



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



Minutes of AGENDA FOR 43rd MEETING OF THE EXPERT APPRAISAL COMMITTEE (EAC) (THERMAL POWER PROJECTS) TO BE HELD ON 14th MAY, 2026 Date: 21/05/2026
6 DURING 10:30 – 15:30 HRS THROUGH VIRTUAL MODE. meeting Thermal
Projects held from 14/05/2026 to 14/05/2026

MoM ID: EC/MOM/EAC/688144/5/2026

Agenda ID: EC/AGENDA/EAC/688144/5/2026

Meeting Venue: N/A

Meeting Mode: Virtual

Date & Time:

14/05/2026	10:30 AM	05:30 PM
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1. Opening remarks

SUMMARY RECORD OF THE FORTY THIRD (43rd) MEETING OF EXPERT APPRAISAL COMMITTEE (EAC) HELD DURING 14th MAY 2026 FOR ENVIRONMENT APPRAISAL OF THERMAL SECTOR PROJECTS THROUGH VIRTUAL MODE.

14th MAY, 2026 [THURSDAY]

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 EAC members who participated in the meeting is at **Annexure – I.**

[The main PDF of MoM is enclosed at Page no. 112 - 198]

2. Confirmation of the minutes of previous meeting

Confirmation of the minutes of the 42nd meeting of the EAC (Thermal): The minutes of the 42nd meeting of the EAC (Thermal) held on 30th April, 2026 through physical mode have been confirmed by the EAC, along with the following corrections-

A. Agenda Item No. 42.3:

Minutes uploaded on PARIVESH	To be read as
42.3.7: Environment Management Plan: Transport of raw material will be by road through covered trucks initially and then through covered conveyor.	42.3.7: Environment Management Plan: Transport of raw material will be by road through covered trucks initially and then through covered conveyor within Plant.
42.3.7: Air Pollution & Fugitive Emission Control Systems: Company has earmarked 85.79 Ha as ash pond area and 154. 72 Ha as green belt (Total – 240.51 Ha). When disposal will be slurry form, the ash will be laid layer by layer in pre designated parts of the ash pond sequentially.	42.3.7: Air Pollution & Fugitive Emission Control Systems: Company has earmarked 117.24 Ha as ash pond area and 186.54 Ha as green belt. When disposal will be slurry form, the ash will be laid layer by layer in pre designated parts of the ash pond sequentially

B. Agenda Item No. 42.6:

Minutes uploaded on PARIVESH	To be read as
42.6.7: Recommendations of the Committee: In view of the foregoing and after the detailed deliberations, the Committee partially recommended the instant proposal for grant of amendment in the ECs dated 18/03/2011 & 04/11/2011 and its subsequent amendment dated 24/02/2023 as detailed below subject to stipulation of following additional specific conditions. Other terms and conditions prescribed in EC dated 18/03/2011 & 04/11/2011 and its subsequent amendments shall remain unchanged:	42.6.7: Recommendations of the Committee: In view of the foregoing and after the detailed deliberations, the Committee recommended the instant proposal for grant of amendment in the ECs dated 18/03/2011 & 04/11/2011 and its subsequent amendment dated 24/02/2023 as detailed below subject to stipulation of following additional specific conditions. Other terms and conditions prescribed in EC dated 18/03/2011 & 04/11/2011 and its subsequent amendments shall remain unchanged:

3. Details of proposals considered by the committee

Day 1 -14/05/2026

3.1. Agenda Item No 1:

3.1.1. Details of the proposal

“Proposed Expansion of Existing Waste to Energy Plant up to 45 MW”, at adjacent DTC Tehkhand Depot, Maa Anandmai Marg, New Delhi-110020 by M/s Tehkhand Waste to Electricity Project Limited by TEHKH AND WASTE TO ELECTRICITY PROJECT LIMITED located at South East,DELHI			
Proposal For		Expansion EC	
Proposal No	File No	Submission Date	Activity Sub-Activity (Schedule Item)
IA/DL/THE/566057/2026	J-13012/03/2017-IA.I(T)	02/03/2026	Thermal Power Plants Municipal solid (non-hazardous) waste using auxiliary fuel such as coal/lignite/petroleum products upto 15% (1(d))

3.1.2. Project Salient Features

Agenda Item No.- 43.1

43.1: Expansion of Existing 25 MW Waste to Energy (WTE) Plant to 45 MW by M/s Tehkhand Waste to Electricity Project Limited located at adjacent DTC Tehkhand, Depot, Maa Anandmai Marg, District Southeast, New Delhi – Environment Clearance under para 7(ii) a of EIA Notification, 2006 – regarding.

[Proposal no. IA/DL/THE/566057/2026, F.No. J-13012/03/2017-IA.I(T)]

43.1.1: M/s. Tehkhand Waste to Electricity Project Ltd has made an online application vide proposal No. IA/DL/THE/566057/2026 dated 10.02.2026 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 attracts general condition due to proximity to protected area- Notified Eco sensitive area- Okhla Bird Sanctuary ESZ at 4.76 Km NE and Okhla Bird Sanctuary at 4.83 km NE, Asola Wildlife Sanctuary ESZ at 0.72 km SW & Asola Wildlife Sanctuary at 1.65 km SW & inter-state boundaries-Delhi-Haryana State boundary at 1.30 Km SE and Critically Polluted Area namely Okhla Industrial Area is located at 0.61 km North. In view of this, the project is appraised at Central Level.

Name of the EIA consultant: M/s Perfact Enviro Solutions Pvt. Ltd. [S. No. 173, List of ACOs An ISO 9001:2015 & ISO 14001:2015 Certified Company) with Certificate / Extension Letter no. NABET/EIA/25-28/RA 0467.; Valid up to 26.11.2028].

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

43.1.2: The project of M/s Tehkhand Waste to Electricity Project Ltd. located in Tehkhand Village, Kalkaji Tehsil, Tehkhand District, New Delhi State is for setting up of a new Waste to Energy plant with a capacity of 20 MW for enhancement of power generation capacity from 25 MW to 45 MW.

43.1.3: The existing project was accorded environmental clearance vide letter.no. F.No. J-13012/03/2017 IA.I(T) dated 26/07/2018 from MoEF&CC and Amendment in EC vide letter No. J 13012/03/2018-IA.I(T) dated 15/01/2019. Consent to Operate (CTO) for the existing unit was accorded by Delhi Pollution Control Committee (DPCC), vide File No. DPCC/WMC-II/Tehkhand-WTE/2025/02 dated 10/01/2025. The validity of CTO is up to 06/10/2029.

43.1.4: Implementation status of the existing EC

Sl. No.	Configuration	Capacity (MW)	As per the EC dated	Implementation Status as on May 2026	Production as per CTO
1	Product- Power Generation through M SW waste processing 2000 TPD	25MW	26/07/2018 & 15/01/2019 (Amendment in EC)	The project has been fully implemented in compliance with the EC conditions and is currently in operation after obtaining necessary all clearances and No Certificates from departments. (NOCs) concerned departments.	25 MW

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

Name of the facility	Unit	Existing	Proposed Expansion*	Total after Expansion Capacity	
Product (Waste to Energy Power)	MW	25	20	45	
Biogas production (by-product)	Nm ³ /day or TPD	Nil	Biogas = up to 20,000 Nm ³ /day /CBG = up to 8 TPD	Biogas = up to 20,000 Nm ³ /day /CBG = up to 8 TPD	

Boiler for WTE	TPH	2 x 65	≤100	≤230	
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Process description

WTE plant

The technology proposed to be employed for this WTE project is RDF combustion based reciprocating forward feed grate technology. The power plant constitutes Material Recovery Facility (Pre-sorting), RDF fuel Pit, Incinerators, Boilers, and Steam Turbine Generators with power generation capacity of 20 MW.

Bio-gas plant

- Leachate Treatment Plant utilizes chemical and biological treatment methods to treat approximately 360 KL of leachate per day. The plant features three anaerobic digesters operating in both series and parallel modes.
- Anaerobic (without oxygen) biological process that breaks down organic materials and release biogas.
- The Digestion takes about 20 days in the mesophilic temperature (30C – 35C) and producing approx. 8000 to 20,000Nm³ of biogas per day.
- Anaerobic digestion has four major steps: Hydrolysis, Acidogenesis, Acetogenesis & Methanogenesis to decompose the organic matter and produce biogas.
- Digested Sludge from the bottom can be used as manure.

CBG production

- Raw biogas will be filtered and cleaned to remove impurities like hydrogen sulphide, moisture, and particulate matter.
- Carbon dioxide and hydrogen sulphide gas will be removed from the biogas using scrubbing and absorption methods.
- The biogas is then enriched to increase the CH₄ concentration, typically to 90-95%.
- The scrubbed biogas will be compressed to high pressure (typically 200- 250 bar) and filled into CBG cylinders or will be supplied to gas grid through pipeline.
- The final CBG / Bio-CNG product will meet specified standards for fuel quality, safety, and environmental regulations.

43.1.6: Certified compliance report from Regional Office

The status of compliance of earlier EC was obtained from Regional Office, vide File No. V/ENV/DLI/1412/2018/220 [E Computer No. 271496], dated 01.08.2025 in the name of M/s Tehkhand Waste to Electricity Project Ltd. The Action Taken Report regarding the partially/non-complied conditions was submitted to Regional Office, MoEF&CC, Lucknow vide letter bearing Ref. No. TWEPL/EXP/2025-26/008 dated 14.08.2025 by the project proponent. Further, IA-CMD write a letter vide F. No. IA-J-11014/201/2025-IA-I, dated 17.12.2025 to DDGF(C), RO, MoEF&CC – Lucknow, for issuing an Action Taken Review Report to Project Proponent. Accordingly, MoEF&CC (RO), Lucknow evaluated the report and has issued Action Taken Review Report to M/s Tehkhand Waste to Electricity Project Ltd. vide File No. V/ENV/DLI/1412/2018 [E computer No. 271496]/373 dated 10.02.2026. Based on this, proponent has submitted a request letter to IA-CMD, MoEF&CC vide letter TWEPL/EXP/MoEF&CC/2026-27/001 dated 28.04.2026, seeking issuance of an Action Closure Letter and the same was issued by IA-C&MD on 6/05/2026.

The details of the observations made by RO in the report dated 10/02/2026 along with its re-assessment / present status as furnished by the PP are given as below:

S. N o.	Non- compliances details	Observation of RO (abridged)	Condition no.			Closure Remarks by IR O dated 10/02/2026	Present Status
			EC date	Specific	General		
1	PM ₁₀ sensor was not working and showing wrong and malfunction data. [Specific	PM ₁₀ sensor was not working and showing wrong and malfunction data. [Specific	26.07.2018 & 15.01.2019	Specific Condition (vi)	-	It is submitted that during the day of visit on 22.07.2025, the PM ₁₀ sensor was not working and showing wrong and malfunction data. In this regard, PP has informed that they have already reported to CPCB. In this context, PP has been advised	Complied

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Closure Remarks by IR O dated 10/02/2026	Present Status
			EC date	Specific	General		
	Condition (vi)]	Condition (vi)]				to rectify the issue and submit the ATR in this regard to the Ministry. Now, based on the ATR reply submitted by the Project Authority along with display screenshot photograph, it appears that the analyser is working now. The condition may be complied. Complied.	
2	PP has not made adequate expenditure for CER activities.[Specific Condition (xviii) & (xix)]	PP has not made adequate expenditure for CER activities. [Specific Condition (xviii) & (xix)]	26.07.2018 & 15.01.2019	Specific Condition (xviii) & (xix)	-	It is submitted that during the day of visit on 22.07.2025, it had been observed that PP has not made adequate expenditure, towards CER activities, as the EC was granted in 2018 and at that time, the said OM dated 01.05.2018 [CER], was in force. In this regard, PA has been advised to provide the detailed compliance status w.r.t. activities proposed at the time of EC with budget vis-à-vis completed activities along with expenditure made to the Ministry. Now, based on the ATR reply submitted by the Project Authority, which inter-alia, mentioned that a total of Rs. 121.58 Lakhs was earmarked for these activities. As per information provided, PA has made expenditure of Rs. 78.38 Lakhs towards these initiatives between Financial Years 2018-19 & 2024-25. Further, PA has reported that a comprehensive action plan has been prepared	Action Plan of remaining CER amount Rs. 23 lakh for FY 2026-27 has been submitted to RO, MoEFCC, Lucknow and to EAC (Thermal) as well.

S. N o.	Non- compliances details	Observation of RO (abridged)	Condition no.			Closure Remarks by IR O dated 10/02/2026	Present Status
			EC date	Specific	General		
						pared for the balance a mount of Rs. 43.20 Lakhs, with completion targeted for the period of Financial Years 2025-26 (Rs. 20.22 lakhs) and 2026-27 (Rs. 23.0 lakhs). It is also reported by PA, that the total proposed CER expenditure for FY 2025-26 was Rs. 20.22 Lakhs, out of which Rs. 10.21 Lakhs has been spent till date and the balance amount Rs. 10.01 Lakhs proposed to be spent in the period of October 2025 to March-2026. Gist of CER amount proposed at the time of EC and expenditure is as below: · Total CER proposed at the time EC grant in 2018 => Rs. 121.58 Lakhs · Total CER expenditure made w.e.f. F.Y. 2018-19 & 2024-25. => Rs. 78.38 Lakhs · Total CER expenditure made F.Y. 2025-26 (April-September 2025) => Rs. 10.21 Lakhs · Total CER expenditure proposed (under expenditure) for F.Y. 2025-26 (October 2025-March 2026) => Rs. 10.01 Lakhs · Total CER expenditure proposed for F.Y. 2026-27 => Rs. 23.0 Lakhs. Now, based on the ATR reply submitted by the Project Authority along with commitment made fo	

S. N o.	Non- compliances details	Observation of RO (abridged)	Condition no.			Closure Remarks by IR O dated 10/02/2026	Present Status
			EC date	Specific	General		
						r the remaining expenditure related to CER in next FY, it appears that PA is committed to comply with this EC condition. Assured to comply with this EC condition related to CER.	
3	For proper and periodic monitoring of CSR activities, CSR committee or Social Audit Committee or a suitable credible external agency has not been constituted yet. [Specific Condition (xx)]	For proper and periodic monitoring of CSR activities, CSR committee or Social Audit Committee or a suitable credible external agency has not been constituted yet. [Specific Condition (xx)]	26.07.2018 & 15.01.2019	Specific Condition (xx)	-	It is submitted that during the day of visit on 22.07.2025, it had been observed that CSR committee or Social Audit Committee or a suitable credible external agency for proper and periodic monitoring of CSR activities, has not been constituted, as per the EC condition. In this regard, PP has been advised that the evaluation of CSR activities by an independent external agency, needs to be carried out immediately, as per this EC condition. Now, based on the ATR reply submitted by the Project Authority, which inter-alia, mentioned that the Social Audit Committee (SAC) for the evaluation of CSR activities and cost spent towards CSR for the period of FY. 2024-25 was carried out. The total amount Rs. 10.50 Lakhs were allocated and utilized towards on-going programs for differently abled individuals, in alignment with activities outlined in the Schedule VII under Companies Act. A copy of Social Audit Report submitted by SAC committee is attached herewith in ATR reply.	Complied

S. N o.	Non- compliances d etails	Observa tion of RO (abridged)	Condition no.			Closure Remarks by IR O dated 10/02/2026	Present Status
			EC date	Specific	General		
						Now, based on the ATR reply submitted by the Project Authority, it appears that PA is committed to comply with this EC condition now. Being complied now.	
4	The housekeeping of the LTP area is not adequate. [General Condition (i)]	The housekeeping of the LTP area is not adequate. [General Condition (ii)]	26.07.2018 & 15.01.2019	-	General Condition (i)	It is submitted that during the day of visit on 22.07.2025, it was observed that the Leachate Treatment Plant (LTP) was in working condition; however, the housekeeping of the LTP area was not adequate and need improvement. In this regard, the PP was advised to do the needful and submit the ATR in this regard. Now, based on the ATR reply submitted by the Project Authority along with photograph of LTP area, it appears that the Housekeeping has now been improved in the Leachate Treatment Plant (LTP) area. The condition may be complied now. Being Complied.	Complied
5	PM ₁₀ and PM _{2.5} exceed the stipulated limits. [General Condition (vi)]	PM ₁₀ and PM _{2.5} exceed the stipulated limits. [General Condition (vi)]	26.07.2018 & 15.01.2019	-	General Condition (vi)]	It is submitted that during the day of visit, the submitted monitoring reports related to PM ₁₀ and PM _{2.5} , the data have been reported at higher side as per prescribed limit. In view of the above, PAs have been advised to take all the mitigation measures to minimize these particulate matter concentrations. In this regard, the PP was advised to do the needful and submit the ATR in this regard.	Appropriate measures are being taken and action plan for the same has been submitted to RO, MoEFCC, Lucknow and to EAC (Thermal) as

S. No.	Non-compliances details	Observation of RO (abridged)	Condition no.			Closure Remarks by IR O dated 10/02/2026	Present Status
			EC date	Specific	General		
						Now, based on the ATR reply submitted by the Project Authority along with nearby reported monitoring station data of PM₁₀ & PM_{2.5}, it appears that average concentration of PM₁₀ & PM_{2.5} observed at TWEPL is lower than the data of nearest monitoring station Dr. Karni Singh Shooting Range, values. However, still the concentration of PM₁₀ and PM_{2.5} exceeds the stipulated limits due to high baseline data in Delhi and NCR region in winter season. The PA has reported that the following mitigation measures are being applied to lower the concentration of particulate matter, as below: • State-of-the-art technology pollution control devices (Bag filters with FGD) have been installed to take care of stack and fugitive emissions. • 3 No. of Anti-Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas. • The entry gates have sensor-based wheel washing systems for vehicle cleaning and washing. • Fixed sprinklers are installed at the site to reduce dust while movement of trucks. Manual Sprinkling is also done regularly. • Thick layer of greenbelt has been developed around the periphery of the	well.

S. N o.	Non- compliances details	Observation of RO (abridged)	Condition no.			Closure Remarks by IR O dated 10/02/2026	Present Status
			EC date	Specific	General		
						e plant. It acts a buffer to surrounding areas. In view of the above, mitigation measure, still the particulate concentration of PM ₁₀ and PM _{2.5} exceeds the stipulated limits. This may be due to high baseline data of Delhi and NCR in winter season. The condition is still partially compiled. Partially Complied.	
6	The details of the PLI taken as per the provisions of the Public Liability (Insurance) Act, 1991, as recorded in this EC condition has not been submitted. [Other EC condition Para No. 34]	The details of the PLI taken as per the provisions of the Public Liability (Insurance) Act, 1991, as recorded in this EC condition has not been submitted. [Other EC condition Para No. 34]	26.07.2018 & 15.01.2019	-	-	It is submitted that during the day of visit, the details of the PLI taken as per the provisions of the Public Liability (Insurance) Act, 1991, as recorded in this EC condition has not been submitted. In this regard, the PP was advised to do the needful and submit the ATR in this regard. Now, based on the ATR reply submitted by the Project Authority along with copy of PLI, the condition may be compiled now. Complied.	Complied

43.1.7: The detail of the ToR is furnished as below:

Proposal No with date	Consideration	Details	Date of accord	ToR Validity
IA/DL/THE/544398/2025	28 th meeting of EAC – Thermal held on 12.08.2025	Terms of Reference	16.09.2025	4 years

43.1.8: Environmental site settings

S. No.	Particulars	Details	Remarks																								
1	Total Land	6.0703 ha [The complete area is Government l and obtained on lease from MCD]	Land use: The existing Land use of the project site is In dustrial. There will be no change in t he land use pattern of the s ite. As per Gazette Notifica tion dated 12.01.2018, the land is already notified for utility purposes by the Delh i Development Authority. The land was transferred fr om DDA to MCD and then was handed over to M/s Te hkhband Waste to Electricity Project Limited through a le ase deed agreement dated 25.09.2018.																								
2	Land use break up	<table><tr><th>Parti -culars</th><th>Existing (Ha)</th><th>Expansion (Ha)</th><th>Area upon expansion (Ha)</th></tr><tr><td>Covered ar ea</td><td>2.2190</td><td>0.4664 (increase d)</td><td>2.6854</td></tr><tr><td>Road area & drainage</td><td>1.0116</td><td>0 (will remai n same)</td><td>1.0116</td></tr><tr><td>Green Area (33%)</td><td>2.0142</td><td>0 (will remai n same)</td><td>2.0142</td></tr><tr><td>Open Area</td><td>0.8255</td><td>0.4664 (reduced)</td><td>0.3591</td></tr><tr><td>Total Area</td><td>6.0703</td><td></td><td>6.0703</td></tr></table>	Parti -culars	Existing (Ha)	Expansion (Ha)	Area upon expansion (Ha)	Covered ar ea	2.2190	0.4664 (increase d)	2.6854	Road area & drainage	1.0116	0 (will remai n same)	1.0116	Green Area (33%)	2.0142	0 (will remai n same)	2.0142	Open Area	0.8255	0.4664 (reduced)	0.3591	Total Area	6.0703		6.0703	-
Parti -culars	Existing (Ha)	Expansion (Ha)	Area upon expansion (Ha)																								
Covered ar ea	2.2190	0.4664 (increase d)	2.6854																								
Road area & drainage	1.0116	0 (will remai n same)	1.0116																								
Green Area (33%)	2.0142	0 (will remai n same)	2.0142																								
Open Area	0.8255	0.4664 (reduced)	0.3591																								
Total Area	6.0703		6.0703																								
3	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 & 20/2/2025	The land was transferred from DDA to MCD a nd then was handed over to M/s Tehkhand W aste to Electricity Project Limited through a le ase deed agreement dated 25.09.2018.	Registration No. 5.302 dat ed 25.09.2018 and agreem ent is up to 25 years																								
4.	Existence of habitation & involvement of R&R, if any.	Project site: Not applicable Study Area: <table><tr><td>N a m e o f</td><td>Di s t a n c e (K m)</td><td>Di r e c t i o n</td></tr></table>	N a m e o f	Di s t a n c e (K m)	Di r e c t i o n	Status of R&R. Not applica ble																					
N a m e o f	Di s t a n c e (K m)	Di r e c t i o n																									

S. No.	Particulars	Details			Remarks
		H a b i t a t			
		R a i l w a y C o l o n y	0. 41	S E	
		P r e m N a g a r	0. 48	S S W	
		P u l P e h l a d p u r	1. 10	N N W	
		T u g l a q a b a d V i l l a g e	1. 37	N W	
		T e h k	1. 39	N N E	

S. No.	Particulars	Details			Remarks
		h a n d			
		T u g l a q a b a d E x t e n s i o n	2. 54	N W	
		S a r i t a V i h a r	2. 58	N E	
		T a j p u r P a h a r i	2. 72	E S E	
		T a l i m a b a d	2. 76	W N W	
		G o v i n d p u r i	3. 24	N N W	

S. No.	Particulars	Details			Remarks
		M a d a n p u r K h a d a r	3. 53	N E	
		G u p t a C o l o n y	3. 79	S W	
		J a s o l a V i h a r	4. 19	N N E	
		K a l k a j i	4. 20	N N W	
		M i t h a p u r	4. 28	E S E	
		S a r a i K h a w a j a V i l l	4. 31	S E	

S. No.	Particulars	Details			Remarks
		a g e			
		D e v l i	4. 34	S W	
		S a n g a m V i h a r	4. 38	W	
		J a i t p u r	4. 45	W	
		D a k s h i n p u r i	4. 46	W N W	
		D r. A m b e d k a r N a g a r	4. 56	N W	
		K h a n p u r	4. 64	W	
		G K	4. 67	N W	

S. No.	Particulars	Details	Remarks																																																												
		II The nearest habitation is Tughlakabad Railway Colony 0.41 km, East. However there is no R & R involved in the said project. Hence Not applicable.																																																													
5.	Existence of school and hospital if any.	A. <u>School</u> <table><thead><tr><th>School</th><th>Distance</th><th>Direction</th></tr></thead><tbody><tr><td>MCD Primary School (BOYS)</td><td>0.49 Km</td><td>SE</td></tr><tr><td>Apollo Public School</td><td>0.76 Km</td><td>SW</td></tr><tr><td>Government Girls Senior Secondary School</td><td>0.79 Km</td><td>ESE</td></tr><tr><td>Sky High Modern School</td><td>0.95 Km</td><td>WNW</td></tr><tr><td>MCD Primary School, Railway Colony</td><td>1.07 Km</td><td>ESE</td></tr><tr><td>New Sangam Public School</td><td>1.19 Km</td><td>W</td></tr><tr><td>Nav Jai bharti Public School</td><td>1.39 Km</td><td>SE</td></tr><tr><td>Manav Rachna International School Eros Garden,</td><td>1.43 Km</td><td>SSE</td></tr><tr><td>New Motherland Public School</td><td>1.56 Km</td><td>ESE</td></tr><tr><td>Govt. Boys Sr. Sec. School No 1</td><td>1.67 Km</td><td>E</td></tr><tr><td>Bal Upwan Public School</td><td>1.86 Km</td><td>SE</td></tr><tr><td>Ramchander Memorial Public School</td><td>1.92 Km</td><td>SE</td></tr><tr><td>St. Columbus School</td><td>2.19 Km</td><td>SE</td></tr><tr><td>Saraswati Vidya Niketan Public School</td><td>2.39 Km</td><td>SE</td></tr><tr><td>Little wings play school</td><td>2.41 Km</td><td>SE</td></tr><tr><td>Ashiyani Public School Faridabad, New Delhi, Haryana 121009</td><td>2.46 Km</td><td>SSE</td></tr><tr><td>Kinderzone School</td><td>3.23 Km</td><td>SSE</td></tr></tbody></table> B. <u>Hospital</u> <table><thead><tr><th>Hospital</th><th>Distance</th><th>Direction</th></tr></thead><tbody><tr><td>OKHLA PH-I ESI</td><td>0.50 Km</td><td>NNE</td></tr></tbody></table>	School	Distance	Direction	MCD Primary School (BOYS)	0.49 Km	SE	Apollo Public School	0.76 Km	SW	Government Girls Senior Secondary School	0.79 Km	ESE	Sky High Modern School	0.95 Km	WNW	MCD Primary School, Railway Colony	1.07 Km	ESE	New Sangam Public School	1.19 Km	W	Nav Jai bharti Public School	1.39 Km	SE	Manav Rachna International School Eros Garden,	1.43 Km	SSE	New Motherland Public School	1.56 Km	ESE	Govt. Boys Sr. Sec. School No 1	1.67 Km	E	Bal Upwan Public School	1.86 Km	SE	Ramchander Memorial Public School	1.92 Km	SE	St. Columbus School	2.19 Km	SE	Saraswati Vidya Niketan Public School	2.39 Km	SE	Little wings play school	2.41 Km	SE	Ashiyani Public School Faridabad, New Delhi, Haryana 121009	2.46 Km	SSE	Kinderzone School	3.23 Km	SSE	Hospital	Distance	Direction	OKHLA PH-I ESI	0.50 Km	NNE	
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		Hospital			
		MAX Lab	0.92 Km	SE	
		Tuglakabad Railway Health Unit N R Hospital	1.02 Km	ESE	
		Western Central Railway Hospitals	1.02 Km	ESE	
		Jeewan Jyoti Hospital	1.21 Km	NNE	
		Jain Charitable Hospital	1.24 Km	SE	
		Sarvopari Hospital	1.56 Km	SE	
		Supreme Hospital	1.98 Km	SE	
		BTPS Hospital	2.03 Km	East	
		ECHS Polyclinic Hospital	2.44 Km	WNW	
		Health City Clinic Landmark	2.70 Km	ESE	
		Majeedia Unani Hospital	2.77 Km	WNW	
		Hakeem Abdul Ha meed Centenary Hospital	2.78 Km	WNW	
		Unity Hospital	3.11 Km	SE	
		Batra Hospital & Medical Research Centre	3.35 Km	WNW	
		Universal Hospital DND	3.41 Km	SE	
		Mitigation Measures: - Proposed: The proposed Boiler of up to 100 T PH will be installed as the 3rd boiler with the Best available technology and State-of-the-art technology pollution control devices. The proposed bag filters will be designed with 130% capacity, providing additional margin for efficient emission control. - Emissions from stacks are maintained within the CPCB standards and as per emission standards prescribed in CTO. The same will be maintained after expansion. - Online Continuous Emission Monitoring System (OCEMS) already installed at the site. - The OCEMS and CAAQMS were installed on 10.12.2022 & 17.02.2023 for stack emission & ambient air monitoring. The OCEMS and CAAQMS are connected with DPCC & CPCB Servers for online monitoring of prescribed parameters. - The Air dispersion modeling of existing and proposed point sources has been done. The modelling suggests that the proposed expansion			

