375** | |
| C | **Sustainable Livelihood and Women Empowerment** | | | | | | | |

| S. 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 | | |
| 1 | Skill Development Training to Youth through CIPET/Other agencies | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.85 | Providing Skill Development Training to 40 unemployed youths to improve their employability through CIPET/Accredited Skill Devt Agency |
| 2 | Skill Development Training for Women in villages of Sundergarh District | | 0.075 | | 0.075 | | 0.15 | Skill Development on Income generation activities to be taken up covering 6o women based on need assessment and market linkage. |
| | **Sub Total** | **0.17** | **0.245** | **0.17** | **0.245** | **0.17** | **1.00** | |
| D | **Community Rural Infrastructure Development** | | | | | | | |
| 1 | Repairing, strengthening & Maintenance of Existing roads in consultation with Gram Panchayats. | 1.0 | 3.0 | 4.0 | 2.0 | 2.0 | 13.00 | Bituminous/CC road about 6500 meters length (Podmundi to Ainlabahal), 2500 Mts (Darlipali Khagesh market to ASH dyke), 5000 mts (Ash Dyke to Tileimal Chowk), 2000 mts in Periphery villages on requirement basis through district administration. |
| 2 | Installation of Solar High Mast Lights in villages of Sundergarh District in consultation with Gram Panchayats | 0.60 | 0.60 | --- | 0.72 | --- | 1.92 | 48 nos of Solar High Mast Lights shall be installed in prominent locations based on need assessment. |
| 3 | Installation of Solar Street Lights in villages of Sundergarh District | 0.20 | 0.20 | 0.20 | --- | --- | 0.60 | 300 nos. of Solar Street Lights shall be installed in Darlipali, Badbanga, Raidihi and J-Raibaga Gram Panchayats, at prominent locations |

| S. 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 | | |
| | | | | | | | | based on need assessment. |
| 4 | Construction of 2 nos of Kirtan Mandaps in Darlipali & Raidhi Gram Panchayat | 0.10 | ---- | ----- | 0.10 | ---- | 0.20 | 02 nos. of Kirtan Mandap of 300 Sq Ft each shall be constructed in 2 Gram Panchayats. |
| 5 | Construction of 2 nos of Community Centers | ---- | 0.14 | 0.14 | 0.14 | ---- | 0.42 | 03 nos. of Community Centers of 420 Sq Ft shall be taken up-2 in Raidihi and 1 in Nuadihi village. |
| 6 | Construction of market Complex | --- | --- | 0.18 | --- | --- | 0.18 | 1 Market Complex of 600 Sq Ft shall be constructed at Raidhi. |
| 7 | Renovation works in Chandli Temple | --- | 0.30 | ---- | --- | --- | 0.30 | Construction of Rest Shed and Stairs for Chandli Temple |
| 8 | Augmentation of Water Supply in Villages through Solar Based Bore Well system | 0.30 | 0.60 | --- | --- | --- | 0.90 | 10 locations in Raidhi, Badbanga and Sargipali villages, shall be taken up in consultation with local community, to install Solar based Bore well system. |
| 9 | Renovation of Ponds and construction of bathing ghats | 0.60 | 0.75 | 0.45 | ---- | ---- | 1.80 | Renovation of 12 nos of Ponds & construction of bathing ghats in Luising, Rajpur and Chandnimal GP. |
| 10 | Construction of 1 no of Temporary Check Dam in Tileimal village (Every year during summer season) | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.15 | Construction of Temporary Check Dam across Basundhara Nala for Summer Season, to be done on annual basis. |
| 11 | Renovation of Darlipali Primary Health Center | ---- | 0.30 | 0.20 | ---- | ---- | 0.50 | Taking up enabling infrastructure works in Darlipali Primar Health Center viz, repair of Boundary |

| S. 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 | | |
| | | | | | | | | wall, Tiles repairing inside premises, Construction of Vehicle Parking Shed, Painting works, Lighting inside Campus. |
| | **Sub Total** | **2.81** | **5.9** | **5.18** | **2.97** | **2.01** | **18.87** | |
| E | **Development of Playgrounds for Sports** | | | | | | | |
| 1 | Levelling and improvement of Playgrounds in villages | --- | 0.25 | ---- | ---- | 0.25 | 0.50 | Levelling and infrastructure upgradation shall be taken up in 2 playgrounds each of 4800 Sq Mts in Kheradega and Nuadihi villages. |
| 2 | Providing Sports kits to local clubs & Schools | 0.32 | 0.36 | 0.24 | ---- | ---- | 0.92 | Providing Sports Kits to 8 Local Clubs and 15 Schools in Darlipali, Raidhi GPs and other local clubs. |
| | Sub Total | 0.32 | 0.61 | 0.24 | 0.00 | 0.25 | 1.42 | |
| F | **Promoting local Culture and Sports/Need Based activities** | | | | | | | |
| 1 | Support for Cultural Events/ Rural Sports in villages of Sundergarh District | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.80 | Support for Cultural Events/ Rural Sports to local clubs and village committees on annual basis based on events. |
| 2 | Procurement of Need Based items ( Blankets/Mosquito nets/ Assistive Aids/ Furniture) for distribution in villages or supply to Public Utility building | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 1.50 | Procurement of need based items viz. mosquito nets, blankets, assistive Aids etc for distribution to villagers. |
| 3 | Providing seedlings for plantation drive in villages | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.10 | Procurement, distribution and organizing mass tree plantation events in |

| S. 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 | | |
| | | | | | | | | schools during Van Mahotsav, Greening Fallow lands identified by the Gram Panchayat bodies. |
| 4 | Providing critical drinking water supply to villages in Summer Months annually for 5 years | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 1.00 | Providing critical drinking water supply to villages, during summer season annually for 5 years covering 14 habitations in Darlipali and Raidihi GPs |
| 5 | Taking up additional plantation in and around the periphery villages | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 10.00 | Taking up additional plantation in and around the periphery villages |
| 6 | Deployment of Fog Canons in the periphery areas to tackle pollution by fugitive dust | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | 1.75 | Deployment of 1 no of Fog Canons on daily basis |
| 7 | Compensation to villages for Crop loss due to pollution | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.80 | Crop Compensation to Alupada villagers owing to crop loss due to pollution |
| 8 | Intervention regarding Waste Disposal | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 | 0.16 | Awareness Generation programs for Waste segregation and waste disposal in villages. |
| 9 | Cleaning of roads through deployment of tankers | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.50 | Regular water sprinkling on roads to arrest fugitive dust on roads in periphery villages throughout the year. |
| | Sub Total | 3.802 | 3.802 | 3.802 | 3.802 | 3.802 | 3.802 | |
| | **Total (A+B+C+D+E+F)** | **7.607** | **11.0495** | **10.017** | **7.569** | **6.507** | **42.75** | |

**30.1.16: Project cost**: Capital cost of Existing project was Rs. 14822.27 Crores. The capital cost of the proposed project is Rs11130.98 Crores and the capital cost for environmental protection measures is proposed as Rs1082.62 crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 21.85 Crores. The employment generation from the proposed project / expansion is During construction phase of Stage – II the no. of temporary and permanent persons are 1200-1500 & 100, respectively, and during operation phase of Stage – II the no. of temporary and permanent persons are 500 & 100 respectively. The details of cost for environmental protection measures are as follows:

| S.No | EMPs: (Eg.: Air Environment, Water Environment) | Capital Cost (Lakhs) | Recurring cost (Lakhs) |
|---|---|---|---|
| 1 | Electrostatic Precipitator | 17325.52 | 346.51 |
| 2 | Chimney | 6370.29 | 127.41 |
| 3 | Cooling Towers incl. Civil Works | 341284 | 68.29 |
| 4 | Ash Handling | 37051.46 | 741.03 |
| 5 | Ash Disposal Area | 38706.51 | 774.13 |
| 6 | Ash Water Recirculation Incl. ETP | 1829.00 | 36.58 |
| 7 | Dust extraction & suppression System. | 42.00 | 0.84 |
| 8 | DM plant waste treatment systems | 260.00 | 5.20 |
| 9 | Online monitoring equipments CEMS | 640 | 12.8 |
| 10 | Solar Rooftop | 364.55 | 7.30 |
| 11 | Sewerage collection, treatment & disposal | 210.00 | 4.20 |
| 12 | Green Belt, Afforestation & Landscaping | 1278.00 | 20.00 |
| 13 | Wildlife Conservation plan | 391.55 | - |
| 14 | Watershed management. | 177.20 | - |
| 15 | River Protection | 38.55 | - |
| 16 | Environment Lab equipment | 50 | 10 |
| 17 | Environment monitoring | 1.40 | 31.68 |
| 18 | Hydrology study | 62 | 0 |
| 19 | Risk Assessment action plan | 39.58 | 0 |
| 20 | Rainwater Harvesting | 12 | |
| **Total** | | **108262.50** | **2185.91** |
| Cost provisions for addressing the issues raised in Environmental Public hearing as per time bound action Plan for Sundergarh District | | 4275.00 | |
| Cost provisions for addressing the issues raised in Environmental Public hearing as per time bound action Plan for Jharsuguda District | | 3717.00 | |

**30.1.17: Green belt development**: Existing green belt has been developed in 116.470 Ha area which is about 46.17 % of the total Main plant and Ash dyke area of 252.24 Ha with total sapling of Approx. 227500 Trees. Proposed greenbelt will be developed in 39.660 Ha which is about 37.20 % of the total Main plant and Ash dyke area of 106.592 Ha. Thus, total of 156.130 ha (116.470 ha + 39.660 ha) area will be developed as greenbelt which is about 43.51% of total Main plant and Ash dyke area of 358.832 Ha (252.24 Ha + 106.592 Ha). A 30-50m 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 1,60,000 saplings will be planted

and nurtured in an area of approx. 64 Ha (44 Ha within the plant premises +20 Ha in the Ash Dyke area).

**30.1.18: Ash management for last three years (Only for expansion cases)**

| **Year** | **Quantity generated (LMT)** | **Quantity utilized (LMT)** | **% of utilization** | **Balance quantity (LMT)** | **No of storage silos with capacity** |
|---|---|---|---|---|---|
| FY 2022-23 | 38.85 | 10.24 | 26.37 | 54.74 | Dry Fly Ash Silos Main silos: 4x1500 MT with truck & Wagon loading facilities HCSD Silo: 3x 700 MT with truck loading |
| FY 2023-24 | 43.10 | 24.01 | 55.71 | 73.82 | |
| FY 2024-25 | 39.88 | 33.93 | 85.06 | 79.78 | |

**A. Fly ash Details for last three years:** 97.464 LMT

| Financial Year | Total Ash Production (LMT) | Fly Ash Production (LMT) | Total Ash Utilization (LMT) | Total Ash Utilization (%) |
|---|---|---|---|---|
| 2022-23 | 38.85 | 31.08 | 10.24 | 26.37 |
| 2023-24 | 43.10 | 34.48 | 24.01 | 55.71 |
| 2024-25 | 39.88 | 31.90 | 33.93 | 85.06 |

| **S.No.** | **Activity (as applicable)** | **Quantity** | **Percentage** | **Remarks (Prior approval of SPCB details to be mentioned)** |
|---|---|---|---|---|
| 1 | Fly ash based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels) | 0.003 | 0.003 | Only ash bricks manufactured. |
| 2 | Construction of roads, road and fly over embankment | 57.08 | 58.56% | |
| 3 | Use in overburden dumps | 0.42 | 0.43% | |
| | **Total** | **57.503** | **58.993%** | |

**B. Bottom ash details for last three years:** 24.368 LMT

| Financial Year | Total Ash Production (LMT) | Bottom Ash Production (LMT) | Total Ash Utilization (LMT) | Total Ash Utilization (%) |
|---|---|---|---|---|
| 2022-23 | 38.85 | 7.76 | 10.24 | 26.37 |
| 2023-24 | 43.10 | 8.62 | 24.01 | 55.71 |
| 2024-25 | 39.88 | 7.976 | 33.93 | 85.06 |

| S.No. | Activity (as applicable) | Quantity | Percentage | Remarks (Prior approval of SPCB details to be mentioned) |
|---|---|---|---|---|
| 1 | Filling up of low lying area | 9.59 | 39.36% | |
| 2 | Filling of mine voids: | 1.06 | 4.35% | |
| | **Total** | **10.65** | **43.71%** | |

**C. Legacy ash details:** There is no legacy ash

**D. Ash Pond details**: Stage I (existing ash pond)

| S.No. | Details of Ash Pond | Lagoon 1: Fly ash lagoon (FA) | Lagoon 2: Bottom ash lagoon (BA) | Lagoon 3: Bottom ash lagoon (BA) | OFL | Total |
|---|---|---|---|---|---|---|
| 1. | Status of ash pond (Active / Exhausted (yet to be reclaimed)/ Reclaimed) | Active | Active | Active | - | |
| 2. | Area (Ha) | 80.93 | 36.42 | 38.44 | 4.21 | 160 |
| 3. | Dyke height (m) | 8 | 8 | 8 | - | |
| 4. | Volume ($m^3$) | 42.96LMT | 19.33LMT | 20.41LMT | - | |
| 5. | Quantity of ash disposed (Metric Tons) | 78.5 LMT | | | | |
| 6. | Available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons) | 4.2 LMT | | | | |
| 7. | Expected life of ash pond (number of years and months | 01-month capacity | | | | |
| 8. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HCSD Lining which is impervious. | HCSD Lining which is impervious. | Bentonite lining | - | |
| 9. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | HCSD | LCSD | LCSD | - | |
| 10 | Ratio of ash: water in slurry mix : | 1:2/3 | 1:3 | 1:3 | - | |
| 11 | Ash water recycling system (AWRS) | Yes | Yes | Yes | - | |

**E. Proposed ash utilization plan for expansion project**

| Details | Existing generation (LMTPA) | Proposed generation (LMTPA) | Total LMTPA | Utilization (LMTPA) | % of utilization | Balance quantity (LMTPA) | No. of storage silos with capacity |
|---|---|---|---|---|---|---|---|
| Ash( Fly Ash & Botto Ash) | 40 | 20 | 60 | 60 | 100 | -- | HCSD cum Dry Fly Ash Silos Main silos: 2x2000 MT & Fine Fly Ash Silo : 1x1500MT with truck & Wagon loading facilities No separate HCSD silos Dry Bottom Ash Silo : 1x2000T with truck & Wagon loading facilities (In case of dry bottom ash system) Dry bottom ash intermediate silo : 1x500MT with truck loading facility only (In case of dry bottom ash system). |

**Proposed year wise Ash Utilization for Existing Stage-I & Proposed Stage-II**

| MoEF &CC Compliance Cycle | Year | Ash Generation (LMT) | Land Development (LMT) | Outside Bricks (LMT) | Own Brick plant (LMT) | Cement & Other Industries (LMT) | Roads Construction (LMT) | Ash based products/ Others (LMT) | Mines Fillings (LMT) | Total Ash Utilized (LMT) | Ash Utilization (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Operation from existing 2x800 MW(St-1) | | | | | | | | | | |
| First | 2022-23 | 38.86 | 1.25 | 0.02 | 0.00 | 0.00 | 8.93 | 0.00 | 0.04 | 10.24 | 26.37 |

| MoEF &CC Compliance Cycle | Year | Ash Generation (LMT) | Land Development (LMT) | Outside Bricks (LMT) | Own Brick plant (LMT) | Cement & Other Industries (LMT) | Roads Construction (LMT) | Ash based products/ Others (LMT) | Mines Fillings (LMT) | Total Ash Utilized (LMT) | Ash Utilization (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2023-24 | 43.10 | 2.50 | 0.00 | 0.00 | 0.00 | 21.09 | 0.00 | 0.42 | 24.01 | 55.71 |
| | 2024-25 | 39.88 | 5.84 | 0.00 | 0.00 | 0.00 | 27.06 | 0.00 | 1.02 | 33.93 | 85.06 |
| | 2025-26 | 40.00 | 12.00 | 1.00 | 0.00 | 0.00 | 40.00 | 0.00 | 12.00 | 65.00 | 162.5 |
| | 2026-27 | 40.00 | 10.00 | 1.00 | 0.00 | 0.00 | 42.00 | 0.00 | 15.00 | 68.00 | 170 |
| Second | 2027-28 | 40.00 | 10.00 | 1.00 | 0.00 | 0.00 | 42.00 | 0.00 | 15.00 | 68.00 | 170 |
| | 2028-29 | 40.00 | 10.00 | 1.00 | 0.00 | 0.00 | 42.00 | 0.00 | 15.00 | 68.00 | 170 |
| | 2029-30 | 40.00 | 10.00 | 1.00 | 0.00 | 0.00 | 42.00 | 0.00 | 15.00 | 68.00 | 170 |
| | **With Commissioning of St-2 1x800 MW Unit & Operation from 2x800 MW(St-1) + 1x800 (St-2)** | | | | | | | | | | |
| Third | 2030-31 | 60.00 | 12.50 | 5.00 | 0.00 | 15.00 | 20.00 | 3.00 | 4.50 | 60.00 | 100 |
| | 2031-32 | 60.00 | 12.50 | 5.00 | 0.00 | 15.00 | 20.00 | 3.00 | 4.5 | 60.00 | 100 |
| | 2032-33 | 60.00 | 11.50 | 5.50 | 0.00 | 15.00 | 20.00 | 2.00 | 6.00 | 60.00 | 100 |
| Fourth | 2033-34 | 60.00 | 11.50 | 5.50 | 0.00 | 12.00 | 20.00 | 5.00 | 6.00 | 60.00 | 100 |
| | 2034-35 | 60.00 | 11.50 | 5.50 | 0.00 | 12.00 | 20.00 | 5.00 | 6.00 | 60.00 | 100 |
| | 2035-36 | 60.00 | 11.50 | 5.50 | 0.00 | 12.00 | 20.00 | 5.00 | 6.00 | 60.00 | 100 |

Ash pond details: If existing ash pond is to be utilized details may be mentioned. If not, new ash pond details may be provided as below:

| S.No. | Details of Ash pond | Ash pond |
|---|---|---|
| 1 | Area (Ha) | 60 Ha<br>(including 30% space for non-storage purpose i.e. overflow lagoon, dyke embankment, toe drains, peripheral roads, ash pipe corridor, AWRS pump house and other facilities etc.). |
| 2 | Dyke height (m) | Average Height:10 m (Starter Dyke)<br>(Additionally, two subsequent Raisings of 3.0 M height is envisaged in each lagoon design for uncertainties in ash utilisation) |
| 3 | Volume (m3 ) | Approx. 3.8 million $m^3$ (Ash disposal in Starter Dyke) |
| 4 | Quantity of ash to be disposed (Metric Tons) | Approx 3.8 Million Metric Ton (considering density as 1.0T/Cum) |
| 5 | Expected life of ash pond (number of years and months) | 7.5 years |
| 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 |

| S.No. | Details of Ash pond | Ash pond |
|---|---|---|
| | | 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) | Bottom Ash in lean slurry and Fly Ash in High Concentration Slurry Disposal (HCSD) form |
| 8 | Ratio of ash: water in slurry mix : | Bottom Ash: Water ratio- 25:75 Fly ash: Water ratio-60:40 |
| 9 | Ash water recycling system (AWRS): Yes or No | Yes<br>Ash water recycling system has been envisaged for the proposed project. |
| 10 | Quantity of wastewater from ash pond to be discharged into land or water body (m3 ) | No ash water discharge is envisaged. AWRS and ZLD system envisaged hence no ash water discharge from Ash Dyke. |
| 11 | Details regarding dyke stability study and name of the organization who conducted the study | As already done in all past ash dyke stability design, this will also be done by NTPC, (in-house design) in line<br>with "CEA and CPCB Guidelines for Design, Construction, O&M and Annual certification of Coal Ash Ponds". |

**30.1.19:** Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration:

**A. Summary of court cases:** There are total 9 cases related with Darlipali STPP Stage-I, out of these 04 cases are related to Land Acquisition, 03 Cases related to Contractual disputes, 01 Injunction Suit, 01 case related to Environment Matter which pertains to Orissa Human Rights Commission and its details are as given bellow:

| S. | Case No/ Title | Name of the Court | Brief summary of the case | Last Date of Hearing | Next date of Hearing | Direction/Action taken by the PP |
|---|---|---|---|---|---|---|
| 1. | OHRC Case No. 3888 of 2024 (2952/OHRC, dated 18.02.2025) | Orissa Human Rights Commission | The complainant alleges that NTPC is violating human rights by polluting the environment in the Sundargarh district, causing health hazards due to emissions from vehicles and chimneys of the power plant. Complaint states that there is no development in the area since the establishment of | 22.07.2025 | 30.10.2025 | Comprehensive Reply has been submitted by NTPC on all the issues raised by the complainant along with documentary evidence.<br>On last date, i.e. 22.07.2025, petitioner has submitted its reply on NTPC written submission. Now, NTPC has to file reply on |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | project. | | | petitioner's submission. |

**B. Summary of Show Cause Notices:** Show case Notice no. 13591/IND-I-CON-6631 dated 19.07.2025, issued by OSPCB, Bhubaneswar for illegal dumping of Ash in unauthorised area.

| S.N. | Issuing authority | Date | Reasons for issuance of SCN | Status of reply to submission | Present status |
|---|---|---|---|---|---|
| 1 | Odisha Pollution Control Board | 19.07.2025 | Illegal dumping of Ash | Reply submitted to OSPCB on 23.07.2025 | Case is under consideration for personal Hearing in OSPCB. |

**C. Summary of violation**

| | |
|---|---|
| Any violation case pertaining to the project following,<br><br>The Environmental Protection Act, 1986 | No Violation |
| Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 | Observations on violation have been raised by the MOEF & CC, regarding taking up construction of Make-up Water Pipeline and the 132 KV Transmission line without obtaining Stage-II approval/ working permission for diversion of 25.56 ha of forest land. It is submitted that the Stage-I approval was accorded on 01.11.2016 and after compliance of the conditions laid down under Stage-I approval, the final (Stage-II) approval, has been accorded by the MOEF &CC on 24th April 2025, vide letter no. 5-ORC279/2016-BHU. |
| The Wildlife (Protection) Act, 1972 | No Violation |

**30.1.20:** Compliance to the observations of sub-committee site visit report (Only in case of site visit by the sub-committee) – Nil

**30.1.21: Written submissions:** Project proponent submitted the following written submission during the meeting:

1. ***Queries raised: Forest Clearances Details***

**Reply:**

| FOREST CLEARANCES ALREADY ACCORDED FOR DARLIPALI STAGE-1 | | | |
|---|---|---|---|
| **Purpose of Forest Diversion** | **Forest Area Diverted (Ha)** | **Purpose for which used** | **Remarks** |

| FOREST CLEARANCES ALREADY ACCORDED FOR DARLIPALI STAGE-1 | | | |
|---|---|---|---|
| **Purpose of Forest Diversion** | **Forest Area Diverted (Ha)** | **Purpose for which used** | **Remarks** |
| Setting up of Darlipali Super Thermal Power project | 13.95 Ha | Main Plant and associated infrastructure and Township | Stage-II Forest Clearance accorded on 13.10.2014 |
| Construction of MGR-Rail Corridorfor transportation of coal from Dulanga Coal Mines to Darlipali Super Thermal Power Plant | 19.70 Ha | Construction of MGR- rail corridor, connecting Dulanga coal mines with the Darlipali Power Plant | Stage-II Forest Clearance accorded on 16.11.2016 |
| Construction of Railway Siding Corridor by NTPC Darlipali STPP to connect their MGR line | 19.43 Ha | Construction of Railway Siding Corridor by NTPC Darlipali STPP to connect to the MGR line | Stage-II Forest Clearance accorded on 26.06.2024 |
| Laying of Make Up Water Pipeline and 132 KV Electric transmission lines by NTPC for drawl of water from Hirakud reservoir for Darlipali Super Thermal Power Project | 25.56 Ha | Laying of Make Up Water Pipeline and 132 KV Electric transmission lines by NTPC. | Stage-II Forest Clearance accorded on 24.04.2025 |
| **Proposal For Diversion of Forest Land for Darlipali Stage-II** | | | |
| Construction of Additional reservoir and Unit-III of NTPC Darlipali | 65.301 Ha | Construction of Main Plant, Reservoir and Ash Dyke. The area for the proposed Ash Dyke, is a combination of Private Land, Non Forest Govt land and Forest land as the requirement of land for the Ash Dyke is required in contiguity. | Under consideration in FAC on 26.09.2025 |

**2.** ***Action taken Report Show cause notice*** **(**Notice No. - 13591/IND-I-CON-6631 dated 19.07.2025, issued by OSPCB, Bhubaneswar for illegal dumping of Ash in unauthorised area**)**

**Reply:** NTPC has submitted detailed reply to OSPCB, Bhubaneswar vide Letter dated 23.07.2025, with the following action taken:

- All dumped Fly Ash from the alleged site, has been completely evacuated.
- Physical and biological reclamation measures have been undertaken to restore the area to its natural condition.