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		nsion will have negligible incremental to the background concentration. · 3 No. of Anti-Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas. · Manual Sprinkling is also done regularly. · The entry gates have sensor-based wheel washing systems for vehicle cleaning and washing. · The materials are kept covered using green net. · Continuous Ambient Air Quality Monitoring Station (CAAQMS) already installed. · Storing of construction material in covered condition at project site. · Proper route management of the traffic for smooth ingress and egress of traffic. · Monitoring of Ambient Air Quality at periodic intervals.																						
6.	Latitude and Longitude of all corners of the project site.	A. Plant site <table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>28°30'35.31"N</td><td>77°16'50.83"E</td></tr><tr><td>B</td><td>28°30'32.42"N</td><td>77°16'56.59"E</td></tr><tr><td>C</td><td>28°30'23.04"N</td><td>77°16'51.19"E</td></tr><tr><td>D</td><td>28°30'25.47"N</td><td>77°16'44.93"E</td></tr></table>	Point	Latitude	Longitude	A	28°30'35.31"N	77°16'50.83"E	B	28°30'32.42"N	77°16'56.59"E	C	28°30'23.04"N	77°16'51.19"E	D	28°30'25.47"N	77°16'44.93"E							
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7	Elevation of the project site	The project site elevation varies from 249 m to 260 m above mean sea level (amsl)																						
8	Involvement of Forest land if any	Nil	Not applicable																					
9	Water body (Rivers, Lakes, Pond, Nalla, Natural Drainage, Canal etc.) exists within the project site as well as study area	Project site: There are no water body within the project site Study area -The following are within 5km radius from the project site <table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Pond Near Prem Nagar</td><td>0.51 Km</td><td>West</td></tr><tr><td>Pond Near Chuginao 2</td><td>0.57 Km</td><td>SSW</td></tr><tr><td>Hari Singh Pond</td><td>0.60 Km</td><td>W</td></tr><tr><td>Pond Near Tughlakabad District Park</td><td>1.00 Km</td><td>W</td></tr><tr><td>Pond Near Tughlakabad Fort Pond</td><td>1.03 Km</td><td>WSW</td></tr><tr><td>Pond Near Tughlak</td><td>1.10 Km</td><td>NNW</td></tr></table>	Water body	Distance	Direction	Pond Near Prem Nagar	0.51 Km	West	Pond Near Chuginao 2	0.57 Km	SSW	Hari Singh Pond	0.60 Km	W	Pond Near Tughlakabad District Park	1.00 Km	W	Pond Near Tughlakabad Fort Pond	1.03 Km	WSW	Pond Near Tughlak	1.10 Km	NNW	
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10	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant	Study area Name & Distance of the ESZ/ESA: (a) Asola Wildlife Sanctuary ESZ is located at 0.72 km SW & Asola Wildlife Sanctuary is located at 1.65 km SW. (b) Okhla Bird Sanctuary ESZ is located at 4.76 Km NE and Okhla Bird Sanctuary is located at 4.83 km NE																																														

S. No.	Particulars	Details	Remarks								
	reserve etc. if any within the study area	Status of Notification: a) Gazette Notification for ESZ & WLS of Asola Wildlife Sanctuary published in 2017. b) Gazette Notification for ESZ & WLS of Okhla Bird Sanctuary published in 2015. Authenticated map of ESZ projecting distance of ESZ from project site: The Map showing the distance has been submitted. Status of NBWL approval: Not applicable List of Reserved and Protected Forests: <table><tr><th>Forest Type</th><th>Name</th><th>Distance & Direction</th></tr><tr><td>Reserved Forest</td><td>Jahanpanah City Forest</td><td>2.78 km in WNW</td></tr></table> Mitigation Measures- Greenbelt covering 33% of the plot area i.e. 2.0 142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESZ area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Miyawaki plantation will be implemented in designated areas as per space availability.	Forest Type	Name	Distance & Direction	Reserved Forest	Jahanpanah City Forest	2.78 km in WNW			
Forest Type	Name	Distance & Direction									
Reserved Forest	Jahanpanah City Forest	2.78 km in WNW									
11	Archaeological sites monuments/ historical temples etc.	The following Archaeological Sites are in the radius of 2 km from the project site: <table><tr><th>Name</th><th>Distance Direction</th></tr><tr><td>Nai-ka-kot in Tughlaqabad</td><td>0.44 km SW</td></tr><tr><td>Walls, gate and bastions of Adilabad (Mohammadabad) and causeway leading there to from Tughlakabad</td><td>1.18 km SW</td></tr><tr><td>Tomb of Ghiyasuddin Tughlakabad</td><td>1.76 km West</td></tr></table>	Name	Distance Direction	Nai-ka-kot in Tughlaqabad	0.44 km SW	Walls, gate and bastions of Adilabad (Mohammadabad) and causeway leading there to from Tughlakabad	1.18 km SW	Tomb of Ghiyasuddin Tughlakabad	1.76 km West	NOC has been obtained from National Monument Authority vide File No. <u>04/02/2025/CA/Delhi/No. 788</u>, Dated 24.02.2026-stating that the project site/ aforesaid property falls beyond the regulated area of any centrally protected monument.
Name	Distance Direction										
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Tomb of Ghiyasuddin Tughlakabad	1.76 km West										
13	Involvement of Critically Polluted Area/Severely. Polluted area as per 2018 CEPI	Involvement of CPA/SPA-No (a) Critically Polluted-Not Applicable (b) Proximity to CPA/SPA - Okhla Industrial Area is located at 0.61 Km North	Proposed additional environmental safeguards as per MoEF&CC OM dated 31/10/2019: The stack emissions are within prescribed emission								

S. No.	Particulars	Details	Remarks
	score		standards of CTO granted by DPCC, which are more stringent than those specified under the SWM Rules, 2016 and 2026. • Online Continuous Emission Monitoring System (OC EMS) and CAAQMS has already been installed at the site, which is already connected to DPCC & CPCB Servers. • Greenbelt is already developed in 2.01 Ha land inside the project area which is 33% of the total project area and additionally Greenbelt will be developed in 1.65 Ha land adjacent to the project site at ESLF area. Land has been allocated by MCD vide letter no. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026 for greenbelt development. • ZLD is being maintained at the plant site for the existing operations. The same will be followed after the expansion project. • Maintaining MSW pit under negative pressure to mitigate escape out the odour from MSW Pit. • The entry gates have sensor-based wheel washing systems for vehicle cleaning and washing. • Use of Anti-Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas.

43.1.9: **Fuel Requirement:** The details of the municipal solid waste 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	Linkage document
Existing W	Municipal Solid Wa	MCD	5-10 Km	Trucks and dump	Concession

tE	ste- 7,30,000			ers	agreement between MCD and TWEPL
Proposed WtE	Municipal Solid Waste- 3,65,000	MCD	5-10 Km	Trucks and dumpers	

43.1.10: **Water Requirement:** Existing Water requirement is 490 m³/day, water requirement is obtained from Okhla STP and permission for the same has been obtained from Delhi Jal Board vide letter no. F-1/DJB/EE(SDW)V/2017/1346 dated 13.10.2017. The water requirement for the proposed project is estimated as 632 m³ /day, out of which 7 m³/day of fresh water requirement will be obtained from the DJB and the remaining requirement of 625 m³ /day will be met by the treated water from Okhla STP and in house treated water. The water is transported to the plant site through the underground pipeline. No groundwater extraction is involved in the project.

43.1.11: **Power Requirements:** Existing power requirement of 3.5 MW is obtained from Inhouse (WtE Plant). The power requirement for the proposed project is estimated as 6.3 MW, which will be obtained from the Inhouse (WtE Plant).

43.1.12: **Baseline Environmental Studies:**

Period	March to May 2024	Additional study (October 2025)
AAQ parameters at 12 Locations (min and max)	Core zone 2024: PM_{2.5} =121 µg/m³; PM₁₀ = 173 µg/m³ ; SO₂= 15 µg/m³; NO₂ =136 µg/m³ ; CO is 0.76 mg/m³ Buffer zone 2024: PM_{2.5} = 84 To 132 µg/m³ ; PM₁₀ = 104 To 194 µg/m³ SO₂ = 13 to 21 µg/m³ ; Nox =61 To 142 µg/m³; CO = 0.53 To 0.79 mg/m³	One month baseline (October 2025) Core zone 2025: PM_{2.5} =7 2.24 µg/m³ to 74.24 µg/m³; PM₁₀ = 182.81 µg/m³ to 188.30 µg/m³; SO₂ = 9.52 µg/m³ to 9.80 µg/m³; NO₂ = 24.61 µg/m³ to 25.34 µg/m³ ; CO = 0.58 µg/m³ to 0.59 µg/m³. Buffer zone 2025: PM_{2.5} = 70.07 To 92.46 µg/m³ PM₁₀ = 177.33 To 234 µg/m³ SO₂ = 9.24 To 12.1 µg/m³ Nox =223.88 To 31.50 µg/m³ CO = 0.56 To 0.74 mg/m³
Incremental GLC level	PM ₁₀ =0.914 µg/m ³ With APCS (Level at onsite) SO ₂ = 2.39 µg/m ³ With APCS (Level at onsite)	-
Ground water quality at 6 locations	pH: 7.29 to 7.61, Total Hardness: 278 to 383 mg/l, Chlorides: 84 to 168 mg/l, Fluoride: 0.24 to 0.48 mg/l. Heavy metals such as Total Chromium: <0.05mg/l, Nickel:<0.01 mg/l, Copper:<0.01mg/l, Cadmium: <0.05 mg/l, Arsenic: <0.01 mg/l, Zinc: <0.001 mg/l, lead: <0.001mg/l, Iron: <0.001mg/l	Ground water quality at 8 locations pH: 6.80 to 7.48, Total Hardness: 460 to 1476 mg/l, Chlorides: 161.9 to 998.9 mg/l, Fluoride: 0.12 to 0.94 mg/l. Heavy metals such as Total Chromium, Nickel, Manganese, Copper, Mercury, Cadmium, Arsenic, Zinc, Selenium

Period	March to May 2024	Additional study (October 2025)
		m, Lithium are below the limit of quantification.
Surface water quality at 5 locations	pH: 7.26.to 7.92; DO: <2 to 4.1mg/l and BOD: 10.5 to 13.5 mg/l. COD from 196 to 416 mg/l	Surface water quality at 8 locations pH: 6.80 to 7.89; DO: BOD: 80.4 to 280 mg/l. COD from 130 to 470 mg/l
Effluent generation details and its treatment	Effluent generation from LTP Approx. 354 KLD of liquid leachate during the operational phase. Mode of treatment & reuse- Effluent will be treated in existing Leachate treatment plant. The treated water from Leachate treatment plant is recycled to DM Plant and rejected for quenching of bottom ash and FGCS Gas Cooling Domestic wastewater generation of approx. 6 KLD. Mode of treatment & reuse- Domestic wastewater will be treated in the existing Leachate treatment plant.	
Noise levels Leq (Day and Night) 12 locations	Core Zone (Industrial area) 66.2 dB (A) for the day time and 60.2 dB for the Night time. Buffer Zone (Industrial area) 62.1 dB (A) to 64.5 dB (A) for the day time and 56.7 dB (A) to 59.4 dB (A) for the Night time; (Residential area) 46.3 dB (A) to 53.3 dB (A) for the day time and 41.8 dB (A) to 46.2 dB (A) for the Night time; (silence area) 42.3 dB (A) for the day time and 38.4 dB for the Night time.	Noise levels Leq (Day and Night) 11 locations Core Zone (Industrial area) 60.2 dB (A) to 60.9 dB (A) for the day time and 51.6 dB (A) to 51.9 dB (A) for the Night time; Buffer Zone (Industrial area) 56.8 dB (A) to 57.8 dB (A) for the day time and 46.8 dB (A) to 47.9 dB (A) for the Night time; (Residential area) 54.7 dB (A) to 56.9 dB (A) for the day time and 44.6 dB (A) to 45.2 dB (A) for the Night time; (silence area) 44.3 dB (A) for the day time and 37.2 dB for the Night time. (Commercial area) 64.8 dB (A) to 67.9 dB (A) for the day time and 57.9 dB (A) to 61.7 dB (A) for the Night time
Traffic assessment study findings	- Traffic study has been conducted at Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided) and Approach Road (Ma Anandmayee Marg) which is approximately 0.26 Km S from the plant site. - Transportation of raw material will be done 100%	

Period	March to May 2024	Additional study (October 2025)																														
	by road. - Existing PCU is 5143 PCU/hr on Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided) and existing level of service (LOS) is: 0.16 i.e. Cat "A" <table><thead><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></thead><tbody><tr><td>Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided))</td><td>863</td><td>5143</td><td>0.16</td><td>Cat "A"</td></tr><tr><td>App. Road 17 Mtr. with Divided Road 4 Lane 2 Way (Ma Anandmayee Marg)</td><td>373</td><td>5143</td><td>0.07</td><td>Cat "A"</td></tr></tbody></table> - PCU load after proposed project will be 5143 (Existing) + 5143 (Additional) PCU/hr and level of service (LOS) will be: <table><thead><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></thead><tbody><tr><td>Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided))</td><td>905</td><td>5143</td><td>0.17</td><td>Cat "A"</td></tr><tr><td>App. Road 17 Mtr. with Divided Road 4 Lane 2 Way (Ma Anandmayee Marg)</td><td>415</td><td>5143</td><td>0.08</td><td>Cat "A"</td></tr></tbody></table> Conclusion: The level of service will include additional traffic due to proposed project. Road 1. The carrying capacity of the Mehrauli - Badarpur Road is much higher than the traffic volume. The traffic (to & fro) from the "Tehkhand Waste to Electricity Project Ltd." will not create traffic congestion. Mehrauli - Badarpur Road The volume/capacity ratio is likely to change from 0.16 to 0.17 with LOS being "A" to "A" Road 2. The carrying capacity of the Approach Road (Ma Anandmayee Marg).is much higher than the traffic volume. The traffic (to & fro) from the "Tehkhand Waste to Electricity Project Ltd." will not create traffic congestion App	Road	V (Volume in PCU/hr.)	C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS	Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided))	863	5143	0.16	Cat "A"	App. Road 17 Mtr. with Divided Road 4 Lane 2 Way (Ma Anandmayee Marg)	373	5143	0.07	Cat "A"	Road	V (Volume in PCU/hr.)	C (Capacity in PCU/hr.)	Existing V/C Ratio	LOS	Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided))	905	5143	0.17	Cat "A"	App. Road 17 Mtr. with Divided Road 4 Lane 2 Way (Ma Anandmayee Marg)	415	5143	0.08	Cat "A"	
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Period	March to May 2024	Additional study (October 2025)
	roach Road (Ma Anandmayee Marg). The volume/capacity ratio is likely to change from 0.07 to 0.08 with LOS being "A" to "A"	
Soil Quality at 10 Locations	Core zone 2024: Bulk density: 2.25 %; pH range 7.32-; Electrical conductivity (EC); 726 mS/m; calcium content: 16.5 mg/100g; sodium: 8.0 mg/100g; potassium: 5.0 mg/100g; Nitrogen: 16.5 mg/100g; Phosphorous: 22.6 mg/100g; Cation Exchange Capacity (CEC): 12.36 meq/100gm; Magnesium: 9.5 mg/100g; Organic Carbon: 0.68% Buffer zone 2024: Bulk density: 2.15 to 2.85 %; pH range 7.15 to 7.5; Electrical conductivity (EC); 632 to 845 mS/m; calcium content: 11.8 to 19.2 mg/100g; sodium: 7.0 to 12.0 mg/100g; potassium: 4.0 to 8.0 mg/100g; Nitrogen: 13.4 to 20.4 mg/100g; Phosphorous: 4.0 to 8.0 mg/100g; Cation Exchange Capacity (CEC): 10.38 to 16.48 meq/100gm; Magnesium: 6.2 to 9.4 mg/100g; Organic carbon: 0.57 to 0.95 %	Core zone October 2025: Bulk density: 1.22 g/cc; pH range 8.58; Electrical conductivity (EC); 428.0 μS/cm; calcium content: 64.0 mg/kg; sodium: 42.7 mg/kg; potassium: 45.76 mg/kg; Nitrogen: 131.7 mg/kg; Phosphorous: 11.67 mg/kg; Cation Exchange Capacity (CEC): 14.03 meq/100gm; Magnesium: 56.0 mg/kg; Organic Matter: 1.52 % Buffer zone October 2025: Bulk density: 1.25 to 1.33 %; pH range 6.98 to 7.77; Electrical conductivity (EC): 75.7 to 365.0 mS/m; calcium content: 54.6 to 106.8 mg/kg; sodium: 36.4 to 89.6 mg/kg; potassium: 4.0 to 8.0 mg/kg; Nitrogen: 13.4 to 20.4 mg/kg; Phosphorous: 1.02 to 47.9 mg/kg; Cation Exchange Capacity (CEC): 11.2 to 17.2 meq/100gm; Magnesium: 12.5 to 44.2 mg/kg; Organic matter: 0.27 to 0.92 %
Flora and fauna	Total of 23 species listed under Schedule I of the Wildlife Protection Act. The Wildlife conservation Plan has been approved by Conservator of Forest (HQ) Wildlife officer vide F. No. 260/CWLW/WL/Jindal WLP/10983-85, dated 26.11.2025 from Department of Forest & Wildlife, New Delhi.	-
Hydrogeology study	The Hydrological study has been carried out by M/s Hydro Geo solution LLP, in October-December, 2025. Elevation of water table in the study area ranged from 144 to 214.1 metres above mean sea level (m.amsl). The general ground water flow is towards north and northwest. A ground water trough is formed in the northwest. Groundwater flow gradient in the study area varies in all direction.	M/s Hydro Geo solution LLP

Period	March to May 2024	Additional study (October 2025)
	· In-situ infiltration test study revealed a constant rate of infiltration 3.33 cm /hr. The infiltration rate in the area is considered moderate. · The Depth to ground water level during October 2025 ranged from 6.7 mbgl (Lajpat Nagar) to >100 mbgl (dry) at Tughlaqabad Biodiversity Park and Sangam Vihar. Depth to water level in the major part of the study area ranges from 80 to 90 m.bgl. Deeper water levels in the range of 90 to >100 m.bgl are observed in the northwestern part of the study area, whereas shallower water levels, ranging from 15 to 20 m.bgl are observed in the southeastern part of the study area. · Quality of ground water is fresh to brackish. Water is very hard. Fluoride and Nitrate is within permissible limits for drinking use in the study area. · Groundwater quality is largely satisfactory microbiologically, except at Tughlaqabad Village (Shiv Mandir) where E. coli and Total Coliform were detected, indicating faecal contamination. BOD (up to 4.9 mg/l) and COD (up to 19.6 mg/l) exceed desirable limits at several locations, pointing to organic loading likely attributable to leachate influence from the proximate Tikhkhanda landfill. · No groundwater abstraction will be done for the said project. STP Treated water from Okhla STP is used as the primary source of water. · No impact on ground water has been observed on the ground water regime due to the operations of the industry within the 2 Km radius. The details of the study have been submitted along with EIA report.	
Impact study on bio-diversity and aquatic ecology	· The project is based on ZLD concept and there will be no effluent discharge from the plant. · Since, there is no major aquatic system in the area, the chances of impact on aquatic ecology would be insignificant. · A Greenbelt Development Plan has been submitted. · The excavated soil from the project site should be kept separately and can be used to boost restoration and green plantation activity. · Yamuna river is at approx. 4.98 km, NE from the project site. · All vehicles inside the project site should maintain speed limit and will not blow horn unless it is required. · Awareness will be given to workers about the importance and conservation of terrestrial ecology and biodiversity. · Miyawaki plantation will be done adjacent to the project site at ESLF area and gap plantation within the project site in the existing available area..	M/s Perfect Enviro Solutions Pvt. Ltd.

Period	March to May 2024	Additional study (October 2025)
Risk assessment study	- Only flammable material is diesel/LDO/HSD for operations will be provided with fire fighting systems. - Fire water pumps shall be installed along with adequate water storage capacity. - Ensure Inspection and Maintenance of Pipelines of Boiler and other related equipment/ instruments/ connections like safety device, water level indicator, flanges etc. to avoid boiler explosion. - Special precautions like SOP to be considered during start-up and shut down failure of which may lead to fire box explosion/boiler explosion. - Periodical inspection and calibration of various types of electronic instruments shall be followed. - Ensure effective monitoring of the power plant safety. - Effective housekeeping to be maintained in the plant. - MSDS of the chemicals should be present at strategic locations and workers should be well trained to handle that chemical with appropriate PPE. - Gas monitoring equipment to be connected to the alarm (flammable oil). - Periodic Inspection and Maintenance of Fire Alarm & Fire Detection System to ensure its working when in need. - Periodic rehearsal of mock drill to ensure readiness to handle any emergency situation. - All safety precautions (SOP etc.) to be followed in any type of operation in the plant to avoid accidental situation. - Special precautions like no use of match boxes, cigarette lighters etc. also be followed to avoid fire in LDO/HSD storage area, loading/unloading of LDO tanker area. - SOP to be followed during loading/unloading of LDO to storage tank. LDO/HSD Tankers to be fitted with flame arrestors. Earthing/bonding during loading/unloading to be considered to avoid any static charge generation. - As per NFPA-85E, it is believed that improved instrumentation, safety interlocks and protective devices, proper operating sequences and a clearer understanding of the problem by both designers and operators can greatly reduce the risks and actual incidence of furnace/boiler explosions.	M/s Perfect Enviro Solutions Pvt. Ltd.
Epidemiological Study	The <u>Epidemiological study</u> has been carried out in December, 2025 by International Institute of Health Management Research (IIHMR), Delhi within 5 km range of project site. Findings of the study: Population & income: 1,921 households (5,720 people), median income ₹29,808/month, with most earning ≤₹30,000.	M/s IIHMR, Delhi

Period	March to May 2024	Additional study (October 2025)
	· Demographics: Predominantly working-age (76.9%), fewer children (22.3%) and elderly (14%). · Exposure zones: Zone 1 (closest) poorer, more waste/industrial workers, weaker housing and water access; Zone 3 (farthest) better off. · Health outcomes: High prevalence of asthma (7.9%), bronchitis (7.9%), hypertension (12.9%), diabetes (7.5%); symptoms like cough, wheezing, diarrhea show clear dose-response with proximity. · Socioeconomic disparities: Poorest quartile bears highest disease burden (e.g., asthma 12.3% vs. 2.1% in richest), showing poverty and exposure jointly drive health risks. Conclusion: · Regional pollution (Okhla dumpsite, AQI 300–633) and poor sanitation infrastructure are major contributors. · Poorest quartile bears 5–7 x higher respiratory and GI burden than richest. · Education strongly protective: respiratory disease prevalence drops from 18.3% (illiterate) to 3.1% (higher educated). · Hence, a Direct causality between plant operations and morbidity cannot be established.	

43.1.13: **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 (T PA)	Disposal
1	Recyclable (Ferrous & Non ferrous)	Process	4	Will be sold to registered recyclers
2	Manure (from composting)	Process	2	Used as compost/soil conditioner
3	Bottom Ash	Process	310	Ash Generated is utilized in road subgrade construction and embankment. Any unutilized material will be sent to SLF/ESLF..
4	Fly Ash	Process	47	Supplied to ash brick manufacturers and any unutilized material will be sent to SLF/ESLF
5	Inert	Process	444	Used for road construction and any unused material will be sent to SLF/ESLF.
6	Used Oil	Machineries	7	Will be sold to registered recyclers

S. No.	Type of Waste	Source	Quantity generated (T PA)	Disposal
7	Sludge (WTP)	WTP	8	Sludge will be filter pressed and sent to incinerator in-boiler
8	Chemical Sludge (LTP)	LTP	3	Will be sold TSDF/ESLF
9	Domestic Solid Waste	Staff	12.8	Will be handled in- house Biogas digester

43.1.14: **Public Consultation:** As per the ToR accorded, instant proposal is exempted from the conduct of fresh public hearing in terms of the provisions contained under para 7(ii)a of EIA, 2006 on the following grounds. However, public consultation by obtaining responses in writing from concerned persons having a plausible stake in the environmental aspects of the project or activity shall be carried out as per the procedure prescribed under EIA, 2006 as amended.

- Proposed expansion of WTE was already envisaged under the proposal submitted for existing EC dated 26/07/2018.
- Proposed expansion of WTE from 25 to 45 MW will be confined to the existing land of 6.0703 Ha only.
- 6.0703 Ha is already undergone public hearing process as per the provisions contained under EIA Notification, 2006 at the time of grant of EC during 26/07/2018.
- No reduction in green belt area of 2.01 Ha due to the proposed expansion of WTE.
- Proposed expansion will facilitate disposal of additional 1000 tons per day of Municipal Solid Waste.
- State Govt. of Delhi has initiated the neutralization of the waste dump site and the existing project is playing a key role in reducing the waste dumped into landfills by using Municipal Solid waste to generate power.
- Central Pollution Control Board (CPCB) has introduced a new "blue category" to classify industries providing Essential Environmental Services (EES) like waste management and pollution control. This category recognizes activities such as waste-to-energy plants, sewage treatment plants, and landfill maintenance, which are crucial for managing pollution from both domestic and industrial sources.
- Increase in pollution load due to the proposed WTE expansion will be minimized by adopting additional environmental safeguards.

Details of advertisement given	Newspapers "Times of India" in English & "Navbharat times" in Hindi dated 30.09.2025
Date of public consultation	30.09.2025 to 29.10.2025
Venue	The draft EIA/EMP Report was made available on the portal http://dpcc.delhigovt.nic.in within 30 days
Presiding Officer	Member Secretary of Delhi Pollution Control Committee (DPCC)
Major issues raised	Noise Pollution, Air Pollution, Employment for rag pickers
No. of people attended / No. of query	Total 60 Nos. of representation received via mail in Public consultation proceedings

Action plan to address the concerns/issues raised from the public consultation process as per MoEF&CC OM dated 30/09/2020:

Key Area Identified under Socio-EMP (CER) based on needs highlighted during Public Consultation with Action Plan and Budget (in Lakh)

S. No.	Proposed Activities	Physical Targets	2026 -2027	2027-2028	2028-2029	2029-2030	2030-2031	Total Amount (Rs. in Lakhs)
1	Water Shed Development (Tughlaqabad Pond)	Physical target	Tughlaqabad Pond (Bank Strengthening & Bund Repair, De-Silting Chamber Construction at Pond Inlets, Fencing & Boundary Protection, Inlet-Outlet Regulation & Overflow Control, Plantation & Peripheral Greening, Post-Construction Monitoring etc.)					13.1
		Budget	3	3	2.5	2.5	2.1	
2	Medical health Check-up Camps / Awareness (Medical Tests such as LFT, KFT, CBC, Eye Test etc.)	Physical target / Beneficiaries	400-500 approx.	400-500 approx.	400-500 approx.	400-500 approx.	400-500 approx.	20
		Budget	4	4	4	4	4	
3	Employment/Skill Development (Providing skill development training)	Physical target / Beneficiaries	5 students/year from 10 km study area					10
		Budget	2	2	2	2	2	
4	Provision of Ambulance Facility (1 no.)	Physical target / Beneficiaries	Railway Colony, Tughlaqabad Village, Prem Nagar, Pul Prahladpur and other nearby villages within study area					30
		Budget	10	3	3	10	4	

Key Area Identified under Socio-EMP (CER) based on needs highlighted during Public Consultation with Action Plan and Budget (in Lakh)

S. No.	Proposed Activities	Physical Targets	2026 -2027	2027-2028	2028-2029	2029-2030	2030-2031	Total Amount (Rs. in Lakhs)
5	Distribution of indoor plant (5000 saplings)	plant distribution	1000	1000	1000	1000	1000	
		Physical target / Beneficiaries	300 - 500	300 - 500	300 - 500	300 - 500	300 - 500	
		Budget	3	3	3	3	3	15
6	Solar RO Drinking Water Units (5 nos.)	Physical target / Beneficiaries	Okhla MCD School, DTC Tehkhand Bus Depot, ESIC Hospital, Railway Colony, Pul Prahladpur.					
		Budget	1	1	1	1	1	5
Total CER Expenditure (Rs. in Lakhs) (A)			23	16	15.5	22.5	16.1	93.1
Balance amount of CER from existing project (B)								23
Grand total A+B) (Rs. in Lakhs)								116.1

43.1.15: Cost of the Project: Existing capital cost of project was 4,375.48 In lakhs. The capital cost of the proposed project is Rs 1954.61 lakhs and the annual recurring cost towards the environmental protection measures are Rs. 670 lakhs for existing and Rs. 132.81 lakh for the proposed project. The employment generation from the proposed project / expansion is 45 nos. The details of cost for environmental protection measures is as follows:

	Capital (in Lakhs)	Recurring (in Lakhs)

S. N o.	Particulars	As per EC	Actual e xpense i ncurred for existi ng plant	Proposed e xpansion	Total aft er expan sion	As per E C estimat ed	Proposed expansion estimated	Total aft er expan sion estimate d
1	Air Pollution Control	1,355.00	2,514.08	3110	4,624.08	500	94	594
2	Water Polluti on Control	1,040.00	1,580.00	-	1,580.00	80	18	98
3	Noise Polluti on Control	No extra ca pital cost is required for noise polluti on control a s equipment to be purch ased would be in accord ance with n oise compli ance.	-	No extra ca pital cost is required for noise polluti on control a s equipment to be purch ased would be in accord ance with n oise compli ance.	-	10	0.01	10.01
4	Environment Monitoring & Management	120	158	125	283	40	5	45
5	Occupational Health & Saf ety	40	19.3	Existing fun d allocation is adequate to cover OH S expenses for the expa nsion	40	20	2	22
6	Green Belt D evelopment	100	22.5	20	42	15	8	23
7	Others (Odour contr ol manageme nt, Sanitizati on, etc.)	50	0.7	1	1.7	5	0.2	5.2
8	Solar Panel & Solar Lights (through third party)	-	1	175	176	-	5	5
9	Rainwater Co llection & Ha rvesting	-	14.5	6	20.5	-	0.6	0.6

10	Others	-	-	10	10	-	-	-
11	CER Activities	-	98.6	116.1	214.7	-	-	-
	Total	2,705.00	4,408.68	3,563.10	6,991.98	670	132.81	802.81

Note: Recurring cost for air pollution control have been considered maximum for replacement of bag filter in every 5 years as per OEM guidelines.

CER activities include cost of rejuvenation of Tughlaqabad Pond which is a part of watershed development. It also includes cost of Check-up Camps, Provision of Ambulance Facility, Distribution of indoor plant and installation of Solar RO Drinking Water Units

43.1.16: Greenbelt Development Plan: Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha. area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare. Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.

A. Greenbelt development Plan for Gap Plantation:

The Gap plantation has been progressively carried out in a phased manner, taking into consideration the observations made during inspections and the subsequent directions issued by authorities for improvement of the existing greenbelt in the premises.

Phase-1: (July-Aug 2025)

Gap plantation undertaken in compliance with the observations made during the IRO site visit conducted in July 2025.

S. No.	Species Name	Quantity
1	Bougainvillea glabra	30
2	Tabernaemontana divaricate	20
Total Count (No's)		50

Phase-2 (Jan-Feb 2026)

Gap Plantation was carried out pursuant to the observations made during the EAC Sub-Committee site visit conducted in November 2025

S. No.	Species Name	Quantity
1	Syzygium cumini	11
2	Holoptelea integrifolia	31
3	Butea monosperma	4
4	Cassia fistula	2
5	Eucalyptus citriodora	4

6	Bauhinia variegata	38
7	Jatropha curcas	48
8	Putranjiva roxburghii	22
9	Mimusops elengi	1
Total Count (Nos.)		161

Phase-3 (Apr 2026)

Gap plantation has been undertaken in pursuance of the directions issued by the EAC in the Agenda Meeting dated 08 April 2026, with consideration to strengthening the existing greenbelt.

S. No.	Species Name	Quantity
1	Pterospermum acerifolium	19
2	Alstonia scholaris	8
3	Neolamarckia cadamba	23
Total Count (No's)		50

Phase-4: Action plan (Jun- Jul 2026)

It is proposed to undertake plantation of 50 nos. of trees of more than 3 metres height, as part of the ongoing phased greenbelt development programme.

Expenditure of Gap Plantation

Period of plantation	Qty. (No's)	Plantation Cost (Rs. in lakhs)
July-Aug 2025	50	0.25
Jan-Feb 2026	161	Govt. Nursery
Apr 2026	50	0.79
Jun- Jul 2026	60	1
Total cost (Rs. in Lakhs)		2.04

B. Action Plan for additional Greenbelt of 1.65 Ha

Year	Trees	Shrubs/Herbs	Total Saplings	Capital Cost (INR)	Recurring Cost (INR)
2026-27	1000	1000	2000	7,000,00	3,000,00
2027-28	400	1500	1900	5,000,00	2,000,00
2028-29	400	1500	1900	6,000,00	3,000,00

9					
Total	1800	4000	5800	18,000,00	8,000,00

43.1.17: Ash management for last three years

Year	Quantity generated (MT)	Quantity utilized (MT)	% of utilization	Balance quantity (MTPA)	No of storage silos with capacity
Bottom Ash FY 23-24 & 24-25)	230 MT/day	230 MT/day	100 %	Unutilized material sent to SLF/ESLF	-
Fly Ash (FY 23-24 & 24-25)	27 MT/day	27 MT/day	100 %	Unutilized material sent to SLF/ESLF	2x250 m3

A. Fly ash Details for the last three years = 9983.5 TPA (FY 23-24 & 24-25)

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)	27 MT/day	100	Supplied to ash brick manufacturers and any unutilized material sent to SLF/ESLF.
	Total	27 MT/day	100	

B. Bottom ash generation for the last three years = 83947.5 TPA (Avg. FY 23-24 & 24-25)

S. No.	Activity (as applicable)	Quantity	Percentage	Remarks (Prior approval of SPCB details to be mentioned)
1.	Construction of roads, road and fly over embankment	230 MT/day	100	As per guidelines
	Total	230 MT/day	100	

C. Proposed ash utilization plan for expansion project

Details	Existing generation (MTPA)	Proposed generation (MTPA)	Total	Utilization (MTPA)	Balance quantity (MTPA)	No of storage silos with capacity
Bottom Ash	230 MT/ day	80 MT/ day	310 MT/ day	Use for road construction and any unutilized material will be sent to ESFL	Unutilized material will be sent to ESFL	-

Details	Existing generation (MTPA)	Proposed generation (MTPA)	Total	Utilization (MTPA)	Balance quantity (MTPA)	No of storage silos with capacity
Fly Ash	27 MT/ day	20 MT/ day	47 MT/ day	Supplied to cement industries / ash brick manufacturers	Unutilized material will be sent to ESLF	2x250m ³ (Existing silos will be used)

43.1.18: Summary of court cases: Nil.

43.1.19: Summary of Show Cause Notices (Last two years): Nil.

43.1.20: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration shall be furnished.-Nil

43.1.21: Compliance to the observations of sub-committee site visit report dated 19.11.2025:

S. No.	Observation of the Sub-committee:	Compliance
1	The Committee observed the operational activities of the waste-to-energy generation at the site of Mis Tehkhand Waste to Electricity Project Limited. Bio-waste was handled through automated systems, wherein waste collection trucks unloaded directly into a designated pit, and the waste was subsequently fed into the digester using remote-controlled machinery. The entire process is being conducted within a closed facility controlled machinery. The entire process is being conducted within a closed facility maintained under negative pressure to control odor, biogas emissions, and potential contamination.	Noted
2	Municipal solid waste was digesting in the digestion chambers under optimum operating conditions. Following the digestion process, the waste was segregated using separators to remove solid materials such as metals, plastics, glass, stones, etc., from the liquid fraction. The digested solid waste was then stored as Refuse-Derived Fuel (RDF) through a parallel and alternate storage system. Acceptable RDF was transferred from the storage area to the boilers for energy generation. The generated leachate is being conveyed to the leachate treatment plant for appropriate treatment.	Noted
3	The committee observed the unpleasant odors surrounding the waste transportation corridors, in the waste handler area and suggested to the PP for t	Cross ventilation is proposed in the truck reception area to mitigate unpleasant odours in the surroundings. Additionally, the following measures have been/will be implemented to control unpleasant odour:

S. No.	Observation of the Sub-committee:	Compliance
	aking the appropriate mitigation measures.	a) Sufficient quantity of sanitizer is inoculated at this point with a sprayer to reduce odor. b) MSW pit under negative pressure is being maintained to mitigate escape out the odour from MSW Pit. c) Indoor species such as Snake Plant, Peace Lily, Spider Plant, Aloe Vera, etc. will be planted, which will act as natural sinks for pollutants and odour and also purify the air.
4	The workers were not wearing suitable masks during the operation inside the project area and suggested to the P P for adequate protective gears and regular health checkup of the workers.	Noted. Proper PPE is provided to the workers, and their health checkups are conducted regularly.
5	The ash handling area within the project site is poorly maintained as there was ash spillage everywhere within the site. The Committee asked the proponent to take corrective action by properly providing a dyke wall all along the periphery of the ash handling area and improve the housekeeping.	Ash generated is stored in closed silos and only spills during transfer or transportation. The area observed by the committee will be entirely covered during the expansion project. However, good housekeeping practices are being maintained and trucks are properly covered with tarpaulin sheets on all sides to prevent any spillage. In the proposed expansion, the movement of trucks carrying ash will be re-routed to connect directly from the ash handling area to the main road/ESLF. This measure will not only improve housekeeping but also reduce the distance travelled by trucks, thereby minimizing the possibility of spillage.
6	The committee found that there is no proper boundary wall all around the project site. The committee suggested constructing a proper boundary wall around the project site on priority basis.	A proper boundary wall has been provided around the project site, along with the development of a thick greenbelt that acts as a natural sink for pollution. However, the erection of the boundary wall is still in progress.
7	The committee observed that the Green belt developed in the periphery of the Plant site is not satisfactory. The committee suggested increasing the plantation surrounding the boundaries and making a bio fencing by using the suitable Tree/shrubs/creepers.	Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha. area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare. Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.
8	The committee observed water testing facilities and available instruments a	The laboratory currently handles a limited number of samples and the existing equipment is working properly and is

S. No.	Observation of the Sub-committee:	Compliance
	nd found outdated instruments not feasible for huge numbers of sample testing and needs technologically up gradation of the water testing laboratory.	sufficient for present testing needs. Since large-scale testing is not required, technological upgradation is not deemed necessary at this stage. However, if the number of samples increases in the future, the requirement for equipment up gradation will be reviewed accordingly.
9	The committee found that a show Cause notice (SCN) has been issued by the Compliance and monitoring Division (CMD) of the Ministry and action closure report is still awaited for the same.	Noted. Further, after following up with the concern, the action closure report of the CCR was subsequently issued by the Regional Office, Lucknow vide File No. V/ENV/DLI/1412/2018 [E-Computer No. 271496], dated 10.02.2026.
Recommendation of the sub-committee		
1	Certified Compliance Report (CCR) with action taken plan for all non-compliance points to be submitted by the P.P.	CCR obtained from MOEF&CC Regional Office, Lucknow vide File No. V/ENV/DLI/1412/2018/220 dated 01.08.2025. Minor observations were made by the officials. Action Taken Report for minor observations have been submitted to IRO vide Letter Ref. No. TWEPL/EXP/2025-26/008, dated 14.08.2025. The Current Action taken report with current status has been submitted to MOEF & IRO vide Ref. No. TWEPL/EXP/MOEFCC/2025-26/24 dated 15.12.2025. Further, the action closure report of the CCR was subsequently issued by the Regional Office, Lucknow vide File No. V/ENV/DLI/1412/2018 [E-Computer No. 271496], dated 10.02.2026.
2	Mechanism and monitoring protocol to be put in place regarding long term health impact of peoples working at the Plant site.	Half-yearly and annual health is carried out regularly since the operation of the plant.
3	Health assessment report and safety measures for employee (including both staff & workers) and the nearby population to be submitted.	Public Health Action Plan including Regular Medical Check-up & First Aid facility will be provided, Conduct of Mock drills, Training programme on health & Safety, and Health Check-up camps shall be organized. Support to the occupational Health center.
4	Details of the mode of transportation of waste for both existing and proposed operation shall be submitted.	Waste transportation in the existing operations is carried out using closed dumpers, hookloaders, compactors etc. and the same will be used for the proposed expansion project.
5	PP needs to explore and submit the action plan/control measures to mitigate/suppress the odors, contamination and ambient air pollution.	Following measures are/will be taken to control the odors, contamination and ambient air pollution: · Fragrant materials are used in the odour control system by using air solution methods. · Maintaining MSW pit under negative pressure to mitigate escape out the odour from MSW Pit. · Indoor species such as Snake Plant, Peace Lily, Spider PL

S. No.	Observation of the Sub-committee:	Compliance
		ant, Aloe Vera, etc. will be planted, which will act as natural sinks for pollutants and odour and also purify the air. · 3 No. of Anti-Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas. · Manual Sprinkling is also done regularly. · The entry gates have sensor-based wheel washing systems for vehicle cleaning and washing. · The materials are kept covered using green net. · Ambient air monitoring is being carried out at regular intervals, and reports are being submitted to DPCC. The same practice will be followed during the expansion project.
6	PP needs to submit detailed plans for development of bio fencing and green belt area around the boundary side, and plan for elevating the boundary wall of the project site.	Peepal, neem, sheesham, and banyan trees, along with 42 bougainvillea plants, have already been planted along the boundary wall. These will serve as biofencing and enhance the aesthetics of the site. Additionally, elevation of the boundary wall is under progress.
7	PP has to enhance the existing green belt and long trees to be planted across the boundary of the plant. PP should pursue with MCD for land provision to make the existing green cover from 33% to 40% by planting additional trees near the site, and check with PWD for planting trees along the site periphery.	Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare. Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.
8	The detail of stack emission pollution, and test reports of Furans & Dioxin and other emission parameters (Heavy Metals, PM, SO ₂ , etc) shall be submitted by the PP.	The Stack emissions monitoring is regularly carried out. The parameters like dioxin & Furan and other heavy metals are also considered in the analysis.
9	The standard methodology for bio-waste handling and biogas generation and bottling along with adequate safety measures for existing and proposed plants shall be submitted.	The detailed methodology for bio-waste handling and biogas generation is given in below: Additionally, following safety measures will be taken: • Ensure proper ventilation and explosion proof equipment. • Use flame arrestors, relief valves, and automated process controls. • Flare excess biogas safely. • Inspect digesters and pipelines regularly.

S. No.	Observation of the Sub-committee:	Compliance																		
		• Install gas leak detectors and alarms. • Maintain fire safety equipment and safe storage conditions. • Train workers in safe handling and emergency procedures. • Emergency response plans with drills and evacuation routes. • Scheduled maintenance of all equipment. • Continuous ambient air monitoring.																		
10	PP shall conduct and submit microbial analysis reports regarding the existence of microbial contaminants in the ambient environment.	Microbial analysis in ambient air has been carried out within the plant premises.																		
11	PP shall carry out a pollution load assessment comparing the existing adjacent open landfill with the WtE facility.	The comparison of adjacent Open landfill and the existing WtE facility is given below: <table> <tr> <th>Criteria</th><th>Open Landfill</th><th>Waste-to-Energy (WtE) Facility</th></tr> <tr> <td>Greenhouse Gas Emissions</td><td> • High methane emissions (25x more potent than CO₂). • Methane from anaerobic decomposition is often uncontrolled. </td><td> • CO₂ from combustion, but significantly lower net GHG emissions compared to methane release. • Controlled flue gas treatment reduces impact. </td></tr> <tr> <td>Air Pollution</td><td> • Fugitive emissions of volatile organic compounds (VOCs), odors, and dust. • No systematic control. </td><td> • Controlled combustion with scrubbers, filters, and selective non-catalytic reduction. • Lower particulate matter and NOx emissions. </td></tr> <tr> <td>Water Pollution</td><td> • Leachate contaminates groundwater and surface water with heavy metals, nitrates, and pathogens. </td><td> • No water contamination as plant is based on ZLD concept. • Ash residues are managed and stabilized before disposal. </td></tr> <tr> <td>Land Use</td><td> • Requires large tracts of land. • Long-term occupation and post-closure monitoring. </td><td> • Smaller footprint • Reduces land requirement by up to 90% compared to landfills. </td></tr> <tr> <td>Energy Recovery</td><td> • None </td><td> • Generates electricity and heat from waste combustion </td></tr> </table>	Criteria	Open Landfill	Waste-to-Energy (WtE) Facility	Greenhouse Gas Emissions	• High methane emissions (25x more potent than CO₂). • Methane from anaerobic decomposition is often uncontrolled.	• CO₂ from combustion, but significantly lower net GHG emissions compared to methane release. • Controlled flue gas treatment reduces impact.	Air Pollution	• Fugitive emissions of volatile organic compounds (VOCs), odors, and dust. • No systematic control.	• Controlled combustion with scrubbers, filters, and selective non-catalytic reduction. • Lower particulate matter and NOx emissions.	Water Pollution	• Leachate contaminates groundwater and surface water with heavy metals, nitrates, and pathogens.	• No water contamination as plant is based on ZLD concept. • Ash residues are managed and stabilized before disposal.	Land Use	• Requires large tracts of land. • Long-term occupation and post-closure monitoring.	• Smaller footprint • Reduces land requirement by up to 90% compared to landfills.	Energy Recovery	• None	• Generates electricity and heat from waste combustion
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12	PP must obtain DPCC comments on the site criteria conditions and submit the same. DPCC recommendations/NOC on site suitability are required due to residential areas within 500 m.	A request letter for recommendation/NOC from DPCC on site suitability to DPCC has been submitted vide letter no. TWEPL/EX./2025-26/021 dated 21-11-2025. The recommendation letter from DPCC has received vide File No. DPCC/WMC-II/WTE Tehkhand Expansion Project/2025/2375-78, dated 26.02.2026.												
13	Detailed plans of Ash Handling & Storage and safety measures adopted for the existing and proposed plant shall be submitted. PP shall submit current ash disposal methodology and Toxicity characteristic leaching procedure (TCLP) test results confirming the non-hazardous nature of Ash generated.	The bottom ash generated is given for construction of Highway embankment. Any unutilized material will be sent to ESFL. The Fly Ash generated from the project is being supplied to ash brick manufacturers and any unutilized material will be sent to ESFL. Safety measures for handling ash are given below: 3 No. of Anti Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas. - Workers will receive training on safe waste handling, ash management, chemical storage, and interpretation of Material Safety Data Sheets (MSDS).												
14	Since current boiler stack height is 60 m, PP is required to recheck adequacy and submit scientific justification for retaining or increasing stack height. Considering the maximum stack height requirement, revised permissions are to be obtained as applicable.	The current boiler stack at 60 m height ensures that the exhaust plume is released into a higher atmospheric layer. This prevents "fumigation" (smoke settling near the ground) and allows for maximum dilution of pollutants before they reach the surrounding community. The Air dispersion modelling has been carried out to assess the dispersion from the stack. As per dispersion modelling report the stack height of 60 m is finalized.												
15	PP shall obtain NOC from ASI/Defense authority for the proposed expansion.	An application for obtaining the NOC was submitted to the ASI on 08.12.2025 vide reference no. TWEPL/EXP/ASI/2025-26/23. In response, a letter from ASI was received on 29.12.2025 vide File No T-19034/209/2025-M (46742), mentioning that obtaining permission does not fall under their purview and accordingly, the request for the												

S. No.	Observation of the Sub-committee:	Compliance
		NOC was resubmitted to the National Monument Authority on 15.01.2026 vide reference no. TWEPL/EXP/NMA/2025-26/026. NOC from NMA has been obtained vide File No. 04/02/2025/CA/Delhi/No. 788, stating that the project site/ aforesaid property falls beyond the regulated area of any centrally protected monument.
16	PP is required to submit an action closure report of the Show Cause Notice (SCN) issued.	The action taken review/closure report has been received from Regional Office, Lucknow vide File No. V/ENV/DLI/1412/2018 [E-Computer No. 271496], dated 10.02.2026.
17	Install mist sprinklers around the greenbelt, ensuring 50% coverage overlap (positioned such that no spot is left dry and no overwatering prevails), and position them 1-1.5 meters above ground level, with timers set to water early morning or late evening to minimize evaporation and removal of dust from the leaves.	10 standby mist sprinklers have been installed around the greenbelt, positioning 5 to 6 meters above ground level, covering an area of 20 m radially, spacing between approx. 12 meter.

43.1.22: Comments of State Pollution Control Board, Delhi as per Ministry's OM dated 14.01.2025 and SOP dated 08.10.2025:

DPCC vide letter dated 25.03.2026 has submitted their comments on Parivesh portal w.r.t the activity of Processing and Disposal of Municipal Solid Waste & Electricity Generation (Waste to Energy Plant) with Solid Waste Processing Capacity of (additional) 1000 Tons /day & Electricity Generation Capacity expansion of existing 25 MW to 45 MW by M/s. Tehkhand Waste to Electricity Project Limited.

43.1.23: ADS Information in chronology

M/s. Tehkhand Waste to Electricity Project Limited made an online application vide proposal no. Proposal No. IA/DL/THE/566057/2026, dated 10.02.2026. The proposal was initially considered in 41st meeting of the Expert Appraisal Committee (EAC) (thermal power projects) held on 08.04.2026. Proposal was deferred for want of additional information.