Post submission of the above, site visit has been conducted by Regional Officer- SPCB-Rourkela and inspection report has been submitted on 25.09.2025, which mentions that all the ash has been completed evacuated by the user agency and plantation has been carried out on the mentioned land. The photographic evidence is also enclosed along with the Inspection report. (Copy of inspection report is submitted)

**3.** ***Updated Ash Pond Life details***

**Reply:** Updated Ash pond life details of proposed new ash-pond of Darlipalli-II(1x800MW) is as mentioned below-

| **Details of Proposed Ash Dyke** | |
|---|---|
| Area | 60 Ha (including 30% space for non-storage purpose i.e. overflow lagoon, dyke embankment, toe drains, peripheral roads, ash pipe corridor, AWRS pump house and other facilities etc.). |
| Volume | Approx. 3.8 million $m^3$ (Ash disposal in Starter Dyke) |
| Height of the Ash Dyke | Average Height:10m (Starter Dyke) |
| Life of the ash pond | 7.5 years |

**4. *CPCB Recognition and NABL Accreditation certificate for Consultant Laboratory***

**Reply:** Recognition letter w.r.t recognition of M/s. Mantec Consultants Pvt. Ltd., D-36, Sector-6, Noida, Gautam Budh Nagar, Noida-201 301, Uttar Pradesh has been submitted by CPCB vide letter dated 7th July 2025.

**5. Green Belt details around ash dyke**

**Reply: Action plan for 50000 Sapling plantation around proposed ash dyke of Stage-II**: Tree plantation is one of the effective remedial measures to control the Air pollution/dust emission and noise pollution. It also causes aesthetics and climatologically improvement of area as well as sustains and supports the biosphere. It is an established fact that trees and vegetation acts as a vast natural sink for the gaseous as well as particulate air pollutants due to enormous surface area of leaves. Plantation around proposed ash dyke towards Basundhara River will act barrier for dust pollution sources which will control the air pollution by filtering the air particulate before it reaches to the Basundhara River.

| **Year of plantation** | **Total no of Seedling** | **Area in Ha** | **Budget in Lakhs Rs.** |
|---|---|---|---|
| 2025-26 | 15000 | 6.0 | 150 |
| 2026-27 | 20000 | 8.0 | 160 |
| 2027-28 | 15000 | 6.0 | 150 |
| **Total** | **50000** | **20** | **460** |

***Following are species to be planted around Ash dyke***:

Shorea robusta (Sal), Dalbergia sisoo (Sisoo), Gmelina. Arborea (Gambhar), Bridelia retusa (Kasi), Terminelia tomentosa (Asan), Terminelia arjuna (Arjun), Terminalia belerica, Adina cordifolia, Mitragyna parviflora, Careya arborea, Clestartthus collinus, Cassia. Fistula, .Albizia procera, Madhuca indica (Mahul), Acacia auriculiformis (Acacia), Cassia siamea (Chakuda), Pongamia pinnata (Karanja), Albizzia lebek (sersuan), Dendrocalamus strictus (Bamboo),Tectona grandis.

**Selection of Plant species:** Native/local plant species will be selected in the proposed greenbelt and plantation areas in consultation with local forest department. Species composition of plantation area will be heterogeneous in nature.

The species for plantation will be selected based on the following characteristics:

- Adapted to the Geo-climatic conditions of the area.

- Species having wide canopy.
- Different heights ranging from 4 m to 12 m; and
- Preferably evergreen trees

Various type of plant species based on their important and mode of functions will be selected for plantation.

Agency: State Forest department, OFDC, CGVRV Vikas Nigam LTD.

The lay out map of Ash dyke marked with green belt area to be planted around proposed ash dyke towards the Basundhara River is submitted.

**Proposed Greenbelt of Darlipali plant Stage – II**: A total of 1,10,000 nos. of saplings will be planted in an area of approx. 44 Ha with a tentative budget of Rs. 935 lakhs. Details are summarized in following table:

| **Proposed Green Belt Development Action Plan** | | | |
|---|---|---|---|
| **Financial Year** | **Area in Ha** | **Number of Plants** | **Tentative Budget (In Lakhs Rupees)** |
| 2025-26 | 08 | 20000 | 160 |
| 2026-27 | 14 | 35000 | 280 |
| 2027-28 | 08 | 20000 | 170 |
| 2028-29 | 08 | 20000 | 175 |
| 2029-30 | 06 | 15000 | 150 |
| **Total** | **44** | **1,10000** | **G35** |

***Note*:** 15000 additional saplings are being proposed equivalent to 6 Ha Land (@2500 Sapling/Ha) (Increase from 38 Ha to 44 Ha)

**Plant to Plant distance** = 2 meters.

**Row to Row distance** = 2 meters.

**6.** ***Existing Ash Pond available capacity details***
**Reply:**

| **S.No.** | **Details of Ash Pond** | **Lagoon 1: Fly ash lagoon (FA)** | **Lagoon 2: Bottom ash lagoon (BA)** | **Lagoon 3: Bottom ash lagoon (BA)** | **OFL** | **Total** |
|---|---|---|---|---|---|---|
| 1. | Status of ash pond (Active / Exhausted (yet to be reclaimed)/ Reclaimed) | Active | Active | Active | - | |
| 2. | Area (Ha) | 80.93 | 36.42 | 38.44 | 4.21 | 160 |
| 3. | Dyke height (m) | 8 | 8 | 8 | - | |
| 4. | Volume (m3 ) | 42.96LMT | 19.33LMT | 20.41LMT | - | |

| S.No. | Details of Ash Pond | Lagoon 1: Fly ash lagoon (FA) | Lagoon 2: Bottom ash lagoon (BA) | Lagoon 3: Bottom ash lagoon (BA) | OFL | Total |
|---|---|---|---|---|---|---|
| 5. | Quantity of ash disposed (Metric Tons) | 78.5 LMT | | | | |
| 6. | Available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons) | 4.2 LMT | | | | |
| 7. | Expected life of ash pond (number of years and months | 01-month capacity | | | | |
| 8. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HCSD Lining which is impervious. | HCSD Lining which is impervious. | Bentonite lining | - | |
| 9. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | HCSD | LCSD | LCSD | - | |
| 10 | Ratio of ash: water in slurry mix : | 1:2/3 | 1:3 | 1:3 | - | |
| 11 | Ash water recycling System (AWRS) | Yes | Yes | Yes | - | |

**7. *RO Compliance status***

**Reply:** PP has submitted the IRO compliance report status as on 26.09.2025

**Observations and deliberation of the EAC**

**30.1.22:** The Committee observed and noted the following:

i. The instant proposal is for expansion of 2x800 MW (Stage-I) Darlipali Supercritical Coal Based Thermal Power Plant by addition of one unit of 800 MW [1x800MW(Stage-II) Darlipali Super Thermal Power Project] by M/s. NTPC Limited located at Village Darlipali, Raidihi, in Lephripara Tehsil, Village Chuabahal, Kalamegha, Laikera, Bihajor, Kanaktura in Hemgir Tehsil, District Sundergarh and Village Tileimal, Chichinda, Kechobahal, in Jharsuguda Tehsil and Village Chhadarama in Lakhanpur Tehsil of Jharsuguda District in Odisha.

ii. The existing project of 2x800 MW was accorded environmental clearance vide letter dated 17.02.2014 from Ministry of Environment & Forests. The Environment Clearance was amended vide letter dated 12.02.2019, 11.08.2020 & 24.12.2021. Consent to Operate (CTO) for the existing units accorded by Odisha State Pollution Control Board vide Letter 28.03.2025, which is valid up to 31.03.2026.

iii. Both units (2 x 800 MW) have been commissioned and are under commercial operation.

iv. 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.

v. 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.

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

vii. The Status of compliance of EC (for unit 2×800MW) was obtained from Regional Office, Bhubaneswar, vide letter dated 10.09.2024. The Action taken report regarding the partially/non-complied conditions was submitted to Regional office, MoEF&CC Bhubaneswar, vide letter dated 21.09.2024. Request letter regarding revisit for closure report has been sent to IRO vide letter dated 18.10.2024. MoEF&CC (IRO), Bhubaneswar evaluated the same after revisiting the site on 09.05.2025 and submitted observations on ATR submitted by Project Proponent dated 21.09.2024 vide letter 02.06.2025 to MoEF&CC. Project Proponent has submitted the action taken report regarding the partially/non-complied conditions vide letter dated 28.06.2025.

viii. As per the categorization list of CPCB dated 23/06/2022, the existing units (2x800 MW) falls under Category C. The proposed project does not fall within any CPA nor in any non-attainment cities as per MoEF &CC notification G.S.R. 465(E) dated 11/07/2025. Hence, it is also classified as C-Category project with respect to FGD installation. Wet Flue gas desulphurization (FGD) System has been installed for both the units of Darlipali STPP Stage-I and are in operation. Installation of 275m high stacks is envisaged for the proposed expansion (Stage-II) project in compliance to the notification GSR 742(E) dated 30.08.1990.

ix. ToR for the proposed expansion project was granted vide letter dated 17.04.2023 followed by its amendment on dated 13.11.2023 and 09.09.2025. PH was done for both Jharsuguda and Sundargarh District on dated 22.10.2024 and 04.11.2024, respectively.

x. Darlipali STPP has acquired total 715.059 Ha land, out of which 675.780 ha of land has been utilized for Stage-I, with the provision of 39.278 Ha to be utilized for proposed Stage-II (1x800 MW). The additional unit(1x800MW) of Stage-II are proposed to be established adjacent to Stage-I units. Land required for acquisition towards the proposed Darlipali Stage– II (1x800 MW) expansion project is 120.64 Ha, out of total land requirement of 159.912 Ha.

xi. There is involvement of 65.301 Ha of forest land in the proposed Stage-II project. Application for diversion of 65.301 Ha forestland for Darlipali STPP, Stage-II is under process at MoEF&CC. The applicant needs to submit the Stage-I Forest Clearance (FC) for the involvement of 65.301 Ha of forest land. Member Secretary apprised the EAC that, as per OM dated 09/09/2011, after the EAC has recommended the project for environmental clearance, it would be processed on file for obtaining decision of the Competent Authority for grant of environmental clearance. In the cases where the Competent Authority has approved the grant of environmental clearance, the proponent will be informed of the same and a time limit of 12 months will be given to submit the requisite Stage – I forestry clearance. On receipt of the same, formal EC letter will be issued by the Ministry.

xii. Total 10 Schedule I Species are reported in the study area. A Wildlife Conservation Plan has been prepared for Schedule-I species with consultation with Forest Department along with budgetary provision Rs. 391.5 lakhs and the same has been submitted PCCF vide letter dated 17.10.2024.

xiii. Basundahara River is located at 1.82 km from the project boundary. IB river and Ichha River is located at around 9 km form the project boundary. As per the letter of

Irrigation and Water Resource deptt. Odisha, dated 04.03.2025 HFL of IB river and Basundhara river is 200.9m. The project site is located at substantial higher elevation compared to the HFL of IB and Basundhara River (209 m MSL).

xiv. The water requirement for the proposed project is estimated as 750 $m^3$ /hr will be obtained from Hirakund reservoir. The permission for drawl of surface water is obtained from Department of Water resources, Odisha vide letter Dated 21.01.2025 for additional water requirement of 7.42 Cusec. The water will be transported to the plant site through pipeline.

xv. Zero Liquid Discharge system will be adopted.

xvi. Transportation of raw material coal will be done 100% by rail.

xvii. Existing green belt has been developed in 116.470 Ha area which is about 46.17 % of the total Main plant and Ash dyke area of 252.24 Ha with total sapling of Approx. 227500 Trees. Proposed greenbelt will be developed in 39.660 Ha which is about 37.20 % of the total Main plant and Ash dyke area of 106.592 Ha. Thus, total of 156.130 ha (116.470 ha + 39.660 ha) area will be developed as greenbelt which is about 43.51% of total Main plant and Ash dyke area of 358.832 Ha (252.24 Ha + 106.592 Ha). A 30-50m 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 1,60,000 saplings will be planted and nurtured in an area of approx. 64 Ha (44 Ha within the plant premises +20 Ha in the Ash Dyke area).

xviii. The Ash will be collected in dry form in silos for further utilization/transportation through rail wagons / closed trucks to adjacent Cement Plants. 100% Ash will be utilized as per Ash Notification dated 31/12/2021.

xix. The existing ash dyke situated in an area of 160 Ha. New ash dyke is envisaged in an area of 60 Ha for the proposed expansion.

xx. The issues raised during Public hearing both in Jharsuguda and Sundargarh Districts are regarding employment to local people, skill development, infrastructure, village road construction and pollution from ash dyke etc. Proponent has earmarked an amount of Rs. 37.175 crores and 42.75 crores to address the said concerns for Jharsuguda and Sundargarh Districts, respectively.

xxi. The capital cost of the proposed project is Rs11130.98 Crores and the capital cost for environmental protection measures is proposed as Rs1082.62 crore. The annual recurring cost towards the environmental protection measures is proposed as Rs 21.85 Crores. The employment generation from the proposed project / expansion is During construction phase of Stage – II the no. of temporary and permanent persons are 1200-1500 & 100 respectively and during operation phase of Stage – II the no. of temporary and permanent persons are 500 & 100, respectively.

xxii. The Committee deliberated on the baseline data and incremental GLC due to the proposed project. The committee noted that the proponent is providing Electrostatic Precipitator (ESP), Low Nox Burner, Dust Extraction & Suppression System to control the emission of Particulate matter and NOx and also stack with a height of 275 m will be provided to control & regulate the air emission from the proposed project.

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

xxiv. The committee noted that with respect to water pollution control, domestic wastewater will be treated in Sewage treatment plant and treated sewage water shall be reused. Effluent will be treated in ETP. There will be no effluent discharge from the premises, hence the ZLD will be maintained. A state-of-the-art roof top rain water harvesting system, Check Dam and recharge pit will be provided to collect the run -off for ground water recharging.

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

xxvi. There are total 9 case related with Darlipali STPP Stage-I, out of these 04 cases are related to Land Acquisition, 03 Cases related to Contractual disputes, 01 Injunction Suit, 01 case related to Environment Matter which pertains to Orissa Human Rights Commission (No. 3888 of 2024 (2952/OHRC, dated 18.02.2025). Next date of hearing is on 30.10.2025.

xxvii. One Show case Notice (no. 13591/IND-I-CON-6631 dated 19.07.2025) has been issued by OSPCB, Bhubaneswar for illegal dumping of Ash in unauthorised area. Case is under consideration for personal Hearing in OSPCB.

xxviii. A violation under Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980, has been raised by MoEF&CC, regarding take-up construction of Make-up Water Pipeline and 132KV transmission line without obtaining Stage-II approval/Working permission for diversion of 25.56 ha of forest land. However, requisite stage II permission has been accorded by the Ministry.

xxix. The PP shall fulfil the compliance and install **200 and 300** solar power panels in nearby villages (school, colleges, hospitals and other government building) of Jharsuguda and Sundergarh district, respectively.

xxx. EAC suggested to quantify the Carbon emission due to proposed TPP and allied carbon sequestration/ carbon offsetting plan.

xxxi. The committee has suggested that the PP shall explore the option of ash transportation by specialized fly ash bulkers, and shall provide detailed action plan for the same.

xxxii. EAC deliberated and strictly directed to PP for taken action to compliance the partially/ non-complied conditions which reported by RO, MoEF&CC, as per the mentioned in Environmental Clearance (EC) letter vide lr.no. J-13012/65/2008-IA.II (T) dated 17/02/2014 and further amended on 12/02/2019, 24/12/2021, and 11/08/2020 from MoEF&CC. With respect to the non-applicable conditions of existing EC, proponent shall seek for amendment in the EC.

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

xxxiv. 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:**

**30.1.23:** In view of the foregoing and after detailed deliberations, the committee ***recommended*** the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 **subject to uploading of written submission** on PARIVESH Portal and stipulation of the following specific conditions and general conditions based on project specific requirements:

**A. Specific conditions**

**[A] Environmental Management**

1) Project proponent shall submit the Stage – I Forest Clearance for diversion of forestland of 65.301 Ha of forest land involved in the project for non-forestry activity prior to grant of Environment Clearance.
2) The project proponent shall abide by all orders and judicial pronouncements, made from time to time by the OA No. 3888 of 2024 (2952/OHRC, dated 18.02.2025) Orissa Human Rights Commission.
3) Project proponent shall ensure that 100% utilization of ash generated from the proposed project in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendment. Area for the expansion project ash pond shall not exceed 60 Ha as committed.
4) Project proponent shall comply with the recommendations made in the biodiversity assessment report and Hydrogeology report in a time bound manner. Compliance status in this regard shall be submitted to the Regional Office of MoEF&CC along with the six monthly compliance report.
5) The water requirement for proposed expansion (Stage-II) unit is estimated as 750 $m^3$ /hr and the same shall be met from Hirakund reservoir. The specific water consumption for proposed unit shall be less than 3.0 $m^3$/MWhr.
6) The entire coal requirement for proposed TPP shall be transported by rail network only and no road transportation is permitted.
7) 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.
8) Project proponent shall implement the protective measure proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs. 1082.62 crores 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.
9) 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.
10) Project proponent shall ensure that diesel operated vehicles will be switched over to E-Vehicles / CNG vehicles in a time bound manner, replace the passenger vehicles to E/ CNG vehicle in phased manner. Further, for local movement of officials, Contract of Vehicles deployment shall be awarded to Project affected people and all efforts for adopting heavy E-vehicles/ CNG Vehicles like Bulkers for ash transportation for short distance subject to availability of such E-vehicle and adequate charging infrastructure in the surrounding area shall be provided. PP shall submit the action taken report to concerned RO with amount spent, photographs (before & after), number of such non diesel vehicles deployed etc. in six monthly compliance report.
11) The Project Proponent shall provide stack of 275 meters height and shall abide by the

provisions of the notification number G.S.R 465 (E) dated 11/07/2025 related to $SO_2$ emission standards

12) Project proponent shall ensure that pipelines carrying the fly ash and effluent shall be inspected regularly for any leakages.
13) Effluent of 15600 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.
14) PP shall implement the concurrent plantation plan in a time bound manner. Total of 156.130 ha area (43.51% of total Main plant and Ash dyke area of 358.832 Ha) will be developed as greenbelt. A 30-50m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed wihin 2 years 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 1,60,000 saplings will be planted and nurtured in an area of approx. 64 Ha (44 Ha within the plant premises +20 Ha in the Ash Dyke area). The budget earmarked for the green belt plantation including 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 geo-location 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.
15) 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 (sanitary napkin vending machines) and shall also develop green belt around the nearby schools. Further, PP shall organize quarterly awareness programs for school students to educate them on the significance and preservation of trees.
16) 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 a government account.
17) 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 be done regularly.
18) 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.
19) PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM.
20) Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.
21) 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.

22) Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.
23) 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
24) 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.
25) 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.
26) 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.

**[B] Socio-economic**

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. 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.
3. The budget proposed for PH is Rs. 37.175 crores and 42.75 crores to address the said concerns for Jharsuguda and Sundargarh Districts. 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.
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.

**[C] Miscellaneous**

1. An Environmental Cell headed by the Environment Manager 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.
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. All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.

**B. General conditions**

**A. Statutory compliance:**

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.
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.
3. 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.
4. The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
5. No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance.

**B. Ash content/ mode of transportation of coal:**

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.

**C. Air quality monitoring and Management:**

1. Project proponent shall abide by the provisions of the notification number G.S.R 465(E) dated 11/07/2025 related to $SO_2$ emission standards.
2. Low $NO_X$ Burners with Over Fire Air (OFA) system shall be installed to achieve $NO_X$ emission standard of 100 mg/$Nm^3$.

3. High efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission to meet the stipulated standards of 30 mg/$Nm^3$.
4. Stack with a height of 275 meters shall be provided with continuous online monitoring instruments for $SO_2$, Nox and Particulate Matter as per extant rules.
5. Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.
6. Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as $PM_{10}$, $PM_{2.5}$, $SO_2$, $NO_X$ within the plant area at three locations. 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.
7. Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
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.

**D. Noise pollution and its control measures:**

1. The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
2. Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
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.

**E. Human Health Environment:**

1. Bi-annual Health check-up of all the workers is to be conducted. The Occupational health 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.
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.

**F. Water quality monitoring and Management:**

1. Project proponent shall use air coled condensers in the power plants to reduce the fresh water consumption and achieve specific water consumption of 3.0 $m^3$/MWhr.
2. In case of the water withdrawal from river, a minimum flow 15% of the average flow of 120 consecutive leanest days should be maintained for environmental flow whichever is higher, to be released during the lean season after water withdrawal for proposed power plant.

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.
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.
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. 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.
7. Wastewater generation of 15600 KLD from various sources (viz. cooling tower blow down, 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.
8. Sewage generation of 175 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).
9. Action plan by the TPPs located within 50 km of a municipality or any Urban Local Body (ULB) to use the treated sewage water produced by the municipality/Urban Local Body(ULB) to reduce fresh water consumption shall be submitted.

**G. Risk Mitigation and Disaster Management:**

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.
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%.
3. Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
4. Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
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.

**H. Green belt and Biodiversity conservation:**

1. Green belt shall be developed in an area of 33% of the total plant area with indigenous native tree species in accordance with CPCB guidelines.

2. In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.
3. A 3 tier plantation with saplings of native and fruit species of 2 meter height shall be done on both side of the roads which will be used for the transportation of coal and fly ash.

**I. Waste management:**

1. Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
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.
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.
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 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.
5. Unutilized ash if any shall be disposed off in the ash pond in the form of High Concentration Slurry method.

**J. Monitoring of compliance:**

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.
2. Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
3. Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report. Renewable Energy Purchase Obligation as set by MoP/State Government shall be met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy Certificates.
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.
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 & PM2.5 in case 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.

**K. Corporate Environmental Responsibility (CER) activities:**

1. CER activities will be carried out as per Ministry's OM F.No.22- 65/2017- IA.III dated 30th September, 2020 and 22-65/2017- IA.III dated 25.02.2021 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.

**Agenda No 30.2**

**30.2** Proposed Expansion of Kawai Thermal Power Plant under Phase–II by adding 3200 (4x800) MW Ultra Super Critical Thermal Power Plant to Existing 1320 (2x660) MW by **M/s. Adani Power Limited** located at Village Kawai, Tehsil Atru, **District Baran, Rajasthan –Environmental Clearance – regarding.**

**[Proposal no. IA/RJ/THE/549347/2025, F.No. J-13012/154/2008-IA.II (T)]**

**30.2.1: M/s Adani Power Limited** has made an online application vide proposal no. IA/RJ/THE/549347/2025 Dated 10/09/2025 along with Form-I, copy of EIA/EMP report, and Certified compliance report seeking Environment Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at item no. *1(d)* Under Category "A" of the schedule of the EIA Notification, 2006 and appraised at Central Level.

**Name of the EIA consultant:** M/s Gaurang Environmental Solutions Pvt. Ltd. [S. No. 98 List of ACOs with their Certificate No. NABET/EIA/2326/RA 0338 Valid up to: 07.12.2026.

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.2.2:** The project of M/s. Adani Power Limited located in Kawai Village, Atru Tehsil, Baran District, Rajasthan State is enhancement of power generation capacity from 1320 MW to 4520 MW.

**30.2.3:** The existing project was accorded environmental vide lr. no. J-13012/154/2008-IA.II(T) dated 04.05.2011 from MoEF&CC. Subsequently, EC amendment was granted on 13.03.2014 and later EC was transferred to Adani Power Limited (APL, Kawai) from M/s Adani Power Rajasthan Ltd on 24.04.2023. Consent to Operate for the existing unit 1320 (2x660) MW was accorded by Rajasthan State Pollution Control Board (RSPCB) vide lr. No.-F(CPM)/Baran(Atru)/1028(1)/2020-2021/7187-7189 dated 20.02.2024. The validity of CTO is up to 28.02.2029.

**30.2.4**: Implementation status of the existing EC

| S. No. | Configuration | Capacity (MW) | As per EC dated | Implementation Status as on till date | Production as per CTO |
|---|---|---|---|---|---|
| 01. | 2 x 660 MW | 1320 MW | J-13012/154/2008-IA.II(T) dated 04.05.2011, EC Amendment dated 13.03.2014 and EC Transferred to APL dated 24.03.2023 | Unit is Operational (Since 2013**)** | 1320 MW |

**30.2.5: Certified compliance report from Regional Office**: The Status of compliance of earlier EC was obtained from Regional Office, MoEF&CC Jaipur, vide letter dated 06/06/2025 in the name of M/s. Adani Power Limited. The Action taken report regarding the partially/non-complied conditions was submitted to Regional Office, MoEF&CC, Jaipur vide letter no. APL/TPP/Kawai/EC/MoEFCC/342/25 dated 25.08.2025.

The details of the observations made by RO in the report dated 06.06.2025 along with its present status as furnished by the PP is given as below:

| S.No. | Non- Compliance details | Observation of RO (abridged) | Condition No. | | | Re-assessment by RO / Response by PP |
|---|---|---|---|---|---|---|
| | | | EC date | Specific | General | |
| 1 | Minimum required water flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/Rivers (as applicable) even in lean season. | No details submitted. | **EC F. No. J-13012/154/20** | Specific Condition no. XII | NA | **Complied.**<br>APL, Kawai has no role in the distribution of water from Parvan River (irrigation Project). Water Resource Department, Govt. of Rajasthan are maintaining the minimum water flow required during lean season.<br>We have conducted Water Source Sustainability Study by reputed Govt. Institute |

| S.No. | Non- Compliance details | Observation of RO (abridged) | Condition No. | | | Re-assessment by RO / Response by PP |
|---|---|---|---|---|---|---|
| | | | EC date | Specific | General | |
| | | | **08-IA.II (T) dated; 04.05.2011, EC amendment dated; 13.03.2014 & Transferred EC dated; 24.04.2023.** | | | (IISWBM Kolkata), the report concludes that even after utilization of water by Kawai TPP still 16 MCM water will be left with Govt. of Rajasthan for downstream users and can be used to maintain the river's ecological flow. |
| 2 | A long-term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter, mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place. | PP has submitted the Test results of coal samples for radioactivity and heavy metal. | | Specific condition no. **xxxix** | NA | **Being Complied.**<br>Radioactivity analysis in Coal and Ash is being carried out by the **Department of Atomic Energy, Board of Radiation and Isotope Technology (BRIT) Government of India.** Analytical results show that the measurement values are below the clearance level for radionuclides of natural origin in bulk solid materials.<br>For provision mechanism for an in-built continuous monitoring for radioactivity and heavy metals in coal and fly ash (including bottom ash), the technology and monitoring instruments are not available with the suppliers in the Country and is also technically not feasible to monitor in this mechanism.<br>The amendment will be made of this EC condition on Parivesh Portal. |

**30.2.6: Status of $SO_2$ emission standards as per the MoEF&CC Notification dated 11/07/2025**:

v. Categorization details of TPP : **C** ( Other than those included in Category A and B)
vi. Sulfur content of the coal to be fired in the boiler: < 0.5%
vii. Status of FGD installation for existing unit: Not applicable as per MoEFCC Notification dated 11.07.2025

viii. Action plan for installation of new stack in compliance to the notification number GSR 742 (E) dated the 30/08/1990 for the proposed expansion.: Two Chimneys with 275 m height (Twin flue) is proposed. MoEFCC Notification dated 11.07.2025 shall be followed.

**30.2.7:** The detail of the ToR is furnished as below:

| Proposal No with date | Consideration | Details | Date of accord | ToR Validity |
|---|---|---|---|---|
| IA/RJ/THE/467570/ 2024 dated 13.04.2024 | 9th &11th meeting of EAC held on 07.05.2024 & 27-28. 05. 2024. | Terms of Reference | 29.07.2024 | 28.07.2028 |

**30.2.8: Environmental site settings:**

<table>
<tr><th>S. No.</th><th>Particulars</th><th colspan="4">Details</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Total land</td><td colspan="4">820.7 ha (Existing: 350 ha + Proposed: 470.7ha)<br>[Private: 140.8 ha; Govt.: 679.9 ha; Agriculture --NA--ha;]</td><td>Land use: Industrial. The land is already under possession with Adani Power Limited</td></tr>
<tr><td rowspan="11">2.</td><td rowspan="11">Land use break up</td><td>Facilities</td><td>Existing Area (In Ha) (Phase-I)</td><td>Proposed Area (In Ha) (Phase-II)</td><td>Total (Ph I & Ph-II)</td><td rowspan="11"></td></tr>
<tr><td>Main Plant</td><td>70</td><td>138</td><td>208</td></tr>
<tr><td>Coal Handling System</td><td>40</td><td>65.2</td><td>105.2</td></tr>
<tr><td>Water System</td><td>65</td><td>-</td><td>65</td></tr>
<tr><td>Switch Yard</td><td colspan="3">NIL*</td></tr>
<tr><td rowspan="2">Green Belt</td><td>79</td><td>169.44</td><td>289.44</td></tr>
<tr><td colspan="3">Additional 41 Ha, Greenbelt and plantation have already been completed in the Phase II Area and all around the plant boundary. (79+41+169.44= 289.44 Ha)</td></tr>
<tr><td>Roads</td><td colspan="3">NIL*</td></tr>
<tr><td>Ash Pond</td><td>60</td><td>57.06</td><td>117.06</td></tr>
<tr><td>Railway Siding</td><td colspan="3">NIL*</td></tr>
<tr><td>Water Supply Pipeline</td><td colspan="3">NIL*</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>Ash Transport Pipeline</td><td colspan="3">NIL*</td></tr>
<tr><td>Others</td><td colspan="3"></td></tr>
<tr><td>Ash based Industries</td><td>6</td><td>-</td><td>6</td></tr>
<tr><td>Township</td><td>30</td><td>-</td><td>30</td></tr>
<tr><td>Total</td><td>350</td><td>470.7</td><td>820.7</td></tr>
<tr><td colspan="4">* Included in Main Plant Area</td></tr>
</table>
</td><td></td></tr>
<tr><td>3.</td><td>Land acquisition details as per MoEF&CC O.M, dated 7/10/2014</td><td>The land is already in possession with Kawai TPP.<br>The expansion project is proposed within the existing plant area.</td><td>Land Documents are submitted along with EC application.</td></tr>
<tr><td>4.</td><td>Existence of habitation& involvement of R&R, if any.</td><td><u>Project site</u>: Name of village (if any): No habitation and no R&R.<br>Study Area: As below
<table>
<tr><th>Habitation / village</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Nimoda</td><td>Adjoining</td><td>N</td></tr>
<tr><td>Dara</td><td>Adjoining</td><td>N</td></tr>
<tr><td>Baldevpura</td><td>Adjoining</td><td>NNW</td></tr>
<tr><td>Salpura</td><td>0.150</td><td>S</td></tr>
<tr><td>Kherli Gaddiyan</td><td>0.350</td><td>E</td></tr>
<tr><td>Kawai</td><td>1.0</td><td>SW</td></tr>
<tr><td>Chhatrapura</td><td>1.0</td><td>NNW</td></tr>
<tr><td>Sagora</td><td>1.40</td><td>NE</td></tr>
<tr><td>Phulbaroda</td><td>1.50</td><td>SSE</td></tr>
<tr><td>Karikheri</td><td>1.50</td><td>NNE</td></tr>
<tr><td>Kolukhera</td><td>1.60</td><td>ESE</td></tr>
<tr><td>Bilkera</td><td>1.70</td><td>E</td></tr>
<tr><td>Barlan</td><td>3.0</td><td>NW</td></tr>
<tr><td>Hani Hera</td><td>3.0</td><td>W</td></tr>
</table>
</td><td>R&R Not applicable/ not involved.</td></tr>
<tr><td>5</td><td>Existence of school and hospital if any.</td><td><u>A.</u> <u>School</u><br>Project site: Nil<br>Study Area: As below
<table>
<tr><th>School</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Government Primary School, Salpura Station</td><td>0.20</td><td>S</td></tr>
<tr><td>Govt. Higher Secondary School, Salpura</td><td>0.23</td><td>S</td></tr>
<tr><td>Eklavya Model Residential School, Chhatrapura</td><td>0.25</td><td>NNW</td></tr>
<tr><td>Govt. Upper Primary School, Nimoda</td><td>1.07</td><td>E</td></tr>
</table>
</td><td></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>Govt. High Sr. Sec. School, Dara</td><td>1.12</td><td>N</td></tr>
<tr><td>Swami Vivekanand Govt. Model School, Atru</td><td>1.50</td><td>NNW</td></tr>
<tr><td>Govt. S. S. School, Kolhukheras</td><td>1.75</td><td>E</td></tr>
<tr><td>Govt. S.S. School, Phulbaroda</td><td>2.0</td><td>SSE</td></tr>
<tr><td>Govt. School, Bilkhera</td><td>2.0</td><td>E</td></tr>
<tr><td>Government primary school Atru,</td><td>4.0</td><td>NW</td></tr>
</table>
<u>B. Hospital</u><br>
Project site: Nil<br>
Study Area: As below
<table>
<tr><th>Hospital</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Sub Health Centre, Dara</td><td>0.10</td><td>N</td></tr>
<tr><td>Govt. Hospital Kawai</td><td>0.90</td><td>S</td></tr>
<tr><td>CHC, Kawai</td><td>0.90</td><td>S</td></tr>
<tr><td>Rajasthan Ayush Ayurved, Kawai</td><td>1.00</td><td>S</td></tr>
<tr><td>Pravya Health Care Centre, Salpura</td><td>4.80</td><td>S</td></tr>
</table>
</td><td></td></tr>
<tr><td>6.</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>1</td><td>24°48'49.45"</td><td>76°43'52.90"</td></tr>
<tr><td>2</td><td>24°49'52.57"</td><td>76°43'13.78"</td></tr>
<tr><td>3</td><td>24°49'18.09"</td><td>76°43'9.64"</td></tr>
<tr><td>4</td><td>24°50'16.91"</td><td>76°42'16.70"</td></tr>
<tr><td>5</td><td>24°50'17.26"</td><td>76°41'49.49"</td></tr>
<tr><td>6</td><td>24°48'52.21"</td><td>76°42'36.87"</td></tr>
<tr><td>7</td><td>24°48'12.53"</td><td>76°43'23.90"</td></tr>
<tr><td>8</td><td>24°48'7.23"</td><td>76°43'44.16"</td></tr>
<tr><td>9</td><td>24°47'20.05"</td><td>76°43'34.43"</td></tr>
<tr><td>10</td><td>24°47'17.07"</td><td>76°43'58.42"</td></tr>
<tr><td>11</td><td>24°47'2.40"</td><td>76°44'42.01"</td></tr>
<tr><td>12</td><td>24°45'43.52"</td><td>76°44'29.90"</td></tr>
</table>
B. Ash Pond
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>24°49'6.50"N</td><td>76°42'31.91"E</td></tr>
<tr><td>2</td><td>24°49'15.24"N</td><td>76°43'5.05"E</td></tr>
<tr><td>3</td><td>24°48'51.15"N</td><td>76°43'19.67"E</td></tr>
<tr><td>4</td><td>24°48'47.00"N</td><td>76°42'43.15"E</td></tr>
<tr><td>5</td><td>24°48'55.27"N</td><td>76°42'44.09"E</td></tr>
</table>
</td><td></td></tr>
<tr><td>7.</td><td>Elevation of the project site</td><td>Average site elevation of TPP: 315 m AMSL<br>Maximum Elevation – 328 m AMSL<br>Minimum Elevation – 302 m AMSL</td><td></td></tr>
<tr><td>8.</td><td>Involvement of Forest land if any.</td><td>NA<br>No Forest land is involved.</td><td>NOC has been issued for no involvement of forest land by</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></td><td>DCF, Baran vide Letter no. 5356 dated 29.08.2025</td></tr>
<tr><td>9.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>Project Site:<br>Name: NA<br>Study area:
<table>
<tr><th>Water body</th><th>Distance (in km)</th><th>Direction</th></tr>
<tr><td>Pond, Baldevpura</td><td>0.18</td><td>NNW</td></tr>
<tr><td>Lhasi Nadi</td><td>0.20</td><td>SSE</td></tr>
<tr><td>Andheri Nadi</td><td>0.25</td><td>SSE</td></tr>
<tr><td>Pond 1, Kawai</td><td>0.80</td><td>S</td></tr>
<tr><td>Pond 2, Kawai</td><td>1.0</td><td>S</td></tr>
<tr><td>Parbati River</td><td>2.93</td><td>NE</td></tr>
<tr><td>Pond, Barlan</td><td>3.0</td><td>NW</td></tr>
<tr><td>Pond, Atru</td><td>4.0</td><td>NNW</td></tr>
<tr><td>Rhupsi Nala</td><td>5</td><td>W</td></tr>
<tr><td>Kukar Talav</td><td>6.9</td><td>WSW</td></tr>
<tr><td>Pond, Moosal Gujran</td><td>7.0</td><td>SW</td></tr>
<tr><td>Ghoghra Nala</td><td>7.5</td><td>W</td></tr>
<tr><td>Parbati Canal</td><td>7.7</td><td>NNW</td></tr>
</table>
**Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.*</td><td>HFL letter from WRD received, vide letter no Spl 01 Dated 19.08.2025 . The HFL of Andheri River is 304.85 meters.</td></tr>
<tr><td>10.</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><u>Study area</u><br>Name of the ESZ/ESA: NA<br>Status of Notification: NA<br>Distance of project from ESZ/ESA: NA<br>Authenticated map of ESZ projecting distance of ESZ from project site: NA<br>Status of NBWL approval: NA<br>List of Reserved and protected forests:
<table>
<tr><th>Reserve Forest (R.F), Protected Forest (P.F)</th><th>Distance (In km)</th><th>Direction</th></tr>
<tr><td>Kheldi Birdagaddiyan Block Forest</td><td>Adjoining</td><td>E</td></tr>
<tr><td>Kawai Kalan Block Forest</td><td>Adjoining</td><td>SSE</td></tr>
<tr><td>Dara Block Forest</td><td>Adjoining</td><td>W</td></tr>
<tr><td>Bir Daranimoda Block (R.F.)</td><td>Adjoining</td><td>N</td></tr>
<tr><td>Kawai Block Forest</td><td>0.12</td><td>W</td></tr>
<tr><td>Bir Sunda Umriwala Block (R.F.)</td><td>0.4</td><td>E</td></tr>
<tr><td>Baldevpura Block</td><td>0.55</td><td>N</td></tr>
<tr><td>Chhatarpura Block Forest</td><td>0.85</td><td>WNW</td></tr>
<tr><td>Bir Parlya Block Forest</td><td>3</td><td>WSW</td></tr>
<tr><td>Ratan Block Forest</td><td>3.1</td><td>NNW</td></tr>
<tr><td>Dilod Block (P.F.)</td><td>3.2</td><td>N</td></tr>
<tr><td>Narsinghpura (P.F.)</td><td>3.2</td><td>ENE</td></tr>
<tr><td>Ugrapura (P.F.)</td><td>6.3</td><td>WSW</td></tr>
<tr><td>Bir Govindpura Block</td><td>7.8</td><td>NNW</td></tr>
<tr><td>Sigri Block (P.F.)</td><td>7.9</td><td>N</td></tr>
</table>
No National Park, Sanctuary, Elephant/Tiger Reserve, or migratory routes/wildlife corridor exists within 10 km of the</td><td></td></tr>
</table>

| S. No. | Particulars | Details | Remarks |
|---|---|---|---|
| | | TPP. NOC from Forest Department, Baran has been obtained vide Letter no. कमांक – एफ()/FCA/उ व सं./2025-26/4222 dated 26.06.2025 state that there is no Wildlife Sanctuary / National Park, Elephant / Tiger Reserve Present within 10 km of project area. | |
| 11. | Archaeological sites monuments/ historical temples etc. | There are no Archeological Sites present within the study area. | |
| 12. | Facility envisaged in CRZ area (Only for coastal power plant) | **Name of the facility in CRZ area** – NA<br>**Recommendations of CZMA** – NA<br>**Status of CRZ clearance – NA** | |
| 13. | Involvement of Critically Polluted Area/Severely Polluted area as per 2018CEPI score | **Involvement of CPA/SPA:** - NA<br><br>**Proximity to CPA/SPA:** - NA | There is no CPA/SPA as per CPCB Index. |

**30.2.9**: The unit configuration and capacity of existing and proposed project is given as below:

| S. No. | Existing power plant configuration and capacity | Proposed power plant configuration and capacity | Total | Technology adopted |
|---|---|---|---|---|
| 1 | 1320 (2x660) MW | 3200 (4x800) MW | **4520 MW (1320+3200)** | Super Critical & Ultra Super Critical |

**30.2.10:** The details of the fuel (coal/LDO) requirement for the proposed project/ expansion cum proposed project along with its source and mode of transportation is given as below:

| Details | Fuel requirement (MTPA) | Source | Distance from site (Kms) | Mode of Transportation | Coal /LDO characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| Coal (Existing TPP) | 5.50 | FSA with NCL/ SECL | 700-800 km | Rail | Ash <40 (%)<br>Sulphur <0.40 (%)<br>Moisture-17 (%)<br>GCV - 3200-4300 | FSA |

| Details | Fuel requirement (MTPA) | Source | Distance from site (Kms) | Mode of Transportation | Coal /LDO characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| | | | | | Kcal/Kg | |
| Coal (Proposed TPP) | 12.9 (85% PLF) | Coal from Coal Mines of Jitpur, Rampia, Ujheni & e-auction for proposed project. | 700-1200 km | Rail | Ash <40 (%) Sulphur <0.50 (%) Moisture-17 (%) GCV - 3200-4300 Kcal/Kg | FSA and E-auction |
| LDO/HSD (Existing TPP) | 23000 KL/Annum | LDO/HSD from Local Market/Vendor | 50-100 km | Road | Low Sulphur (3-5% mass) | Local Vendor |
| LDO/HSD (Proposed TPP) | 30,000 Kl/Annum | LDO/HSD from Local Market/Vendor | 50-100 km | Road | Low Sulphur (3-5% mass) | Local Vendor |

**30.2.11: Water requirement:** Existing Water requirement is 93151 $m^3$/day, water requirement is obtained from Parwan River and permission for the same has been obtained from WRD vide letter no. CEWR/TA (W)/1482 dated 11.08.2009. The water requirement for the proposed project is estimated as 153425 $m^3$/day, which will be obtained from Parwan River. In this regard, Bureau of Investment Promotion Vide Lr. No. BIP UKS Energy/2024/364 Dated 16.11.2024 asked the Water Resources Department, Government of Rajasthan for allocation of 52 MCM water from Parwan Dam based on the application submitted by the proponent vide letter dated 03/06/2024. The final approval from Water Resources Department, Government of Rajasthan is awaited. The water will be transported to plant site through existing water pipeline The specific water consumption for the proposed power plant will be < 2.5 m3/MWhr.

**30.2.12: Existing power requirement:** Existing power requirement of 42 MW is obtained from self-generation, i.e, AUX consumption. The power requirement for the proposed project is estimated as 180 MW, and will be obtained from the existing TPP, i.e, AUX consumption.

**30.2.13: Baseline Environmental Studies:**

<table>
<tr><th>Period</th><th colspan="3">October' 2024 to December' 2024</th><th>Addition study (if any)</th></tr>
<tr><td>AAQ parameters at 11 Locations (min and max)</td><td colspan="3"><table><tr><th>Parameter</th><th>Min (µg/m³)</th><th>Max (µg/m³)</th></tr><tr><td>PM 10</td><td>42.5</td><td>69.5</td></tr><tr><td>PM 2.5</td><td>24.2</td><td>48.3</td></tr><tr><td>SO2</td><td>2.1</td><td>10.9</td></tr><tr><td>NOx</td><td>2.0</td><td>13.4</td></tr></table></td><td>--</td></tr>
</table>

<table>
<tr><th>Period</th><th>October' 2024 to December' 2024</th><th>Addition study (if any)</th></tr>
<tr><td></td><td><table><tr><td>CO</td><td>0.021</td><td>0.261</td></tr></table></td><td></td></tr>
<tr><td>Incremental GLC level</td><td>PM $_{10}$= Max. GLC: 0.663 µg/m$^3$ within project site in SSW direction<br>$SO_2$ = Max GLC: 13.8 µg/m$^3$ within project site in SSW direction<br>$NO_x$ = Max GLC: 4.08 µg/m$^3$ within project site in SSW direction<br>Note:<br>• High Efficiency Electrostatic Precipitator (ESP) is proposed to install to meet PM emission as per the norms.<br>• For $SO_2$, 275m high Chimney is proposed. MoEFCC Notification dated 11.07.2025 shall be followed.<br>• SCR/SOFA with low NOx burner to meet NOx emission as per the norms.</td><td>--</td></tr>
<tr><td>Ground water quality at 08 locations</td><td>pH: 7.65 to 7.76, total Hardness (as CaCO3): 408 mg/l – 477 mg/l; Chlorides: 120–170 mg/l; Fluoride: (0.16-0.24 mg/l; Heavy metals like Copper (as Cu) - BDL(DL-0.001) - BDL(DL-0.01), Lead (as Pb) - BDL(DL-0.005)- BDL(DL-0.01), Cadmium (as Cd) - BDL(DL-0.005), Chromium (as Cr) - BDL(DL-0.005), and Arsenic (as As)- BDL(DL-0.005).</td><td>--</td></tr>
<tr><td>Surface water quality at 07 locations</td><td>pH 6.78 to 7.11, Dissolved Oxygen: 5.2 to 6 mg/lit; BOD:2-3mg/L; COD:3-15 mg/l</td><td>--</td></tr>
<tr><td>Effluent generation details and its treatment</td><td>• Wastewater generation from TPP about 2160 KLD<br>• Mode of treatment & reuse – The wastewater will be treated in ETP of 2400 KLD (Neutralization & Equalization) and treated wastewater will be utilized within the plant to achieve Zero Liquid discharge.<br>• Domestic wastewater, 32 KLD will be treated through STP of 40 KLD having MBBR Technology.<br>• Mode of treatment & reuse - Treated water will be utilized for greenbelt and plantation purpose.</td><td>The project is based on Zero Liquid Discharge (ZLD).</td></tr>
<tr><td>Noise levels Leq (Day and Night) at 11 locations</td><td>The Leq values for daytime was observed to be 45.1 to 48.9 dB (A), while during night time 35.8 to 39.5 dB (A).</td><td>--</td></tr>
<tr><td>Traffic assessment study findings</td><td>• Traffic study has been conducted at SH 37 which is approximately 0.2 km from the plant site.<br>• Transportation of raw material (coal) will be done 100 % by Rail.<br>• Existing PCU is 96.94 PCU/hr on SH37 and Existing level of service (LOS) is A.
<table>
<tr><th>Road</th><th>V (Volume in PCU/hr)</th><th>C (Capacity in PCU/hr)</th><th>Existing V/C Ratio</th><th>LOS</th></tr>
<tr><td>SH-37</td><td>82.62</td><td>625</td><td>0.13</td><td>A</td></tr>
</table>
• PCU load after proposed project will be (82.62- Existing + 24.91 - Proposed) 107.5 PCU/hr and Level of Service (LOS) will be:
<table>
<tr><th>Road</th><th>V (Volume in</th><th>C (Capacity in</th><th>Proposed V/C Ratio</th><th>LOS</th></tr>
</table></td><td>--</td></tr>
</table>

<table>
<tr><th>Period</th><th>October' 2024 to December' 2024</th><th>Addition study (if any)</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>PCU/hr)</td><td>PCU/hr)</td><td></td><td></td></tr>
<tr><td>SH-37</td><td>107.5</td><td>625</td><td>0.17</td><td>A</td></tr>
</table>
* Note: Capacity as per IRC 64:1990 Guideline for capacity of roads. (Only for road transport)<br>
• Conclusion: The level of service will be "A- Excellent" after including additional traffic due to proposed project.
</td><td></td></tr>
<tr><td>Soil Quality at 10 Locations</td><td>pH range 7.41 to 7.65; Electrical conductivity (EC); 190 to 240 mhos/cm; Calcium: 88 to 195 mg/kg; Sodium:80 to 119 mg/kg; potassium: 160 to 210 kg/Ha; Total Kjehdahl Nitrogen: 10.4 to 12.6 kg/Ha mg/kg; Phosphorous: 10.8 to 14.8 kg/Ha; Cation Exchange Capacity (CEC): 3.9 to 6.4 meg/100gm; Magnesium: 38 to 48 mg/kg; Organic Matter: 0.73% to 0.94 %</td><td>--</td></tr>
<tr><td>Flora and fauna</td><td>09 Schedule I Species observed in the buffer zone of study area during field survey. Out of 09 Schedule I Species, 07 are mammals, 01 are avifauna and 01 herpeto-fauna.</td><td>The List of Flora & Fauna is duly certified by DCF, Baran letter No 4221 dated 26.06.2025 .<br>Wildlife Conservation Plan has been prepared and submitted for further approval from Forest office.</td></tr>
<tr><td>Hydrogeology study</td><td>The action plan to address the Recommendation of the Hydrogeology report and Watershed management plan are as below:
<table>
<tr><th>S. No</th><th>NIT Recommendations</th><th>Action Plan</th></tr>
<tr><td>1.</td><td>Since, the groundwater sample from Dilod (WS-24) shows a TDS level of 998 ppm, which exceeds the acceptable limit but is well below the permissible limit as per IS 10500:2012, it is recommended to ensure some preliminary treatment in order to avoid scaling, corrosion, and fouling in boilers, cooling towers, and other plant equipment, reducing efficiency of the plant's operations.</td><td>Water quality monitoring shall be done once a month through NABL accredited laboratory to monitor TDS Level.</td></tr>
</table>
</td><td>Consultant details:<br>The hydrogeology study report has been prepared by M/s. Akshar Geo Services Pvt. Ltd & Vetted by NIT Delhi.</td></tr>
</table>