The proponent submitted the ADS reply vide letter bearing ref. no. TWEPL/EXP/MoEFCC/2026-27/004 dated 07.05.2026 uploaded on PARIVESH on 07.05.2026. Point-wise reply of ADS is given in table as below:

S. No.	ADS Point	Reply/Response of PP
1	Action closure letter from IA-CMD on the non-conformities observed in the conditions prescribed in the EC dated 26/07/2018 shall be submitted.	Action closure letter was issued by IA - C&MD on 6/5/2026.
2	Recommendations of the following additional studies carried out and its action plan with physical and financial outlay. Accordingly, revised EMP cost shall be submitted.	Revised EMP Cost has been submitted with ADS reply on PARIVESH portal.
i	Cumulative Environmental Impact Assessment	Cumulative Environmental Impact Assessment study incl

S. N o.	ADS Point	Reply/Response of PP
	ment study	uding all aspect, impact, proposed mitigation, budget, re curring budget & timeframe of implementation has been submitted with ADS reply on PARIVESH.
ii	Geo-hydrological study	Geo hydrology study including all aspect, impact, propos ed mitigation, budget, recurring budget & timeframe of i mplementation has been submitted with ADS reply on PA RIVESH.
iii	Epidemiological study including Public H ealth Action Plan.	Epidemiological study including all aspect, impact, propo sed mitigation, budget, recurring budget & timeframe of implementation has been submitted with ADS reply on P ARIVESH.
iv	Water shed development	Water shed development including all aspect, impact, pr oposed mitigation, budget, recurring budget & timefram e of implementation has been submitted with ADS reply on PARIVESH.
v	Comments by Commission for Air Qualit y Management in National Capital Region and Adjoining Areas	Compliance of Comments by Commission for Air Quality Management in National Capital Region and Adjoining Ar eas has been submitted with ADS reply on PARIVESH.
3	Monitoring report of Ground water qualit y parameters like BOD, COD, Nitrate, He avy Metals, Microbial culture analysis, Gr ound water level etc. of Core and Buffer zone.	The ground water monitoring has been done for paramet ers like BOD, COD, Nitrate, Heavy Metals and Microbial c ulture analysis. The analysis reports have been submitted with ADS reply on PARIVESH.
4	Clarification regarding installation of ES P/Bag Filter for control of Particulate Ma tter.	It is assured that a bag filter, similar to the arrangement s adopted for the existing units, will be installed to ens ure effective capture and removal of particulate matter. Any prior mention of an ESP was inadvertent and is hereb y corrected.
5	Detailed action plan for the control of O dour Problem and its mitigation measure s.	Odour control measures include maintaining the MSW pit under negative pressure with controlled capture and combustion of odorous gases in the boiler, plantation o f tolerant species as pollutant/odour sinks, and use of h erbal mist spray systems. Proposed measures include channelizing leachate plant fugitive emissions to the biogas plant for gas recovery, with separated gases (CH ₄ , CO ₂ , H ₂ S) further treate d in the Flue Gas Cleaning System to eliminate r esidual odour.
6	Conclusive remarks of aero microbial stu dy done at different locations in and arou nd the project site.	The Aero microbial study has been carried out for 5 loc ations (2 within the project site and 3 around the projec t site). Based on the monitored data, the waste-to-ener gy plant shows no detectable pathogens and only a slig ht increase in common microbes that stay close to natu

S. N o.	ADS Point	Reply/Response of PP
		ral background levels. The details of sampling location, results, and the conclusion have been submitted with ADS reply on PARIVESH portal.
7	Compliance of the Schedule II of the Solid Waste Management Rules 2026 and its subsequent amendments regarding CBG Plant.	Noted and will abide by the condition. Standards for Compressed Biogas (Compressed Bio-Gas or bio-compressed natural gas) plants and household Bio-digester are given under Part - B of Schedule - III of SWM Rules, 2026. Compliance of Biogas/ CBG, as per CPCB guidelines 2022, has been submitted with ADS reply on PARIVESH.
8	Flue gas and leachate treatment plan.	Flue gas and leachate treatment plans have been submitted with ADS reply on PARIVESH.
9	Detailed action plan for 3-tier Greenbelt development covering 40% of the project area including gap plantation in the existing green belt area. The additional area for the green belt development shall be identified by the proponent in consultation with MCD.	The Municipal Corporation of Delhi (MCD) has allocated land adjacent to the Project Site (ELSF), measuring 1.65 hectares, which will be fully utilized for plantation activities. The Action Plan has been submitted with ADS reply.
10	Clarification regarding anomalies observed in the AAQ data reported in the EIA report vis-à-vis with CAQMS data.	The variations are due to standard methodological differences between IS:5182 manual gravimetric monitoring and CAAQMS continuous analysers, including spatial-temporal averaging effects. It is therefore respectfully submitted that The PERFECT baseline is methodologically sound under IS:5182 (NAAQM Standards, 2009), with differences arising from known analytical characteristics of the respective methods. Accordingly, the EIA baseline remains accurate and conservative. The Technical Comparison Analysis report of Ambient Air quality data, CPCB Monitoring station data and CAAQMS data has been submitted with ADS reply on PARIVESH.
11	Compliance to the issues/concerns raised during the public hearing held for the existing EC dated 26/07/2018 and action plan to address the concerns/issues raised from the public consultation process as per MoEF&CC OM dated 30/09/2020 with physical and financial targets.	The Public Hearing for the 25 MW plant was conducted on 21.05.2018 under the supervision of the ADM. For the expansion phase, Public Consultation was conducted by DPCC between 30.09.2025 to 29.10.2025. Action plan has been prepared as per MoEF&CC's OM dated 30.09.2020 and submitted with ADS reply on PARIVESH portal.
12	Findings of the CPCB monitoring report regarding chlorine levels in the water sample	An inspection by CPCB in coordination with DPCC reported chloride in treated leachate at 780 mg/l against 600

S. N o.	ADS Point	Reply/Response of PP
	ples and corrective action taken to address the same.	mg/l; however, the CTO limit is 1000 mg/l, and the values are compliant. Compensation was paid under protest, with a request for withdrawal. Leachate monitoring is being carried out regularly as per CTO conditions.
13	Comments of DPCC dated 25/03/2026 and response of the project proponent.	Compliance of DPCC Comments dated 25.03.2026 has been submitted with ADS reply on PARIVESH portal.

43.1.24: Written Submission:

I. Leachate process flow diagram. Submit test reports of Raw leachate and treated leachate

Reply: The flow diagram of leachate process and test results of raw leachate and treated leachate is submitted by Project Proponent.

II. Odour parameters comparison with threshold values

Reply: The present limit available for Ammonia is 400 µg/m³ (as per NAAQS, 2009), 20 ppm for H₂S (as per OSHA) & no standard prescribed for total VOCs. Further, it is ensured to adhere the limits if prescribed by law in future.

Odour parameters comparison with threshold is submitted by Project Proponent.

III. Financial outlay on the basis of Epidemiology Study

Reply: An amount of ₹50 lakh has been allocated under Corporate Environment Responsibility (CER) activities which includes:

Medical health Check-up & Awareness Camps involving need based Medical Tests such as LFT, KFT, CBC, Eye Test etc.

Provision of Ambulance (1 No.) on call for Railway Colony, Tughlaqabad Village, Prem Nagar, Pul Prahladpur and other nearby villages within study area.

IV. Strategy for tackling with NIMBY Syndrome

Reply: We recognize the challenges posed by the NiMBY ("Not in My Back Yard") syndrome and are actively working towards greater community participation through public sensitization, awareness initiatives, and encouraging visits to the plant.

Our objective is to help people understand the critical role of Waste-to-Energy operations, the environmental need of the hour, and the importance of sustainable coexistence.

During last one year, the plant has witnessed a footfall of more than 1,000 visitors, including Resident Welfare Association (RWA) representatives, school students, and college students.

In addition, awareness is being disseminated to promote responsible waste management practices.

Through our "Swachh Vahini" initiative, we are also collecting single-use plastic waste to sensitize citizens about the importance of waste segregation and recycling, while highlighting our continued contribution towards keeping Delhi cleaner and free from unmanaged waste.

V. Existing and Proposed Efficiency of Bag Filter

Reply: Existing Operating Plant:

The design efficiency of the Bag House Filter has been calculated based on the design parameters:

Inlet Flow: 150000 Nm³/Hr

Inlet Dust Load: 12 g/Nm³

Outlet Particulates: 30 mg/Nm³

The design efficiency of existing bag house filter is: 99.75 %

Proposed Expansion Plant:

The proposed Bag House Filter will be designed to ensure particulate removal up to 99.9% (0.15% higher than the existing) and compliance with the prescribed particulate standard i.e. less than 30 mg/Nm³.

VI. Ash Utilization status and Ash testing reports

Reply: The Ash Utilization data for FY' 2025-26 is as follows:

Ash Utilization

Particulars	Generation (MT)	Utilization (MT)	Disposal MT)
Fly Ash	12816	12816	0
Bottom Ash	66936	66936	0
Total	79752	79752	Nil

Note:

- 1) Ash utilization is carried out in accordance with the DPCC directions dated 09.12.2024 and CTO issued by DP CC dated 10.01.2025.
- 2) Any unutilized ash, at any given time, is send to SLF/ESLF.

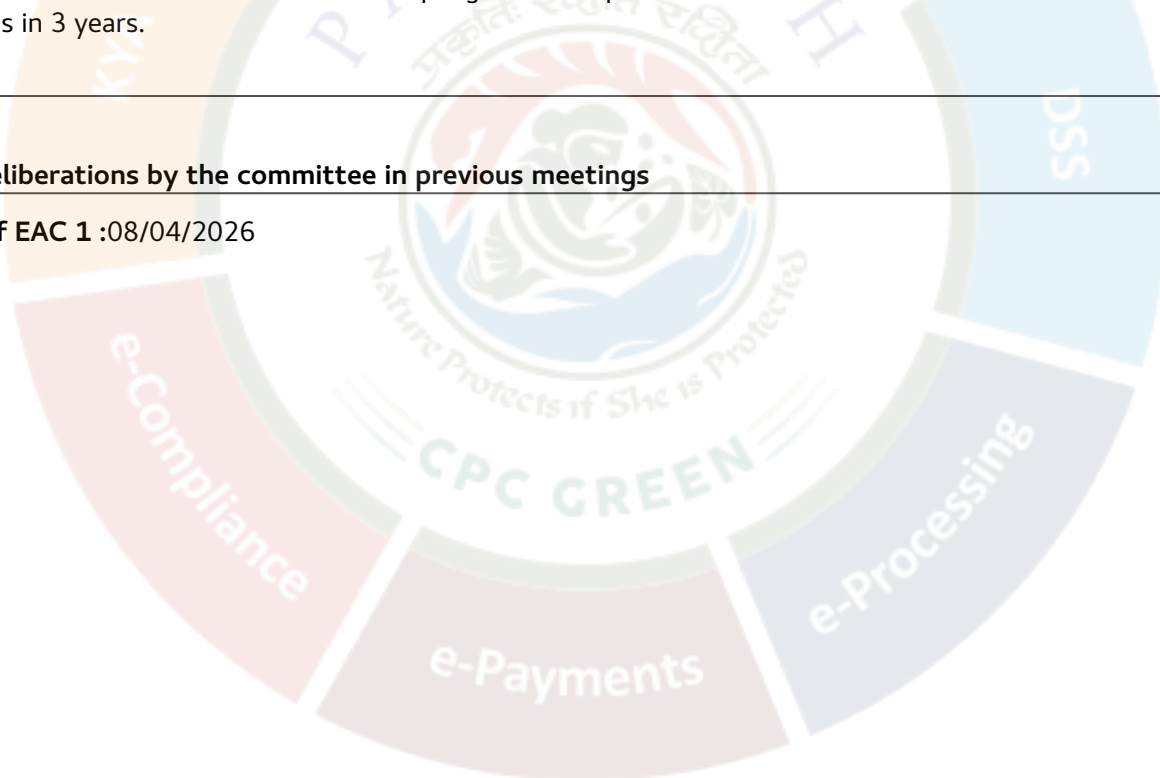
The TCLP Test Reports of Fly Ash & Bottom Ash are submitted by Project Proponent.

VI. Greenbelt Development Plan

Reply: Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare. Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.

3.1.3. Deliberations by the committee in previous meetings

Date of EAC 1 :08/04/2026



Deliberations of EAC 1 :

Observations and deliberation of the EAC

41.1.23: The Committee observed and noted the following:

- i. The Instant proposal is for seeking fresh Environment Clearance for setting up of a WtE plant with a capacity of 20 MW for enhancement from 25 MW to 45 MW in Tehkhand Village, Kalkaji Tehsil, Tehkhand District, New Delhi State of M/s Tehkhand Waste to Electricity Project Ltd.
- ii. The existing project was accorded EC on 26/07/2018 and the same has been implemented.
- iii. Proposed expansion is envisaged within the existing land of 6.0703 Ha and no additional land is required for the proposed expansion.
- iv. There is a Sanitary Landfills (SLF) located adjacent to WTE site, which is owned by Municipal Corporation of Delhi for which the Ministry accorded EC on 29/10/2018. This SLF is an interdependent projects or activities for the proposed WTE expansion as non-recyclable MSW having calorific value of 1500Kcal/kg or more from SLF will be sent to WTE for treatment and waste (ash & inert) from WTE will be sent to SLF for disposal.
- v. There is no involvement of forest land in the proposed project.
- vi. There are three Archaeological Sites within the radius of 2 km from the project site namely Nai-ka-kot in Tughlaqabad (0.44 Km, SW); Walls, gate and bastions of Adilabad (Mohammadabad) and causeway leading there to from Tughlakabad (1.18 Km, SW) and Tomb of Ghiyasuddin Tughlakabad (1.76 Km, W) and NOC for the same has been obtained from National Monument Authority vide File No. 04/02/2025/CA/Delhi/No. 788, dated 24.02.2026-stating that the project site/ aforesaid property falls beyond the regulated area of any centrally protected monument.
- vii. Asola Wildlife Sanctuary ESZ is located at 0.72 km SW & Asola Wildlife Sanctuary is located at 1.65 km SW from the project site. Okhla Bird Sanctuary ESZ is located at 4.76 Km NE and Okhla Bird Sanctuary is located at 4.83 km NE from the project site.
- viii. The project site is located at distance of 0.61 km from the Okhla Industrial Area which is a Critically Polluted Area (CPA) having CEPI score of 92.65.
- ix. EAC deliberated on the CCR report of the project and asked the Project Proponent to give the detailed corrective actions to be taken for the Non complainant condition and also provide the physical and financial targets of the EMP.
- x. EAC observed that the Project Proponent has not submitted the Public Hearing action plan as per MoEF&CC OM dated 30.09.2020.
- xi. EAC asked the Project proponent to submit the Recommendations of the Social Audit done and give its action plan accordingly.
- xii. EAC observed that there is mismatch in the ambient air quality values of CPCB monitoring stations and Project Proponent monitoring stations in the same location. EAC asked the Project Proponent to revisit the data again.
- xiii. EAC deliberated the Hydrogeological Report presented by the project proponent and observed that it lacks the monitoring of Ground water quality parameters like BOD, COD, Nitrate, Heavy Metals, Microbial culture analysis etc. EAC also asked the Proponent to revalidate the Ground water level data as there is considerable variation in Pre monsoon and Post monsoon data.
- xiv. EAC observed that the Project Proponent has not analysed any Ground Water sample of inside the project area. Project Proponent needs to submit the Core Zone Ground water sample analysis (Physical, Chemical and Biological) report.
- xv. EAC deliberated the Water shed analysis report and asked the PP to submit the inference of the report including the Effect of the Project on the nearby water bodies and the mitigation measures to be taken by Project Proponent.

- xvi. EAC observed that in the presentation given by Project Proponent in some places it is written that for control of Particulate Matter, ESP will be installed and in some places it is written that Bag filter will be installed. Project Proponent needs to revisit the entire presentation.
- xvii. During the EAC Sub-committee site visit, committee observed that Odour problem was found in the project site, and this matter is also raised during the Public hearing written submissions. EAC asked the Proponent to submit the detailed action plan for the same including the mitigation measures. The Central Pollution Control Board (CPCB) released guidelines on August 18, 2025, for MSW incineration-based Waste-to-Energy (WtE) plants, aiming to ensure environmentally sound, economically viable operation, and strict adherence to solid waste management rules shall be implemented. Also CPCB guidelines for odor management at Waste-to-Energy (WtE) projects, particularly those under the "Guidelines on Odour Monitoring & Management in Urban Municipal Solid Waste Landfill Sites" shall be followed. Accordingly, monitoring of odorous compounds like hydrogen sulfide (H₂S), ammonia (NH₃), and volatile organic compounds (VOCs) is essential.
- xviii. Project Proponent was unable to clarify the inference of the Aero microbial study carried out in the vicinity of the project. EAC asked the PP to again do the study in different locations and submit its conclusions.
- xix. Project Proponent informed the EAC that it has been going to install the Compressed Bio Gas Plant within the Project area, in this regard EAC asked the Project Proponent to comply the Schedule II of the Solid Waste Management Rules 2016 and its subsequent amendments and follow the CPCB guidelines regarding the same.
- xx. EAC asked the Project Proponent to increase the Environment Mitigation Measures in the ratio of the capacity enhancement as the capacity is going to increase by 80%.
- xxi. EAC observed that the existing greenbelt is not up to the mark and suggested the Project Proponent to do the gap plantation by plants of minimum 3m height.
- xxii. EAC asked the Project Proponent to give the Flue gas and leachate treatment plan.
- xxiii. EAC asked the Project Proponent to plant the 3-tier plantation along the approach road of the project.
- xxiv. EAC asked the MCD officials to give the land for the project for additional plantation and asked the Project Proponent to submit the detailed action plan for Greenbelt development including timelines and physical target.
- xxv. Project Proponent informed the EAC that it has installed solar capacity of 680 KW, EAC asked the Project Proponent to further increase the solar capacity.
- xxvi. EAC deliberated the DPCC comments dated 25.03.2026 and asked the proponent to submit the compliance accordingly.

Recommendations of the Committee

41.1.24: In view of the foregoing and after the detailed deliberations, the **Committee recommended to defer** the instant proposal and asked the project proponent to address the above observations and also sought for the following additional data/information:

- i. Action closure letter from IA-C&MD on the non-conformities observed in the conditions prescribed in the EC dated 26/07/2018 shall be submitted.
- ii. Recommendations of the following additional studies carried out and its action plan with physical and financial out lay. Accordingly, revised EMP cost shall be submitted.
 - Cumulative Environmental Impact Assessment study
 - Geo-hydrological study
 - Epidemiological study including Public Health Action Plan
 - Water shed development

- Comments by Commission for Air Quality Management in National Capital Region and Adjoining Areas
- iii. Monitoring report of Ground water quality parameters like BOD, COD, Nitrate, Heavy Metals, Microbial culture analysis, Ground water level etc of Core and Buffer zone.
- iv. Clarification regarding installation of ESP/Bag Filter for control of Particulate Matter.
- v. Detailed action plan for the control of Odour Problem and its mitigation measures.
- vi. Conclusive remarks of aero microbial study done at different locations in and around the project site.
- vii. Compliance of the Schedule II of the Solid Waste Management Rules 2026 and its subsequent amendments regarding CBG Plant.
- viii. Flue gas and leachate treatment plan.
- ix. Detailed action plan for 3-tier Greenbelt development covering 40% of the project area including gap plantation in the existing green belt area. The additional area for the green belt development shall be identified by the proponent in consultation with MCD.
- x. Clarification regarding anomalies observed in the AAQ data reported in the EIA report vis-à-vis with CAAQMS data.
- xi. Compliance to the issues/concerns raised during the public hearing held for the existing EC dated 26/07/2018 and action plan to address the concerns/issues raised from the public consultation process as per MoEF&CC OM dated 30/09/2020 with physical and financial targets.
- xii. Findings of the CPCB monitoring report regarding chlorine levels in the water samples and corrective action taken to address the same.
- xiii. Comments of DPCC dated 25/03/2026 and response of the project proponent.

3.1.4. Deliberations by the EAC in current meetings

Observations and deliberation of the EAC

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

- i. The Instant proposal is for seeking fresh Environment Clearance for setting up of a new power plant with a capacity of 45 MW enhancement from 25 MW to 45 MW in Tehkhand Village, Kalkaji Tehsil, Tehkhand District, New Delhi State of M/s Tehkhand Waste to Electricity Project Ltd.
- ii. The EAC took into consideration the KML file on the Google Earth presented by the project proponent along with DSS of the project site on PARIVESH.
- iii. The existing project was accorded EC on 26/07/2018 and the same has been implemented.
- iv. Proposed expansion is envisaged within the existing land of 6.0703 Ha and no additional land is required for the proposed expansion.
- v. There is a Sanitary Landfills (SLF) located adjacent to WTE site, which is owned by Municipal Corporation of Delhi for which the Ministry accorded EC on 29/10/2018. This SLF is an interlinked project for the proposed WTE expansion as MSW from SLF will be sent to WTE for treatment and waste (ash & inert) from WTE will be sent to SLF for disposal.
- vi. There is no involvement of forest land in the proposed project.
- vii. There are three Archaeological Sites within the radius of 2 km from the project site namely Nai-ka-kot in Tughlaqabad (0.44 Km, SW); Walls, gate and bastions of Adilabad (Mohammadabad) and causeway leading there to from Tughlakabad (1.18 Km, SW) and Tomb of Ghiyasuddin Tughlakabad (1.76 Km, W) and NOC for the same has been obtained from National Monument Authority vide File No. 04/02/2025/CA/Delhi/No. 788, dated 24.02.2026-stating that the project site/ aforesaid property falls beyond the regulated area of any centrally protected monument.
- viii. Asola Wildlife Sanctuary ESZ is located at 0.72 km SW & Asola Wildlife Sanctuary is located at 1.65 km SW from the project site. Okhla Bird Sanctuary ESZ is located at 4.76 Km NE and Okhla Bird Sanctuary is located at 4.83 km NE from the project site.
- ix. The project site is located at distance of 0.61 km from the Okhla Industrial Area which is a Critically

Polluted Area (CPA) having CEPI score of 92.65.

x. The technology to be employed for this WTE project is RDF combustion based reciprocating forward feed grate technology. The power generation capacity will be 45 MW. The quantity of MSW requirement for the project will be 3,65,000 MTPA.

xi. Existing Water requirement is 490 m³/day, water requirement is obtained from Okhla STP and permission for the same has been obtained from Delhi Jal Board vide letter no. F-1/DJB/EE(SDW)/V/2017/1346 dated 13.10.2017. The water requirement for the proposed project is estimated as 632 m³ /day, out of which 7 m³/day of fresh water requirement will be obtained from the DJB and the remaining requirement of 625 m³ /day will be met by the treated water from Okhla STP and in house treated water. The water is transported to the plant site through the underground pipeline. No groundwater extraction is involved in the project.

xii. The Committee deliberated on the baseline data and incremental GLC due to the proposed project. The committee noted that the proponent is providing Boiler stack of 60 m height with APCS - Lime scrubber and activated carbon injection followed by Bag Filter for SO₂ control, Low NO_x combustion system and provision for Selective Non-Catalytic Reduction (SNCR) for NO_x control and stack with a height of 60 meters will be provided to control & regulate the air emission from the proposed project.

xiii. For odour control, the committee noted that negative Pressure Ventilation in the MSW collection pit, ventilation air from MSW pit will be fired in the boiler and provision of fogging unit/mist system & herbal solution spray.

xiv. The committee noted that with respect to water pollution control, proponent will be using Air cooling system, wastewater from raw water treatment facilities and the boiler section will be used for flue gas conditioning and dust suppression operations and leachate will be collected, treated, and reused in the main plant. Zero liquid discharge will be adopted.

xv. The rejects/generated bottom ash is utilized in road subgrade construction and embankment. Any unutilized material will be sent to SLF/ESLF. Supplied to ash brick manufacturers and any unutilized material will be sent to SLF/ESLF

xvi. Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare. Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.

xvii. As per MoEF&CC OM dated 29/10/25 the minimum Greenbelt requirement for projects located within the CPA is 40%, the instant proposal is situated 0.61 km away from the Okhla CPA. In view of this, Project Proponent has developed 2.01 ha. Greenbelt area which is about 33% of the total project area of 6.07 ha and proposed to develop greenbelt in additional land of approx. 1.65 ha provided by MCD at ESLF area which will increase the greenbelt to approximately 60% of the total project.

xviii. The ToR letter for the project was issued under para 7(ii) a of EIA Notification, 2006 by MoEFCC dated 16.09.2025. The Public Hearing is exempted as per Para 7(ii)(a) of EIA Notification, 2006 and its subsequent amendments. Therefore, Public Consultation was conducted by the DPCC between 30.09.2025 to 29.10.2025, in compliance of EIA Notification, 2006 and its subsequent amendments. The committee advised the PP to implement the PH action plan in a time bound manner.

xix. The capital cost of the proposed project is Rs 3,563.10 lakhs and the annual recurring cost towards the environmental protection measures are Rs. 670 lakh for existing and Rs.132.81 lakh for the proposed project. The employment generation from the proposed project / expansion is 45 nos.during the operation phase and 262 workers during the construction phase.

xx. 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.

xxi. The Committee deliberated on the Project Proponents response to comments of DPCC dated 25/03/2026 and found it satisfactory and advised the PP to adhere to the direction of DPCC.

xxii. The Committee also deliberated on the comments received from Commission on Air Quality Management wherein it has been emphasized upon that proposed project shall undertake strict control measures to control the air pollution arising due to other activities linked to WTE plant construction and operation (e.g., C&D, transportation, road dust, etc) and all the Directions, Advisories and Orders issued by the Commission in this regard from time to time shall be followed strictly. The committee asked the proponent to ensure compliance with the same.

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

xxiv. 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:

43.1.26: 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.	The incoming Municipal waste of 3,65,000 MTPA shall be processed at proposed waste to energy plant as committed. All the waste received shall be kept under a covered storage facility equipped with impermeable base and provision for collection of leachate leading to a leachate treatment and disposal facility.
2.	All the environmental safeguards prescribed by the DPCC vide its letter dated 25.03.2026 for the instant expansion proposal in pursuance to the MoEF&CC O.M. dated 14.01.2025 and its subsequent amendment shall be complied with. Compliance in this regard shall be submitted to the Regional Office of MoEF&CC along with the six-monthly compliance report.
3.	Project proponent shall take necessary precaution to minimize nuisance of odour, flies, rodents, bird menace and fire hazard in the waste storage pit, around & over windrows and in processing area.
4.	Proponent shall ensure that pre-process and post-process rejects shall be removed from the compost processing facility on regular basis and shall not be allowed to pile at the site. Recyclables shall be sent to authorized recyclers. The non-recyclables having high calorific fraction (>1500 kcal/kg) shall be segregated and sent to waste to energy.
5.	Project Proponent shall ensure that waste to be incinerated shall not be chemically treated with any chlorinated disinfectants and incineration of chlorinated plastics shall not occur. All the facilities in twin chamber incinerators shall be maintained to achieve a minimum temperature of 950°C in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 seconds. Incinerators shall be operated with such temperature, retention time and turbulence, as to achieve Total Organic Carbon (TOC) content in the slag and bottom ash less than 3%, or the loss on ignition is less than 5% of the dry weight. The CO ₂ concentration in tail gas shall not be more than 7%.
6.	Project proponent shall ensure that utilization of ash generated in accordance with the directives of Delhi Pollution Control Committee (DPCC). No ash pond is permitted within the project site. Any unutilized ash and inerts from processing of municipal solid waste in the proposed expansion project shall be sent to

	Engineered Sanitary Landfill (ESLF) for its safe disposal. In case the concentration of toxic metals in incineration ash exceeds the limits specified in the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended from time to time, the Project Proponent shall send the ash to the Treatment, Storage and Disposal Facility for Hazardous Waste at Bawana in Delhi.
7.	Online Continuous Stack Emission Monitoring System (OCEMS) shall be done through 24X7 online monitoring system. The emission Standards for Municipal Solid Waste based Thermal Power Plants as per Municipal Solid Waste Rules, 2026 dated 1.4.2026 (S.O. 1357 (E)) shall be complied (Refer Part C of Schedule II of Municipal Solid Waste Rules, 2026 dated 1.4.2026 (S.O. 1357 (E))). OCEMS shall be calibrated properly to ensure that data matches with the actual monitoring results.
8.	The total water requirement for the proposed project is estimated as 632 m3 /day, out of which approx. 7 m3/day of fresh water requirement will be obtained from the DJB and the remaining requirement of 625 m3 /day will be met from the treated water from Okhla STP, DJB and inhouse treated water. The water is transported to the plant site through the underground pipeline. No groundwater extraction is involved in the project. Air-Cooled Condenser shall be used to reduce fresh water requirement.
9.	Project proponent shall harvest rainwater in a storage tank within the plant premises and utilize the same for plantation, recharging water in the pond and domestic utilization as committed. PP shall provide separate garland drains to prevent mixing of leachate with storm water. 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.
10.	Project proponent shall implement the protective measure proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs. 35.63 Crores (Capital) and Rs. 1.32 crores (recurring) for the proposed expansion 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.
11.	Effluent of 354 KLD shall be treated through Leachate Treatment Plant. As committed by the Project proponent, Zero liquid discharge shall be adopted for the proposed plant. No wastewater will be discharged outside the project site. 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.
12.	Project proponent shall implement the concurrent plantation plan in a time bound manner. Total of 3.66 ha. area (project site: 2.01 Ha; Outside project site: 1.65 Ha) shall be maintained as a greenbelt in a time frame of 2-3 years. Three tier green belt all along the periphery of the project site shall be developed by gap plantation in existing green belt area as per CPCB guidelines with tall saplings of not less than 2 meter height within 1 year. The budget earmarked for the greenbelt shall be kept in a separate account and audited annually.
13.	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.
14.	Project proponent shall carry out community plantation with incentive scheme by distributing 5,000 saplings mainly of fruit species per year for a period of five years. Further, PP shall provide basic facilities to the nearby schools such as drinking water, sanitation facilities and shall also develop greenbelt around the nearby schools. Further, PP shall organize quarterly awareness programs for school students to educate them on the significance and preservation of trees.