<table>
<tr><th>Period</th><th colspan="3">October' 2024 to December' 2024</th><th>Addition study (if any)</th></tr>
<tr><td></td><td colspan="3"><table>
<tr><td>2.</td><td>As the levels of total hardness as CaCO3 exceeds the permissible limit in Neemoda (WS-1) sample, it is essential to implement effective water treatment to protect plant equipment and maintain operational efficiency, potential remediation efforts can be suggested in the report to ensure that the plant has a scheduled descaling and maintenance plan for equipment where scaling is a concern.</td><td>Water quality monitoring shall be done once a month engaging NABL accredited laboratory to track hardness as CaCO3 content and corrective/preventive actions will be taken based on findings in the report.</td></tr>
<tr><td>3.</td><td>While the maximum calcium level at Neemoda (WS-1) is within the permissible limit of 200 ppm as per IS 10500:2012, it exceeds the acceptable limit of 75 ppm, which may lead to encrustation and scaling in water supply systems, causing blockages and reduced efficiency. Potential remedial measures can be suggested in report to control the calcium levels.</td><td>Regular monitoring of groundwater quality, particularly calcium concentration, will be conducted to track any trends or deterioration. Installation of suitable water softening systems, such as ion exchange units/RO, can be considered to reduce hardness at the source. Periodic maintenance and descaling of pipelines, storage systems, and water-handling equipment will be done.</td></tr>
</table></td><td></td></tr>
<tr><td>Impact study on bio-diversity and aquatic ecology</td><td colspan="3">Recommendations of study report:<ul><li>Habitat: Restore scrublands and forests; promote agroforestry and corridors; reduce harmful pesticides.</li><li>Awareness: Educate locals and schools; encourage wildlife monitoring and reporting.</li><li>Research: Survey populations; study ecology and breeding; monitor development impacts.</li><li>Infrastructure: Build wildlife crossings; enforce speed limits; restrict construction in habitat zones.</li><li>Veterinary: Set up rescue centres; train staff in wildlife care.</li><li>Budget: ₹135.02 Lakhs over 5 years.</li></ul></td><td>Indian Institute of Social Welfare and Business Management (University of Calcutta), Kolkata in 2024.</td></tr>
<tr><td>Risk Assessment Study</td><td colspan="3">Project specific risk assessment with respect to storage of LDO & Coal storage and other hazardous chemicals is included in Final EIA-EMP Report. The appropriate preventive measures and necessary safeguards such as toxic and flammable gas detectors, alarm / interlock systems, breathing apparatus for working personnel, fire protection systems such as fire extinguishers, water curtain, fire water hydrants in place, the untoward consequences and the major risk due to the same could be eradicated</td><td>Gaurang Environmental Solutions Pvt. Ltd.</td></tr>
<tr><td>Marine</td><td colspan="3">Not Applicable</td><td>--</td></tr>
</table>

| Period | October' 2024 to December' 2024 | Addition study (if any) |
|---|---|---|
| Impact Assessment Study (Only for coastal based TPPs) | | |

**30.2.14: Solid and hazardous waste management**: The details of solid and hazardous waste generation along with its mode of treatment/disposal is furnished as below:

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment | Disposal | Remarks |
|---|---|---|---|---|---|---|
| 1 | Municipal Solid Waste | Plant Canteen | 114 | Collected; segregated using color coded waste bin, Organic waste converters (OWC) | Inorganic will be disposed via local municipal authorized vendor & Organic/ Biodegradable waste by OWC. | - |
| 2 | E-waste | IT & Telecom Equipment | 3.5 | Collected; segregated | Registered Recycler vendor | |
| 3 | Battery waste from UPS | Automotive & Industrial | 7 | Collected; segregated | Authorized Vendor | |
| 4 | Bio medical waste | First aid center | 0.12 | Collected; segregated | Authorized vendor | |
| 5 | Hazardous Waste | Plant Operation | Used/Spent Oil – 90 TPA, Waste or residues Empty Barrels/ Containers/ Contaminated Liners – 15 TPA contaminated cotton – 5.0 TPA | - | Registered Recyclers/Pre-processors with SPCB & Authorized Recyclers | |

**30.2.15: Public Consultation**: The public hearing was conducted on 07.07.2025 at Project Site, Near Nimoda Anganwadi, Village Nimoda, Gram Panchayat Dara, Tehsil Atru, Baran.

| | |
|---|---|
| Details of advertisement given | 1. Times of India dated 05.06.2025<br>2. Dainik Bhaskar dated 05.06.2025<br>3. Rajasthan Patrika dated 05.06.2025 |
| Date of public consultation | Date: 07.07.2025, Monday, 11:00 AM |
| Venue | At Proposed Project Site, Near Nimoda Aanganwaadi, Village Nimoda, Gram Panchayat Dara, Tehsil Atru, Baran |

| | |
|---|---|
| Presiding Officer | 1. Sri Om Prakash Chandelia, Sub Divisional Magistrate, Baran<br>2. Sri Anurag Yadav, Regional Officer, Rajasthan Pollution Control Board, Jhalawar |
| Major issues raised | Employment to Local People, Community Rural Infrastructure Development, Dust generation issue, Education, Community Health & infrastructure, Job to locals |
| No. of people attended | Attended: About.800 (Signed in RSPCB attendance sheet– About 220 Nos.) |

**Action plan as per MoEF&CC O.M. dated 30/09/2020**

| S. No | Physical activity and action plan | | Year of implementation (Budget in Crores) | | | | | Recuring Budget (Rs. in Crores) through CSR | Total Budget (Rs. in Crores) |
|---|---|---|---|---|---|---|---|---|---|
| | Name of the Activity | Physical Targets | 1st | 2nd | 3rd | 4th | 5th | 6th-10th | |
| A | Educational Initiatives | 5 years | **3.6** | **3.6** | **3.6** | **3.6** | **3.6** | **2.15** | 20.15 |
| B | Community Health Initiatives | 5 Years | **2.7** | **2.7** | **2.7** | **3.2** | **3.2** | **2.45** | 16.95 |
| C | Sustainable Livelihood and Women Empowerment | 5 Years | **1.30** | **1.30** | **1.30** | **1.30** | **1.30** | **1.70** | 8.20 |
| D | Community Rural Infrastructure Development | 5 Years | **3.81** | **3.81** | **3.81** | **3.81** | **3.81** | **3.45** | 22.5 |
| E | Sports & Culture Development | 5 Years | **0.5** | **0.5** | **0.5** | **0.5** | **0.5** | **1.0** | 3.5 |
| F | Tree plantation in Govt. School and Community Health Centre | 5 Years | **0.64** | **0.64** | **0.64** | **0.64** | **0.64** | **1.0** | 4.2 |
| Total | | | 12.55 | 12.55 | 12.55 | 13.05 | 13.05 | 11.75 | 75.5 |

**Note**- *The detailed course of action for proposed activities with physical targets and budget based on public hearing is given in Chapter -7, section no. 7.2.3 of EIA & EMP report.*

**30.2.16: Project cost**: Existing capital cost of project was Rs. 8264.59 Crore. The capital cost of the proposed project is Rs. 36,600 Crores and the capital cost for environmental protection measures is proposed as Rs. 2608 Crores (Excluding cost towards addressal of Public Consultation). The annual recurring cost towards the environmental protection measures is proposed as Rs. 39.69 Crores (Excluding cost towards addressal of Public Consultation). The employment generation from the proposed project (Construction Phase) is 350 (Permanent) and 8,000 (Contractual) and during Operational phase; (300 – Permanent & 1500 Contractual). The details of cost for environmental protection measures are as follows:

| S. No. | Item Description | Existing (Rs. In Crore) | | Proposed (Rs. In Crore) | |
|---|---|---|---|---|---|
| | | Cost (Rs. in Crores) | Recurring Cost (Rs. in Crores) | Cost (Rs. in Crores) | Recurring Cost (Rs. in Crores) |
| 1 | Air Pollution Control | | | 1528 | 25 |

| | | | | | |
|---|---|---|---|---|---|
| 2 | Noise Control | 612.1 | 22.23 | 8 | 2 |
| 3 | Water Pollution Control | | | 493 | 0.49 |
| 4 | Ash Management | | | 510 | 10 |
| 5 | Environmental Monitoring & Management | | 0.30 | 23 | 0.2 |
| 6 | Green Belt Development | | 1.29 | 24 | 1 |
| 7 | Others (Rainwater Harvesting & Solar) | | - | 22 | 1 |
| | **Total (Crores)** | **612.1** | **23.66** | **2608** | **39.69** |
| 8 | Addressal of Public Consultation | | | **75.5 (CER budget for 05 years)** | |

**30.2.17: Green belt development**: Existing green belt has been developed in 120 ha area which is about 34 % of the total project area of 350 ha with total sapling of 1,41,240 Trees. The proposed greenbelt will be developed in 169.44 Ha which is about 36% of the total proposed project area of 470.7 Ha with a total proposed sapling of 4,23,600 nos. Hence, total area under green belt development will be 289.44 Ha (35.2 % of 820.7 Ha). A 20 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 2 yers 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 4,23,600 proposed saplings will be planted and nurtured in 169.44 hectares in 5 years.

**30.2.18: Ash management for last three years (Only for expansion cases)**

| Year | Quantity generated (MTPA) | Quantity utilized (MTPA) | % of utilization | Balance quantity (MTPA) | No. of storage silos with capacity |
|---|---|---|---|---|---|
| FY 2022-23 | 1.36 | 1.38 | 101.47 | … | **Existing (3x2200 MT)** |
| FY 2023-24 | 1.42 | 1.29 | 91.13 | 0.13 | |
| FY 2024-25 | 1.41 | 1.41 | 100.00 | … | |

**MTPA: Million Ton Per Annum*

**A. Fly ash Details for last three years: 3.12 MT** (Fly Ash Utilization details as below)

| S.No. | Activity (as applicable) | Quantity | Percentage | Remarks (Prior approval of SPCB details to be mentioned) |
|---|---|---|---|---|
| 1 | Fly ash based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels) | 0.0017 | 0.06 | |
| 2 | Cement manufacturing | 2.8 | 90.54 % | |
| | Filling up of low lying area | 0.29 | 9.41 | |
| 3 | Use in overburden dumps | 0.42 | 0.43% | |
| | **Total** | **3.12** | **100%** | |

**B. Bottom ash details for last three years:** 0.97 MTPA

| S.No. | Activity (as applicable) | Quantity | Percentage | Remarks (Prior approval of SPCB details to be mentioned) |
|---|---|---|---|---|
| 1 | Fly ash based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels) | 0.75 | 77.23% | |
| 2 | Construction of roads, road and fly over embankment | 0.004 | 0.41% | |
| | Filling up of low lying area | 0.22 | 22.35 % | |
| | **Total** | 0.97 | ~ 100**%** | |

**C. Legacy ash details:** There is no legacy ash

**D. Ash Pond details**: Stage I (existing ash pond)

| S.No. | Details of Ash pond | Ash pond 1 | Ash pond 2 | Ash pond 3 | Total |
|---|---|---|---|---|---|
| 1. | Status of ash pond (Active/Exhausted (yet to be reclaimed)/ Reclaimed) | Active | -- | --- | Active |
| 2. | Area (Ha) | 60 | -- | --- | 60 |
| 3. | Dyke height (m) | 7 | -- | --- | 7 |
| 4. | Volume ($m^3$) | 4249350 | -- | --- | 4249350 |
| 5. | Quantity of ash disposed (Million Metric Tons) as on 31st March 2025. | 0.256104 | -- | --- | 0.256104 |
| 6. | Available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons) | 93.97% 3993246 MT | -- | --- | 93.97% 3993246 MT |
| 7. | Expected life of ash pond (number of years and months) | 20 Years | -- | --- | 20 Years |
| 8. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HDPE | -- | --- | HDPE |
| 9. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | LCSD | -- | --- | LCSD |
| 10. | Ratio of ash: water in slurry mix (1: _____): | 1:5 | -- | --- | 1:5 |
| 11. | Ash water recycling system (AWRS) installed and functioning : Yes or No | Yes | -- | --- | Yes |
| 12. | Quantity of wastewater from ash pond discharged into land or water body ($m^3$) | 0 | -- | --- | 0 |

| S.No. | Details of Ash pond | Ash pond 1 | Ash pond 2 | Ash pond 3 | Total |
|---|---|---|---|---|---|
| 13. | Last date when the dyke stability study was conducted and name of the organization who conducted the study: | -- | -- | --- | -- |
| 14. | Last date when the audit was conducted and name of the organization who conducted the audit: | October'24 NIT Delhi | -- | --- | October'24 NIT Delhi |

**E. Proposed ash utilization plan for expansion project**

| Details | Existing generation (Phase-1) (MTPA) | Proposed generation (Phase-II) (MTPA) | Total | Utilization (MTPA) | % of utilization | Balance quantity (MTPA) | No. of storage silos with capacity |
|---|---|---|---|---|---|---|---|
| **Ash** (Fly & Bottom) | 1.65 | 5.16 | 6.81 | 6.81 | 100 | 0 | Existing (3x2200 MT) Proposed (5x2500 MT) |

** MTPA: Million Ton Per Annum*

**Ash pond details**: If existing ash pond is to be utilized details may be mentioned. **No**

**(Proposed Ash Pod Details)**

| S. No. | Details of Ash pond | Ash pond |
|---|---|---|
| 1. | Area (Ha) | 57.06 |
| 2. | Dyke height (m) | 15 |
| 3. | Volume ($m^3$) | 85.6 Lakh m3 |
| 4. | Quantity of ash to be disposed (Metric Tons) | 94.0 Lakh MT |
| 5. | Expected life of ash pond (number of years and months) | 20 Years |
| 6. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HDPE |
| 7. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | HCSD/MCSD |
| 8. | Ratio of ash: water in slurry mix (1:_____): | 65:35 |
| 9. | Ash water recycling system (AWRS): Yes or No | Yes |
| 10. | Quantity of waste water from ash pond to be discharged into land or water body (m3) | 0 |
| 11. | Details regarding dyke stability study and name of the organization who conducted the study: | NA |

**30.2.19: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration**: There are Nine (09) court cases related to Land and other arbitrations. However, there are no court cases pertaining to the Environment & Forest. There are no Show Cause Notices pertaining to Environment & Forest. There is no

any violation case pertaining to the project wrt the Environment Protection Act, 1986; Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and The Wildlife (Protection) Act, 1972.

**30.2.20: Compliance to the observations of sub-committee site visit report** (Only in case of site visit by the sub-committee)

**Date of site visit**: 6th January'2025 – 7th January'2025**.** Point wise action plan for compliance of Sub-Committee recommendations are as below**:**

| Sl. No. | Observations by Sub-Committee | Compliance Status |
|---|---|---|
| 1 | Implementation of phase wise plan for the green belt development all along the internal roads, residential colony and gap area. | Green belt being developed all along the internal roads, residential colony. Plantation in identified gap areas shall be developed as per the recommendations. Phase wise plan for green belt development is prepared and submitted along with EC Application. |
| 2 | Ensure proper maintenance of ash pond/dyke, as per the guidelines issued by the CPCB/CEA. | Proper maintenance of the ash pond/dyke is being ensured in compliance with the guidelines issued by CPCB/CEA. Regular inspections and maintenance activities are conducted to ensure the structural integrity and environmental safety of the ash pond/dyke. |
| 3 | Construction of bund and proper fencing, sign boards and plantations all around the boundary of ash ponds. | Agreed and compliance assured.<br>Bund, proper fencing and signage ensured at ash Pond.<br>Plantation along the ash dyke has been done and further gap filling shall be done to enhance the plantation density. |
| 4 | Provision of Wheel Washing System at the entry and exit to the plant and Ash Pond. | Wheel cleaning and bulker washing facility is available in ash silo area. |
| 5 | Regular monitoring system to check groundwater quality in surrounding areas and also at ash ponds. | Regular monitoring of groundwater quality in surrounding villages and around ash pond is being conducted by NABL accredited third party testing laboratory M/s IRCLASS Systems and Solutions Pvt. Ltd. Test report also being submitted to MoEFCC along with Six Monthly EC Compliance report. |
| 6 | Approaching road to Ash pond shall be made concrete and regular spraying of water through fog canons/fixed sprinkler to check re-suspension of dust during transportation. | Approach road for the ash pond is already pucca and few patches are stone-pitched which will be made pucca. Regular water sprinkling is being done through mobile water tankers to prevent re-suspension of dust during transportation. |

| Sl. No. | Observations by Sub-Committee | Compliance Status |
|---|---|---|
| 7 | Adequate environmental safety measures must be planned for the health and safety of the school children and villagers located in Buffer Zone. | Adequate environmental safety measures have already been considered and taken care with respect to the Existing TPP and continuous efforts to strengthen the safety measures along with Phase II Construction and Operation. |
| 8 | As per the request of staff of Govt. Adarsh Sr. Secondary School, Dara, two classrooms and girl's toilet are required under CSR activity. | We have already considered in the budget provision to provide classroom and girl's toilet with basic facilities and regular water supply is already started. |
| 9 | CAAQMS and CEMS to be connected to the server of SPCB and CPCB. | CAAQMS and CEMS are connected to the server of SPCB and CPCB. |
| 10 | The lean slurry disposal of ash and overflowing of ash pond was observed. The PP should submit the action plan for improvement in concentrated slurry disposal system and utilization of legacy ash. | Ash dyke bund strengthening has been done to prevent overflow and enhance the structural integrity of the dyke. Our efforts are to utilize maximum dry ash to reduce water consumption in slurry disposal system.<br>The dyke is operational and there is no legacy ash, and the ash is stored about 2.56 LMT same will be disposed off within 3 years. |
| 11 | The EIA report shall cover the aspect of Intake well and water supply pipeline. | Intake well and water supply pipeline has been addressed in Chapter 4 of EIA report. |
| 12 | The action plan for carbon sequestration be submitted for proposed 4 x 800 MW plan. | 423600 nos. of saplings are proposed to be planted in 5 years which shall have $CO_2$ sequestration potential of 23418.95 ton/year. Action plan for plantation and carbon sequestration is enclosed. |

**30.1.21: Written submissions:** Project proponent submitted the following written submission during the meeting:

| S. No. | Additional Information Sought | Pointwise Reply/clarification |
|---|---|---|
| 1. | PP shall re-visit and submit revised KML file. | The total land 820.7 ha is already under possession with TPP, and boundary wall is already constructed. The 820.7 ha land area has been verified and confirmed by the DFO office and local administration. The updated KML and Land confirmation letters (vide lr. No. Sr. F/ FCA/ उवस/2024-25/ 5356 dated 29/08/2025) is submitted. |
| 2. | PP shall submit the copy of water permission for the project. | Bureau of Investment Promotion Vide Lr. No. BIP UKS Energy/2024/364 Dated 16.11.2024 asked the Water Resources Department, Government of Rajasthan for allocation of 52 MCM water from Parwan Dam based on the application submitted by the proponent vide letter dated 03/06/2024. The final approval from |

| S. No. | Additional Information Sought | Pointwise Reply/clarification |
|---|---|---|
| | | Water Resources Department, Government of Rajasthan is awaited. |
| 3. | PP shall submit the letters & undertaking regarding withdrawal application of the forest proposal. | Adani Power Limited, Kawai undertakes and confirm that we have already submitted request letter for withdrawal of the Forest Proposal for diversion of 1.758 Ha (1.8414 Ha) land vide proposal no. FP/RJ/OTHERS/467838/2024 to Divisional Forest Officer (DFO), Baran and the Principal Chief Conservator of Forests (PCCF), Jaipur. Earlier coal conveyor belt facility was envisaged however, after detailed engineering and feasibility study, the management has decided to transport the coal by Rail up to Phase-II Project site. The letter regarding withdrawal of forest proposal have been submitted to DFO, Baran &PCCF, Jaipur office. The undertaking and acknowledgment copy is submitted. |
| 4. | PP shall submit communication from railways for development of railway infrastructure facility for the expansion project. | Adani Power Limited, Kawai undertakes and confirm that we have already submitted request letter for withdrawal of the Forest Proposal for diversion of 1.758 Ha (1.8414 Ha) land vide proposal no. FP/RJ/OTHERS/467838/2024 to Divisional Forest Officer (DFO), Baran and the Principal Chief Conservator of Forests (PCCF), Jaipur. Earlier coal conveyor belt facility was envisaged however, after detailed engineering and feasibility study, the management has decided to transport the coal by Rail up to Phase-II Project site. The in-principle approval received for development of proposed railway infrastructure facility. The copy is submitted. |
| 5. | Pp shall submit revised Brief Information format. | The updated brief information is submitted. |
| 6. | PP shall submit the measures adopted for water optimization for proposed TPP. | Water requirement has been optimized to < 2.5 m3/MWh which is well within the 3.0 m3/MWh stipulated by MoEF&CC prescribed standard. Details of water optimization measures for proposed TPP are submitted. |
| 7. | PP shall submit the recent photographs of plantation done during Monsoon period. | Photographs of Plantation during Monsoon are submitted. |
| 8. | PP shall update the statuts regarding wildlife Conservation Plan | A detailed study of Wildlife Conservation Plan for existing TPP (2X660 MW) has already conducted (Document no. EES/AG/001/259-Biological study) by consultant in consultation with forest department & conservation plan already submitted to Chief Wildlife Warden, Jaipur and DFO Baran for approval. We are regularly follow up with the DFO and PCCF Office regarding approval and WLCP payment (Demand Note).<br>The Wildlife Conservation and Management Plan (WLCP) for phase II (4X800 MW) is prepared by reputed gov. institute and submitted to DFO Office for further approval and will be implemented as per directions/recommendations received from Forest Office. Acknowledgement copy is submitted. |

| S. No. | Additional Information Sought | Pointwise Reply/clarification |
|---|---|---|
| 9. | Installation of 2.5 MW Solar Power. | We undertake and confirm that Solar power of 2.5 MW will be installed in the project site/available land in the district through CER/CSR. |

**Observations and deliberation of the EAC**

**30.2.22:** The Committee observed and noted the following:

i. The instant proposal is for expansion of Kawai Thermal Power Plant under Phase–II by adding 3200 (4x800) MW Ultra Super Critical Thermal Power Plant to Existing 1320 (2x660) MW by M/s. Adani Power Limited located at Village Kawai, Tehsil Atru, District Baran, Rajasthan.

ii. The existing project was accorded Environmental clearance vide letter dated 04.05.2011 from MoEF&CC. Subsequently, EC amendment was granted on 13.03.2014 and later EC was transferred to Adani Power Limited (APL, Kawai) from M/s Adani Power Rajasthan Ltd on 24.04.2023. Consent to Operate (CTO) for the existing unit 1320 (2x660) MW was accorded by Rajasthan State Pollution Control Board (RSPCB) vide letter dated 20.02.2024. The validity of CTO is up to 28.02.2029.

iii. Both units (2 x 660 MW) have been commissioned and are under commercial operation.

iv. 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.

v. There are no National Park, Sanctuary, Elephant/Tiger Reserve, or migratory routes/wildlife corridor exists within 10 km of the TPP. NOC from Forest Department, Baran has been obtained vide Letter dated 26.06.2025 stating that there is no Wildlife Sanctuary / National Park, Elephant / Tiger Reserve Present within 10 km of project area..