1 5.	Wildlife conservation plan as approved by the competent authority shall be implemented. Additional, budget shall be added in the plan, in case additional measures suggested by state wildlife department. The final Wildlife conservation plan duly approved by the CWLW shall be submitted to RO, MoEF&CC within a time frame of three months from the date of grant of EC and the budget approved by the concerned authority shall be deposited in government account.
1 6.	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.
1 7.	Project proponent shall install adequate number of anti-smog guns at the periphery of the project boundary facing inwardly at a suitable height and explore the possibility for vertical gardens in order to bring down the particulate matter concentration in the area along with carry out Water Sprinkling on roads inside the plant area/ administrative areas on a regular basis to control the air pollution. A logbook shall be maintained for the activity and be in six-monthly compliance report.
1 8.	Project proponent shall deploy mechanical road sweepers for everyday cleaning of the roads in and around plant site.
1 9.	Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.
2 0.	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
2 1.	For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the latest CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
2 2.	Project proponent shall ensure that plastic waste generated from the plant except chlorinated plastics shall be used as RDF for the in-house incinerators. The chlorinated plastics waste generated from the plant shall be stored separately in isolated area and disposed of strictly adhering to the Plastic Waste Management Rules 2026 (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 Project proponent.
2 3.	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 Greenbelt development. The action in this regard shall be submitted concerned RO in six monthly report.
2 4.	All the Directions, Advisories and Orders of Commission for Air Quality Management in National Capital Region and Adjoining Areas from time to time shall be complied upon by the project proponent.
[B] Socio-economic	
1.	All the recommendations of the epidemiological study report by IIMR Delhi shall be complied upon by

	the project proponent in a time bound manner and compliance status in this regard shall submitted along with the six monthly compliance report. In addition to this, proponent shall carry out a Root Cause Analysis (RCA) study to assess the prevalence of water borne diseases in the areas adjacent to the proposed project. The study report along with the recommendations shall be submitted to the Regional Office of the Ministry along with the six monthly compliance report.
2.	The budget proposed for PH is Rs. 1.16 Crores. The budget proposed shall be kept in a separate account and audited annually. Project proponent shall implement the action plan to address the issues raised during public hearing within a time frame of 5 years from the date of grant of EC. In addition to this, PP shall provide medical camps in the study area for better public health, strengthen existing roads, provide RO for drinking water, develop skills of local people, etc. as committed. Compliance status in this regard shall be submitted along with the six monthly compliance to the concerned Regional Office of MoEF&CC.
3.	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 Manger with postgraduate qualification in environmental science/environmental engineering, shall be created. It shall be ensured that the Head of the Cell shall directly report to the Head of the Plant who would be accountable for implementation of environmental regulations and social impact improvement/mitigation measures.
2.	Consent under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 and Authorization under Solid Waste Management Rules, 2026 and Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016 for the proposed project shall be obtained from the Delhi Pollution Control Committee.
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

1(d)	Thermal Power Plants
Statutory compliance	
1.	Part A, B & C of Schedule II of Solid Waste Management Rules, 2026 which came into force vide S.O. 1357 (E) on 01.04.2026 as amended from time to time shall be complied for standards for composting, treated leachate (generated from waste) and incineration of Municipal Solid Waste.
2.	Environmental Guidelines for Compressed Biogas Plant (CBG)/Bio-CNG Plants, 2022 of CPCB shall be followed for biomethanation plant based on municipal solid waste.
3.	Mode of transportation of municipal solid waste, ash and inerts: - Waste shall be transported in covered vehicles and the wheel-washing facility shall be provided at the entry and exit of the plant. - PP shall transport fly ash / bottom ash / inerts in properly covered vehicles and ensure that no fugitive emission occurs in the air during loading, unloading and transportation.

Air quality monitoring and Management	
1.	Project proponent shall manage the foul odour emerging as a result of waste processing as per CPCB guidelines issued from time to time.
2.	Negative Pressure shall be maintained in the Waste Storage Pit from the waste pit. Pressure monitoring system showing the atmospheric pressure and pressure inside the waste pit shall be installed and the data shall be transferred to CPCB and DPCC through server.
3.	Selective Non-Catalytic Reduction (SNCR) system or Low NO _x combustion system shall be installed to achieve NO _x emission standard as prescribed in Solid Waste Management Rules, 2026 or by DPCC whichever is stringent.
4.	Hydrated lime and activated carbon injection system shall be installed for controlling SO ₂ and HCl emissions in flue gas. Bag Filter House made of PTFE (Polytetrafluoroethylene) with 130% design capacity for controlling Particulate matter emissions shall be installed to ensure that particulate matter (PM) emission meet the stipulated standards of 30 mg/Nm ³ .
5.	One common stack with a height of 60 meters shall be provided with continuous online monitoring instruments for SO ₂ , NO _x and Particulate Matter as per extant rules.
6.	Project proponent shall ensure that all the parameters including TOCs in stack emissions to meet the standards as prescribed in Solid Waste Management Rules, 2026 or by DPCC whichever are stringent.
7.	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 one location. 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.
8.	Adequate dust extraction/suppression system shall be installed in waste handling, ash handling areas and material transfer points to control fugitive emissions.
9.	Appropriate Air Pollution Control measures shall 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.	Personnel's handling municipal solid waste or being present on the tipping floor shall be provided with PPE like shoe covers, gloves, masks, etc.

2.	A separate canteen far from the waste management area shall be provided for employees. All the basic sanitation facilities shall also be provided to all the employees.
3.	Bi-annual Health check-up of all the workers is to be conducted. The study shall take into account chronic exposure of locals 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.
4.	The PP should have one Community Health Centre in the campus, where the citizens from nearby area can have access to it and get treatment.

Water quality monitoring and Management

1.	Regular (at least once in six months) monitoring of groundwater quality in and around the proposed waste to energy plant 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.
2.	The treated effluents emanating from the different processes such as RO & DM plant, boiler blow down, sewage, etc. conforming to the prescribed standards shall be recycled and reused. Sludge/ rejects will be disposed in accordance with the Hazardous Waste Management Rules.
3.	Leachate of 354 KLD and sewage of 6 KLD making the quantum as 360 KLD shall be treated collectively in Leachate Treatment Plant to meet the standards as laid down in Solid Waste Management Rules, 2026. Treated leachate shall be recycled and utilized in the process and for quenching ash within the premises of the proposed WTE plant.
4.	Project proponent shall use the sludge obtained from the Leachate Treatment Plant as fuel into incinerator after dewatering by screw press technique.

Risk Mitigation and Disaster Management

1.	PP shall install radioactive sensors at the entry point of the Waste to Energy plant to detect any radioactive material in the receiving municipal solid waste.
2.	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.
3.	Only RDF shall be fed into incinerator for generation of energy and no other kinds of fuel shall be used.
4.	Ergonomic working conditions with First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.
5.	Safety management plan based on Risk Assessment shall be prepared to limit the risk exposure to the workers within the plant boundary.
6.	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.	Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development.
2.	In-situ/ex-situ Conservation Plan for the flora and fauna in the vicinity of the proposed site should be prepared and implemented.
Waste management	
1.	Municipal solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2026.
2.	Toxicity Characteristic Leachate Procedure (TCLP) test shall be conducted for compost, ash produced or any other substance, potential of leaching heavy metals into the surrounding areas as well as into the groundwater.
3.	Ash shall be utilized as per the directives of DPCC. Rejects/unutilized ash shall be disposed of in the Engineered Sanitary Landfill (ESLF). In case the concentration of toxic metals in incineration ash exceeds the limits specified in the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended from time to time, the PP shall send the ash to the Treatment, Storage and Disposal Facility for Hazardous Waste at Bawana in Delhi.
Monitoring of compliance	
1.	Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report.
2.	The project proponent shall (Post-EC Monitoring): - Send a copy of environmental clearance letter to the heads of Local Bodies, Panchayat, Municipal bodies and relevant offices of the Government; - Upload the clearance letter on the web site of the company as a part of information to the general public. - 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. - Upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same periodically; - 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; - 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; - 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; - 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.	Activities under Extended EMP 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. Statement on the commitments (activity-wise) made during public hearing to facilitate the discussion on the Extended EMP in compliance of the shall be submitted.
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3.2. Agenda Item No 2:

3.2.1. Details of the proposal

Proposed Expansion of the Existing 1,200 MW (10x120 MW) to 2,280 MW (Addition of 4 × 270 MW Unit s) Sub-critical Captive Power Plant at Angul, Odisha by National Aluminium Company Limited (NALCO) b y NALCO located at ANUGUL,ODISHA			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity Sub-Activity (Schedule Item)
IA/OR/THE/573338/2026	J-13012/9/2004.IA-II(T)	26/03/2026	Thermal Power Plants Coal/Lignite based plants (1(d))

3.2.2. Project Salient Features

Agenda item no. 43.2

43.2: Proposed Expansion of the Existing 1200 MW (10x120 MW) Captive Power Plant to 2280 MW by addition of 4x270 MW Sub-critical Captive Power Plant by **M/s. NALCO** at NALCO Nagar, Banarpal Block, **Angul District, Odisha - Prescribing of Terms of Reference - regarding.**

[Proposal No: IA/OR/THE/573338/2026; F. No. J-13012/9/2004.IA-II(T)]

Name of the EIA consultant: M/s Re Sustainability Solutions Pvt Ltd (S. No. 187, List of ACOs with their Certificate no NABET/EIA/25-28/RA0451; Valid up to 26.09.2028)

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

43.2.2: The existing captive power plant project unit 1 to 6 (6x120 MW) was accorded environmental clearance vide Lr. No. O.O.No14/13/81-Env dated 13.01.1982. Expansion of CPP 7th & 8th unit (2x120 MW) was accorded environmental clearance vide Lr. No.J-13-11/1/91/-IA-III dated 23.01.1992. Expansion of CPP 9th and 10th unit (2x120 MW) was accorded Environmental Clearance vide Lr. No F.No.J-13012/9/2004.IA-II(T) dated 30.07.2004. Amendment of EC for expansion of Ash pond was accorded Environmental Clearance vide Lr. No J-13012/9/2004-IA.II(T) dated 06.02.2014. Consent to Operate for the existing unit was accorded by Odisha State Pollution Control Board vide Lr. No. 6613/IND-I-CON-235 dated 29.03.2025. The validity of CTO is up to 31.03.2027.

43.2.3: Implementation status of the existing EC

S. No.	Configuration	Capacity (MW)	EC Dated	Implementation Status as on today	Production as per CTO
1	CPP - Sub critical 6 x120MW (Unit 1 to 6)	720	13.01.1982	In Operation	720 MW
2	CPP -Sub critical 2 x 120 MW (Unit 7 & 8)	240	23.01.1992	In Operation	240 MW
3	CPP -Sub critical 2 x 120 MW (Unit 9 & 10)	240	30.07.2004	In Operation	240 MW
4	Amendment of EC for expansion of Ash pond	Construction of ash pond 4 ash mound on ash pond 2 and dyke raising of ash pond 1	06.02.2014	Presently Pond-I is in operation	-

43.2.4: Compliance to MoEF&CC Notification dated 11/07/2025 regarding SO₂ emission norms: The status of compliance to the SO₂ emission norms shall be furnished as per the MoEF&CC Notification dated 11/07/2025:

43.2.5: Environmental site settings

S. N o.	Particulars	Details	Remarks			
1	Total land	CPP and Ash Pond-678.33 ha and Other infrastructure-141.52 [Private: 712.53 ha; Govt.: 107.32 ha;]	Land use: Industrial l and			
2	Land use break up	<table><tr><td>Fa cili tie s</td><td>E xi s ti n g A r e a in H e c t a r e s</td><td>P r o p o s e d A r e a in H e c t a r</td></tr></table>	Fa cili tie s	E xi s ti n g A r e a in H e c t a r e s	P r o p o s e d A r e a in H e c t a r	
Fa cili tie s	E xi s ti n g A r e a in H e c t a r e s	P r o p o s e d A r e a in H e c t a r				

S. No.	Particulars	Details			Remarks
				es	
		Captive Power plant			
		Power House Area	61.812	12.812	
		Coal Handling Systems	20.07	3.81	
		Watersystems	27.03	3.29	
		Roads	14.58	1.972	
		Switchyard	11.25	1.25	
		Green belt	23.763	1.4285	
		Sub Total (A)	37.244	3.744	
		Ash Pond			
		Ash pond 1, 2,	18.910	1.35	

S. No.	Particulars	Details			Remarks
		3 & 4			
		Other areas (dyke, ramp, office, pipeline, drains, open area)	68.02	31.84	
		Green Belt	48.77	14.355	
		Sub Total (B)	305.89	30.89	
		Total (A+B)	67.33	6.783	
		Others			
		Captive Raisystem/ROB	95.74	No change in t	

S. N o.	Particulars	Details	Remarks												
		<table><tr><td>HT T L ine</td><td>3 0. 3 1</td><td>h e l a n d a r e a a f t e r e x p a n s i o n</td></tr><tr><td>W a t e r s u p p l y p i p e l i n e</td><td>9. 3 2</td><td></td></tr><tr><td>A s h p i p e c o r r i d o r</td><td>6. 1 5</td><td></td></tr><tr><td>Su b T o t a l</td><td>1 4 1. 5 2</td><td></td></tr></table>	HT T L ine	3 0. 3 1	h e l a n d a r e a a f t e r e x p a n s i o n	W a t e r s u p p l y p i p e l i n e	9. 3 2		A s h p i p e c o r r i d o r	6. 1 5		Su b T o t a l	1 4 1. 5 2		
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Su b T o t a l	1 4 1. 5 2														
3	Land acquisition details as per MoE F&CC O.M. dated 7/10/2014 & 20/2/2025	Entire land is in possession of NALCO	Land documents are attached with TOR Application												
4	Existence of habitation & involvement of R&R, if any	Project site: NA Study Area: <table><tr><td>H a b i t a t i o n</td><td>D i s t a n c e</td><td>D i r e c t i o n</td></tr><tr><td>A m a n t a p u r</td><td>1 0 m</td><td>W</td></tr><tr><td>K</td><td>3</td><td>E</td></tr></table>	H a b i t a t i o n	D i s t a n c e	D i r e c t i o n	A m a n t a p u r	1 0 m	W	K	3	E	Status of R&R.- NA			
H a b i t a t i o n	D i s t a n c e	D i r e c t i o n													
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S. N o.	Particulars	Details	Remarks																																																															
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5	Existence of school and hospitals if any.	A. School Project site: No school at project site Study Area: <table><tr><td>S</td><td>D</td><td>Di</td></tr><tr><td>c</td><td>is</td><td>re</td></tr><tr><td>h</td><td>t</td><td>ct</td></tr><tr><td>o</td><td>a</td><td>io</td></tr><tr><td>l</td><td>n</td><td>n</td></tr><tr><td></td><td>c</td><td></td></tr><tr><td></td><td>e</td><td></td></tr><tr><td>G</td><td>2</td><td>E</td></tr><tr><td>o</td><td>0</td><td></td></tr><tr><td>v</td><td>0</td><td></td></tr><tr><td>t.</td><td>m</td><td></td></tr><tr><td>H</td><td></td><td></td></tr><tr><td>ig</td><td></td><td></td></tr><tr><td>h</td><td></td><td></td></tr><tr><td>S</td><td></td><td></td></tr><tr><td>c</td><td></td><td></td></tr><tr><td>h</td><td></td><td></td></tr><tr><td>o</td><td></td><td></td></tr><tr><td>o</td><td></td><td></td></tr><tr><td>l,</td><td></td><td></td></tr><tr><td>G</td><td></td><td></td></tr></table>	S	D	Di	c	is	re	h	t	ct	o	a	io	l	n	n		c			e		G	2	E	o	0		v	0		t.	m		H			ig			h			S			c			h			o			o			l,			G			
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		O m m B i d y a B h a r a t i H i g h e r S e c o n d	4. 7 1 k m	S W	

S. N o.	Particulars	Details			Remarks
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		M y C h h o t a S c h o o l, p r	6. 1 8 k m	W	

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e s c h o l T u r a n g a												
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		B. Hospital Project site: No Hospital at site Study Area: <table><tr><td>H o s p i t a l</td><td>D i s t a n c e</td><td>D i r e c t i o n</td></tr><tr><td>B a n a r p a l G o v t. H</td><td>1. 2 k m</td><td>E</td></tr></table>			H o s p i t a l	D i s t a n c e	D i r e c t i o n	B a n a r p a l G o v t. H	1. 2 k m	E		
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B a n a r p a l G o v t. H	1. 2 k m	E										

S. N o.	Particulars	Details			Remarks
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6	Latitude and Longitude of <u>all corners</u> of the project site.	<table><tr><th colspan="3">A. CPP Site</th></tr><tr><th>ID</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>20° 51' 48.530" N</td><td>85° 11' 41.003" E</td></tr><tr><td>B</td><td>20° 51' 23.779" N</td><td>85° 11' 44.325" E</td></tr><tr><td>C</td><td>20° 51' 18.669" N</td><td>85° 12' 8.764" E</td></tr></table>	A. CPP Site			ID	Latitude	Longitude	A	20° 51' 48.530" N	85° 11' 41.003" E	B	20° 51' 23.779" N	85° 11' 44.325" E	C	20° 51' 18.669" N	85° 12' 8.764" E	
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7	Elevation of the project site	106 to 138 M above mean sea level (as per google earth image)																																																																			
8	Involvement of Forestland if any.	No forest land involved	No-forest land involved																																																																		
9	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	Project site: No waterbody at site Study area <table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Brahmani River</td><td>6.1 km</td><td>NE</td></tr></table>	Water body	Distance	Direction	Brahmani River	6.1 km	NE	HFL of Brahmani River is 55.7m																																																												
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Brahmani River	6.1 km	NE																																																																			

S. N o.	Particulars	Details	Remarks												
		<table><tr><td>r</td><td></td><td></td></tr><tr><td>N an di ra Jo r</td><td>2. 4</td><td>N</td></tr><tr><td>Li n g ar a N a di</td><td>6. 7</td><td>S W</td></tr></table> Mitigation measures- · Maintaining zero discharge with respect to ash pond dewatered water. 100% of water recycled back after treatment for using in the plant purpose. · Leachate is collected through dedicated drains/canals further connected to garland drain and diverted to dedicated ETP for further treatment and reuse in ash quenching and ash slurry making. · Construction of garland drains and stormwater management system around the ash dyke · Installation of piezometers for regular groundwater quality monitoring · Development of a greenbelt buffer zone between the ash dyke and the river · Maintenance of adequate freeboard to prevent overflow during monsoon · Periodic structural stability assessment and safety audits	r			N an di ra Jo r	2. 4	N	Li n g ar a N a di	6. 7	S W				
r															
N an di ra Jo r	2. 4	N													
Li n g ar a N a di	6. 7	S W													
10.	Archaeological sites monuments/ historical temples etc.	No Archaeological site present in the vicinity of project area.													
11	Existence of ESZ/ESA/ National park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	<u>Study area: No existence of ESA/ESZ</u> Name of the ESZ/ESA: NA Status of Notification: NA Distance of project from ESZ/ESA: NA Authenticated map of ESZ projecting distance of ESZ from project site: Not in study area Status of NBWL approval: NA List of Reserved and protected forests: <table><tr><th>Name</th><th>Distance (km)</th><th>Direction</th></tr><tr><td>Balaram prasad PF</td><td>2.1</td><td>NW</td></tr><tr><td>Ganthigarhia PF</td><td>5.6</td><td>SE</td></tr><tr><td>Baistambaragarhi RF</td><td>8.1</td><td>N</td></tr></table>	Name	Distance (km)	Direction	Balaram prasad PF	2.1	NW	Ganthigarhia PF	5.6	SE	Baistambaragarhi RF	8.1	N	
Name	Distance (km)	Direction													
Balaram prasad PF	2.1	NW													
Ganthigarhia PF	5.6	SE													
Baistambaragarhi RF	8.1	N													

S. N o.	Particulars	Details			Remarks
		Sakasingha RF	8.7	W	
		Kauchiakhhol RF	8.7	NW	
12	Involvement of Critically Polluted Area/ Severely Polluted area as per 2018 CEPI score	Project is not located in Critically Polluted Area/Severely Polluted area			

43.2.6: 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	1200 MW (10x120 MW)	1080 MW (4x270 MW)	2280 MW	Sub Critical*

**Note: Ministry of Power vide OM dated 25/02/2026 clarified that provision of their O.M. No. 8/3/2002-Th-II (Vol. I) dated 13.11.2009 and its subsequent modification vide O.M. No. 5/18/2017-Th-II dated 01.02.2018 regarding capacity addition would be through super-critical units only are applicable only for plants to be set up by power generation utilities. There are no specific requirements prescribed for captive power plants. Accordingly, NALCO may adopt sub-critical technology for its proposed brownfield captive power plant expansion of 1080 MW (4 × 270 MW) at Angul, Odisha.*

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

Details	Fuel requirement (MTPA)	Source	Distance from site (Kms)	Mode of Transportation	Coal characteristics (Worst case scenario)	Linkage document
Coal	Existing: 6.820 Proposed: 4.821 Total: 11.641	Mahanadi Coalfield Limited and NALCO's Utkal D&E blocks, NL C	Maximum 100 km	Combination of two or three modes (road and rail)	Ash: 50 (%) Sulphur: 0.5 (%) Moisture: 14 (%) GCV: 3000Kcal/Kg	FSA with MCL and owned coal from NALCO's Utkal D&E block
LDO	4200 KL	Oil Marketing Company (OMC)	Maximum 1500 km	Rail	NA	

43.2.8: Water requirement: Existing Water requirement is 100800 KLD, which is being obtained from Bramani river and permission for the same has been obtained from Irrigation Dept. Govt. of Odisha Vide Lr. No. T313 Dated 04.03.1980 and further renewed vide letter no 2131 dated 30.03.2024 (Valid for 3 years). The water requirement for the proposed project is estimated as 77760 m³ /day which will be obtained from the Bramani river. The permission for drawl of additional surface water will be obtained for additional quantity. The water will be

transported to the plant site through Pipeline. The specific water consumption for the proposed power plant will be 3 m³/MWhr.

43.2.9: Power requirement: Existing power requirement of 100 MW is obtained from Existing Plant. The power requirement for the proposed project is estimated as 108 MW that will be obtained from the Existing Plant.

43.2.10: 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)	Disposal
1	Domestic waste	Plant and canteen	300	Nearest MSW disposal site
2	ETP Sludge	ETP	20	Nearest TSDF

43.2.11: Project Cost: Existing capital cost of project was Rs.1547 Crores. The capital cost of the proposed project is Rs.11313.47 Crores and the capital cost for environmental protection measures is proposed as Rs. 1358 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.136 Crores. The employment generation from the proposed project / expansion is 745 nos. (Permanent 545 nos. and Contractual 200 nos.)

43.2.12: Greenbelt development: Due to the proposed expansion, the greenbelt in the plant site area is rationalised from 237.63 Ha to 142.85 Ha and in the ash pond from 48.77 Ha to 143.55 Ha. Due to the proposed rationalisation, the existing greenbelt at the plant site is maintained at 38.66 % which is more than the stipulated norms of 33%. Thus total of 286.40 Ha area (42.22% of total project area) will be developed as greenbelt. A 10-15 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.

42.3.13: Ash management: Ash management for last three years

Year	Quantity generated (MT)	Quantity utilized (MT)	% of utilization	Balance quantity (MTP)	No of storage silos with capacity
2025-2026 *	2259267	1897457	83.99	361810	06 nos, 5000 MT
2024-2025	3332793	2680824	80.44	651969	06 nos, 5000 MT
2023-2024	2917869	2619412	89.77	298457	06 nos, 5000 MT

*till November 2025

A. Fly ash Details for last three years: 2023-24: 2334295 MT; 2024-25: 2666234 MT; 2025-2026: 1807413 MT

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)	2023-24: 730516 MT 2024-25: 672544 MT 2025-26: 478329 MT	2023-24: 31.2% 2024-25: 25.2% 2025-26: 26.5%	As per MoEF act 2021, Audited by CPCB approved auditor.
2.	Construction of roads, road and fly over embankment	2023-24: 157320 MT 2024-25: 201600 MT 2025-26: 158367 MT	2023-24: 6.7% 2024-25: 7.6% 2025-26: 8.8%	As per MoEF act 2021, Audited by CPCB approved auditor
3.	Filling up of low-lying area	2023-24: 191760 MT 2024-25: 52800 MT 2025-26: 0 MT	2023-24: 8.2% 2024-25: 2% 2025-26: 0.6%	Audited by CPCB approved auditor
4.	Filling of mine voids:	2023-24: 956242 MT 2024-25: 1087321 MT 2025-26: 1247760 MT	2023-24: 40.9% 2024-25: 40.8% 2025-26: 44.04%	Permission from DGMS
5.	Total	2023-24: 2035838 MT 2024-25: 2014265 MT 2025-26: 1445605 MT	2023-24: 87.2% 2024-25: 75.5% 2025-26: 79.98%	

B. Bottom ash generation for last three years: 2023-24: 583574 MT; 2024-25: 666559 MT; 2025-26: 451854 MT

S.No.	Activity (as applicable)	Quantity	Percentage	Remarks (Prior approval of SPCB details to be mentioned)
1.	Filling of mine voids	2023-24: 583574 MT 2024-25: 666559 MT 2025-26: 451854 MT	2023-24: 100% 2024-25: 100% 2025-26: 100%	Permission from DGMS
	Total	2023-24: 583574 MT 2024-25: 666559 MT 2025-26: 451854 MT	2023-24: 100% 2024-25: 100% 2025-26: 100%	

C. Ash Pond Details

S.No.	Details of Ash pond	Ash pond 1	Total
1.	Status of ash pond (Active / Exhausted (yet to be reclaimed)/ Reclaimed)	Active	-

S.No.	Details of Ash pond	Ash pond 1	Total
2.	Area (Ha)	67.66*	67.66
3.	Dyke height (m)	113 mRL	-
4.	Volume (m ³)	19.2 Million m ³	-
5.	Quantity of ash disposed (Metric Tons)	230.4 LMT	-
6.	Available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons)	0.52% @1.2 LMT	-
7.	Expected life of ash pond (number of years and months)	Active	-
8.	Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining	No lining	-
9.	Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	Wet Slurry LCSD	-
10.	Ratio of ash: water in slurry mix (1:):	1:9	-
11.	Ash water recycling system (AWRS) installed and functioning : Yes or No	Yes	-
12.	Quantity of wastewater from ash pond discharged in to land or water body (m ³)	ZERO	-
13.	Last date when the dyke stability study was conducted and name of the organization who conducted the study:	15.10.2015	
14.	Last date when the audit was conducted and name of the organization who conducted the audit:	25.10. 25 Dr Suresh Prasad Singh Professor & Head Department of Civil Engineering National Institute of Technology, Rourkela, ODISHA, 769008	

*** Note:** Total ash pond area as per land use break up submitted to the Ministry is 189.10 Ha. Out of 189.10 Ha, active ashpond area is only 67.66 Ha. In the remaining land

D. Proposed ash utilization plan for expansion project

Details	Existing generation (MTPA)	Proposed generation (MTPA)	Total	Utilization (MTPA)	% of utilization	Balance quantity (MTPA)	No storage silos with capacity
Ash (Fly & botto	3.3	2.7	6.0	6.0	100	0	6 nos 5 000 MT

m)							
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43.2.14: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration: There is no court case/show cause against the proposed project. Further, there is no violation cases under the Environmental Protection Act, 1986, Van (Sanraksha Evam Samvardhan) Adhiniyam, 1980 and The Wildlife (Protection) Act, 1972.

43.2.15: ADS Information in chronology:

M/s. National Aluminum Company Ltd (NALCO) made an online application vide proposal no IA/OR/THE/573338/2026 dated 26.03.2026. The proposal was initially considered in 41st meeting of Re- constituted EAC (Thermal) held on 08.04.2026. Proposal was deferred for want of additional information.

The proponent submitted the ADS reply vide letter dated 04.05.2026 uploaded on PARIVESH 04.05.2026 Point-wise reply of ADS is given as below:

S No	ADS Point	Reply/Response of PP																																																																					
i	Proponent to explore the feasibility of alternate land arrangement for the proposed expansion as there is clearing of existing green belt situated in an area of 94.78 Ha at the plant site.	NALCO has examined the feasibility of alternate land for the proposed expansion. However, due to technical constraints, limited land availability within the existing plant boundary, and the requirement for integration with existing infrastructure and utilities, the expansion is proposed within the current premises. It is submitted that although a portion of the existing greenbelt area (94.78 Ha) is likely to be affected. The existing trees which are suitable for shifting will be transplanted within the project premises, and the total number of trees will be maintained by planting additional trees in open areas. Accordingly, compensatory plantation is being undertaken within the project premises (ash pond area), including capped ash pond areas [Area available at closed ash pond -IV (18.6 Ha) & area available at ash pond II B (40 Ha), and open area available around ash pond (36.18 Ha)] which is part of the total project area (678.33 Ha.). Post-compensation, the overall greenbelt shall be maintained as 42.22% which is more than EC norms (minimum 33%). The details land breakup existing and after expansion is given the below table. <table><tr><th rowspan="2">Facilities</th><th colspan="2">Existing Area</th><th colspan="2">After Expansion Area</th></tr><tr><th>Ha</th><th>%</th><th>Ha</th><th>%</th></tr><tr><td>Captive power plant area</td><td></td><td></td><td></td><td></td></tr><tr><td>Power House Area</td><td>61.88</td><td>16.61</td><td>128.12</td><td>34.40</td></tr><tr><td>Coal Handling system@</td><td>20.07</td><td>5.39</td><td>38.21</td><td>10.26</td></tr><tr><td>Water System</td><td>27.03</td><td>7.26</td><td>32.29</td><td>8.67</td></tr><tr><td>Roads</td><td>14.58</td><td>3.91</td><td>19.72</td><td>5.29</td></tr><tr><td>Switch Yard</td><td>11.25</td><td>3.02</td><td>11.25</td><td>3.02</td></tr><tr><td>Green belt</td><td>237.63</td><td>63.80</td><td>142.85</td><td>38.36</td></tr><tr><td>Sub Total</td><td>372.44</td><td>100.00</td><td>372.44</td><td>100.00</td></tr><tr><td>Ash pond area</td><td></td><td></td><td></td><td></td></tr><tr><td>Ash pond 1,2,3 & 4</td><td>189.1</td><td>61.82</td><td>130.5</td><td>42.66</td></tr><tr><td>Other areas (dyke, ramp, office, pipeline, drains, open area)</td><td>68.02</td><td>22.24</td><td>31.84</td><td>10.41</td></tr><tr><td>Greenbelt</td><td>48.77</td><td>15.94</td><td>143.55</td><td>46.93</td></tr></table>	Facilities	Existing Area		After Expansion Area		Ha	%	Ha	%	Captive power plant area					Power House Area	61.88	16.61	128.12	34.40	Coal Handling system@	20.07	5.39	38.21	10.26	Water System	27.03	7.26	32.29	8.67	Roads	14.58	3.91	19.72	5.29	Switch Yard	11.25	3.02	11.25	3.02	Green belt	237.63	63.80	142.85	38.36	Sub Total	372.44	100.00	372.44	100.00	Ash pond area					Ash pond 1,2,3 & 4	189.1	61.82	130.5	42.66	Other areas (dyke, ramp, office, pipeline, drains, open area)	68.02	22.24	31.84	10.41	Greenbelt	48.77	15.94	143.55	46.93
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S No	ADS Point	Reply/Response of PP																																					
		<table><tr><td>Sub Total</td><td>305.89</td><td>100.00</td><td>305.89</td><td>100.00</td></tr><tr><td>Total</td><td>678.33</td><td></td><td>678.33</td><td></td></tr><tr><td>Total greenbelt area</td><td>286.40</td><td>42.22</td><td>286.40</td><td>42.22</td></tr><tr><td>Other areas</td><td></td><td></td><td></td><td></td></tr><tr><td>Captive Rail system/ ROB</td><td>95.74</td><td colspan="3" rowspan="5">No change in the land area after expansion</td></tr><tr><td>HTT Line</td><td>30.31</td></tr><tr><td>Water supply pipe line</td><td>9.32</td></tr><tr><td>Ash pipe corridor</td><td>6.15</td></tr><tr><td>Total</td><td>141.52</td></tr></table>					Sub Total	305.89	100.00	305.89	100.00	Total	678.33		678.33		Total greenbelt area	286.40	42.22	286.40	42.22	Other areas					Captive Rail system/ ROB	95.74	No change in the land area after expansion			HTT Line	30.31	Water supply pipe line	9.32	Ash pipe corridor	6.15	Total	141.52
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ii	Map depicting the existing and proposed green belt development in the plant site as well as ash pond including its area covered/proposed compensatory plantation with different color code shall be submitted for consideration.	A revised map has been prepared and submitted in ADS reply showing: - Existing greenbelt area - Proposed / Compensatory plantation area All features have been clearly demarcated using distinct color codes for ease of interpretation along with area statistics.																																					
iii	Project proponent to clarify the ash dyke height details as it has been mentioned as 92 meters, 113 meters and 123 meters.	The existing project has four ash ponds having different dyke heights, the initial land area was 90 mRL, the details of the ash dyke height raising given below. The ash dyke raisings developed in a phased and engineered manner in compliance with CPCB/MoEF&CC guidelines after obtaining CTE from SPCB, ensuring structural stability and safety <table><tr><th>Details</th><th>Year</th><th>mRL</th><th>Remarks</th></tr><tr><td>Stage I</td><td>1986</td><td>90</td><td>Starter Dyke (Earthen type), Initial period</td></tr><tr><td>Stage II</td><td>1992</td><td>90 to 100</td><td>Composite dyke (Ash Core), Constructed in 3 Phases (Ash pond I and II) (90-93.4 mRL, 93.4-96.7 mRL & 96.7-100 mRL)</td></tr><tr><td>Stage II I</td><td>2001</td><td>100 to 104</td><td>Composite dyke (Ash Core) (Ash pond I and II)</td></tr><tr><td>Stage I V</td><td>2008</td><td>104 to 107</td><td>Composite dyke (Ash Core) Ash pond I and II</td></tr><tr><td>Stage V</td><td>2013</td><td>107 to 110</td><td>Composite dyke (Ash Core) Ash pond I only</td></tr><tr><td>Stage V I</td><td>2017</td><td>110 to 113</td><td>Composite dyke (Ash Core) Ash pond I only</td></tr><tr><td>Stage V II</td><td>2015-2026</td><td>107 to 123</td><td>Ash pond II (Ash mounding continue)</td></tr></table>					Details	Year	mRL	Remarks	Stage I	1986	90	Starter Dyke (Earthen type), Initial period	Stage II	1992	90 to 100	Composite dyke (Ash Core), Constructed in 3 Phases (Ash pond I and II) (90-93.4 mRL, 93.4-96.7 mRL & 96.7-100 mRL)	Stage II I	2001	100 to 104	Composite dyke (Ash Core) (Ash pond I and II)	Stage I V	2008	104 to 107	Composite dyke (Ash Core) Ash pond I and II	Stage V	2013	107 to 110	Composite dyke (Ash Core) Ash pond I only	Stage V I	2017	110 to 113	Composite dyke (Ash Core) Ash pond I only	Stage V II	2015-2026	107 to 123	Ash pond II (Ash mounding continue)	
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S No	ADS Point	Reply/Response of PP			
iv	Project proponent shall submit the details of the additional mitigation measures to be adopted as part of the expansion project as there are four villages namely Gotmara, Amantapur, Kulad and Bonda villages in the vicinity of the project site.	Considering the proximity of Gotmara, Amantapur, Kulad, and Bonda villages, the following mitigation measures shall be implemented. NALCO is also carrying out regular CSR activities in periphery of out project area, the amount spent during Financial Year (FY) 2021-22 is Rs 827.87 Lakhs, FY 2022-23 is Rs 984.85 Lakhs, FY 2023-24 is Rs 31.97 Lakhs, FY 2024-25 is Rs 112.36 Lakhs and FY 2025-26 is Rs 505.05 Lakhs. Further, NALCO undertakes that a 50 m wide greenbelt buffer will be maintained along the periphery of the project area, particularly in stretches adjoining nearby villages			
		Village	Distance /direction	Infrastructure proposed	Mitigation measures
		Gotmara	30m/E	Raw water reservoir and CHP	· Development a multi-layer greenbelt 50 m width along the village boundary. · Use of dense native species with high dust attenuation capacity · Install closed/covered conveyors and transfer point enclosures. · Provide dry fog / water spray dust suppression systems at unloading & transfer points. · Regular water sprinkling on internal roads. · Ensure wind-breaking walls
Kulad	50m/S	Raw water reservoir, CW Pump and Storage godown	· Development of greenbelt buffer 50 m between reservoir and village side. · Carry out periodic water quality monitoring · Install acoustic enclosures for pumps and motors. · Provide anti-vibration pads / isolation mounts. · Construct noise barrier walls toward the village side. · Ensure covered storage (closed shed) to prevent dust dispersion. · Provide impervious flooring with spill containment (bund walls). · Install fire protection system (hydrants, sprinklers, extinguishers). · Maintain proper ventilation and housekeeping. · Store materials as per MSD		

S No	ADS Point	Reply/Response of PP			
					S guidelines
		Bonda	60m/S	Cooling Tower	· Installation of high-efficiency drift eliminators to prevent fine droplets carrying dissolved solids/chemicals from reaching the village · Maintain uniform water distribution to avoid splashing and carryover. · Optimize tower height and airflow for proper dispersion. · Use natural draft / well-designed induced draft towers
		Amantapur	10m/W	Flue gas Chimney	· Installation of 275 m height stack · SCR/SNCR → NOx control · Advanced Electrostatic Precipitator (ESP) · Continuous monitoring System as per the guidelines of CPCB. · Development of greenbelt 50 m width between plant and village. · Organize periodic health check-up camps for nearby residents.
v	Ash dyke of the project is just 100m away from the Nandira River, mitigation measures to be followed in this regard shall be submitted.	Ash pond-II & IV has located approximately 100 m from the Nandira River. It is submitted that Ash pond-II & IV are presently not in operation. And will be used for greenbelt development. At present, Ash pond-I is in operation, which is located at an approximate distance of 600 m from the Nandira River, However following mitigation measures are being adopted to safeguard the nearby water body: · Maintaining zero discharge with respect to ash pond decanted water. 100% of water recycled back after treatment for using in the plant purpose. · Leachate is collected through dedicated drains/canals further connected to garland drain and diverted to dedicated ETP for further treatment and reuse in ash quenching and ash slurry making. · Construction of garland drains and stormwater management system around the ash dyke · Installation of piezometers for regular groundwater quality monitoring · Development of a greenbelt buffer zone between the ash dyke and the river · Maintenance of adequate freeboard to prevent overflow during monsoon · Periodic structural stability assessment and safety audits. Compliance with CPCB/MoEF&CC guidelines for ash pond management.			

S No	ADS Point	Reply/Response of PP
vi	Project Proponent to validate the kml file that is uploaded in the application form.	As suggested, a proper survey has been conducted for the project site, including the ash pond area, to verify the actual project boundary. Based on the survey findings, the kml file has been duly validated and revised.
vii	Proponent shall submit action plan for additional Ambient Air Quality monitoring in 2 locations other than the proposed locations in North of the A6 point and between A2 & A9 point of the proposed AAQ monitoring locations	Additional Ambient Air Quality (AAQ) monitoring will be carried out at 2 locations North of A6 point and between A2 & A9 as suggested for a period of one month. The monitoring will cover key parameters, including PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO, NH ₃ , and O ₃ , as per applicable standards. The monitoring will be carried out in accordance with CPCB guidelines using approved instruments such as Respirable Dust Sampler (RDS) and Fine Particulate Sampler (FPS). The duration of sampling will be aligned with the requirements of the National Ambient Air Quality Standards (NAAQS), 2009. The results will be analyzed, compared with prescribed standards, and duly incorporated in the final EIA Report along with interpretation and necessary mitigation measures.
viii	EAC observed that some part of Protected Forest is coming inside the project area as per the DSS, Project Proponent is required to give the clarification in this regard.	As suggested by the EAC the KML file has been validated through a detailed digital site survey. Based on this verification, the KML has been slightly revised. However, as per the DSS, same portion of forest area still appears within the revised boundary. It is clarified that, although DSS indicates the presence of forest area, the land belongs to NALCO as per Cadastral map. The Cadastral map is superimposed on the Google map and the same is attached in ADS Reply. Further revised ash pond boundary is also superimposed on the Survey of India Toposheet and the same is attached in ADS reply. NALCO will get required clarification/NOC from Forest department and same will be submitted during EC application.

43.2.16: Written Submission:

Query: Ash Management Details:

Reply: NALCO's approach to ash management marks a strategic shift from conventional disposal to sustainable utilization, mandated by stringent regulatory frameworks that emphasize industrial applications and mine stowing as preferred alternatives to traditional pond storage.

1. Disposal Strategies:

- Primary (Eco-Friendly): Dry ash is supplied to brick/cement units, and lean slurry is disposed of in abandoned allotted mines.
- Emergency Storage: Ash Pond, I serve as a temporary buffer during surplus or exigencies.

2. Infrastructure Status: The facility manages four ash ponds covering a total area of 168.26 Ha excluding utility area.

Pond	Area (Ha)	Current Status & Functional Role
Ash Pond I	67.66	Active: Used for emergency/temporary slurry storage
Ash Pond II	82.00	Exhausted: Currently undergoing reclamation works
Ash Pond III	-	Decantation: Functions as a channel for water clarification

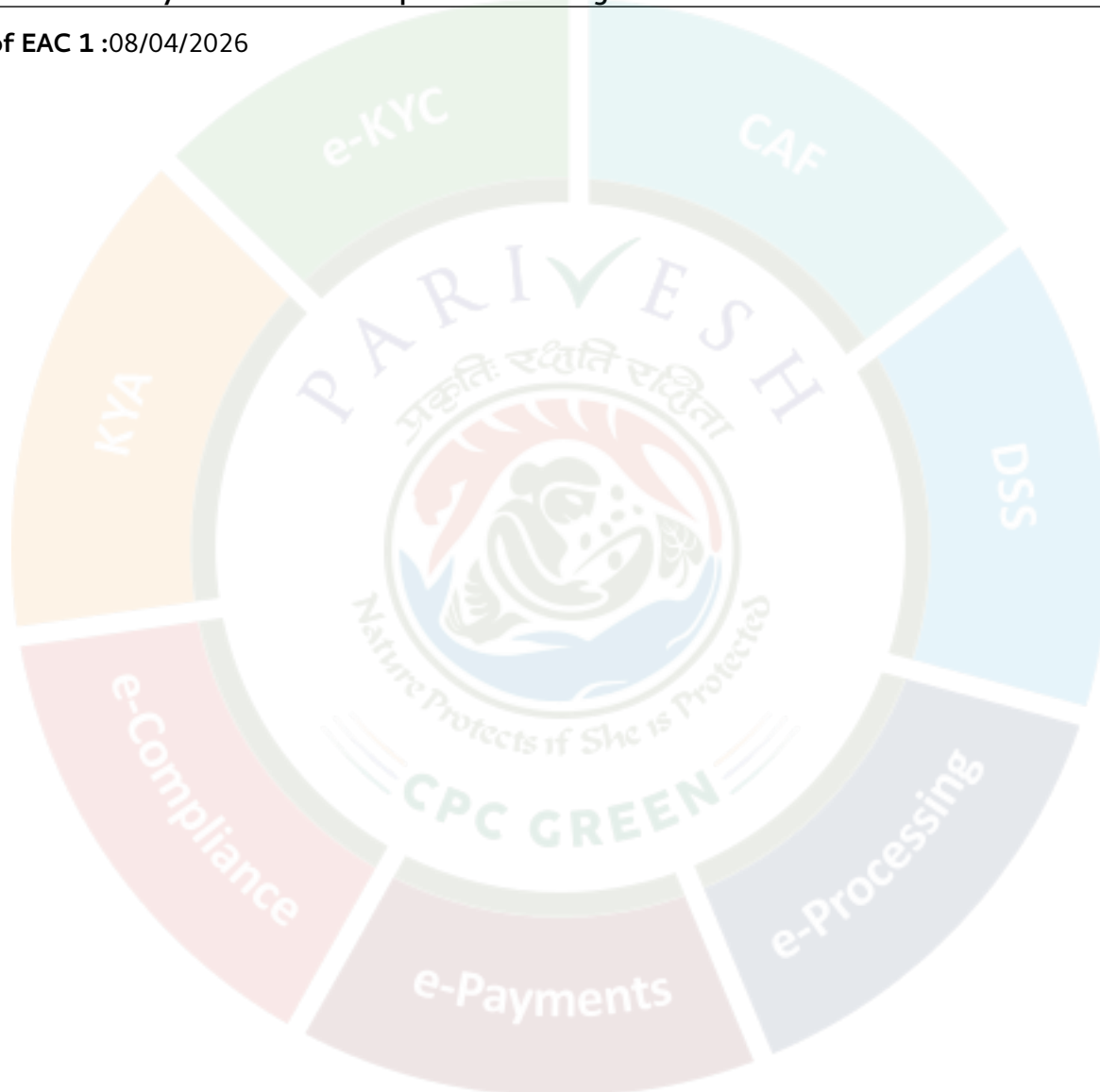
Ash Pond IV	18.60	Closed: Completely exhausted and capped.
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3. Water Recovery & Treatment: To ensure environmental compliance, the system operates a closed-loop water cycle: channels.

- Sedimentation: Slurry settles in ponds; supernatant water overflows into decanting
- Clarification: Ash Pond III facilitates final settlement of particles.
- Recycling: Clarified water is processed through the dedicated wastewater treatment plant and recycled back to the CPP.

3.2.3. Deliberations by the committee in previous meetings

Date of EAC 1 :08/04/2026



Deliberations of EAC 1 :

Observation and deliberation of the EAC

41.5.16: The Committee observed and noted the following:

- i. The instant proposal is for Expansion of the Existing 1200 MW (10x120 MW) Captive Power Plant to 2280 MW by addition of 4x270 MW Sub-critical Captive Power Plant by M/s. NALCO at NALCO Nagar, Banarpal Block, Angul District, Odisha.
- ii. The committee observed that no alternative sites considered by the Project proponent, since the proposed project area has been coming inside the existing plant area. Total land requirement for the project is 678.33 ha. In addition to the above, about 141.5 Ha consists of the Captive Rail System/ROB (95.74 Ha), HT Line (30.31 Ha), Water Supply Pipeline (9.32 Ha), and Ash Pipe Corridor (6.15 Ha) is involved in the project owing to total 819.83 Ha. No R & R is involved in the proposed project.
- iii. The committee noted that Brahmani River, Nandira Jor and Lingara nadi are located at 6.1 (NE), 2.4 (N) and 6.7 (SW) km, respectively, from the project boundary. The committee observed some reserved/protected forests such as Baistambaragarhi RF, Sakasingha RF, Kauchiakho R.F, Balaram prasad PF, Ganthigarhia PF etc. located within the study area.
- iv. Coal requirement for the proposed project is about 4.821 MTPA that will be sourced from Nearby Commercial Coal Mines of MCL and owned coal from NALCO's Utkal D&E block and transported through combination of railway wagons and road. LDO (4200 KL/ Annum) will be transported by Railway.
- v. Existing Water requirement is 100800 m³/day, water requirement is obtained from Bramani river and permission for the same has been obtained from Irrigation Dept. Govt. of Odisha vide letter no 2131 dated 30.03.2024 (Valid for 3 years). The water requirement for the proposed project is estimated as 77760 m³/day, out of which 77760 m³/day of fresh water requirement will be obtained from the Bramani river. The permission for drawl of surface water is obtained Vide Lr. No. T313 Dated 04.03.1980 will be renewed for additional quantity. The water will be transported to the plant site through Pipeline. The specific water consumption for the proposed power plant will be 3 m³/MWhr. Power
- vi. Existing capital cost of project was Rs.1547 Crores. The capital cost of the proposed project is Rs.11313.47 Crores and the capital cost for environmental protection measures is proposed as Rs. 1358 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.136 Crores. The employment generation from the proposed project is 745 nos. (Permanent 545 nos. and Contractual 200 nos.)
- vii. Total Area of CPP is 819.85 Ha. Existing Plantation / Green Belt Area at plant site is 286.4 Ha. Area to be cleared of existing green belt for Project Expansion at the plant site is 94.78 Ha. 94.78 Ha area proposed for expansion is in lieu of the existing green belt area at the plant site which will be compensated by developing fresh greenbelt in an area of 94.78 Ha at the ash pond [Areas at closed ash pond -IV (18.6 Ha) & ash pond II B (40 Ha), open area around ash pond (36.18 Ha)]. EAC asked the MS to obtain the comments/views of the policy division in this regard in light of the OM dated 29/10/2025 pertaining to green belt development.
- viii. EAC observed that one of the ash dyke of the project is just 100m away from the Nandira River, EAC asked the Project Proponent to monitor the water quality of the River water and provide the Mitigation measures for the same.
- ix. EAC asked the Proponent to additionally monitor Ambient Air Quality in 2 locations other than the proposed locations in North of the A6 point and between A8 & A9 point of the proposed locations.
- x. Project proponent has proposed that it will use 1:9 Ash water ratio for transfer of the Ash to dyke, EAC asked the proponent to reduce the Ash Water ratio.
- xi. EAC asked the Project Proponent to validate the kml file that is uploaded in the application form.
- xii. EAC observed that some part of Protected forest is coming inside the project area as per the DSS, Project Proponent is required to give the clarification regarding the same.

Recommendations of the Committee:

41.5.17: In view of the foregoing and after detailed deliberations, the EAC recommended to **defer** the proposal and sought for following additional information for further consideration of the proposal:

- i. Proponent to explore the feasibility of alternate land arrangement for the proposed expansion as there is clearing of existing green belt situated in an area of 94.78 at the plant site.
- ii. Map depicting the existing and proposed green belt development in the plant site as well as ash pond including its area covered/proposed compensatory plantation with different color code shall be submitted for consideration.
- iii. Project proponent to clarify the ash dyke height details as it has been mentioned as 92 meters, 113 meters and 123 meters.
- iv. Project proponent shall submit the details of the additional mitigation measures to be adopted as part of the expansion project as there are four villages namely Gotmara, Amantapur, Kulad and Bonda villages in the

vicinity of the project site.

v. Ash dyke of the project is just 100m away from the Nandira River, mitigation measures to be followed in this regard shall be submitted.

vi. Project Proponent to validate the kml file that is uploaded in the application form.

vii. Proponent shall submit action plan for additional Ambient Air Quality monitoring in 2 locations other than the proposed locations in North of the A6 point and between A2 & A9 point of the proposed AAQ monitoring locations.

viii. EAC observed that some part of Protected forest is coming inside the project area as per the DSS, Project Proponent is required to give the clarification in this regard.

In addition to the above, EAC observed that 94.78 Ha area for proposed expansion will be met from the existing green belt area of 94.78 Ha at the plant site which will be further compensated by developing new greenbelt in an area of 94.78 Ha at the ash pond area [Areas at closed ash pond -IV (18.6 Ha) & ash pond II B (40 Ha), open area around ash pond (36.18 Ha)] which is located at a aerial distance of approximately 1.6 km from the plant site. EAC asked the MS to obtain the comments/views of the policy division in this regard in light of the OM dated 29/10/2025. The comments shall include whether clearing of vegetation from the existing green belt area at one place and compensating the same in other place (situated at approximately 1.6km distance) is permitted and in such case extent of minimum green belt area (percentile of project site) to be maintained shall be provided.

3.2.4. Deliberations by the EAC in current meetings

Observation and deliberation of the EAC

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

i. The instant proposal is for Expansion of the Existing 1200 MW (10x120 MW) Captive Power Plant to 2280 MW by addition of 4x270 MW Sub-critical Captive Power Plant by M/s. NALCO at NALCO Nagar, Banarpal Block, Angul District, Odisha.

ii. The committee observed that no alternative sites considered by the Project proponent, since the proposed project area has been coming inside the existing plant area. Total land requirement for the project is 678.33 ha. In addition to the above, about 141.5 Ha consists of the Captive Rail System/ROB (95.74 Ha), HT Line (30.31 Ha), Water Supply Pipeline (9.32 Ha), and Ash Pipe Corridor (6.15 Ha). No R & R is involved in the proposed project.

iii. The project site is not located within CPA/SPA as per CEPI assessment 2018 of CPCB.

iv. The committee noted that Brahmani River, Nandira Jor and Lingara nadi are located at 6.1 (NE), 2.4 (N) and 6.7 (SW) km, respectively, from the project boundary. The committee observed some reserved/protected forests such as Baistambaragarhi RF, Sakasingha RF, Kauchiakho R.F, Balaram prasad PF, Ganthigarhia PF etc. located within the study area.

v. Coal requirement for the proposed project is about 4.821 MTPA that will be sourced from Nearby Commercial Coal Mines of MCL and owned coal from NALCO's Utkal D&E block and transported through combination of railway wagons and road. LDO (4200 KL/ Annum) will be transported by Railway.

vi. Existing Water requirement is 100800 KLD, water requirement is obtained from Bramani river and permission for the same has been obtained from Irrigation Dept. Govt. of Odisha Vide Lr. No. T313 Dated 04.03.1980 and which got renewed vide letter no 2131 dated 30.03.2024 (Valid for 3 years). The water requirement for the proposed project is estimated as 77760 m³/day which will be obtained from the Bramani river. The permission for drawl of additional surface water will be obtained for additional quantity. The water will be transported to the plant site through Pipeline. The specific water consumption for the proposed power plant will be 3 m³/MW hr.

vii. Existing capital cost of project was Rs.1547 Crores. The capital cost of the proposed project is Rs.11313.47 Crores and the capital cost for environmental protection measures is proposed as Rs. 1358 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.136 Crores. The employment generation from the proposed project / expansion is 745 nos. (Permanent 545 nos. and Contractual 200 nos.)

viii. Due to the proposed expansion the greenbelt in the plant site area is rationalised from 237.63 Ha to 142.85 Ha and in the ash pond from 48.77 Ha to 143.55 Ha, however due to the proposed rationalisation the existing greenbelt at the plant site is maintained at 38.66 % which is more than the stipulated norms of 33%. Thus total of 286.40 Ha area (42.22% of total project area) will be developed as greenbelt. A 10-15 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. With respect to green belt development in the instant proposal, MS apprised that the proposal was referred to Policy section and their comments/views on the same is given as below:

- “If 33% was prescribed in the earlier EC, then the project proponent may not clear the existing green belt to reduce it. However, PP may relocate the green belt within the project site, subject to not reducing it from 33%.
- If a specific green-belt percentage was not prescribed in the EC and the project proponent has suo-moto developed a certain percentage of greenbelt in the project site, then the same may be rationalised to not less than the minimum percentage as mentioned in the revised green belt norms.”