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

vii. The Status of compliance of earlier EC (2x660 MW) was obtained from Regional Office, MoEF&CC Jaipur, vide letter dated 6th June ’2025 in the name of M/s. Adani Power Limited. The Action taken report regarding the partially/non-complied conditions was submitted to Regional Office, MoEF&CC, Jaipur vide letter no. APL/TPP/Kawai/EC/MoEFCC/342/25 dated 25.08.2025.

viii. As per the categorization list of CPCB dated 23/06/2022, the existing units (2x660 MW) falls under Category C. The proposed project does not fall within any CPA nor in any non-attainment cities as per MoEF &CC notification G.S.R. 465(E) dated 11/07/2025. Hence, it is also classified as C-Category project with respect to FGD installation. Installation of two chimneys of 275m height is envisaged for the proposed expansion (Stage-II) project in compliance to the notification GSR 742(E) dated 30.08.1990.

ix. ToR for the proposed expansion project was granted vide letter dated 29.07.2024. The public hearing was conducted on 07.07.2025 at Project Site, Near Nimoda Anganwadi,

Village Nimoda, Gram Panchayat Dara, Tehsil Atru, Baran.

x. Total land required for the project is 820.7 ha (Existing: 350 ha + Proposed: 470.7ha), which is already under possession with M/s Adani Power Limited. In addition to this, proponent envisaged a coal conveyor belt in an area of 1.758 Ha of forest land for coal transportation for which FC Proposal was submitted vide proposal No. FP/RJ/OTHERS/467838/2024. However, during the meeting, proponent informed that they are withdrawing the Forest Proposal for diversion of 1.758 Ha land. Further, coal conveyor belt facility has been dropped and decided to transport the coal by Rail up to Phase-II Project site. EAC taken cognizance of the same.

xi. There is no involvement of forest land in the proposed project, and an NOC letter has been issued by DCF, Baran vide letter dated 29.08.2025.

xii. Total 9 Schedule I Species (07 mammals, 01 avifauna and 01 herpeto-fauna) are reported in buffer zone of study area during field survey. The List of Flora & Fauna is duly certified by DCF, Baran vide letter dated 26.06.2025. Wildlife Conservation Plan has been prepared and submitted for further approval from the Forest Department.

xiii. Andheri River is located at 0.25 km from the project boundary. HFL letter from WRD received, vide letter Dated 19.08.2025. The HFL of Andheri River is 304.85 meters. The project site is located at substantial higher elevation compared to the HFL Andheri River (315 m AMSL).

xiv. The water requirement for the proposed project is estimated as 153425 m3/day, which will be obtained from Parwan River. In this regard, Bureau of Investment Promotion Vide Lr. No. BIP UKS Energy/2024/364 Dated 16.11.2024 asked the Water Resources Department, Government of Rajasthan for allocation of 52 MCM water from Parwan Dam based on the application submitted by the proponent vide letter dated 03/06/2024. The final approval from Water Resources Department, Government of Rajasthan is awaited.

xv. Power requirement of 42 MW will be obtained from self-generation, i.e, AUX consumption. The power requirement for the proposed project is estimated as 180 MW, and will be obtained from the existing TPP, i.e, AUX consumption.

xvi. Zero Liquid Discharge system will be adopted.

xvii. Transportation of raw material coal will be done 100% by rail. There will be no road transportation of coal for proposed project. However, LDO/HSD shall be transported by Road.

xviii. Existing green belt has been developed in 120 ha area which is about 34 % of the total project area of 350 ha with total sapling of 1,41,240 Trees. The proposed greenbelt will be developed in 169.44 Ha which is about 36% of the total proposed project area of 470.7 Ha with a total proposed sapling of 4,23,600 nos. A 20 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 2 years 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 4,23,600 proposed saplings will be planted and nurtured in 169.44 hectares in 5 years.

xix. The Ash will be collected in dry form in silos for further utilization/transportation through pipelines. 100% Ash will be utilized as per Ash Notification dated 31/12/2021. The committee suggest PP to implement the HCSD system in current and in further expansion project.

xx. The existing ash dyke situated in an area of 60 Ha. New ash dyke is envisaged in an area of 57.06 Ha for the proposed expansion.

xxi. The issues raised during Public hearing are Employment to Local People, Community Rural Infrastructure Development, Dust generation issue, Education, Community Health & infrastructure, Job to locals etc. Proponent has earmarked an amount of Rs. 75.5 crores to address the said concerns.

xxii. The capital cost of the proposed project is Rs. 36,600 Crores and the capital cost for environmental protection measures is proposed as Rs. 2608 Crores (Excluding cost towards addressal of Public Consultation). The annual recurring cost towards the environmental protection measures is proposed as Rs. 39.69 Crores. The employment generation from the proposed project (Construction Phase) is 350 (Permanent) and 8,000 (Contractual) and during Operational phase; (300 – Permanent & 1500 Contractual).

xxiii. The Committee deliberated on the baseline data and incremental GLC due to the proposed project. The committee noted that the proponent is providing Electrostatic Precipitator (ESP), SCR/SOFA with Low Nox Burner, Dust Extraction & Suppression System to control the emission of Particulate matter and NOx and also stack with a height of 275 m will be provided to control & regulate the air emission from the proposed project.

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

xxv. The committee noted that with respect to water pollution control, domestic wastewater will be treated in Sewage treatment plant and treated sewage water shall be reused. Effluent will be treated in ETP. There will be no effluent discharge from the premises, hence the ZLD will be maintained.

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

xxvii. There are Nine (09) court cases related to Land and other arbitrations. However, there are no court cases pertaining to the Environment & Forest. There are no Show Cause Notices pertaining to Environment & Forest. There is no any violation case pertaining to the project w.r.t. the Environment Protection Act, 1986; Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 and The Wildlife (Protection) Act, 1972.

xxviii. EAC suggested to quantify the Carbon emission due to proposed TPP and allied carbon sequestration/ carbon offsetting plan.

xxix. EAC observed that Railway line and National Highway is passing near by the project site. PP needs to take permission/NOC from the concerned Railway department and Highway authority.

xxx. EAC suggested for installation of 3 MW Solar power plant for energy conservation measures.

xxxi. The EAC also deliberated on the written submission of the project proponent and found it satisfactory. Further, point-wise compliance status of the recommendations made by the Sub-Committee during the site visit was also deliberated by the committee and found it in line with.

xxxii. 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:**

**30.2.23:** In view of the foregoing and after detailed deliberations, the committee ***recommended*** the instant proposal for grant of Environment Clearance under the provisions of EIA Notification, 2006 **subject to uploading of written submission** on PARIVESH Portal and stipulation of the following specific conditions and general conditions based on project specific requirements:

**A. Specific conditions**

**[A] Environmental Management**

1) Project proponent shall ensure that 100% utilization of ash generated from the proposed project in accordance with the ash utilization notification dated 31/12/2021 and its subsequent amendment. Area for the proposed ash dyke shall not exceed 57 Ha as committed.
2) Project proponent shall comply with the recommendations made in the biodiversity assessment report and Hydrogeology report in a time bound manner. Compliance status in this regard shall be submitted to the Regional Office of MoEF&CC along with the six monthly compliance report.
3) Project proponent shall comply with the recommendations made by the sub-committee during the site visit of the proposed project and compliance status in this regard shall be submitted to the Regional Office of MoEF&CC along with the six monthly compliance report.
4) The water requirement for proposed expansion (Phase-II) project is estimated as 153425 $m^3$/day and the same shall be met from Parwan River. The specific water consumption for proposed unit shall be less than 2.5 $m^3$/MWhr.
5) The entire coal requirement for proposed TPP shall be transported by rail network only and no road transportation is permitted.
6) 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.
7) Project proponent shall implement the protective measure proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs. 2608 crores 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.
8) 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.

9) Project proponent shall ensure that diesel operated vehicles will be switched over to E-Vehicles / CNG vehicles in a time bound manner, replace the passenger vehicles to E/ CNG vehicle in phased manner. Further, for local movement of officials, Contract of Vehicles deployment shall be awarded to Project affected people and all efforts for adopting heavy E-vehicles/ CNG Vehicles like Bulkers for ash transportation for short distance subject to availability of such E-vehicle and adequate charging infrastructure in the surrounding area shall be provided. PP shall submit the action taken report to concerned RO with amount spent, photographs (before & after), number of such non diesel vehicles deployed etc. in six monthly compliance report.

10) The Project Proponent shall provide stack of 275 meters height and shall abide by the provisions of the notification number G.S.R 465 (E) dated 11/07/2025 related to FGD.

11) Project proponent shall ensure that pipelines carrying the fly ash and effluent shall be inspected regularly for any leakages.

12) Effluent of 2160 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.

13) PP shall implement the concurrent plantation plan in a time bound manner. Total of 169.44 Ha area (36% of the total proposed project area of 470.7 Ha) will be developed as greenbelt. with a total proposed sapling of 4,23,600 nos. A 20 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 2 years 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 4,23,600 proposed saplings will be planted and nurtured in 169.44 hectares in 5 years. The budget earmarked for the green belt plantation including 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 geo-location 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.

14) 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 (sanitary napkin vending machines) and shall also develop green belt around the nearby schools. Further, PP shall organize quarterly awareness programs for school students to educate them on the significance and preservation of trees.

15) 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 a government account.

16) 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 be done regularly.

17) 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.

18) PP shall deploy vacuum based vehicle for everyday cleaning of the road in and around plant site at least for 5 KM.

19) Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.

20) 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.

21) Oil and grease recovered from the treatment plant should be disposed only through authorized recyclers.

22) 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

23) 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.

24) 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.

25) 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.

**[B] Socio-economic**

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. 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.

3. The budget proposed for PH is Rs. 75.5 crores to address the said concerns. 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.
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.

**[C] Miscellaneous**

1. An Environmental Cell headed by the Environment Manager 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.
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. All necessary clearance from the concerned Authority, as may be applicable should be obtained prior to commencement of project or activity.

**B. General conditions**

**A. Statutory compliance:**

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.
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.
3. 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.
4. The recommendation from Standing Committee of NBWL under the Wildlife (Protection) Act, 1972 should be obtained, if applicable.
5. No Objection Certificate from Ministry of Civil Aviation be obtained for installation of requisite chimney height and its siting criteria for height clearance.

**B. Ash content/ mode of transportation of coal:**

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.

**D. Air quality monitoring and Management:**

1. Project proponent shall abide by the provisions of the notification number G.S.R 465(E) dated 11/07/2025 related to $SO_2$ emission norms.
2. Low $NO_X$ Burners with Over Fire Air (OFA) system shall be installed to achieve $NO_X$ emission standard of 100 mg/$Nm^3$.
3. High efficiency Electrostatic Precipitators (ESPs) shall be installed in each unit to ensure that particulate matter (PM) emission to meet the stipulated standards of 30 mg/$Nm^3$.
4. Stack with a height of 275 meters shall be provided with continuous online monitoring instruments for $SO_2$, Nox and Particulate Matter as per extant rules.
5. Exit velocity of flue gases shall not be less than 20-25 m/s. Mercury emissions from stack shall also be monitored periodically.
6. Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as $PM_{10}$, $PM_{2.5}$, $SO_2$, $NO_X$ within the plant area at five locations. 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.
7. Adequate dust extraction/suppression system shall be installed in coal handling, ash handling areas and material transfer points to control fugitive emissions.
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.

**E. Noise pollution and its control measures:**

1. The Ambient Noise levels shall meet the standards prescribed as per the Noise Pollution (Regulation and Control) Rules, 2000.
2. Persons exposed to high noise generating equipment shall use Personal Protective Equipment (PPE) like earplugs/ear muffs, etc.
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.

**E. Human Health Environment:**

1. Bi-annual Health check-up of all the workers is to be conducted. The Occupational health 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.

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.

**F. Water quality monitoring and Management:**

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 $m^3$/MWhr.
2. In case of the water withdrawal from river, a minimum flow 15% of the average flow of 120 consecutive leanest days should be maintained for environmental flow whichever is higher, to be released during the lean season after water withdrawal for proposed power plant.
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.
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.
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. 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.
7. Wastewater generation of 2160 KLD from various sources (viz. cooling tower blow down, 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.
8. Sewage waste generation of 32 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).
9. Action plan by the TPPs located within 50 km of a municipality or any Urban Local Body (ULB) to use the treated sewage water produced by the municipality/Urban Local Body(ULB) to reduce fresh water consumption shall be submitted.

**G. Risk Mitigation and Disaster Management:**

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.
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%.

3. Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
4. Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
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.

**H. Green belt and Biodiversity conservation:**

1. Green belt shall be developed in an area of 35.26% of the total area of 820.7 Ha with indigenous native tree species in accordance with CPCB guidelines.
2. In-situ/ex-situ Conservation Plan for the conservation of flora and fauna should be prepared and implemented.
3. A 3 tier plantation with saplings of native and fruit species of 2 meter height shall be done on both side of the roads within 3 years which will be used for the transportation of coal and fly ash.

**I. Waste management:**

1. Solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2016.
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.
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.
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 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.
5. Unutilized ash if any shall be disposed off in the ash pond in the form of High Concentration Slurry method.

**J. Monitoring of compliance:**

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.
2. Resettlement & Rehabilitation Plan as per the extant rules of Govt. of India and respective State Govt. shall be followed, if applicable.
3. Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report. Renewable Energy Purchase Obligation as set by MoP/State Government shall be met either by establishing renewable energy power plant (such as solar, wind, etc.) or by purchasing Renewable Energy Certificates.

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.
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 & PM2.5 in case 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.

**K. Corporate Environmental Responsibility (CER) activities:**

1. CER activities will be carried out as per Ministry's OM F.No.22- 65/2017- IA.III dated 30th September, 2020 and 22-65/2017- IA.III dated 25.02.2021 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.

**Agenda No 30.3**

**30.3** Expansion of existing 600 MW (2x300 MW) project by addition of 1320 MW (2x660 MW) Super Critical Coal Based Thermal Power Plant **by M/s. Korba Power Limited** located at Village Pathadi, **District Korba, Chhattisgarh – Amendment in Environmental Clearance – regarding.**

**[Proposal No. IA/CG/THE/550285/2025; F. No. J-13011/3/2009-IA. II(T)]**

**30.3.1:** M/s. Korba Power Limited has made an online application vide proposal no. IA/CG/THE/550285/2025 dated 04.09.2025 along with Form 4 seeking for amendment in Environmental Clearance accorded by the Ministry vide letter no. J-13011/3/2009-IA. II(T) dated 22.07.2025 under the provisions of the EIA Notification, 2006 for the project mentioned above.

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.3.2:** The existing project of 600 (2x300) MW (Phase I) was granted Environmental Clearance from Ministry vide letter no. J- 13012/21/2004- IA. I (T) dated 19.11.2004. Project has been implemented and is under operation. Subsequently, EC transfer was accorded in the name of M/s. KPL on 13.01.2025. Consent to Operate (CTO) has been obtained from Chhattisgarh Environment Conservation Board vide letter no. 443/TS/CECB/2024 Nava Raipur Atal Nagar, Raipur dated 15.04.2024 has validity till 31.05.2027 and CTO name change vide letter no. 582/RO/CECB/2025 dated: 15.04.2025.Thereafter, MoEF&CC has accorded another expansion EC under the provisions of EIA Notification, 2006 to M/s. Korba Power Limited on 22/07/2025 for 1320 (2x660) MW (Phase II) Thermal Power Plant located at Village Pathadi, District Korba, Chhattisgarh.

**30.3.3:** The Implementation status of the existing ECs:

| S. No. | Product | As per EC dated 19.11.2004, 13.01.2025 (EC transfer) & 22.07.2025 | As per CTO/CFO dated 15.04.2024 has valid till 31.05.2027 | Balance Quantity |
|---|---|---|---|---|
| . 1. | **Electricity Generation** | **1920 MW**<br>Phase I: 600 (2x300) MW<br>& Phase II: 1320 (2x660) MW | **600 MW**<br>(CTO received from CECB Raipur *vide* order no. 443/TS/CECB/2024 Nava Raipur Atal Nagar, Raipur dated 15.04.2024 has valid till 31.05.2027) | **1320 MW**<br>(2x660 MW)<br>**Is Under Construction.** |

**30.3.4:** The details of the condition for which amendment is sought and justification for the same is as follows:

| Conditions/ Points/ S.No. of EC | Details of Conditions as per Existing EC (22.07.2025) conditions | Amendment Sought | Justification for Amendment |
|---|---|---|---|
| Point no.11, S.no2. | **Facilities** / **Area for Unit 1 & 2 (In Ha.)** / **Area for Unit 3 & 4 (In Ha.)** / **Total Area (In Ha.)**<br>Main Plant / 114.94 / 137.81 / **252.75** | **Facilities** / **Phase- I (In Ha.)** / **Phase-II (In Ha.)** / **Area for future expansion (In Ha.)**<br>Main Plant / 71.12 / 65.00 / **127.04** | The Adani Power Limited, Engineering |

<table>
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<td></td>
<td>
<table>
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<tr><td>Water System</td><td>10.52</td><td>0.00</td><td>10.52</td></tr>
<tr><td>Switch Yard</td><td colspan="3">Included in Main plant area</td></tr>
<tr><td>Green belt</td><td>85.21</td><td>84.07</td><td>169.28</td></tr>
<tr><td>Roads</td><td colspan="3">Included in Main plant area</td></tr>
<tr><td>Township</td><td>9.31</td><td>0.00</td><td>09.31</td></tr>
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<tr><td>Railway Siding (inside Plant boundary)</td><td colspan="3">Included in Coal Handling System (Outside ROU)</td></tr>
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<tr><td>Roads</td><td colspan="2">Included in Main plant area</td><td></td></tr>
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<tr><td>Sub Total</td><td>226.37</td><td>152.17</td><td>127.04</td></tr>
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Note: -<br>
The total area is 505.58 Ha. will be unchanged.<br>
Total land of 505.58 ha is required for the project including 71.12 Ha for existing units 1 & 2 (Phase-I) & 65.00 Ha for unit 3 & 4 (Phase-II). The land is already under the possession of Korba Power Limited.
</td>
<td>and Management department conducted a Comprehensive Land Optimization Study and revisited the Layout of the Korba Thermal Power Plant. The Ash Dyke area has been revisited, the area allocated for FGD has been reduced, and ancillary facilities have been strategically optimized and proposed to use the existing common facilities for Phase I, II & III, thereby eliminating the need for additional infrastructure. The Land area has been optimized based on the Engineering revisit to accommodate Phase III within the</td>
</tr>
</table>

| Conditions/ Points/ S.No. of EC | Details of Conditions as per Existing EC (22.07.2025) conditions | Amendment Sought | Justification for Amendment |
|---|---|---|---|
| | | | existing land area.<br><br>Korba Power Limited has the total Land Area of 505.58 Ha. Considering the growing electricity demand in the Country, KPL is planning for future expansion of 2x800 MW under Phase III within the existing land through optimization and use of Common Facilities. |
| Point no. 26, S.no. X. | *"Total land of 505.58 ha is required for the project including 114.94 ha for existing units 1 & 2 and 137.81 ha for unit 3 & 4. The land is already under the possession of M/s Korba Power Limited. Out of total project area of 505.58 ha, an area of 169.28 Ha land is for green belt. Overall, the proposed expansion is within the plant premises area and no additional land acquisition is envisaged for the proposed expansion project"* | Total land of 505.58 ha is required for the project including 71.12 Ha for existing units 1 & 2 (Phase-I) & 65.00 Ha for unit 3 & 4 (Phase-II). The land is already under the possession of Korba Power Limited. Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area). Overall, the proposed expansion is within the plant premises area and no additional land acquisition is envisaged for the future expansion project. | Land area required for Future expansion within the existing plant premises /area of 505.58 Ha. |
| Point No. 20 | *"Green belt development: Existing green belt has been developed in 85.21 ha area which is about 33.13 % of* | Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II | Land area required for Future expansion |

<table>
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<tr><td></td><td>the total project area of 257.20 ha with total sapling of 2,48,000 nos. trees. The proposed greenbelt will be developed in 84.07 Ha which is about 33.84% of the total proposed project area of 505.58 Ha. Thus, total of 169.28 ha area (33.48 % of total project area) will be developed as greenbelt. A 10m 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 458175 saplings will be planted and nurtured in 169.28 hectares in 5 years. The following five-year action plan for proposed plantation and Green belt development is submitted by PP."</td><td>Area). A 10m 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 318200 saplings will be planted and nurtured in 127.28 hectares in 5 years. The following five-year action plan for proposed plantation and Greenbelt development is submitted by PP.
<table>
<tr><th rowspan="2">Year</th><th colspan="2">Plantation Area</th><th colspan="2">Cost of sapling with maintenance</th></tr>
<tr><th>Area (Ha.)</th><th>Plantation Target</th><th>Capital cost</th><th>Recuring cost/Annum</th></tr>
<tr><td>2025-26</td><td>8</td><td>20000</td><td rowspan="4">Proposed 3.75 Cr.</td><td rowspan="4">Maintenance Cost Rs. 1.05 Cr. (Rs. 100/Plant)</td></tr>
<tr><td>2026-27</td><td>10</td><td>25000</td></tr>
<tr><td>2027-28</td><td>12</td><td>30000</td></tr>
<tr><td>2028-29</td><td>12.07</td><td>30175</td></tr>
<tr><td>2029-30</td><td colspan="2">Maintenance and Casual replacement</td><td></td><td>Rs. 0.20 Cr</td></tr>
<tr><td>Total</td><td>42.07</td><td>105175</td><td>3.75 Crore</td><td>1.25 Crore</td></tr>
<tr><td colspan="5">Local Species will be preferred for plantation</td></tr>
</table></td><td>within the existing plant premises /area of 505.58 Ha.</td></tr>
<tr><td>Specific Condition No. 1.13</td><td>"PP shall implement the concurrent plantation plan in a time bound manner. Total of 169.28 ha area (33.5% of total plant area of 505.58 ha) will be developed as greenbelt. A 5 m - 50 m wide (min 25 m) greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green</td><td>PP shall implement the concurrent plantation plan in a time bound manner. Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area).<br>A 5 m - 50 m wide (min 25 m) greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB guidelines. PP</td><td>Green belt development : 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6</td></tr>
</table>

| Conditions/ Points/ S.No. of EC | Details of Conditions as per Existing EC (22.07.2025) conditions | Amendment Sought | Justification for Amendment |
|---|---|---|---|
| | *cover as per CPCB guidelines. PP shall also adopt Miyawaki plantation technique and plantation with minimum 2 m height of the saplings in upcoming monsoon season in an area of 4 Ha by planting 10,000 trees per hectare i.e. approx. 40,000 native tree saplings. The budget earmarked for the green belt plantation including 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."* | shall also adopt Miyawaki plantation technique and plantation with minimum 2 m height of the saplings in upcoming monsoon season in an area of 4 Ha by planting 10,000 trees per hectare i.e. approx. 40,000 native tree saplings. The budget earmarked for the green belt plantation including 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. | % of Phase I & II Area). |

**30.3.5: Justification for the Proposed EC amendment**:

Adani Power Limited, Engineering and Management department conducted a Comprehensive Land Optimization Study and revisited the Layout of the Korba Thermal Power Plant. The Ash Dyke area has been revisited, the area allocated for the Flue Gas Desulfurization (FGD) has been reduced, and ancillary facilities have been strategically optimized and proposed to use the existing common facilities for Phase I, II & III, thereby eliminating the need for additional infrastructure. The Land area has been optimized on the basis of the Engineering revisit to accommodate future expansion within the existing land area.

Korba Power Limited has the total Land Area of 505.58 Ha. Considering the growing electricity demand in the Country, KPL is planning for future expansion within the existing

land through optimization and use of Common Facilities. The details of which are listed below:

- Ash Dyke: The Ash Dyke area allocated for Phase I & II will be utilized for Future Expansion and no additional Ash Dyke is proposed considering 100% Ash Utilization.
- Water Reservoir: Water shall be sourced from the Existing Source and facilities. Hence No Additional Reservoir is proposed for future expansion.
- Railway Siding: The existing Railway line will be utilized, and tap-off will be taken from this line for the Coal Handling System (Wagon Tippler) for Future Expansion Project.
- Reduced Piping and Cabling Facilities and Optimization in Structural Design.
- Optimization in Basic Infrastructure Facilities: Basic Infrastructure facilities of Phase I & II such as Project Site Office, Administrative Building, Temporary workmen residential facility, Construction Power Systems, Hostels, Stores, Security System, Workshop, Health Center (Dispensary), Laydown Area, physical storage of spare parts and inventory, Roads & Drains are the Common Facilities for all phases.

**30.3.6: Summary of Court Cases:** There are no pending court cases with respect to environment related matters. However, there are 4 cases pending in different courts with respect to civil and labor laws related matter.

**Observations and deliberation of the EAC**

**30.3.7:** The Committee observed and noted the following:

i. Instant proposal is for seeking amendment in various conditions prescribed in the EC dated 22/07/2025 accorded for the project titled "Expansion of existing 600 MW (2x300 MW) project by addition of 1320 MW (2x660 MW) Super Critical Coal Based Thermal Power Plant by M/s. Korba Power Limited located at Village Pathadi, District Korba, Chhattisgarh" regarding land use of the existing and proposed expansion project.

ii. Due to the proposed change in the land use for the existing and proposed expansion project arising out of the Comprehensive Land Optimization Study, there is a reduction in green belt area from 169.28 ha to 127.28 ha. Further, proponent is conserving an area of 127.04 ha which is planned to be utilized for future expansion projects. However, total area remains the same i.e., 505.58 Ha.

iii. Committee deliberated on the justification provided by the proponent for the instant amendment proposal and found it satisfactory.

iv. 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 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:**

**30.3.8:** In view of the foregoing and after the detailed deliberations, the Committee ***recommended*** the instant proposal for grant of amendment in the EC dated 22/07/2025 as detailed below**.** All other terms and conditions prescribed in EC dated 22/07/2025 shall remain unchanged.