In the instant case, PP rationalized the green belt from 63.80 % to 38.36 %.

ix. Baseline data for the proposed project was already collected for the period of January 2026 to March 2026 in study area.

x. Existing Ash pond situated in an area of 67.66 ha will be used for proposed expansion and no new ash pond is envisaged. About 2.7 LMTPA ash will be generated and the same will be disposed with 100 % utilization by cement manufacturing, bricks manufacturing industries and filling mines etc. Unused fly ash, if any, will be stored to ash dyke.

xi. EAC suggested the Project Proponent to quantify the Carbon Sink capacity of the existing Greenbelt and the translocated Greenbelt area.

xii. EAC asked the Project Proponent to install the wind barrier along the village side for fugitive dust control and shall plant the saplings not less than 2 meter height along with it.

xiii. EAC asked the Project Proponent to account the number of trees to be felled and accordingly compensate for the same in consultation with the State Forest Department

xiv. Committee asked the Project Proponent to make provisions for Dry Bottom and Fly ash collection and if any ash to be disposed in the ash dyke it should be in HCSD form.

xv. EAC opined that a site visit should be conducted by the Sub-committee of EAC to see the various issues pertaining to the instant project before consideration of EC proposal. The findings of the subcommittee report shall be incorporated in the final EIA/EMP report and the same shall be reported along with the ToR compliance.

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

Recommendations of the Committee:

43.2.18: The EAC after detailed deliberations on the information submitted and as presented during the meeting **recommended** the proposal for grant of ToR **subject to uploading of written submissions on PARIVESH portal** 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.

3.2.5. Recommendation of EAC

Recommended (Subject to submission of requisite information/ documents)

3.2.6. Details of Terms of Reference

3.2.6.1. Specific

[A] Environmental Management and Biodiversity Conservation	
1.	Project proponent shall provide appropriate Pollution control measure for SO ₂ emissions as per the applicable emission norms for the proposed project.
2.	Project Proponent to take necessary permissions from the State Forest Department before felling/translocation of trees.
3.	Project Proponent to obtain certified compliance report from the MoEF&CC RO office for the existing EC as per MoEF&CC OM dated 08/06/2022.
4.	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 Nandira River and Brahmani River corresponding to one in 25 years of flood as per Ministry's O.M. dated 14/02/2022.
5.	PP needs to submit NOC/permission from the State Water resource Department/Irrigation Dept. in case of diversion of any Nala/Stream/water bodies.
6.	All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent and additionally ambient air at two more locations other than the proposed locations shall be monitored.
7.	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.
8.	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.
9.	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 power plant on aquatic life of Nandira River and action plan for complying with the recommendations of the study report shall be submitted.
10.	Project proponent shall commission a study on site specific hydrological studies for area drainage for existing and proposed 2280 MW power plant structure through reputed Government institute. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.
1	Project proponent shall prepare an integrated water shed management plan for protection and

1.	conservation of water bodies within the study area of the project site. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.
1 2.	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.
1 3.	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 286.4 Ha (Plant site- 142.85 Ha + Ash Dyke- 143.55 Ha) of the project area as per MoEF&CC OM dated 29.10.2025 of MoEF&CC for greenbelt/green cover requirement for industries. 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.
1 4.	Action plan for development of three-tier plantation programme along the periphery of the project boundary and the coal transportation route shall be provided. PP shall submit concurrent plantation plan.
1 5.	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.
1 6.	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.
1 7.	Action plan for dry ash collection system (Bottom ash and Fly ash) shall be submitted.
1 8.	Action plan for disposal of ash through High Concentration Slurry Disposal (only in emergency conditions) shall be submitted.
1 9.	Proper protection measures like high-density polyethylene (HDPE) lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body 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.
2 0.	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.
2 1.	Details pertaining to water source, treatment and discharge should be provided.
2 2.	PP shall provide the details of wastewater treatment facilities to be installed within its capacity, timeline and budget.
2 3.	Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.

2 4.	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.
2 5.	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.
2 6.	PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2026 and to adhere Ministry's OM dated 18/07/2022.
2 7.	Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted.
2 8.	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.
2 9.	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 SO2 emission norms.
3 0.	Details of air pollution control devices to be installed in the proposed 4x270 MW TPP along with its maintenance schedule shall be incorporated in EIA/EMP report.
3 1.	Carbon emission due to proposed TPP and allied carbon sequestration/ carbon offsetting plan be submitted.
3 2.	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.
2.	Project proponent shall carry out study on site specific design earthquake parameters for proposed 1080 MW (4x270 MW) power project through reputed institute.
3.	Site specific risk assessment study followed by emergency preparedness plan shall be submitted.
[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 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.
1 2.	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.
1 3.	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.
1 4.	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.
1 5.	The findings of the subcommittee report shall be incorporated in the final EIA/EMP report.

3.2.6.2. Standard

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 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 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 wind speed analysis and 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 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 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 CO ₂ 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). CER details 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-conductive 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.

3.3. Agenda Item No 3:

3.3.1. Details of the proposal

Expansion of Talcher Thermal Power Project from existing 1320 MW (Stage-III: 2x660 MW) to 2120 MW by addition of Stage-IV (1x800 MW) Ultra Super Critical Technology Coal Based Power Plant at Gram panchayat- Santaparha, Jagannathpur, Bantol, & Gurujanguli at Talcher in Tehsil Talcher Sadar, Angul District, Odisha by NTPC Limited by NTPC LIMITED located at ANUGUL, ODISHA			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity Sub-Activity (Schedule Item)
IA/OR/THE/573359/2026	J-13012/31/2009-IA.II(T)	05/05/2026	Thermal Power Plants Coal/Lignite based plants (

		1(d))
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3.3.2. Project Salient Features

Agenda Item No.- 43.3:

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

S. No	Configuration	Capacity (MW)	As per EC dated	Implementation Status as on 08.05.2026	Production as per CTE
1	Stage-III: 2x6 60 MW	1320	12.09.2018	Under Construction	1320 MW

S. No	Particulars	Details	Remarks																																																																	
1.	Total land	433.72 Ha [Private land: 174.38 Ha, Govt.: 252.34 Ha & Forest land: 6.996 Ha]	Land use: Industrial																																																																	
2	Land use breakup	<table><tr><th>S. No.</th><th>Facilities</th><th>Existing Area (In Ha) Stage-III</th><th>Proposed Area (In Ha) Stage-IV</th><th>Total Area (In Ha)</th></tr><tr><td>1</td><td>Main Plant</td><td>77.04</td><td>42.08</td><td>119.12</td></tr><tr><td>2</td><td>Township (Common)</td><td>28.70</td><td>--</td><td>28.70</td></tr><tr><td>3</td><td>Reservoir</td><td>7.24</td><td>1.82*</td><td>9.06</td></tr><tr><td>4</td><td>Make-up water PH (Common); Forest land</td><td>0.95</td><td>---</td><td>0.95</td></tr><tr><td>5</td><td>Makeup water Pipeline Corridor (Common), including 6.046 Ha of Forest land.</td><td>27.80</td><td>---</td><td>27.80</td></tr><tr><td>6</td><td>Ash water Corridors (Common)</td><td>8.08</td><td>---</td><td>8.08</td></tr><tr><td>7</td><td>Greenbelt-Inside main plant (Common)</td><td>14.44</td><td>---</td><td>14.44</td></tr><tr><td>8</td><td>Greenbelt-Outside main plant (Common)</td><td>128.28</td><td>---</td><td>128.28</td></tr><tr><td>9</td><td>Public use land (Common)</td><td>14.71</td><td>---</td><td>14.71</td></tr><tr><td>10</td><td>Temp. Ash dyke land[#] (Common)</td><td>65.27</td><td>---</td><td>65.27</td></tr><tr><td>11</td><td>Balance land for Future use (Common)</td><td>17.31</td><td>---</td><td>17.31</td></tr><tr><td></td><td>Total (Ha)</td><td>389.82</td><td>43.90</td><td>433.72</td></tr></table> * 1.82 Ha=0.59+1.23 (0.59 already in possession and 1.23 Ha acquisition in process)	S. No.	Facilities	Existing Area (In Ha) Stage-III	Proposed Area (In Ha) Stage-IV	Total Area (In Ha)	1	Main Plant	77.04	42.08	119.12	2	Township (Common)	28.70	--	28.70	3	Reservoir	7.24	1.82*	9.06	4	Make-up water PH (Common); Forest land	0.95	---	0.95	5	Makeup water Pipeline Corridor (Common), including 6.046 Ha of Forest land.	27.80	---	27.80	6	Ash water Corridors (Common)	8.08	---	8.08	7	Greenbelt-Inside main plant (Common)	14.44	---	14.44	8	Greenbelt-Outside main plant (Common)	128.28	---	128.28	9	Public use land (Common)	14.71	---	14.71	10	Temp. Ash dyke land [#] (Common)	65.27	---	65.27	11	Balance land for Future use (Common)	17.31	---	17.31		Total (Ha)	389.82	43.90	433.72	
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	Land acquisition details as per MoEF&C C O.M. dated 7/10/2014 & 20/2/2025	The total 433.72 Ha land comprises of Private land: 174.38 Ha, Govt. land: 252.34 Ha and Forest land: 6.996 Ha]. In addition to existing 432.49 Ha of land in use, about 1.23 Ha of Govt. land shall be acquired.	Break up of land and its lease/ LOI/ Consent/ Possession details are submitted with application form.																																																																	

Existence of habitation & involvement of R&R, if any.	Project site: NTPC Township Study Area: <table border="1"> <thead> <tr> <th>Habitation</th><th>Distance (Km)</th><th>Direction</th></tr> </thead> <tbody> <tr><td>Jagannathpur</td><td>0.5</td><td>W</td></tr> <tr><td>Nuagaon</td><td>0.8</td><td>S</td></tr> <tr><td>Gurujangli</td><td>0.7</td><td>SE</td></tr> <tr><td>Bhoghabereni</td><td>1.26</td><td>S</td></tr> <tr><td>Bantol</td><td>1.15</td><td>NE</td></tr> <tr><td>Budhapanka</td><td>5.0</td><td>SE</td></tr> <tr><td>Jhadiamba</td><td>2.0</td><td>SW</td></tr> <tr><td>Kendupali</td><td>1.20</td><td>W</td></tr> <tr><td>Santhapada</td><td>1.75</td><td>NE</td></tr> </tbody> </table>	Habitation	Distance (Km)	Direction	Jagannathpur	0.5	W	Nuagaon	0.8	S	Gurujangli	0.7	SE	Bhoghabereni	1.26	S	Bantol	1.15	NE	Budhapanka	5.0	SE	Jhadiamba	2.0	SW	Kendupali	1.20	W	Santhapada	1.75	NE	No R&R issue																														
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Existence of school and hospitals if any.	A. School Study Area: <table border="1"> <thead> <tr> <th>School</th><th>Distance (K m)</th><th>Direction</th></tr> </thead> <tbody> <tr><td>Nuagan Primary School</td><td>1</td><td>SE</td></tr> <tr><td>Kukudula High School</td><td>1</td><td>N</td></tr> <tr><td>Gadtal Regional Hr Sec School</td><td>0.2</td><td>E</td></tr> <tr><td>TTPS Hr Sec School</td><td>0.35</td><td>W</td></tr> <tr><td>Sri Jagganath Nodal HS</td><td>0.50</td><td>W</td></tr> <tr><td>Tarun Nodal UPS</td><td>0.50</td><td>N</td></tr> <tr><td>St. Xavior H S</td><td>0.55</td><td>N</td></tr> <tr><td>Govt. UGHS Bhogerberini</td><td>1.1</td><td>S</td></tr> <tr><td>Panchayat Nodal HS</td><td>1</td><td>S</td></tr> </tbody> </table> B. Hospital Project site: Ashalok Hospital Study Area: <table border="1"> <thead> <tr> <th>Hospital</th><th>Distance (K m)</th><th>Direction</th></tr> </thead> <tbody> <tr><td>S S Hospital</td><td>0.5</td><td>E</td></tr> <tr><td>Subhalaxmi Nursing home</td><td>0.5</td><td>W</td></tr> <tr><td>Health Centre Jaganathpur</td><td>0.5</td><td>W</td></tr> <tr><td>Health Centre Bangu</td><td>0.55</td><td>N</td></tr> <tr><td>Health Centre Gurujanguli</td><td>1.1</td><td>SE</td></tr> <tr><td>Health Centre Jhariamba</td><td>2</td><td>E</td></tr> <tr><td>Health Centre Tentuloi</td><td>2.8</td><td>W</td></tr> <tr><td>Health Centre Pingua</td><td>2.6</td><td>SW</td></tr> <tr><td>Health Centre Budhapanka</td><td>5.5</td><td>SE</td></tr> </tbody> </table> Mitigation measures: The mitigation measures proposed for air pollution control which will minimize impact on all sensitive receptors are as under:- • Advanced air pollution control systems including High Efficiency ESP, Stack with height 275m, NOx control systems and FGD are proposed to meet prescribed emission standards. • Water pollution prevention & control systems; ETP, STP etc. and ensuring Zero Liquid Discharge. • Greenbelt will be developed at TTPP to mitigate pollution impacts. • Tree plantation at schools, health centers, temples etc.	School	Distance (K m)	Direction	Nuagan Primary School	1	SE	Kukudula High School	1	N	Gadtal Regional Hr Sec School	0.2	E	TTPS Hr Sec School	0.35	W	Sri Jagganath Nodal HS	0.50	W	Tarun Nodal UPS	0.50	N	St. Xavior H S	0.55	N	Govt. UGHS Bhogerberini	1.1	S	Panchayat Nodal HS	1	S	Hospital	Distance (K m)	Direction	S S Hospital	0.5	E	Subhalaxmi Nursing home	0.5	W	Health Centre Jaganathpur	0.5	W	Health Centre Bangu	0.55	N	Health Centre Gurujanguli	1.1	SE	Health Centre Jhariamba	2	E	Health Centre Tentuloi	2.8	W	Health Centre Pingua	2.6	SW	Health Centre Budhapanka	5.5	SE	
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	Latitude and Longitude of all corners of the project site.	A. Plant site <table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>20°54'41"N</td><td>85°12'10"E</td></tr><tr><td>B</td><td>20°55'5"N</td><td>85°12'31"E</td></tr><tr><td>C</td><td>20°54'2"N</td><td>85°12'11"E</td></tr><tr><td>D</td><td>20°54'10"N</td><td>85°12'36"E</td></tr></table> B. Township <table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>1</td><td>20°54'26"N</td><td>85°12'46"E</td></tr><tr><td>2</td><td>20°54'20"N</td><td>85°12'58"E</td></tr><tr><td>3</td><td>20°54'10"N</td><td>85°12'36"E</td></tr><tr><td>4</td><td>20°54'7"N</td><td>85°13'0"E</td></tr></table> C. Ash Pond – No permanent ash pond is envisaged	Point	Latitude	Longitude	A	20°54'41"N	85°12'10"E	B	20°55'5"N	85°12'31"E	C	20°54'2"N	85°12'11"E	D	20°54'10"N	85°12'36"E	Point	Latitude	Longitude	1	20°54'26"N	85°12'46"E	2	20°54'20"N	85°12'58"E	3	20°54'10"N	85°12'36"E	4	20°54'7"N	85°13'0"E	
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	Elevation of the project site	Main Plant: 70-73 m above mean sea level Township: 70-73 m above mean sea level Ash Pond: No permanent ash pond is envisaged																															
	Involvement of Forest land if any.	Total Forest Land Involved: 6.996 Ha																															
	Water body (Rivers, Lakes, Pond, Nallah, Natural Drainage, Canal etc.) exists within the project site as well as study area	Project site: NA Study area: <table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Brahmani River</td><td>2 km</td><td>E</td></tr><tr><td>Nandira Jhor (Nallah)</td><td>Adjacent to project</td><td>S</td></tr></table> Mitigation measures: · Nandira Jhor, a small rivulet/nallah leading to the Brahmani River, flows adjacent to the southern boundary of the project site. There is a road of width 9 meters between the plant boundary and Nandira Jhor. · The existing TTPP Stage-III (under construction) is designed as a Zero Liquid Discharge (ZLD) facility, and the proposed Stage-IV will also operate under ZLD conditions. No effluent discharge into Nandira Jhor is envisaged, and compliance will be ensured through effluent monitoring systems. · Regular monitoring will be carried out in the Upstream and Downstream to assess the water quality. · Greenbelt development will be undertaken at Santhpada and Jhariamba near to the Brahmani River to strengthen ecological buffering. · Both existing Stage-III (under construction) and proposed Stage-IV units will operate under Zero Liquid Discharge (ZLD) conditions. No wastewater discharge into the Brahmani River is envisaged and compliance will be ensured through effluent monitoring systems	Water body	Distance	Direction	Brahmani River	2 km	E	Nandira Jhor (Nallah)	Adjacent to project	S	HFL of Brahmani River is 62.26 amsl (As per Irrigation Dept. Angul Letter dated 16.01.2025)																					
Water body	Distance	Direction																															
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	Archaeological Sites / monuments / historical temples etc.	<table><tr><th>Archaeological Site</th><th>Distance</th><th>Direction</th></tr><tr><td>Anantashayana Vishnu at Saranaga</td><td>5.5 km</td><td>NE</td></tr><tr><td>Ashtsambhu Temple at Kaulao</td><td>10.5 km</td><td>NE</td></tr></table>	Archaeological Site	Distance	Direction	Anantashayana Vishnu at Saranaga	5.5 km	NE	Ashtsambhu Temple at Kaulao	10.5 km	NE	NOC for same has been obtained from ASI.																					
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Ashtsambhu Temple at Kaulao	10.5 km	NE																															
	Existence of	Study area																															

	ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area.	• Name of the ESZ/ESA: Not Applicable • Status of Notification: Not Applicable • Distance of project from ESZ/ESA: Not Applicable • Authenticated map of ESZ projecting Not Applicable • Distance of ESZ from project site: Not Applicable • Status of NBWL approval: Not Applicable List of Reserved and Protected Forests: <table><tr><th>Forest Name</th><th>Distance</th><th>Direction</th></tr><tr><td>Hirapur RF</td><td>6.2 km</td><td>WNW</td></tr><tr><td>Kauchiakhhol RF</td><td>6.9 km</td><td>WNW</td></tr><tr><td>Rakas RF</td><td>7.3 km</td><td>NW</td></tr><tr><td>Makundanali RF</td><td>5.6 km</td><td>NW</td></tr><tr><td>Gengutia RF</td><td>4.6 km</td><td>N</td></tr><tr><td>Kandhal RF</td><td>8.5 km</td><td>N</td></tr><tr><td>Petachira RF</td><td>7.2 km</td><td>N</td></tr><tr><td>Khalpal RF</td><td>9 km</td><td>NE</td></tr><tr><td>Balaram Prasad PF</td><td>4.9 km</td><td>SW</td></tr><tr><td>Paturia RF</td><td>7.7 Km</td><td>N</td></tr></table>	Forest Name	Distance	Direction	Hirapur RF	6.2 km	WNW	Kauchiakhhol RF	6.9 km	WNW	Rakas RF	7.3 km	NW	Makundanali RF	5.6 km	NW	Gengutia RF	4.6 km	N	Kandhal RF	8.5 km	N	Petachira RF	7.2 km	N	Khalpal RF	9 km	NE	Balaram Prasad PF	4.9 km	SW	Paturia RF	7.7 Km	N	
Forest Name	Distance	Direction																																		
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Balaram Prasad PF	4.9 km	SW																																		
Paturia RF	7.7 Km	N																																		
	Facility envisaged in CRZ area (Only for coastal power plant)	Not Applicable																																		
	Involvement of Critically Polluted Area/ Severely Polluted area as per 2018 CEPI score.	No Involvement of CPA/SPA No Proximity to CPA/SPA																																		

43.3.6: 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
1.	2x660 MW (1320 MW) Under Construction	1x800 MW (800 MW)	2120 MW	Ultra Super Critical

43.3.7: The details of the fuel (Coal) 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 characteristics (Worst case scenario)	Linkage document
Existing: TT PP, Stage-III (Under Construction)	5.85	MCL Mines, Talcher	10	Rail & Pipeline Conveyor system	Ash: 34 % Sulphur: 0.55 % Moisture: 15 (%) GCV: 2900-4100 Kcal/K	LoA with MCL dtd. 26.10.2023 available

					g	
Proposed: TTPP, Stage-IV	3.94	Yet to be allocated	10	Rail & Pipeline Conveyer system	Ash: 41 % Sulphur: 0.50 % Moisture:15 (%) GCV:3300-4100 Kcal/Kg	Yet to be done

The details of the fuel 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 (KL per Annum)	Source	Distance from site (Kms)	Mode of Transportation	LDO Characteristics
Existing: TTPP, Stage-III (Under Construction)	5000 (assuming 85 % PLF with normative oil consumption 0.5 ml/kwh)	BPCL/ HPCL/ IOCL	>600	Rail	Applicable IS 15770: 2021 Sulphur -0.005-1.5 (%)
Proposed: TTPP, Stage-IV	3500 (assuming 85 % PLF with normative oil consumption 0.5 ml/kwh)	BPCL/ HPCL/ IOCL	>600	Rail	Applicable IS 15770: 2021 Sulphur -0.005-1.5 (%)

43.3.8: Water Requirement: Water requirement proposed for TTPP, Stage-III project is 95040 m³/day (3960 m³/hr) at operational phase (Presently project is under construction phase) and permission for the same has been obtained from Water Resource Department (WRD), Government of Odisha vide letter no 19522/WR dated 16.07.2025. The water requirement for the proposed TTPP, Stage-IV project is estimated as 30000 m³/day (1250 m³/hr), which shall be met partly from existing allocation of Water for Stage-III and for the balance requirement, allocation is yet to be tied up. The water will be transported to the plant site through a pipeline from 26 km from the distance from Samal barrage on the Brahmani River. The specific water consumption for the power plant will be maintained within the existing norms of 3.0 m³/MW hr.

43.3.9: Power Requirement: Power requirement of 82.5 MW for Stage-III proposed at operational phase (Presently project is under construction phase) will be obtained from Self generation of TTPP. The power requirement for the proposed project Stage-IV is estimated as 58 MW, that will be obtained from the Self generation of TTPP.

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

Sr. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment	Disposal	Remarks
1	Municipal Solid Waste	Residential colony, Guest house and Plant office	328	Composting, Reuse, disposal through recycler	In house composting, Reuse & through Co-processor/ Recycler	
2	Plastic packaging waste	Packaging of goods	05	---	Reuse & through Co-processor/ Recycler	

3	E-waste	IT, C&I and Elect. Equipments	05	---	Disposal through authorized recycler	
4	Used Batteries	Backup power system	05	---	Disposal through authorized recycler	Provision in contract for buy-back
5	Bio Medical waste	Hospital	02	---	Disposal through authorized agency	
6	Hazardous Waste					
6.1	Used or Spent Oil	Operation & Maintenance works	100	---	Disposal through authorized recyclers	
6.2	Empty barrel/ containers/ Liners	Operation & Maintenance work	10	---	Disposal through authorized Recyclers	
	Spent ion exchange Resins	Water treatment	02	---	TSDf	
6.4	Rock wool Insulation materials	Operation & Maintenance work	10	---	TSDf	

43.3.11: Project Cost: Existing capital cost of TTPP, Stage-III project is Rs. 12543.00 Cr. The capital cost of the proposed (Stage-IV TTPP) project is Rs. 11678.04 Cr (At Current Cost level) and the capital cost for environmental protection measures is proposed as Rs.1661.8 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.33 Crores. The employment generation from the proposed project/expansion is 80 (Permanent) & 4000 (Contractual) during construction and 125 (Permanent) & 600 (Contractual) during operation.

43.3.12: Greenbelt Development: Green belt development has been proposed in 142.72 Ha area which is about 33% of the total project area of 433.72 Ha (Total land for Stage III& IV) with total sapling of 356800 Trees. Greenbelt will be developed as per CPCB guidelines with Local and native species with a density of 2500 trees per hectare. Total no. of 356800 saplings will be planted and nurtured in 142.72 Ha hectares in five (05) years.

43.3.13: Ash Management: Ash management for last three years- Not Applicable as the units under Stage-I & II of the project have already been decommissioned since 31.03.2021 and the construction of the Stage-III (2x660 MW) project is under progress at present.

A. Proposed ash utilization plan for expansion project:

Details	Existing generation (LMT/ Yr.)	Proposed generation Stage-III (LMT/	Proposed generation Stage-IV (LMT/Yr.)	Total (LMT/ Yr.)	Utilization (LMT/ Yr.)	% of utilization	Balance quantity (LMT/ Yr.)	No. of storage silos with capacity
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		Yr.)						
Ash (Fly & Botto m)	NA	23	16.2	39.2	39.2	100%	Nil	For Stage III: 4x1750 MT=7000 MT (DFA Silos) Envisaged For Stage IV: 2x1500 + 1x1000 =40 00 MT (DFA Silos) & 2x1500= 3000 MT (Dr y Bottom Ash) DBA Sil os Envisaged

43.3.14: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration: No court cases related to Environment

Other Court Cases pending- 47 Nos.

1. Appeal- 04 (Service matter)
2. Writ Petition (Civil)- 25 (Service matter-19, Contract matter-4, Admn. Matter-1)
3. Other: Misc.- 18 (Service matter-07, Contract matter-03, Labor matter-03, Land matter-01, Accident-04)

Further, there is no violation cases under the Environmental Protection Act, 1986, Van (Sanraksha Evam Samvardhan) Adhiniyam, 1980 and The Wildlife (Protection) Act, 1972.