<table>
<tr><th>S. No.</th><th>Conditions/ Points/ S.No. of EC</th><th>Details of Conditions as per Existing EC (22.07.2025) conditions</th><th>Amendment Sought</th><th>Recommendations of the EAC</th></tr>
<tr>
<td>1.</td>
<td>Point no.11, S.no2.</td>
<td>
<table>
<tr><th>Facilities</th><th>Area for Unit 1 & 2 (In Ha.)</th><th>Area for Unit 3 & 4 (In Ha.)</th><th>Total Area (In Ha.)</th></tr>
<tr><td>Main Plant</td><td>114.94</td><td>137.81</td><td>252.75</td></tr>
<tr><td>Coal Handling System</td><td>7.01</td><td>7.40</td><td>14.41</td></tr>
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<tr><th>Facilities</th><th>Phase- I (In Ha.)</th><th>Phase-II (In Ha.)</th><th>Area for future expansion (In Ha.)</th></tr>
<tr><td>Main Plant</td><td>71.12</td><td>65.00</td><td rowspan="12">127.04</td></tr>
<tr><td>Coal Handling System</td><td>20.00</td><td>26.00</td></tr>
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| S. No. | Conditions/ Points/ S.No. of EC | Details of Conditions as per Existing EC (22.07.2025) conditions | Amendment Sought | Recommendations of the EAC |
|---|---|---|---|---|
| 2. | Point no. 26, S.no. X. | *"Total land of 505.58 ha is required for the project including 114.94 ha for existing units 1 & 2 and 137.81 ha for unit 3 & 4. The land is already under the possession of M/s Korba Power Limited. Out of total project area of 505.58 ha, an area of 169.28 Ha land is for green belt. Overall, the proposed expansion is within the plant premises area and no additional land acquisition is envisaged for the proposed expansion project"* | Total land of 505.58 ha is required for the project including 71.12 Ha for existing units 1 & 2 (Phase-I) & 65.00 Ha for unit 3 & 4 (Phase-II). The land is already under the possession of Korba Power Limited. Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area). Overall, the proposed expansion is within the plant premises area and no additional land acquisition is envisaged for the future expansion project. | **Agreed** |
| 3. | Point No. 20 | *"Green belt development: Existing green belt has been developed in 85.21 ha area which is about 33.13 % of the total project area of 257.20 ha with total sapling of 2,48,000 nos. trees. The proposed greenbelt will be developed in 84.07 Ha*<br>*which is about 33.84% of the total proposed project area of 505.58 Ha. Thus, total of 169.28 ha area (33.48 % of total project area) will be developed as greenbelt. A 10m 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 458175 saplings will be planted and nurtured in 169.28 hectares in 5 years. The following five-year action plan for proposed plantation and Green belt development is submitted by PP."* | Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area). A 5 m - 50 m wide (min 25 m) greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 3 years 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 318200 saplings will be planted and nurtured in 127.28 hectares in 5 years. The following five-year action plan for proposed plantation and Greenbelt development is submitted by PP. | **Agreed** |

<table>
<tr><th>S. No.</th><th>Conditions/ Points/ S.No. of EC</th><th>Details of Conditions as per Existing EC (22.07.2025) conditions</th><th>Amendment Sought</th><th>Recommendations of the EAC</th></tr>
<tr><td>4.</td><td>Specific Condition No. 1.13</td><td>“PP shall implement the concurrent plantation plan in a time bound manner. Total of 169.28 ha area (33.5% of total plant area of 505.58 ha) will be developed as greenbelt. A 5 m - 50 m wide (min 25 m) 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 m height of the saplings in upcoming monsoon season in an area of 4 Ha by planting 10,000 trees per hectare i.e. approx. 40,000 native tree saplings. The budget earmarked for the green belt plantation including 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.”</td><td>PP shall implement the concurrent plantation plan in a time bound manner. Green belt development: 85.21 Ha (Phase I) & 42.07 Ha (Phase II), Total 127.28 ha will be developed under greenbelt (about 33.6 % of Phase I & II Area).<br>A 5 m - 50 m wide (min 25 m) greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 3 years as greenbelt and green cover as per CPCB guidelines. PP shall also adopt Miyawaki plantation technique and plantation with minimum 2 m height of the saplings in upcoming monsoon season in an area of 4 Ha by planting 10,000 trees per hectare i.e. approx. 40,000 native tree saplings. The budget earmarked for the green belt plantation including 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.
<table>
<tr><th rowspan="2">Year</th><th colspan="2">Plantation Area</th><th colspan="2">Cost of sapling with maintenance</th></tr>
<tr><th>Area (Ha.)</th><th>Plantation Target</th><th>Capital cost</th><th>Recuring cost/Annum</th></tr>
<tr><td>2025-26</td><td>8</td><td>20000</td><td>Prop</td><td>Maint</td></tr>
</table>
</td><td>Agreed</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Conditions/ Points/ S.No. of EC</th><th>Details of Conditions as per Existing EC (22.07.2025) conditions</th><th>Amendment Sought</th><th>Recommendations of the EAC</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>2026-27</td><td>10</td><td>25000</td><td rowspan="3">osed 3.75 Cr.</td><td rowspan="3">enance Cost Rs. 1.05 Cr. (Rs. 100/Plant)</td></tr>
<tr><td>2027-28</td><td>12</td><td>30000</td></tr>
<tr><td>2028-29</td><td>12.07</td><td>30175</td></tr>
<tr><td>2029-30</td><td colspan="2">Maintenance and Casual replacement</td><td></td><td>Rs. 0.20 Cr</td></tr>
<tr><td>Total</td><td>42.07</td><td>105175</td><td>3.75 Crore</td><td>1.25 Crore</td></tr>
<tr><td colspan="5">Local Species will be preferred for plantation</td></tr>
</table>
</td><td></td></tr>
</table>

**<u>Agenda No 30.4</u>**

**30.4**: Proposed 2400 (3x800) MW Coal Based Ultra Super Critical Thermal Power Project by **M/s Adani Power Limited**, located at Sirmatpur & adjacent villages in Tehsil/block Pirpainti, **District Bhagalpur, Bihar - Prescribing of Terms of Reference (ToR) – reg.**

**[Proposal no. IA/BR/THE/550207/2025, F.No. J-13012/08/2025-IA.I(T)]**

**30.4.1**: M/s Adani Power Limited has made an application online vide proposal no. **IA/BR/THE/550207/2025** dated **05.09.2025** along with the application in prescribed format (CAF, Form – I Part A & B), copy of pre-feasibility report and proposed ToRs for undertaking detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at item no. *1(d)* Under Category **"A "** of the schedule of the EIA Notification, 2006 and appraised at Central Level.

**Name of the EIA consultant**: **M/s Gaurang Environmental Solutions Pvt. Ltd**. [NABET/EIA /23-26/RA 0338 dated 16.07.2024 valid up to 07.12.2026].

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.4.2:** The proposed greenfield project is for 2400 (3x800) MW Coal Based Ultra Super Critical Thermal Power project coming up at Sirmatpur & adjacent villages in Tehsil/block Pirpainti, District Bhagalpur, Bihar by M/s.Adani Power Limited.

**30.4.3: Environmental site settings**:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Total land</td><td>479 ha [Private: 400 ha; Govt 79 ha; Agriculture ---NA--- ha;]</td><td>Land use: Industrial (The land is allotted by BSPGCL, Govt. of Bihar)</td></tr>
<tr><td>2.</td><td>Land use break up</td><td><table>
<tr><th>Particular</th><th>Area (in Ha.)</th></tr>
<tr><td>Main Plant</td><td>67</td></tr>
<tr><td>Coal Handling System</td><td>57</td></tr>
<tr><td>Water System</td><td>75</td></tr>
<tr><td>Switch Yard</td><td>NIL*</td></tr>
<tr><td>Green belt</td><td>124</td></tr>
<tr><td>Roads</td><td>NIL*</td></tr>
<tr><td>Ash pond</td><td>46</td></tr>
<tr><td>Railway Siding</td><td>Outside plant boundary</td></tr>
<tr><td>Water supply pipeline (inside plant boundary)</td><td>NIL*</td></tr>
<tr><td>Ash transport pipeline</td><td>NIL*</td></tr>
<tr><td>Others:</td><td></td></tr>
<tr><td>Township</td><td>5</td></tr>
<tr><td>Land for Future Expansion</td><td>105</td></tr>
<tr><td>Total</td><td>479</td></tr>
</table>
* Included in Main Plant Area</td><td></td></tr>
<tr><td>3.</td><td>Land acquisition details as per MoEF&CC O.M.dated 7/10/2014 & 20/2/2025</td><td>The land is allotted to the proponent by Bihar State Power Generation Company Limited (BSPGCL).</td><td>LoA submitted along with ToR application.</td></tr>
</table>

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>4.</td><td>Existence of habitation& involvement of R&R, if any.</td><td>Project site: Sirmatpur, Harinkol, Raipura and Mundwa & Tundwa.<br>Study Area: As Below
<table>
<tr><th>Habitation / village</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Sirmatpur</td><td>Adjacent</td><td>W</td></tr>
<tr><td>Harinkol</td><td>Adjacent</td><td>S</td></tr>
<tr><td>Raipura</td><td>Adjacent</td><td>S</td></tr>
<tr><td>Mundwa & Tundwa</td><td>Adjacent</td><td>E</td></tr>
<tr><td>Sundarpur</td><td>Adjacent</td><td>S</td></tr>
<tr><td>Duldulhiya</td><td>0.75</td><td>SE</td></tr>
<tr><td>Imamnagar</td><td>0.62</td><td>SW</td></tr>
<tr><td>Vasanthpur</td><td>1.45</td><td>SW</td></tr>
<tr><td>Maheshram</td><td>0.14</td><td>S</td></tr>
<tr><td>Shermari</td><td>1.3</td><td>S</td></tr>
<tr><td>Olapur</td><td>1.6</td><td>SE</td></tr>
<tr><td>Ramnagar</td><td>1.7</td><td>N</td></tr>
</table></td><td>Status of R&R.<br>No R & R is involved.<br>The land is allotted by Bihar State Power Generation Company Limited (BSPGCL) to set up the Power Project as per the agreement with the State Government</td></tr>
<tr><td>5</td><td>Existence of school and hospital if any.</td><td><u>C.</u> <u>School</u><br>Project site: NIL<br>Study Area: As below
<table>
<tr><th>School</th><th>Distance (Km)</th><th>Direction</th></tr>
<tr><td>Anganwadi School</td><td>0.5</td><td>S</td></tr>
<tr><td>St. Xaviers Convent School</td><td>0.54</td><td>S</td></tr>
<tr><td>Middle School Sundarpur</td><td>0.63</td><td>S</td></tr>
<tr><td>Laxminarayan plus 2 School</td><td>0.78</td><td>ENE</td></tr>
<tr><td>Ujwal Public School</td><td>0.95</td><td>NE</td></tr>
<tr><td>Middle High School</td><td>1.0</td><td>NE</td></tr>
<tr><td>Saraswati Shishu Mandir</td><td>1.2</td><td>NE</td></tr>
<tr><td>Shermari High School</td><td>1.25</td><td>SSW</td></tr>
<tr><td>Shri Shyam Public School</td><td>1.5</td><td>NE</td></tr>
<tr><td>Delhi Public School</td><td>1.8</td><td>S</td></tr>
</table></td><td></td></tr>
</table>

| S. No. | Particulars | Details | Remarks |
|---|---|---|---|

| | | |
|---|---|---|
| Happy Valley School | 1.6 | S |

**D. Hospital**

**Project site:** NIL

**Study Area:** As below

| Hospital | Distance (Km) | Direction |
|---|---|---|
| Dr Ramakrishna Arunodaya hospital | 0.6 | E |
| Multi-Star Speciality hospital | 0.77 | SSW |
| Yashpal Ayurvedic hospital | 0.82 | NE |
| Ujwal Narayan Hospital | 1.44 | S |
| Referral Hospital | 1.54 | SSW |

**Protection measures to be adopted are as follows**:

**Control of Air Emissions:**

Provision of High Efficiency ESP, Low NOx Burner & Over Fire Air System, Dust Extraction, Dust Suppression, Dry Fog Dust Suppression, Fog Cannons at Ash Dyke, Water Sprinkling on Hauling Roads·

**Noise:** Acoustic Enclosures & barriers

**Greenbelt Development**: Development of dense greenbelt in the periphery of plant as well as towards the side of villages/ habitations, Afforestation/ Miyawaki Plantation on available land.

**Wastewater:** ETP, STP, Ash water recycling system, Zero Liquid Discharge, Rainwater Harvesting, Watershed Development in the vicinity.

**Safety:** Display signages, speed breakers, and crossing guard's provision; optimization of heavy vehicle movement near villages, Disaster Management Plan & Provisions.

**Health & Awareness:** Regular health camps, distribution of masks, and environmental awareness

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td></td><td></td><td>programs for surrounding community.<br><br>CSR & Monitoring: Support for infrastructure and development, and regular monitoring of air and noise pollution.</td><td></td></tr>
<tr><td>6.</td><td>Latitude and Longitude of all corners of the project site.</td><td>C. Plant site
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>25°18'19.07"N</td><td>87°23'46.48"E</td></tr>
<tr><td>2</td><td>25°18'36.63"N</td><td>87°23'42.56"E</td></tr>
<tr><td>3</td><td>25°18'56.13"N</td><td>87°23'54.63"E</td></tr>
<tr><td>4</td><td>25°19'18.97"N</td><td>87°24'9.74"E</td></tr>
<tr><td>5</td><td>25°19'11.25"N</td><td>87°24'56.64"E</td></tr>
<tr><td>6</td><td>25°18'58.06"N</td><td>87°24'57.78"E</td></tr>
<tr><td>7</td><td>25°18'48.41"N</td><td>87°25'26.67"E</td></tr>
<tr><td>8</td><td>25°18'25.96"N</td><td>87°25'20.04"E</td></tr>
<tr><td>9</td><td>25°18'18.24"N</td><td>87°26'6.46"E</td></tr>
<tr><td>10</td><td>25°17'57.60"N</td><td>87°25'47.14"E</td></tr>
<tr><td>11</td><td>25°17'54.33"N</td><td>87°25'27.54"E</td></tr>
<tr><td>12</td><td>25°17'51.11"N</td><td>87°25'20.55"E</td></tr>
<tr><td>13</td><td>25°17'59.91"N</td><td>87°24'54.39"E</td></tr>
<tr><td>14</td><td>25°18'17.29"N</td><td>87°24'58.18"E</td></tr>
<tr><td>15</td><td>25°18'19.84"N</td><td>87°24'33.82"E</td></tr>
<tr><td>16</td><td>25°18'40.22"N</td><td>87°24'35.90"E</td></tr>
<tr><td>17</td><td>25°18'27.73"N</td><td>87°24'16.24"E</td></tr>
<tr><td>18</td><td>25°18'15.83"N</td><td>87°24'1.17"E</td></tr>
</table>
D. Ash Pond
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>1</td><td>25°18'19.07"N</td><td>87°23'46.48"E</td></tr>
<tr><td>2</td><td>25°18'36.63"N</td><td>87°23'42.56"E</td></tr>
<tr><td>3</td><td>25°18'40.22"N</td><td>87°24'35.90"E</td></tr>
<tr><td>4</td><td>25°18'27.73"N</td><td>87°24'16.24"E</td></tr>
</table></td><td></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>5</td><td>25°18'15.83"N</td><td>87°24'1.17"E</td></tr></table></td><td></td></tr>
<tr><td>7.</td><td>Elevation of the project site</td><td>Average site elevation (AMSL): 72 m (Avg)</td><td></td></tr>
<tr><td>8.</td><td>Involvement of Forest land if any.</td><td>Status of stage I Forest Clearance: NA<br><br>Area of forest land involved: No Forest land involved.</td><td></td></tr>
<tr><td>9.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area</td><td>Project Site:<br>Name: As Below:<br><table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Singhia Seasonal Nadi</td><td>Through Project Boundary</td><td>--------</td></tr></table>Study area:<table><tr><th>Water body</th><th>Distance (in km)</th><th>Direction</th></tr><tr><td>Mar Ganga</td><td>1.5</td><td>E to N</td></tr><tr><td>Ganga</td><td>7.5</td><td>W to E</td></tr></table>*Source: - All distances are taken with respect to S.O.I. Toposheet, which is pertinent to this project.</td><td>----</td></tr>
<tr><td>10.</td><td>Archaeological sites monuments/ historical temples etc.</td><td>There are no Archeological Sites present within the study area.</td><td></td></tr>
<tr><td>11.</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><u>Study area</u><br>Name of the ESZ/ESA: Vikramshila Gangetic Dolphin Sanctuary (VGDS) about 7.5 km<br>Status of Notification: Notified<br>Distance of project from ESZ/ESA: About 7.5 km<br>Authenticated map of ESZ projecting distance of ESZ from project site: Enclosed DSS Map<br>Status of NBWL approval: Not Applicable, as project is outside ESZ<br>List of Reserved and protected forests:<table><tr><th>Particulars (RF/PF)</th><th>Distance (In km)</th><th>Direction</th></tr><tr><td>Kaushalpur Forest</td><td>8.9</td><td>SE</td></tr></table>No National Park, Elephant/Tiger Reserve, or migratory routes/wildlife corridor exists within 10 km of the proposed TPP. The proposed project does not fall in any Wildlife Corridor</td><td></td></tr>
</table>

| S. No. | Particulars | Details | Remarks |
|---|---|---|---|
| 12. | Facility envisaged in CRZ area (Only for coastal power plant) | **Name of the facility in CRZ area** – NA<br><br>**Recommendations of CZMA** – NA<br><br>**Status of CRZ clearance – NA** | CRZ map indicating HTL/ LTL demarketed by the authorized agency in 1:4000 scale: **NA** |
| 13. | Involvement of Critically Polluted Area/Severely Polluted area as per 2018 CEPI score | **Involvement of CPA/SPA:** - NA<br><br>**Proximity to CPA/SPA:** - NA | Proposed additional environmental safeguards as per MoEF&CC OM dated 31/10/2019: **There is no CPA/SPA as per CPCB Index.** |

**30.4.4:** The unit configuration and capacity of the proposed project is given as below:

| S. No. | Proposed power plant configuration and capacity | Total | Technology adopted |
|---|---|---|---|
| 1 | (3x800) MW | 2400 MW | Ultra Super Critical |

**30.4.5:** The details of the fuel (Coal/Gas/LDO) requirement for the proposed project along with its source and mode of transportation is given as below:

| Details | Fuel requirement | Source | Distance from site (Kms) | Mode of Transportation | Coal characteristics (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| Coal | 9.67 MTPA | ECL/SECL/MCL/ Nearby Commercial Coal Mines & e-auction | From 70km - 400km | Rail | Ash <40 (%)<br>Sulphur <0.5 (%)<br>Moisture-13 (%)<br>GCV- 3200-4300 Kcal/Kg | FSA under Shakti Policy and E-auction |
| LDO/ HSD | 25,000 KL/ Annum | Local Market/Vendors | About 50-100 | Road | Low Sulphur (3-5% mass) | Local Vendors |

**30.4.6: Water requirement**: The water requirement for the proposed project is estimated as 1,15,200 $m^3$ /day (42 MCM), out of which 1,15,200 $m^3$/day fresh water requirement will be obtained from Ganga River. The application has been submitted to WRD for the permission for drawl of surface water Vide Lr. No. पत्रांकः-प्र०/ BSPGCL-06/2024-2875 dated 19.06.2025. The water will be transported to the plant site through water pipeline. The specific water consumption for the power plant will be < 2.5 $m^3$/MWhr.

**30.4.7: Power requirement**: The power requirement for the proposed project is estimated as 120 MW, which will be obtained from the nearby substation.

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

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment | Disposal | Remarks |
|---|---|---|---|---|---|---|
| 1 | Municipal Solid Waste | Plant Canteen | 80.3 | Collected; segregated using color coded waste bin, Organic waste converters (OWC) | Inorganic will be disposed via local municipal authorized vendor & Organic/ Biodegradable waste by OWC. | - |
| 2 | E-waste | IT & Telecom Equipment | 2.5 | Collected; segregated | Registered Recycler vendor | |
| 3 | Battery waste from UPS | Automotive & Industrial | 6 | Collected; segregated | Authorized Vendor | |
| 4 | Bio medical waste | First aid center | 0.1 | Collected; segregated | Authorized vendor | |
| 5 | Hazardous Waste | Plant Operation | Used/ Spent Oil – 90 KL<br>Waste or residues Empty Barrels/ Containers/ Contaminated Liners – 12 TPA<br>contaminated cotton – 4.0 | - | Registered Recyclers/Pre-processors with SPCB & Authorized Recyclers | |

**30.4.9: Cost of project:** The capital cost of the proposed project is Rs. 28,225 Crores and the capital cost for environmental protection measures is proposed as Rs. 1,908. Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 19 Crores. The employment generation from the proposed project / expansion is Construction phase: 300 (permanent) + 7800 (contractual), Operation phase:500 (permanent) + 1800 (contractual).

**30.4.10: Green belt development**: Proposed greenbelt will be developed in 124 ha which is about 33.15 % of the total project area. Thus total 124 ha area (33.15 % of total project area) will be developed as greenbelt. A 20m 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 3,10,000 saplings will be planted and nurtured in 124 hectares in 5 years.

**30.4.11: Ash management**:

| Details | Annual generation (MTPA) | Utilization (MTPA) | % of utilization | Balance quantity (MTPA) | No of storage silos with capacity |
|---|---|---|---|---|---|
| Ash (Fly & Bottom) | **3.87** | **3.87** | **100** | **0** | **4x2500 MT** |

**Ash Pond details**- PP has proposed an ash pond, details of which are given below:

| S.No. | Details of Ash pond | Ash pond |
|---|---|---|
| 1. | Area (Ha) | 46 |
| 2. | Dyke height (m) | 15 |
| 3. | Volume ($m^3$) | 69 Lac $m^3$ |
| 4. | Quantity of ash to be disposed (Metric Tons) | 75.9 Lakh MT |
| 5. | Expected life of ash pond (number of years and months) | Life of ash dyke is calculated as 20 years |
| 6. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HDPE |
| 7. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | HCSD/MCSD |
| 8. | Ratio of ash: water in slurry mix (1:____): | 65:35 |
| 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 ($m^3$) | 0 |

**30.4.12**: **Baseline data collection:** March 2025 to May 2025

| Attributes | Parameters | Sampling | | Remarks |
|---|---|---|---|---|
| **A. Air** | | **No. of stations** | **Frequency** | |
| a. Meteorological parameters | Wind speed, Wind direction, Relative Humidity, Temperature and Rainfall | 1 | Hourly | Met data logger at site Secondary data from nearest IMD Station, Bhagalpur |
| b. AAQ parameters | $PM_{10}$, $PM_{2.5}$, $SO_2$, $NO_x$, CO & Hg. | 12 | 24 hourly data, twice a week for 12 weeks | As per NAAQS, 2009 by CPCB |
| B. Noise | Hourly equivalent noise levels | 12 | One time sampling for 24 hours | IS: 4954- 1968 as adopted by CPCB |
| **C. Water** | | | | |
| Surface water parameters | Physical parameters – (pH, temp, colour, turbidity, odour, taste),<br>Chemical parameters - (Total hardness, calcium, total alkalinity, chloride, | 03 | Once in a month | During Study Period |

| Attributes | Parameters | Sampling | | Remarks |
|---|---|---|---|---|
| | magnesium, TDS, sulphate, fluoride, nitrate, iron, aluminium, boron, phenolic compounds, chromium, conductivity, BOD, COD, DO, TSS, Heavy metals like Hg, As, Pb, Ni, Mn, Cd) & microbiological parameters – (Total coliforms, E-COli) etc. | | | |
| Ground water parameters | Physical parameters – (pH, temp, colour, turbidity, odour, taste, TDS),<br>Chemical parameters - (Total hardness, calcium, total alkalinity, chloride, cyanide, magnesium, sulphate, fluoride, nitrate, iron, aluminium, boron, phenolic compounds, chromium, poly aromatic hydrocarbons, Heavy metals like Hg, As, Pb, Ni, Mn, Cd) & microbiological parameters – (Total coliforms, E-coli) etc. | 12 | Once in a month | During Study Period |
| **D. Land** | | | | |
| a. Soil quality | Particle size distribution; Texture, pH, Electrical conductivity, cation exchange capacity (CEC), Alkali metals, Sodium Absorption Ratio (SAR), Permeability, Porosity, available nitrogen, available phosphorous, potassium, heavy metals like – As, Hg etc. | 12 | Once in a month | During Study Period |
| b. Land use | Location code, Total project area, Topography, Drainage (natural) Cultivated, forest plantations, water bodies, roads and settlements | 10 km radius | --- | During Study Period |
| **E. Biological** | | | | |
| a. Aquatic | Primary productivity, Aquatic weeds, Enumeration of phytoplankton, zooplankton Fisheries Diversity indices Trophic levels, Rare and endangered species, etc. | From nearby tributaries at downstream, and also from dug wells close to activity site | During the Study period | One season sampling for aquatic biota, Plankton net, Sediment dredge, Depth sampler |
| b. Terrestrial | Vegetation – species, list, economic importance, forest produce, medicinal value Importance value index (IVI) of trees and wild animals | Considering probable impact, sampling points and number of samples on established guidelines on ecological studies based on site eco- | One Time | One season for terrestrial biota. Preliminary assessment. Application of indices, viz. Shannon, similarity, dominance IVI etc. Point quarter plot-less method |

| Attributes | Parameters | Sampling | | Remarks |
|---|---|---|---|---|
| | | environment setting within 10 km radius from the proposed site. | | (random sampling) for terrestrial vegetation survey. |
| | Fauna: Rare and endangered species Sanctuaries / National park / Biosphere reserve Listing of birds, mammals, reptiles, amphibians etc | For forest studies, chronic as well as short- term impacts. | One Time | Secondary data from Government offices, NGOs, published literature Field binocular. |
| **F. Socio-**economic **parameters** | Demographic structure Infrastructure resource based | Socio-economic sample survey | --- | Community/Village Level survey based on personal interviews and questionnaire within 10 KM radius of project site. |

**30.4.13: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration:** Nil

B. **Summary of Show Cause Notices:** Nil

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

**Observations and deliberation of the EAC**

**30.4.14:** The Committee observed and noted the following:

i. Instant proposal is for greenfield project of 2400 (3x800) MW Coal Based Ultra Super Critical Thermal Power project located at Sirmatpur & adjacent villages in Tehsil/block Pirpainti, District Bhagalpur, Bihar.

ii. The committee observed that no alternate sites considered by the proponent, since the project area has been allotted specifically for the project by the Bihar State Power Generation Company Limited (BSPGCL), Govt. of Bihar.

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

iv. 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.

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

vi. Mar Ganga Nadi and Ganga River is located at 1.5 (E to N) and 7.5 (W to E) km from the project boundary. A Seasonal Singhia Nadi is flowing through Project Boundary. One Nala diversion is proposed, EAC asked the proponent to submit the certificate from the State Water resource/irrigation department as per MoEF&CC O.M. dated 14/02/2022.

vii. Coal requirement for proposed project will be met through Rail. There will be no road transportation of coal for proposed project. Only LDO/HSD will be transported by road.

viii. The water requirement for the proposed project is estimated as 1,15,200 $m^3$ /day (42 MCM), out of which 1,15,200 $m^3$/day fresh water requirement will be obtained from Ganga River. The application has been submitted to WRD for the permission for drawl of surface water Vide Lr. No. पत्रांकः-प्र०/ BSPGCL-06/2024-2875 dated 19.06.2025. The water will be transported to the plant site through water pipeline. The specific water consumption for the power plant will be < 2.5 $m^3$/MWhr.

ix. The power requirement for the proposed project is estimated as 120 MW, which will be obtained from the nearby substation.

x. The capital cost of the proposed project is Rs 28,225 Crores and the capital cost for environmental protection measures is proposed as Rs 1,908. Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs 19 Crores. The employment generation from the proposed project ~~/ expansion~~ is Construction phase: 300 (permanent) + 7800 (contractual), Operation phase:500 (permanent) + 1800 (contractual).

xi. Proposed greenbelt will be developed in 124 ha which is about 33.15 % of the total project area. Thus total 124 ha area (33.15 % of total project area) will be developed as greenbelt. A 20m 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 3,10,000 saplings will be planted and nurtured in 124 hectares in 5 years.

xii. Various schools and hospital are located within 2 km distance from proposed project sit. The project proponent shall maintain the sanitation, and provide the clean water (drinking) facility and toilet facility in all school present within 2 km area from proposed site. PP shall provide the details of environmental receptors present within 10km area and the same will be included in EIA/EMP reports.

xiii. The proposed units (3x800 MW) will incorporate high-efficiency Electrostatic Precipitators (ESP) to control particulate matter and selective catalytic reduction system (SCR) to control the NOx emission. EAC observed that Flue Gas desulphurization (FGD) technology is not proposed, it should be included EIA/EMP reports.

xiv. PP shall carryout Hydrogeology and aquatic biodiversity study and the same shall be incorporated in the EIA/EMP reports.

**Recommendations of the Committee:**

**30.4.15:** The EAC after detailed deliberations on the information submitted and as presented during the meeting ***recommended*** the proposal for grant of ToR for conducting an EIA study for the above project under the provisions of the EIA Notification, 2006, as amended along with the following specific ToR in addition to the generic ToRs.

**[A] Environmental Management and Biodiversity Conservation**

i. Project proponent shall explore the feasibility of using air cooled condenser in place of water cooled condenser and details shall be incorporated in the final EIA/EMP report.

ii. Project proponent shall optimize the land requirement for the proposed ash pond and design details of the same shall submitted in the EIA/EMP report.

iii. Certificate from concerned District Magistrate/Executive Engineer from the State Water Resources department (or) any officer authorized by the State Government in this regard shall be submitted stating that project site is not located within flood plain of Ganga river corresponding to one in 25 years of flood as per Ministry's O.M. dated 14/02/2022.

iv. PP needs to submit NOC/permission from the State Water resource Department/Irrigation Dept. in case of diversion of any Nala/Stream/water bodies.

v. All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent.

vi. Project proponent shall also obtain recommendations from the State Forest department regarding the impact of project on the nearby Reserved Forests, if any, along with the mitigation measures to be followed.

vii. EIA/EMP study shall take in to consideration the different scenarios arising due to change of coal source, impact on environmental attributes due to change of coal source along with corresponding mitigation measures with EMP budget shall be submitted.

viii. Biodiversity analysis of the project site and study area shall be done through any NABET accredited consultant. The study report shall inter-alia include impact of release of cooling tower water on aquatic life and action plan for complying with the mitigation measures shall be submitted.

ix. Project proponent shall commission a study on Hydrology and Hydrogeology of the project site as well as the study area of the project site through a NABET accredited consultant. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.

x. Radioactivity studies along with coal analysis to be provided (sulphur, ash percentage and heavy metals including Pb, Cr, As and Hg). Details of auxiliary fuel, if any including its quantity, quality, storage, etc should also be given.

xi. PP should submit the detailed plan in tabular format (year-wise) for concurrent afforestation and green belt development in and around the project site covering 33 % of the project area. The PP should submit the number of saplings to be planted, names of native species, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling should be of native and few fruit bearing species mainly, of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided.

xii. Action plan for development of three-tier plantation programme (33 % of total project cover area) along the periphery of the project boundary and the coal transportation route shall be provided. PP shall submit concurrent plantation plan.

xiii. Detailed action plan shall be prepared for maintenance of air pollution control equipment for proposed units and shall be incorporated in the EIA/EMP report.

xiv. Details of Ash management plan as per MoEF&CC notification dated 31/12/2021 & its subsequent amendment for the proposed project shall be submitted. MoU signed for ash utilization with companies shall be submitted.

xv. Action plan for dry ash collection system (Bottom ash and Fly ash) shall be submitted.

xvi. Action plan for disposal of ash through High Concentration Slurry Disposal (only in emergency conditions) shall be submitted.

xvii. Proper protection measures like high-density polyethylene (HDPE) lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body (minimum 60 meters) etc. shall be planned to reduce the possibility of mixing leachate with any freshwater body for ash pond. A high-density Slurry disposal plan shall be prepared.

xviii. Pond and ground water quality (10 locations within 2 km radius of the plant boundary) shall be studied and report be submitted along with EIA/EMP. Action plan for Ground water monitoring stations on all hotspots like schools/hospitals within 2 km radius of the plant boundary be submitted. Baseline Study for Heavy metals in Groundwater, Surface water and soil to be carried out and incorporated in EIA/EMP report.

xix. Details pertaining to water source, treatment and discharge should be provided.

xx. PP shall provide the details of wastewater treatment facilities to be installed within its capacity, timeline and budget.

xxi. Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.

xxii. An action plan shall be prepared for Water shed development within 10 km radius of the plant boundary in consultation with reputed government institution and incorporated in EIA/EMP report.

xxiii. PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total material handled) and steps to be taken for reduction of the same. The year-wise target for reduction in the specific diesel consumption needs to be submitted. PP shall also explore the possibility of using e-vehicles/LNG/CNG-based machinery and trucks for the operation and transportation of Coal and ash and submit an implementation strategy.

xxiv. PP shall provide the details of transportation of fly ash from the plant, transportation route etc. Further, carry out a traffic study for at least one month and provide the impact of transportation along with the mitigation measures.

xxv. PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2016 and to adhere Ministry's OM dated 18/07/2022.

xxvi. Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted.

xxvii. The input parameters for the AAQ modelling and the influence of various combinations of these on the AAQ must be reported in the EIA/EMP Report. In addition to the Wind Rose diagram collected for one season during the preparation of the E.I.A., wind rose diagram for all seasons must be provided using secondary data from sources such as IMD/CPCB etc.

xxviii. Project proponent shall take all necessary steps to control the Air Quality and take additional mitigation measures for proposed TPP to maintain the Ambient Air Quality values within the limits. The action plan regarding maintaining ambient quality standards (Time weighted average for 24 hours and Annual both) be submitted. Further, project proponent shall submit an undertaking to abide by the provisions of the notification number G.S.R 465 (E) dated 11/07/2025 related to FGD, as amended, and any subsequent amendment there of pursuant to the outcome of study carried out by CPCB in this regard.

xxix. Details of air pollution control devices to be installed in the proposed 3x800 MW TPP along with its maintenance schedule shall be incorporated in EIA/EMP report.

xxx. Carbon emission due to TPP and allied carbon sequestration/ carbon offsetting plan be submitted.

xxxi. 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. An action plan in this regard shall be submitted.

**[B] Disaster Management**

i. A Disaster Management Plan shall be prepared and incorporated in the EIA/EMP report.

**[C] Socio-economic Study**

i. Public Health Action Plan including the provisions for drinking water supply for the local population shall be in the EIA/EMP Report. The status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the needs of the labour force and local populace.

ii. Public consultation (Public Hearing and Written submission) shall be conducted as per the provisions of EIA Notification, 2006 and as amended. As per the Ministry's OM dated 30.09.2020, to address the concern raised during the Public Hearing, the Project Proponent is required to submit the detailed activities proposed with year-wise budgetary provision (Capital and recurring) for 5 years. Activities proposed shall be part of EMP. Tentative no. of project affected families (if any) shall be identified and accordingly appropriate Rehabilitation &Resettlement plan shall be prepared. The recommendation Socio-economic study may also be considered while planning the activities & budget.

iii. A need based Social Impact Assessment Study shall also be carried out and an action plan on its recommendations may also be submitted with budgetary provisions.

iv. Demographic details and land use change details in 10 km area shall be submitted.

**[D] Miscellaneous**

i. Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study. The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind. A mathematical model shall be developed for the local site rather than using the standard model

available in software for both air & water quality modeling.

ii. PP shall align its activities to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050. PPs shall update the same to the EAC.

iii. PP shall submit the EIA/EMP report after the plagiarism check using authenticated plagiarism software.

iv. Detailed description of all the court cases along with its current status shall be submitted.

v. PP should provide in the EIA Report details of all the statutory clearances, permissions, no objection certificates, consents etc. obtained for this project under various Acts, Rules and regulations shall be submitted. Further, all the permissions/MoUs obtained for this project shall be revalidated and submitted along with the EIA/EMP report.

vi. The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs, which will analyze the samples.

vii. PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of persons to be engaged for the implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.

viii. PP should submit the year-wise, activity wise and time-bound budget earmarked for EMP, occupational health surveillance, and activities proposed to address the issues raised during Public Hearing. The capital and recurring expenditure to be incurred needs to be submitted.

ix. Activities shall be prepared based on the issues arise during public hearing conducted and fresh written submission with defined timeline and budgetary provisions.

x. Aerial view video of project site and coal transportation route proposed for this project shall be recorded through drone and be submitted.Along with this plan of 3 tier plantation on coal transporatation route shall be submitted.

xi. The PP should ensure that only NABET-accredited consultants shall be engaged for the preparation of EIA/EMP Reports. PP shall ensure that the accreditation of the consultant is valid during the collection of baseline data, preparation of EIA/EMP report and the appraisal process. The PP and consultant should submit an undertaking the information and data provided in the EIA Report and submitted to the Ministry are factually correct and the PP and consultant are fully accountable for the same.

xii. PP should provide in the EIA Report details of the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after the grant of EC.

xiii. All the certificates viz. involvement of Forest land, distance from the protected area, and list of flora & fauna should be duly authenticated by the Forest

Department. The Certificate should bear the name, designation, official seal of the person signing the certificate and dispatch number.

xiv. Necessary coordination shall be made with concerned SPCB (who is responsible for Compliance of OM dated 14.01.2025) regarding streamlining the implementation of GSR 702 and GSR 703 dated 12.11.2024 through which projects requiring prior EC were exempted from requirement of CTE.

**Agenda No 30.5**

**30.5**: Proposed **2x800 MW Coal Based Ultra Super Critical Thermal Power Plant** (New Zone Thermal Power Plant, Anuppur,) by **M/s Torrent Power Limited** at village Raksha, Kolmi and Daikhal, Tehsil Anuppur, **Anuppur District, Madhya Pradesh - Prescribing of Terms of Reference (ToR) – reg.**

**[Proposal no. IA/MP/THE/547272/2025, F.No. J-13012/07/2025-IA.I (T)**

**30.5.1**: M/s Torrent Power Limited has made an application online vide proposal no IA/MP/THE/547272/2025 dated 16.09.2025 along with the application in the prescribed format (CAF, Form – I Part A & B), a copy of the pre-feasibility report and proposed ToR for undertaking the detailed EIA study as per the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at item no. 1(d) Under Category "A" of the schedule of the EIA Notification, 2006, and appraised at Central Level and do not attract the general condition of the EIA Notification, 2006.

**Name of the EIA consultant**: M/s Greencindia Consulting Private Limited [S. No. NABET/EIA/2326/RA 0297, List of ACOs with their Certificate / Extension Letter no. QCI/ NABET/ ENV/ ACO/ 23// 2862; Valid up to 22.02.2026. Rev.]

**Details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meeting, are given as under:**

**30.5.2:** The proposed greenfield project is for 1600 (2x800) MW Coal Based Ultra Super Critical Thermal Power project coming up at village Raksha, Kolmi and Daikhal, Tehsil Anuppur, Anuppur District, Madhya Pradesh by M/s Torrent Power Limited.

**30.5.3: Environmental site settings**:

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th><th>Remarks</th></tr>
<tr><td>1.</td><td>Total land</td><td>341.85 ha [Private: 302.97 ha; Govt.:39.78 ha]</td><td>Main plant (333.78 ha) area taken over from earlier industry.</td></tr>
<tr><td>2.</td><td>Land use break up</td><td><table><tr><th>Facilities</th><th>Proposed Area (In Hectares)</th></tr><tr><td>Boiler, TG building, ESP, Chimney and Facilities</td><td>10.32</td></tr><tr><td>Coal Handling Plant</td><td>23.93</td></tr><tr><td>Ash Handling Plant</td><td>4.13</td></tr><tr><td>Transformer yard, Switchyard,</td><td>10.32</td></tr></table></td><td>113.66 Ha (33.25%) land is allocated for Greenbelt.</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>Air washer, DG sets</td><td></td></tr>
<tr><td>Water system including WTP, DM Plant & ETP</td><td>8.26</td></tr>
<tr><td>CW System- IDCT & CWPH</td><td>4.14</td></tr>
<tr><td>Raw Water Reservoir</td><td>78.63</td></tr>
<tr><td>Ash dyke</td><td>44.43</td></tr>
<tr><td>Miscellaneous (roads, non-plant buildings etc.)</td><td>25.64</td></tr>
<tr><td>Colony and other Facilities</td><td>10.32</td></tr>
<tr><td>Railway Siding</td><td>8.07</td></tr>
<tr><td>Greenbelt</td><td>113.66</td></tr>
<tr><td>Total</td><td>341.85</td></tr>
</table>
</td><td></td></tr>
<tr><td>3.</td><td>Land acquisition details as per MoEF&CC O.M. dated 7/10/2014</td><td>Total land- 341.85 Ha<br>Non-Forest land – 341.85 Ha, Forest Land- 0 Ha.<br>Govt Land- 39.78 Ha (Under possession of PP)<br>Private Land- 302.97 Ha (294 Ha of pvt. land is under possession of PP, rest 8.07 Ha of Pvt. Land is yet to acquire)</td><td>333.78 Ha land have been taken over from earlier industry. 8.07 ha land identified for railway siding is yet to be acquired.</td></tr>
<tr><td>4.</td><td>Existence of habitation & involvement of R&R, if any.</td><td><u>Project site</u>: Raksha & Kolmi<br>Study Area:
<table>
<tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Raksha</td><td>Adjacent</td><td>N</td></tr>
<tr><td>Kolmi</td><td>0.25 km</td><td>NW</td></tr>
<tr><td>Jartalwa</td><td>1.4 km</td><td>NE</td></tr>
</table>
Protection Measures for existing habitation<br>• In addition to the boundary wall, 3m wind shield will be constructed above the boundary wall, in the portion which is adjacent to village Raksha.<br>• The greenbelt proposed in the layout plan of site (in the northern side along the Ash Pond) varies from 15m to more than 100m. Over and above this greenbelt, it is also proposed to develop tree plantation outside the boundary wall towards this village under CSR programme, so as to maintain a minimum green buffer of 50 m between the plant and the village settlements.<br>The village Kolmi is located at 0.25km from the project boundary. Within the boundary wall a reservoir has been planned towards this village. The reservoir is having a width of 800 m which will be acting as a buffer between operating plant and the village. However peripheral greenbelt between the boundary wall and the reservoir will be provided.</td><td>R&R have already been conducted for main plant area. The area proposed for Railway Siding is yet to be acquired. Hence R & R is pending for the railway siding area.</td></tr>
<tr><td>5.</td><td>Latitude and Longitude of all corners of the project site.</td><td>A. Plant Layout
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>A</td><td>23°9'04.13"N</td><td>81°49'09.43"E</td></tr>
<tr><td>B</td><td>23°8'57.37"N</td><td>81°49'27.27"E</td></tr>
<tr><td>C</td><td>23°9'05.30"N</td><td>81°49'33.44"E</td></tr>
</table>
</td><td></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>D</td><td>23°9'02.97"N</td><td>81°49'55.73"E</td></tr>
<tr><td>E</td><td>23°8'51.10"N</td><td>81°50'03.88"E</td></tr>
<tr><td>F</td><td>23°8'58.09"N</td><td>81°50'24.49"E</td></tr>
<tr><td>G</td><td>23°8'52.31"N</td><td>81°50'47.27"E</td></tr>
<tr><td>H</td><td>23°8'28.55"N</td><td>81°50'51.27"E</td></tr>
<tr><td>I</td><td>23°8'34.34"N</td><td>81°50'34.11"E</td></tr>
<tr><td>J</td><td>23°8'26.05"N</td><td>81°50'36.52"E</td></tr>
<tr><td>K</td><td>23°8'19.67"N</td><td>81°50'34.25"E</td></tr>
<tr><td>L</td><td>23°8'05.57"N</td><td>81°50'41.76"E</td></tr>
<tr><td>M</td><td>23°7'36.91"N</td><td>81°50'30.27"E</td></tr>
<tr><td>N</td><td>23°7'33.06"N</td><td>81°50'20.20"E</td></tr>
<tr><td>O</td><td>23°7'54.26"N</td><td>81°50'38.82"E</td></tr>
<tr><td>P</td><td>23°8'05.06"N</td><td>81°50'40.22"E</td></tr>
<tr><td>Q</td><td>23°8'17.02"N</td><td>81°50'26.96"E</td></tr>
<tr><td>R</td><td>23°8'18.08"N</td><td>81°50'06.34"E</td></tr>
<tr><td>S</td><td>23°8'26.85"N</td><td>81°49'47.84"E</td></tr>
<tr><td>T</td><td>23°8'18.45"N</td><td>81°49'25.25"E</td></tr>
<tr><td>U</td><td>23°8'16.80"N</td><td>81°49'04.57"E</td></tr>
<tr><td>V</td><td>23°8'40.11"N</td><td>81°48'55.69"E</td></tr>
<tr><td>W</td><td>23°8'54.69"N</td><td>81°48'57.28"E</td></tr>
</table>
B. Ash Pond
<table>
<tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>I</td><td>23° 8'46.74"N</td><td>81°49'57.09"E</td></tr>
<tr><td>II</td><td>23° 8'46.75"N</td><td>81°50'15.25"E</td></tr>
<tr><td>III</td><td>23° 8'50.69"N</td><td>81°50'18.27"E</td></tr>
<tr><td>IV</td><td>23° 8'50.69"N</td><td>81°50'36.22"E</td></tr>
<tr><td>V</td><td>23° 8'35.30"N</td><td>81°50'36.18"E</td></tr>
<tr><td>VI</td><td>23° 8'35.30"N</td><td>81°49'57.10"E</td></tr>
</table>
</td><td></td></tr>
<tr><td>6.</td><td>Elevation of the project site</td><td>500m – 520m 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:<br>Area of the forest land involved: Nil</td><td>No forest land is involved for the proposed project.</td></tr>
<tr><td>8.</td><td>Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area.</td><td><u>Project site:</u><br>Jhitku Nala a 2nd order perineal stream is crossing across the project site in the Eastern part of the project area. A total of 480 m length of the Nala is falling within the project boundary.<br><br>Study area
<table>
<tr><th>Waterbody</th><th>Distance</th><th>Direction</th></tr>
<tr><td>Jhitku N</td><td>Adjacent, inside</td><td>E</td></tr>
</table>
</td><td>Application for the certification of HFL data for both Gohiari Nadi and Sone River are already done to Water Resource Department, Anuppur, Madhya Pradesh vide. Letter no.- TPL/WRD/ANUPPUR/2025/01 dated: 21.08.2025<br>As per satellite data the</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>Gohirari N</td><td>Adjacent</td><td>S</td></tr>
<tr><td>Sone River</td><td>1.7</td><td>SW</td></tr>
</table>
The plant layout is prepared in such a way so that the natural flow of the water body is not disturbed. It is also proposed to create a dense greenbelt in the Eastern part of the project to mitigate adverse impact on Jhitku Nala.
</td><td>elevation level of Jhitku Nala is 491 m and that of Gohirari Nadi is 482m and 484m for Sone River.</td></tr>
<tr><td>9.</td><td>Archaeological sites monuments/ historical temples etc.</td><td>No Archaeological sites/ monument/ historical temples are present in the project site.</td><td></td></tr>
<tr><td>10.</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>
Study area<br>
Name of the ESZ/ESA: None<br>
Status of Notification: None<br>
Distance of project from ESZ/ESA: NA<br>
Authenticated map of ESZ projecting distance of ESZ from project site:<br>
NA<br>
Status of NBWL approval: Not Required<br>
List of Reserved and protected forests:
<table>
<tr><th>Name</th><th>Distance in Km</th><th>Direction</th></tr>
<tr><td>Kotma RF</td><td>0.14</td><td>E, SE</td></tr>
<tr><td>RF near Thuthi</td><td>2.6</td><td>NW</td></tr>
<tr><td>Kotma RF near Lalmatia</td><td>3.7</td><td>NNE</td></tr>
<tr><td>Mauhari RF near Pasla</td><td>4</td><td>WNW</td></tr>
<tr><td>Kotma RF near Chhohri</td><td>4.2</td><td>ENE</td></tr>
<tr><td>RF near Parasi</td><td>4.3</td><td>ESE</td></tr>
<tr><td>Mauhari RF near Rahilakachhar</td><td>4.7</td><td>SSE</td></tr>
<tr><td>Bamni PF</td><td>4.8</td><td>N, NNW</td></tr>
<tr><td>Kotma RF near Piyari</td><td>5.8</td><td>NE</td></tr>
<tr><td>Mauhari RF</td><td>6</td><td>SW</td></tr>
<tr><td>Mauhari RF near Patauratola</td><td>6.4</td><td>SSE</td></tr>
<tr><td>Deori PF</td><td>6.7</td><td>NNE</td></tr>
<tr><td>Kotma RF near Latar</td><td>7</td><td>ESE, SE</td></tr>
<tr><td>Mauhari RF near</td><td>7.1</td><td>W</td></tr>
</table>
</td><td>No Eco-sensitive Zone notified/ proposed to be notified are present within the 10 km study area.</td></tr>
</table>

| S. No. | Particulars | Details | | | Remarks |
|---|---|---|---|---|---|
| | | Bhagatbandh | | | |
| | | Mauhari RF near Mairtola | 7.4 | WNW | |
| | | Rampur PF | 7.9 | NW | |
| | | Laharpur PF | 8.2 | S | |
| | | Chhilpa PF | 11 | NNW | |
| | | Majhauli PF | 11.4 | NW | |
| | | Lakhanpur RF | 12.1 | SSW | |
| | | Munda RF | 14.3 | SE | |
| 11 | Involvement of Criticall Polluted Area/ Severely Polluted area as per 2018 CEPI score | **Involvement of CPA/SPA:** NA<br><br>**Proximity to CPA/SPA:** NA | | | |

**30.5.4:** The unit configuration and capacity of the proposed project is given as below:

| S. No. | Proposed power plant configuration and capacity | Total | Technology adopted |
|---|---|---|---|
| 1 | 2x800 MW | 1600 MW | Ultra Super Critical Thermal Power Plant |

**30.5.5:** The details of the fuel (Coal/Gas/LDO) requirement for the proposed project along with its source and mode of transportation is given as below:

| Details | Fuel requirement (MTPA) | Source | Distance from site (Kms) | Mode of Transportation | Coal characteristic s (Worst case scenario) | Linkage document |
|---|---|---|---|---|---|---|
| Coal | 8.15 | As per allocation by Ministry Under Shakti Scheme | 200 | Rail | Ash – 40.52 %<br>Sulphur – 0.33 %<br>Moisture- 10.15 %<br>GCV -3169 Kcal/Kg | As per allocation by Ministry under Shakti Scheme |
| LDO | 3000 | Nearest Oil Depot (either Raipur or Nagpur) | 300 | Road | - | LDO will be procured from open market. Related agreement will be acquired once EC is granted for the project |

**30.5.6: Water requirement**: The water requirement for the proposed project is estimated as 72,456 $m^3$ /day, out of which 70,856 $m^3$/day of fresh water requirement will be obtained from the Sone River and the remaining requirement of. 1600 $m^3$ /day will be met from the Treatment facilities (ETP & STP). The permission for drawl of surface water is obtained from WRD Anuppur Vide Lr. No. 1129 Dated-01.05. 2025.The water will be transported to the plant site through Pipeline.

**30.5.7: Power requirement**: The power requirement for the proposed project is estimated as 5 MW, out of which 5 MW will be obtained from the Nearest Sub-Station at Anuppur.

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

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment | Disposal | Remarks |
|---|---|---|---|---|---|---|
| 1 | Ash | Power Plant | 42,04,800 | Will be utilized in-<br>1. Cement Plant<br>2. Abandoned mine back filling<br>3. Low lying area reclamation<br>4. Fly ash bricks<br>5. Road Construction | It is proposed to use Closed Wagons / closed trucks for fly ash transportation, water sprinkling system will be commissioned in the ash disposal area to suppress the fugitive dust emission. | |
| 2 | MSW | Plant Canteen | 5 | Recyclable waste will be provided to Authorized recycler and biodegradable waste will be composted. | Recyclable waste will be transported via collection truck by Road. | |
| 3 | Used PVC Bags | Plant | 2 | To be sold to authorized recycler as per Plastic Waste Management Rule, 2022 | Waste will be transported to treatment facility via Road. | |
| 4 | E-waste from IT & Telecom equipment. | IT & Telecom | 3 | Via Registered Recycle Vendor | Waste will be transported to treatment facility via Road. | |
| 5 | Battery waste from UPS | Automotive and Industrial | 3 | Authorized Vendor | Waste will be transported to treatment facility via Road. | |
| 6 | Biomedical Waste | Occupational Health Centre (OHC) | 0.025 | SPCB Authorized Facilities | Waste will be transported to treatment facility via Road. | |

| S. No. | Type of Waste | Source | Quantity generated (TPA) | Mode of Treatment | Disposal | Remarks |
|---|---|---|---|---|---|---|
| 7 | Used Oil/ Waste Oil | Plant Operation | 60 | Registered Recycler/ Preprocessor with SPCB | Waste will be transported to treatment facility via Road. | |
| 8 | Waste or residues containing oil | Plant Operation | 10 | Sell to authorized recycler | Waste will be transported to treatment facility via Road. | |
| 9 | Empty barrels/ containers/ contaminated liners | Plant operation | 20 | Sell to authorized recycler | Waste will be transported to treatment facility via Road. | |

**30.5.9: Cost of project:** The capital cost of the proposed project is Rs. 23,740 Crores and the capital cost for environmental protection measures is proposed as Rs 1,285 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 24.22 Crores. The employment generation from the proposed project is 5050 during Construction and 1400 during Operation.

**30.5.10: Green belt development**: Proposed greenbelt will be developed in 113.66 ha which is about 33.25% of the total project area. A 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 2,84,150 saplings will be planted and nurtured in 113.66 hectares in 5 years.

**30.5.11: Ash management**:

| Details | Annual generation (MTPA) | Utilization (MTPA) | % of utilization | Balance quantity (MTPA) | No of storage silos with capacity |
|---|---|---|---|---|---|
| Ash (Fly & Bottom) | 4.2 | 4.2 | 100 | 0 | 03 Nos of Silos with capacity of 3000 MT each. (3x3000 = 9000 MT) |

**Ash Pond details**- PP has proposed an ash pond, details of which are given below:

| S.No. | Details of Ash pond | Ash pond |
|---|---|---|
| 1. | Area (Ha) | 44.43 |
| 2. | Dyke height (m) | 10 |
| 3. | Volume ($m^3$) | 4 x 10^6 |
| 4. | Quantity of ash to be disposed (Metric Tons) | 3.27 x 10^6 |
| 5. | Expected life of ash pond (number of years and months) | 2 Years 0 Month (Considering Nil ash utilization) |
| 6. | Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining | HDPE |
| 7. | Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD) | MCSD |

| S.No. | Details of Ash pond | Ash pond |
|---|---|---|
| 8. | Ratio of ash: water in slurry mix (1:_____): | Ratio- 1:2.5<br>(40% ash to 60% water.) |
| 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 ($m^3$) | Nil |

**30.5.12**: **Baseline data collection:** March 2025 to May 2025

| Attributes | Parameters | Sampling | | Remarks |
|---|---|---|---|---|
| | | No. of stations | Frequency | |
| A. Air | | | | |
| a. Meteorological parameters | Wind speed, Wind direction, Relative Humidity, Rainfall & Solar radiation, Cloud Cover & Dust Fall | 1 | Hourly | IS 5182 Part 1-20 Site-specific primary data is essential<br>Secondary data from IMD, New Delhi for the nearest IMD station. |
| b. AAQ parameters | $PM_{10}$, $PM_{2.5}$, $SO_2$, $NO_2$, CO | 10 | 24 hourly data, twice a week | As per CPCB standards for NAQM, 1994 |
| B. Noise | Hourly equivalent noise levels | 10 | One time sampling | Min: IS: 4954- 1968 as adopted by CPCB |
| C. Water | Ground water- PH, temp, turbidity, magnesium hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, sodium, potassium salinity, Total nitrogen, total phosphorus, DO, Phenol, Heavy metals, Total coliforms, faecal coliforms | 12 | One time sampling | Samples for water quality will be collected and analysed as per:<br>IS: 2488 (Part 1-5), per standard APHA and IS: 3025 criteria and IS: 10500, 2012. methods for sampling<br>International standard practices for benthos and aquatic flora & fauna. |
| Surface water/Ground water quality parameters | Surface water- Total Carbon; pH; Dissolved Oxygen, Biological Oxygen Demand, COD, DO and Electrical Conductivity | 6 | One time sampling | Surface water samples will be collected from 6 different locations for analysis monthly and are compared to Class-C CPCB Designated Water Quality Criteria and IS 2296. |
| D. Land | | | | |
| a. Soil quality | Physical and chemical characteristics<br>Particle size distribution; Texture, pH, Electrical conductivity, Caution exchange capacity, Alkali | 8 | One time sampling | Soil samples will be collected as per BIS specifications) in the study area by Auger up to depth of 30 cm and homogenized samples |

| Attributes | Parameters | Sampling | | Remarks |
|---|---|---|---|---|
| | | No. of stations | Frequency | |
| | metals, Sodium Absorption Ratio (SAR), Permeability, Porosity | | | will be analyzed as per the methods described in "Soil Chemical Analysis" (M. L. Jackson, 1967), |
| Land use | Location code, Total project area, Topography, Drainage (natural) Cultivated, forest plantations, water bodies, roads and settlements | At least 20 points along with plant boundary and general major land use categories in the study area | - | NRSC Satellite Imagery, 2020 and Census data, 2011 |
| E. Biological<br>a. Aquatic<br>Terrestrial | Terrestrial: Vegetation – species, list, economic importance, forest produce, medicinal value Importance value index (IVI) of trees and wild animals<br><br>Avifauna: Rare and endangered species Sanctuaries / National park / Biosphere reserve | Considering probable impact, sampling points and number of samples were decided to established guidelines on ecological studies based on site eco-environment setting within 10 km radius from the proposed site<br><br>For forest studies, chronic as well as short- term impacts should be analysed warranting data on micro climate conditions. | One Time | One season for terrestrial biota. Preliminary assessment. Microscopic analysis of plankton and meiobenthic, studies of macrofauna, aquatic vegetation and application of indices, viz. Shannon, similarity, dominance IVI etc. Point quarter plot-less method (random sampling) for terrestrial vegetation survey.<br><br>Secondary data to collect from Government offices, NGOs, published literature<br>Field binocular |
| F. Socio-economic parameters | Demographic structure infrastructure resource base. | Socio-economic survey is based on proportionate | Once | |

**30.5.13: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration:** Nil

B. **Summary of Show Cause Notices:** Nil

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

**30.5.14: Undertaking:** Proponent has submitted the following undertaking -

i. That the layout and associated facilities of the Project have been designed in such a manner so as to ensure that Jhitku Nala flowing in the Eastern part of the site will not be diverted.

ii. That the existing natural drainage pattern of the Jhitku Nala will be maintained, and adequate protective measures shall be taken to avoid any disturbance to the natural flow of water.

iii. That Jhitku Nala will not be diverted for the implementation and operation of the 2x800 MW Thermal Power Project at Anuppur, Madhya Pradesh.

**Observations and deliberation of the EAC**

**30.5.15:** The Committee observed and noted the following:

i. Instant proposal is for greenfield project of 1600 (2x800) MW Coal Based Ultra Super Critical Thermal Power project located at village Raksha, Kolmi and Daikhal, Tehsil Anuppur, Anuppur District, Madhya Pradesh.

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

iii. 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.

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

v. Jhitku Nadi is adjacent inside flowing in East direction and Gohirari Nadi is located adajacent to the project boundary and flowing towards South direction. Sone River is at 1.7 (S-W) km from the project boundary. The elevation level of Jhitku Nala is 491 m and that of Gohirari Nadi is 482m and 484m for Sone River.

vi. Authenticated HFL data of the water body as per MoEF&CC O.M. dated 14/02/2022 shall be furnished.

vii. Coal requirement for proposed project will be met through Rail. There will be no road transportation of coal for proposed project. Only LDO/HSD will be transported by road.

viii. The water requirement for the proposed project is estimated as 72,456 $m^3$ /day, out of which 70,856 $m^3$/day of fresh water requirement will be obtained from the Sone River and the remaining requirement of. 1600 $m^3$ /day will be met from the Treatment facilities (ETP & STP). The permission for drawl of surface water is obtained from WRD Anuppur Vide Lr. No. 1129 Dated-01.05. 2025.The water will be transported to the plant site through Pipeline.

ix. The power requirement for the proposed project is estimated as 5 MW, out of which 5 MW will be obtained from the Nearest Sub-Station at Anuppur.

x. The capital cost of the proposed project is Rs. 23,740 Crores and the capital cost for environmental protection measures is proposed as Rs 1,285 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 24.22 Crores. The employment generation from the proposed project is 5050 during Construction and 1400 during Operation.

xi. Proposed greenbelt will be developed in 113.66 ha which is about 33.25% of the total project area. A 50 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed within 3 years 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 2,84,150 saplings will be planted and nurtured in 113.66 hectares in 5 years.

xii. Some habitations are located within 2 km distance from proposed project site. PP shall provide the details of environmental receptors present within 10km area and their mitigation measures and the same will be included in EIA/EMP reports.

xiii. The proposed units (2 x 800 MW) will incorporate high-efficiency Electrostatic Precipitators (ESP) to control particulate matter. EAC observed that Flue Gas desulphurization (FGD) technology is not proposed, it should be included in EIA/EMP reports.

xiv. PP shall carryout Hydrogeology and aquatic biodiversity study and the same shall be incorporated in the EIA/EMP reports.

xv. Detailed biodiversity and epidemiological study will be submitted in the EIA/EMP report.

xvi. Waste (Municipal Solid waste, e-waste, Biomedical and Hazardous waste) generated will be handled and processed/recycled by the authorized vendors.

xvii. EAC suggested to develop the Ash dyke /pond away from the Water bodies/Nallah.

xviii. PP shall calculate total carbon emission and sequestration in the proposed plant and the same shall be mentioned during the EC application

xix. PP has submitted an undertaking that existing natural drainage pattern of the Jhitku Nala will be maintained and will not be diverted.

xx. 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 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:**

**30.5.16:** In view of the foregoing and after detailed deliberation, the Committee ***recommended*** the above mentioned project for grant of Terms of Reference by prescribing following specific ToRs for undertaking detailed EIA and EMP study and conduct Public Consultation (along with the public hearing) in addition to generic ToR given at Annexure-I, subject to uploading of written submissions:

**[A] Environmental Management and Biodiversity Conservation**

i. Project Proponent shall explore the feasibility of using treated sewage from Sewage Treatment Plants located within 50 km radius of the proposed project as an alternative to the fresh water source to minimize the fresh water drawl from surface water bodies. Action plan in this regard shall be submitted.

ii. Project proponent shall optimize the land requirement for the proposed ash pond and design details of the same shall submitted in the EIA/EMP report.

iii. Certificate from concerned District Magistrate/Executive Engineer from the State Water Resources department (or) any officer authorized by the State Government in this regard shall be submitted stating that project site is not located within flood plain of Sone River corresponding to one in 25 years of flood as per Ministry's O.M. dated 14/02/2022.

iv. PP needs to submit NOC/permission from the State Water Resource Department/Irrigation Dept. in case of diversion of any Nala/Stream/water bodies.

v. All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent.

vi. Project proponent shall also obtain recommendations from the State Forest department regarding the impact of project on the nearby Reserved Forests, if any, along with the mitigation measures to be followed.

vii. EIA/EMP study shall take in to consideration the different scenarios arising due to change of coal source, impact on environmental attributes due to change of coal source along with corresponding mitigation measures with EMP budget shall be submitted.

viii. Biodiversity analysis of the project site and study area shall be done through any NABET accredited consultant. The study report shall inter-alia include impact of release of cooling tower water on aquatic life and action plan for complying with the mitigation measures shall be submitted.

ix. Project proponent shall commission a study on Hydrology and Hydrogeology of the project site as well as the study area of the project site through a NABET accredited consultant. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.

x. Radioactivity studies along with coal analysis to be provided (sulphur, ash percentage and heavy metals including Pb, Cr, As and Hg). Details of auxiliary fuel, if any including its quantity, quality, storage, etc should also be given.

xi. PP should submit the detailed plan in tabular format (year-wise) for concurrent afforestation and green belt development in and around the project site covering 33 % of the project area. The PP should submit the number of saplings to be planted, names of native species, area to be covered under afforestation & green belt, location of plantation, target for survival rate and budget earmarked for the afforestation & green belt development. The capital and recurring expenditure to be incurred needs to be submitted. Plantation plan should be prepared in such a way that 80% of the plantation to be carried out in first 5 years and for the remaining years the proposal for gap filling. The seedling should be of native and few fruit bearing species mainly, of height not less than 2 meters to be selected and accordingly cost of plantation needs to be decided.

xii. Action plan for development of three-tier plantation programme (33 % of total project cover area) within 3 years along the periphery of the project boundary and the coal transportation route shall be provided. PP shall submit concurrent plantation plan.

xiii. Detailed action plan shall be prepared for maintenance of air pollution control equipment for proposed units and shall be incorporated in the EIA/EMP report.

xiv. Details of Ash management plan as per MoEF&CC notification dated 31/12/2021 & its subsequent amendment for the proposed project shall be submitted. MoU signed for ash utilization with companies shall be submitted.

xv. Action plan for dry ash collection system (Bottom ash and Fly ash) shall be submitted.

xvi. Action plan for disposal of ash through High Concentration Slurry Disposal (only in emergency conditions) shall be submitted.

xvii. Proper protection measures like high-density polyethylene (HDPE) lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body (minimum 60 meters) etc. shall be planned to reduce the possibility of mixing leachate with any freshwater body for ash pond. A high-density Slurry disposal plan shall be prepared.

xviii. Pond and ground water quality (10 locations within 2 km radius of the plant boundary) shall be studied and report be submitted along with EIA/EMP. Action plan for Ground water monitoring stations on all hotspots like schools/hospitals within 2 km radius of the plant boundary be submitted. Baseline Study for Heavy metals in Groundwater, Surface water and soil to be carried out and incorporated in EIA/EMP report.

xix. Details pertaining to water source, treatment and discharge should be provided.

xx. PP shall provide the details of wastewater treatment facilities to be installed within its capacity, timeline and budget.

xxi. Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.

xxii. An action plan shall be prepared for Water shed development within 10 km radius of the plant boundary in consultation with reputed government institution and incorporated in EIA/EMP report.

xxiii. PP should clearly bring out that what is the specific diesel consumption ~ (Liters/Tonne of total material handled) and steps to be taken for reduction of the same. The year-wise target for reduction in the specific diesel consumption needs to be submitted. PP shall also explore the possibility of using e-vehicles/LNG/CNG-based machinery and trucks for the operation and transportation of Coal and ash and submit an implementation strategy.

xxiv. PP shall provide the details of transportation of fly ash from the plant, transportation route etc. Further, carry out a traffic study for at least one month and provide the impact of transportation along with the mitigation measures.

xxv. PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2016 and to adhere Ministry's OM dated 18/07/2022.

xxvi. Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted.

xxvii. The input parameters for the AAQ modelling and the influence of various combinations of these on the AAQ must be reported in the EIA/EMP Report. In addition to the Wind Rose diagram collected for one season during the preparation of the E.I.A., wind rose diagram for all seasons must be provided using secondary data from sources such as IMD/CPCB etc.

xxviii. Project proponent shall take all necessary steps to control the Air Quality and take additional mitigation measures for proposed TPP to maintain the Ambient Air Quality values within the limits. The action plan regarding maintaining ambient quality standards (Time weighted average for 24 hours and Annual both) be submitted. Further, project proponent shall submit an undertaking to abide by the provisions of the notification number G.S.R 465 (E) dated 11/07/2025 related to FGD, as amended, and any subsequent amendment there of pursuant to the outcome of study carried out by CPCB in this regard.

xxix. Details of air pollution control devices to be installed in the proposed 2x800 MW TPP along with its maintenance schedule shall be incorporated in EIA/EMP report.

xxx. Carbon emission due to TPP and allied carbon sequestration/ carbon offsetting plan be submitted.

xxxi. 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. An action plan in this regard shall be submitted.

**[B] Disaster Management**

i. A Disaster Management Plan shall be prepared and incorporated in the EIA/EMP report.

**[C] Socio-economic Study**

i. Public Health Action Plan including the provisions for drinking water supply for the local population shall be in the EIA/EMP Report. The status of the existing medical facilities in the project area shall be discussed. Possibilities of strengthening of existing medical facilities, construction of new medical infrastructure etc. will be explored after assessing the needs of the labour force and local populace.

ii. Public consultation (Public Hearing and Written submission) shall be conducted as per the provisions of EIA Notification, 2006 and as amended. As per the Ministry's OM dated 30.09.2020, to address the concern raised during the Public Hearing, the Project Proponent is required to submit the detailed activities proposed with year-wise budgetary provision (Capital and recurring) for 5 years. Activities proposed shall be part of EMP. Tentative no. of project affected families (if any) shall be identified and accordingly appropriate Rehabilitation &Resettlement plan shall be prepared. The recommendation Socio-economic study may also be considered while planning the activities & budget.

iii. A need based Social Impact Assessment Study shall also be carried out and an action plan on its recommendations may also be submitted with budgetary provisions.

iv. Demographic details and land use change details in 10 km area shall be submitted.

**[D] Miscellaneous**

i. Plot the wind rose diagram using the typical meteorological year (TMY) data for the period considered for the study. The monitoring units shall be deployed in the field based on the coverage area ratio and direction of the wind. A mathematical model shall be developed for the local site rather than using the standard model

available in software for both air & water quality modeling.

ii. PP shall align its activities to one/few of the Sustainable Development Goals (SDG) and start working on the mission of net zero by 2050. PPs shall update the same to the EAC.

iii. PP shall submit the EIA/EMP report after the plagiarism check using authenticated plagiarism software.

iv. Detailed description of all the court cases along with its current status shall be submitted.

v. PP should provide in the EIA Report details of all the statutory clearances, permissions, no objection certificates, consents etc. obtained for this project under various Acts, Rules and regulations shall be submitted. Further, all the permissions/MoUs obtained for this project shall be revalidated and submitted along with the EIA/EMP report.

vi. The PP should submit the photograph of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this PP should submit the original test reports and certificates of the labs, which will analyze the samples.

vii. PP should clearly bring out the details of the manpower to be engaged for this project with their roles /responsibilities/designations. In addition to this PP should mention the number and designation of persons to be engaged for the implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.

viii. PP should submit the year-wise, activity wise and time-bound budget earmarked for EMP, occupational health surveillance, and activities proposed to address the issues raised during Public Hearing. The capital and recurring expenditure to be incurred needs to be submitted.

ix. Activities shall be prepared based on the issues arise during public hearing conducted and fresh written submission with defined timeline and budgetary provisions.

x. Aerial view video of project site and coal transportation route proposed for this project shall be recorded through drone and be submitted. Along with this plan of 3 tier plantation on coal transportation route shall be submitted.

xi. The PP should ensure that only NABET-accredited consultants shall be engaged for the preparation of EIA/EMP Reports. PP shall ensure that the accreditation of the consultant is valid during the collection of baseline data, preparation of EIA/EMP report and the appraisal process. The PP and consultant should submit an undertaking the information and data provided in the EIA Report and submitted to the Ministry are factually correct and the PP and consultant are fully accountable for the same.

xii. PP should provide in the EIA Report details of the statutory clearances, permissions, no objection certificates, consents etc. required for this project under various Acts, Rules and regulations and their status or estimated timeline after the grant of EC.

xiii. All the certificates viz. involvement of Forest land, distance from the protected

area, and list of flora & fauna should be duly authenticated by the Forest Department. The Certificate should bear the name, designation, official seal of the person signing the certificate and dispatch number.

xiv. Necessary coordination shall be made with concerned SPCB (who is responsible for Compliance of OM dated 14.01.2025) regarding streamlining the implementation of GSR 702 and GSR 703 dated 12.11.2024 through which projects requiring prior EC were exempted from requirement of CTE.

*****

**ANNEXURE-I**

LIST OF PARTICIPANTS OF EAC (THERMAL) IN 30th MEETING HELD ON 26TH SEPTEMBER, 2025 THROUGH PHYSICAL MODE

| S. No. | Name & Address | Role | 26.09.2025 |
|---|---|---|---|
| 1. | Shri Inder Pal Singh Matharu, (I.F.S. Retd.) | Chairman | Present |
| 2. | Shri Lalit Kapur | Member | Present |
| 3. | Dr. Umesh Jagannathrao Kahalekar | Member | Present |
| 4. | Dr. Santosh Kumar Hampannavar | Member | Present |
| 5. | Shri Savalge Chandrasekhar | Member | Present |
| 6. | Shri K. B. Biswas | Member | Present |
| 7. | Prof. Shyam Shanker Singh | Member | Present |
| 8. | Dr. Vinod Agrawal | Member | Present |
| 10. | Shri Mahi Pal Singh, Chief Engineer | Representative of Central Electricity Authority (CEA) | Present |
| 11. | Shri Harmeet Sawhney, Scientist 'E' | Representative of Indian Meteorological Department (IMD) | Absent |
| 12. | Prof. R M Bhattacharjee | Representative of IIT/ISM Dhanbad | Present |
| 13. | Shri Prasoon Gargava, Scientist 'F' | Representative of Central Pollution Control Board | Absent |
| 13. | Shri Sundar Ramanathan | Scientist 'F' & Member Secretary | Present |
| 14. | Dr. Rajesh Prasad Rastogi | Scientist 'D' | Present |

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## ANNEXURE-II

## APPROVAL OF CHAIRMAN – EAC

10/10/25, 1:31 PM (285 unread) - Inbox - Mail (rp.rastogi@gov.in)

**Re: FINAL MOM OF 30 EAC THERMAL HELD ON 26/09/2025**

Inderpal Singh Matharu <matharu0204@gmail.com>
Fri, 10 Oct 2025 1:26:55 PM +0530 INBOX
"RAJESH PRASAD RASTOGI" <rp.rastogi@gov.in>
"Sundar Ramanathan" <r.sundar@nic.in>
TLS Learn more

**Warning: Flagged by your organization rules**
The email has been sent from an external organization. Be alert when clicking any links, downloading attachments or sending sensitive information to this sender.

Dear Rajesh ji,
I have gone through the final draft MoM of the 30th EAC- Thermal held on 26th September 2025 sent by you. In this all the points have been incorporated including amendments done in Zero draft of it. I agree with the above Final draft of MoM.
Hence I approve the final MoM of the 30th EAC- Thermal .

Sincerely yours

Inder Pal Singh Matharu
Chairman
EAC, Coal mining and Thermal power
MoEF&CC
GoI

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