3.3.3. Deliberations by the committee in previous meetings

N/A

3.3.4. Deliberations by the EAC in current meetings

Observation and deliberation of the EAC

43.3.15: The Committee observed and noted the following:

- i. The instant proposal is for Expansion of Talcher Thermal Power Project from existing 1320 MW (Stage III: 2x660 MW) to 2120 MW by addition of Stage-IV (1x800 MW) Ultra Super Critical Technology Coal Based Power Plant by M/s NTPC Limited at Gram panchayat Santaparha, Jagannathpur, Bantol, & Gurujanguli at Talcher in Tehsil Talcher Sadar, Angul District, Odisha.
- ii. The committee observed that no alternative sites considered by the Project proponent, since the proposed project area has been coming inside the existing plant area. Total land requirement for the proposed project is 433.72 ha (Private: 174.3ha, Govt.: 252.34 Ha & Forest land: 6.996 Ha). No R & R is involved in the proposed project.
- iii. There is involvement of total 6.993 Ha of forest land in the project out of which for 0.95 Ha Stage-II Forest Clearance has already been accorded by MoEF&CC vide Letter no. 5-ORB327/2017-BHU dated 01.05.2023 and for 6.046 Ha Stage-II clearance has been accorded by MoEF&CC vide Letter no. FP/OR/Pipeline/446796/2023 dated 16.07.2025.
- iv. The project site is not located within any Critically Polluted Area/ Severely Polluted area as per 2018 CEPI score.
- v. The committee noted that Nandira Jhor (Nallah) is Adjacent to project and Brahmani River is located at 2 km (E), from the project boundary. The committee observed that Gengutia RF, Balaram Prasad PF and Makundanali RF is located 4.6(N), 4.9(PF) and 5.6(NW) km, respectively, within the study area.
- vi. Coal requirement for the proposed project is about 3.94 MTPA that will be sourced from Nearby Commercial Coal Mines and transported through railway wagons and pipe conveyor system. LDO (3500 KL/Annum) will be transported by Rail.
- vii. Water requirement proposed for TTPP, Stage-III project is 95040 KLD at operational phase (Presently project is under construction phase) and permission for the same has been obtained from Water Resource Department (WRD), Government of Odisha vide letter no 19522/WR dated 16.07.2025. The water

requirement for the proposed TTPP, Stage-IV project is estimated as 30000 KLD, which shall be met partly from existing allocation of Water for Stage-III and for the balance requirement, allocation is yet to be tied up. The water will be transported to the plant site through a pipeline from 26 km from the distance from Samal barrage on the Brahmani River. The specific water consumption for the power plant will be maintained within the existing norms of 3.0 m³/MWhr.

viii. Power requirement of 82.5 MW for Stage-III proposed at operational phase (Presently project is under construction phase) will be obtained from Self generation of TTPP. The power requirement for the proposed project Stage-IV is estimated as 58 MW, which in full will be obtained from the Self generation of TTPP.

ix. Existing capital cost of TTPP, Stage-III project is Rs. 12543.00 Cr. The capital cost of the proposed TTPP, Stage-IV project is Rs. 11678.04 Cr (At Current Cost level) and the capital cost for environmental protection measures is proposed as Rs.1661.8 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 33 Crores. The employment generation from the proposed project/expansion is 80 (Permanent) & 4000 (Contractual) during construction and 125 (Permanent) & 600 (Contractual) during operation.

x. Green belt development has been proposed in 142.72 Ha area which is about 33% of the total project area of 433.72 Ha (Total land for Stage III & IV) with total sapling of 356800 Trees. Greenbelt will be developed as per CPCB guidelines with Local and native species with a density of 2500 trees per hectare. Total no. of 356800 saplings will be planted and nurtured in 142.72 Ha hectares in five (05) years

xi. The proposed units (1x800 MW) will incorporate high-efficiency Electrostatic Precipitators (ESP) to control particulate matter and selective catalytic reduction system (SCR) to control the NO_x emission. For SO₂ emission, FGD and 275 m high Chimney is proposed. EAC suggested to incorporate detailed SO₂ emission norms and their control facility/technology in the EIA/EMP reports.

xii. Project Proponent has proposed to collect baseline data for the instant proposal from October 2026 to December 2026.

xiii. EAC observed that the Ash Pond is near the Nandira Jhor and asked the Project Proponent to develop the thick green belt all along the periphery of the Nandira Jhor.

Recommendations of the Committee:

43.3.16: 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.

3.3.5. Recommendation of EAC

Recommended

3.3.6. Details of Terms of Reference

3.3.6.1. Specific

[A] Environmental Management and Biodiversity Conservation

1.	Project Proponent to get the CCR report from the MoEF&CC RO office for the existing EC as per MoEF&CC OM dated 08/06/2022.
2.	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 Brahmani River and corresponding to one in 25 years of flood as per Ministry's O.M. dated 14/02/2022.
3.	PP needs to submit NOC/permission from the State Water resource Department/Irrigation Dept. in case

	of diversion of any Nala/Stream/water bodies.
4.	All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent at the proposed locations.
5.	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.
6.	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.
7.	Biodiversity analysis of the project site and study area shall be done through any NABET accredited consultant.
8.	Project proponent shall submit a study on site specific hydrological studies for area drainage for existing and proposed 2120 MW power plant structure through reputed Government institute. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.
9.	Project proponent shall prepare an integrated water shed management plan for protection and conservation of water bodies within the study area of the project site. 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 142.72 Ha of the project area as per MoEF&CC OM dated 29.10.2025 of MoEF&CC for greenbelt/green cover requirement for industries. 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 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.

1 6.	Action plan for disposal of ash through High Concentration Slurry Disposal (only in emergency conditions) shall be submitted.
1 7.	Proper protection measures like high-density polyethylene (HDPE) lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body 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.
1 8.	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.
1 9.	Details pertaining to water source, treatment and discharge should be provided.
2 0.	PP shall provide the details of wastewater treatment facilities to be installed within its capacity, timeline and budget.
2 1.	Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
2 2.	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.
2 3.	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.
2 4.	PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2026 and to adhere Ministry's OM dated 18/07/2022.
2 5.	Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted.
2 6.	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.
2 7.	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 SO ₂ emission norms.
2 8.	Details of air pollution control devices to be installed in the proposed 1x800 MW TPP along with its maintenance schedule shall be incorporated in EIA/EMP report.
2	Carbon emission due to proposed TPP and allied carbon sequestration/ carbon offsetting plan be

9.	submitted.
30.	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.
2.	Project proponent shall carry out study on site specific design earthquake parameters for proposed 800 MW (1x800 MW) power project through reputed institute.
3.	Site specific risk assessment study followed by emergency preparedness plan shall be submitted.
[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 modelling.
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 analyse 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.
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.

3.3.6.2. Standard

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 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 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.

1 4.	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.
1 5.	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 wind speed analysis and 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 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.
1 0.	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 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 CO ₂ 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). CER details 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-conductive 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.
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4. Any Other Item(s)

N/A

5. List of Attendees

Sr. No.	Name	Designation	Email ID	Remarks
1	Sh Inder Pal Singh Matharu IFS	Chairman, EAC	mat*****@gmail.com	Present
2	Shri K B Biswas	Member (EAC)	bis*****@gmail.com	Present
3	Shri Mahi Pal Singh	Member (EAC)	mps*****@nic.in	Present
4	Sh Lalit Kapur	Member (EAC)	lka*****@yahoo.com	Present
5	Dr Umesh Jagannathrao Kahalekar	Member (EAC)	uka*****@gmail.com	Present
6	Sh Savalge Chandrasekhar	Member (EAC)	sav*****@gmail.com	Present
7	Prof Shyam Shanker Singh	Member (EAC)	sin*****@gmail.com	Present
8	Dr Vinod Agrawal	Member (EAC)	vin*****@yahoo.com	Absent
9	Shri Harmeet Sahaney	Member (EAC)	har*****@imd.gov.in	Absent
10	Prof R M Bhattacharjee	Member (EAC)	rmb*****@iitism.ac.in	Present
11	Dr Santoshkumar Hampannavar	Member (EAC)	san*****@yahoo.com	Present
12	Sundar Ramanathan	Scientist - F	r.s*****@nic.in	Present
13	Shri Prasoon Gargava	Scientist F	pra*****@nic.in	Present

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

Date of zero draft MoM sent to Chairman: 19/05/2026

Approval by Chairman: 20/05/2026

Uploading on PARIVESH: 21/05/2026

SUMMARY RECORD OF THE FORTY THIRD (43rd) MEETING OF EXPERT APPRAISAL COMMITTEE (EAC) HELD DURING 14th MAY 2026 FOR ENVIRONMENT APPRAISAL OF THERMAL SECTOR PROJECTS THROUGH VIRTUAL MODE.

14th MAY, 2026 [THURSDAY]

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 EAC members who participated in the meeting is at **Annexure – I.**

Confirmation of the minutes of the 42nd meeting of the EAC (Thermal): The minutes of the 42nd meeting of the EAC (Thermal) held on 30th April, 2026 through physical mode have been confirmed by the EAC, along with the following corrections-

A. Agenda Item No. 42.3:

Minutes uploaded on PARIVESH	To be read as
<u>42.3.7: Environment Management Plan:</u> Transport of raw material will be by road through covered trucks initially and then through covered conveyor.	<u>42.3.7: Environment Management Plan:</u> Transport of raw material will be by road through covered trucks initially and then through covered conveyor within Plant.
<u>42.3.7: Air Pollution & Fugitive Emission Control Systems:</u> Company has earmarked 85.79 Ha as ash pond area and 154. 72 Ha as green belt (Total – 240.51 Ha). When disposal will be slurry form, the ash will be laid layer by layer in pre designated parts of the ash pond sequentially.	<u>42.3.7: Air Pollution & Fugitive Emission Control Systems:</u> Company has earmarked 117.24 Ha as ash pond area and 186.54 Ha as green belt. When disposal will be slurry form, the ash will be laid layer by layer in pre designated parts of the ash pond sequentially

B. Agenda Item No. 42.6:

Minutes uploaded on PARIVESH	To be read as
<u>42.6.7: Recommendations of the Committee:</u> In view of the foregoing and after the detailed deliberations, the Committee <i>partially recommended</i> the instant proposal for grant of amendment in the ECs dated 18/03/2011 & 04/11/2011 and its subsequent amendment dated 24/02/2023 as detailed below subject to	<u>42.6.7: Recommendations of the Committee:</u> In view of the foregoing and after the detailed deliberations, the Committee <i>recommended</i> the instant proposal for grant of amendment in the ECs dated 18/03/2011 & 04/11/2011 and its subsequent amendment dated 24/02/2023 as detailed below subject to stipulation of

Minutes uploaded on PARIVESH	To be read as
stipulation of following additional specific conditions. Other terms and conditions prescribed in EC dated 18/03/2011 & 04/11/2011 and its subsequent amendments shall remain unchanged:	following additional specific conditions. Other terms and conditions prescribed in EC dated 18/03/2011 & 04/11/2011 and its subsequent amendments shall remain unchanged:

Agenda Item No.- 43.1

43.1: Expansion of Existing 25 MW Waste to Energy (WTE) Plant to 45 MW by **M/s Tehkhand Waste to Electricity Project Limited** located at adjacent DTC Tehkhand, Depot, Maa Anandmai Marg, District Southeast, New Delhi – **Environment Clearance under para 7(ii) a of EIA Notification, 2006 – regarding.**

[Proposal no. IA/DL/THE/566057/2026, F.No. J-13012/03/2017-IA.I(T)]

43.1.1: M/s. Tehkhand Waste to Electricity Project Ltd has made an online application vide proposal No. IA/DL/THE/566057/2026 dated 10.02.2026 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 attracts general condition due to proximity to protected area- Notified Eco sensitive area- Okhla Bird Sanctuary ESZ at 4.76 Km NE and Okhla Bird Sanctuary at 4.83 km NE, Asola Wildlife Sanctuary ESZ at 0.72 km SW & Asola Wildlife Sanctuary at 1.65 km SW & inter-state boundaries-Delhi-Haryana State boundary at 1.30 Km SE and Critically Polluted Area namely Okhla Industrial Area is located at 0.61 km North. In view of this, the project is appraised at Central Level.

Name of the EIA consultant: M/s Perfact Enviro Solutions Pvt. Ltd. [S. No. 173, List of ACOs An ISO 9001:2015 & ISO 14001:2015 Certified Company) with Certificate / Extension Letter no. NABET/EIA/25-28/RA 0467.; Valid up to 26.11.2028].

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

43.1.2: The project of M/s Tehkhand Waste to Electricity Project Ltd. located in Tehkhand Village, Kalkaji Tehsil, Tehkhand District, New Delhi State is for setting up of a new Waste to Energy plant with a capacity of 20 MW for enhancement of power generation capacity from 25 MW to 45 MW.

43.1.3: The existing project was accorded environmental clearance vide letter.no. F.No. J-13012/03/2017 IA.I(T) dated 26/07/2018 from MoEF&CC and Amendment in EC vide letter No. J 13012/03/2018-IA.I(T) dated 15/01/2019. Consent to Operate (CTO) for the existing unit was accorded by Delhi Pollution Control Committee (DPCC), vide File No. DPCC/WMC-II/Tehkhand-WTE/2025/02 dated 10/01/2025. The validity of CTO is up to 06/10/2029.

43.1.4: Implementation status of the existing EC

Sl. No.	Configuration	Capacity (MW)	As per the EC dated	Implementation Status as on May 2026	Production as per CTO
1	Product- Power Generation through MSW waste processing 2000 TPD	25MW	26/07/2018 & 15/01/2019 (Amendment in EC)	The project has been fully implemented in compliance with the EC conditions and is currently in operation after obtaining necessary all clearances and No Certificates from departments. (NOCs) concerned departments.	25 MW

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

Name of the facility	Unit	Existing	Proposed Expansion*	Total after Expansion Capacity
Product (Waste to Energy Power)	MW	25	20	45
Biogas production (by-product)	Nm ³ /day or TPD	Nil	Biogas = up to 20,000 Nm ³ /day /CBG = up to 8 TPD	Biogas = up to 20,000 Nm ³ /day /CBG = up to 8 TPD
Boiler for WTE	TPH	2 x 65	≤100	≤230

Process description

WTE plant

The technology proposed to be employed for this WTE project is RDF combustion based reciprocating forward feed grate technology. The power plant constitutes Material Recovery Facility (Pre-sorting), RDF fuel Pit, Incinerators, Boilers, and Steam Turbine Generators with power generation capacity of 20 MW.

Bio-gas plant

- Leachate Treatment Plant utilizes chemical and biological treatment methods to treat approximately 360 KL of leachate per day. The plant features three anaerobic digesters operating in both series and parallel modes.
- Anaerobic (without oxygen) biological process that breaks down organic materials and release biogas.
- The Digestion takes about 20 days in the mesophilic temperature (30C – 35C) and producing approx. 8000 to 20,000Nm³ of biogas per day.
- Anaerobic digestion has four major steps: Hydrolysis, Acidogenesis, Acetogenesis & Methanogenesis to decompose the organic matter and produce biogas.
- Digested Sludge from the bottom can be used as manure.

CBG production

- Raw biogas will be filtered and cleaned to remove impurities like hydrogen sulphide, moisture, and particulate matter.
- Carbon dioxide and hydrogen sulphide gas will be removed from the biogas using scrubbing and absorption methods.
- The biogas is then enriched to increase the CH₄ concentration, typically to 90-95%.
- The scrubbed biogas will be compressed to high pressure (typically 200- 250 bar) and filled into CBG cylinders or will be supplied to gas grid through pipeline.
- The final CBG / Bio-CNG product will meet specified standards for fuel quality, safety, and environmental regulations.

43.1.6: Certified compliance report from Regional Office

The status of compliance of earlier EC was obtained from Regional Office, vide File No. V/ENV/DLI/1412/2018/220 [E Computer No. 271496], dated 01.08.2025 in the name of M/s Tehkhand Waste to Electricity Project Ltd. The Action Taken Report regarding the partially/non-complied conditions was submitted to Regional Office, MoEF&CC, Lucknow vide letter bearing Ref. No. TWEPL/EXP/2025-26/008 dated 14.08.2025 by the project proponent. Further, IA-CMD write a letter vide F. No. IA-J-11014/201/2025-IA-I, dated 17.12.2025 to DDGF(C), RO, MoEF&CC – Lucknow, for issuing an Action Taken Review Report to Project Proponent. Accordingly, MoEF&CC (RO), Lucknow evaluated the report and has issued Action Taken Review Report to M/s Tehkhand Waste to Electricity Project Ltd. vide File No. V/ENV/DLI/1412/2018 [E computer No. 271496]/373 dated 10.02.2026. Based on this, proponent has submitted a request letter to IA-CMD, MoEF&CC vide letter TWEPL/EXP/MoEF&CC/2026-27/001 dated 28.04.2026, seeking issuance of an Action Closure Letter and the same was issued by IA-C&MD on 6/05/2026.

The details of the observations made by RO in the report dated 10/02/2026 along with its re-assessment / present status as furnished by the PP are given as below.

S. No.	Non-compliance details	Observation of RO (abridged)	Condition no.			Closure Remarks by IRO dated 10/02/2026	Present Status
			EC date	Specific	General		
1	PM ₁₀ sensor was not working and showing wrong and malfunction data. [Specific Condition (vi)]	PM ₁₀ sensor was not working and showing wrong and malfunction data. [Specific Condition (vi)]	26.07.2018 & 15.01.2019	Specific Condition (vi)	-	It is submitted that during the day of visit on 22.07.2025, the PM ₁₀ sensor was not working and showing wrong and malfunction data. In this regard, PP has informed that they have already reported to CPCB. In this context, PP has been advised to rectify the issue and submit the ATR in this regard to the Ministry. Now, based on the ATR reply submitted by the	Complied

S. No.	Non-compliance details	Observation of RO (abridged)	Condition no.			Closure Remarks by IRO dated 10/02/2026	Present Status
			EC date	Specific	General		
						Project Authority along with display screenshot photograph, it appears that the analyser is working now. The condition may be compiled. Complied.	
2	PP has not made adequate expenditure for CER activities.[Specific Condition (xviii) & (xix)]	PP has not made adequate expenditure for CER activities. [Specific Condition (xviii) & (xix)]	26.07.2018 & 15.01.2019	Specific Condition (xviii) & (xix)	-	It is submitted that during the day of visit on 22.07.2025, it had been observed that PP has not made adequate expenditure, towards CER activities, as the EC was granted in 2018 and at that time, the said OM dated 01.05.2018 [CER], was in force. In this regard, PA has been advised to provide the detailed compliance status w.r.t. activities proposed at the time of EC with budget vis-à-vis completed activities along with expenditure made to the Ministry. Now, based on the ATR reply submitted by the Project Authority, which inter-alia, mentioned that a total of Rs. 121.58 Lakhs was earmarked for these activities. As per information provided, PA has made expenditure of Rs. 78.38 Lakhs towards these initiatives between Financial Years 2018-19 & 2024-25. Further, PA has reported that a comprehensive action plan has been prepared for the balance amount of Rs. 43.20 Lakhs, with completion targeted for the period of Financial Years	Action Plan of remaining CER amount Rs. 23 lakh for FY 2026-27 has been submitted to RO, MoEFCC, Lucknow and to EAC (Thermal) as well.

S. No.	Non-compliance details	Observation of RO (abridged)	Condition no.			Closure Remarks by IRO dated 10/02/2026	Present Status
			EC date	Specific	General		
						2025-26 (Rs. 20.22 lakhs) and 2026-27 (Rs. 23.0 lakhs). It is also reported by PA, that the total proposed CER expenditure for FY 2025-26 was Rs. 20.22 Lakhs, out of which Rs. 10.21 Lakhs has been spent till date and the balance amount Rs. 10.01 Lakhs proposed to be spent in the period of October 2025 to March-2026. Gist of CER amount proposed at the time of EC and expenditure is as below: • Total CER proposed at the time EC grant in 2018 => Rs. 121.58 Lakhs • Total CER expenditure made w.e.f. F.Y. 2018-19 & 2024-25. => Rs. 78.38 Lakhs • Total CER expenditure made F.Y. 2025-26 (April-September 2025) => Rs. 10.21 Lakhs • Total CER expenditure proposed (under expenditure) for F.Y. 2025-26 (October 2025-March 2026) => Rs. 10.01 Lakhs • Total CER expenditure proposed for F.Y. 2026-27 => Rs.	

S. No.	Non-compliance details	Observation of RO (abridged)	Condition no.			Closure Remarks by IRO dated 10/02/2026	Present Status
			EC date	Specific	General		
						23.0 Lakhs. Now, based on the ATR reply submitted by the Project Authority along with commitment made for the remaining expenditure related to CER in next FY, it appears that PA is committed to comply with this EC condition. Assured to comply with this EC condition related to CER.	
3	For proper and periodic monitoring of CSR activities, CSR committee or Social Audit Committee or a suitable credible external agency has not been constituted yet. [Specific Condition (xx)]	For proper and periodic monitoring of CSR activities, CSR committee or Social Audit Committee or a suitable credible external agency has not been constituted yet. [Specific Condition (xx)]	26.07.2018 & 15.01.2019	Specific Condition (xx)	-	It is submitted that during the day of visit on 22.07.2025, it had been observed that CSR committee or Social Audit Committee or a suitable credible external agency for proper and periodic monitoring of CSR activities, has not been constituted, as per the EC condition. In this regard, PP has been advised that the evaluation of CSR activities by an independent external agency, needs to be carried out immediately, as per this EC condition. Now, based on the ATR reply submitted by the Project Authority, which inter-alia, mentioned that the Social Audit Committee (SAC) for the evaluation of CSR activities and cost spent towards CSR for the period of FY. 2024-25 was carried out. The total amount Rs. 10.50 Lakhs were allocated and utilized towards on-going programs for	Complied

S. No.	Non-compliance details	Observation of RO (abridged)	Condition no.			Closure Remarks by IRO dated 10/02/2026	Present Status
			EC date	Specific	General		
						differently abled individuals, in alignment with activities outlined in the Schedule VII under Companies Act. A copy of Social Audit Report submitted by SAC committee is attached herewith in ATR reply. Now, based on the ATR reply submitted by the Project Authority, it appears that PA is committed to comply with this EC condition now. Being complied now.	
4	The housekeeping of the LTP area is not adequate. [General Condition (ii)]	The housekeeping of the LTP area is not adequate. [General Condition (ii)]	26.07.2018 & 15.01.2019	-	General Condition (ii)	It is submitted that during the day of visit on 22.07.2025, it was observed that the Leachate Treatment Plant (LTP) was in working condition; however, the housekeeping of the LTP area was not adequate and need improvement. In this regard, the PP was advised to do the needful and submit the ATR in this regard. Now, based on the ATR reply submitted by the Project Authority along with photograph of LTP area, it appears that the Housekeeping has now been improved in the Leachate Treatment Plant (LTP) area. The condition may be compiled now. Being Complied.	Complied
5	PM ₁₀ and PM _{2.5} exceed the stipulated limits. [General	PM ₁₀ and PM _{2.5} exceed the stipulated limits.	26.07.2018 & 15.01.2019	-	General Condition (vi)]	It is submitted that during the day of visit, the submitted monitoring reports related to PM₁₀ and PM_{2.5}, the data have	Appropriate measures are being taken and action

S. No.	Non-compliance details	Observation of RO (abridged)	Condition no.			Closure Remarks by IRO dated 10/02/2026	Present Status
			EC date	Specific	General		
	Condition (vi)]	[General Condition (vi)]				been reported at higher side as per prescribed limit. In view of the above, PAs have been advised to take all the mitigation measures to minimize these particulate matter concentrations. In this regard, the PP was advised to do the needful and submit the ATR in this regard. Now, based on the ATR reply submitted by the Project Authority along with nearby reported monitoring station data of PM₁₀ & PM_{2.5}, it appears that average concentration of PM₁₀ & PM_{2.5} observed at TWEPL is lower than the data of nearest monitoring station Dr. Karni Singh Shooting Range, values. However, still the concentration of PM₁₀ and PM_{2.5} exceeds the stipulated limits due to high baseline data in Delhi and NCR region in winter season. The PA has reported that the following mitigation measures are being applied to lower the concentration of particulate matter, as below: • State-of-the-art technology pollution control devices (Bag filters with FGD) have been installed to take care of stack and fugitive emissions. • 3 No. of Anti-Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas.	plan for the same has been submitted to RO, MoEFCC, Lucknow and to EAC (Thermal) as well.

S. No.	Non-compliance details	Observation of RO (abridged)	Condition no.			Closure Remarks by IRO dated 10/02/2026	Present Status
			EC date	Specific	General		
						- The entry gates have sensor-based wheel washing systems for vehicle cleaning and washing. - Fixed sprinklers are installed at the site to reduce dust while movement of trucks. Manual Sprinkling is also done regularly. - Thick layer of greenbelt has been developed around the periphery of the plant. It acts a buffer to surrounding areas. In view of the above, mitigation measure, still the particulate concentration of PM₁₀ and PM_{2.5} exceeds the stipulated limits. This may be due to high baseline data of Delhi and NCR in winter season. The condition is still partially compiled. Partially Compiled.	
6	The details of the PLI taken as per the provisions of the Public Liability (Insurance) Act, 1991, as recorded in this EC condition has not been submitted. [Other EC condition Para No. 34]	The details of the PLI taken as per the provisions of the Public Liability (Insurance) Act, 1991, as recorded in this EC condition has not been submitted. [Other EC condition Para No. 34]	26.07.2018 & 15.01.2019	-	-	It is submitted that during the day of visit, the details of the PLI taken as per the provisions of the Public Liability (Insurance) Act, 1991, as recorded in this EC condition has not been submitted. In this regard, the PP was advised to do the needful and submit the ATR in this regard. Now, based on the ATR reply submitted by the Project Authority along with copy of PLI, the condition may be compiled now. Complied.	Complied

43.1.7: The detail of the ToR is furnished as below:

Proposal No with date	Consideration	Details	Date of accord	ToR Validity
IA/DL/THE/544398/2025	28 th meeting of EAC – Thermal held on 12.08.2025	Terms of Reference	16.09.2025	4 years

43.1.8: Environmental site settings

S. No.	Particulars	Details	Remarks																								
1	Total Land	6.0703 ha [The complete area is Government land obtained on lease from MCD]	Land use: The existing Land use of the project site is Industrial. There will be no change in the land use pattern of the site. As per Gazette Notification dated 12.01.2018, the land is already notified for utility purposes by the Delhi Development Authority. The land was transferred from DDA to MCD and then was handed over to M/s Tehkhand Waste to Electricity Project Limited through a lease deed agreement dated 25.09.2018.																								
2	Land use break up	<table> <tr> <th>Particulars</th><th>Existing (Ha)</th><th>Expansion (Ha)</th><th>Area upon expansion (Ha)</th></tr> <tr> <td>Covered area</td><td>2.2190</td><td>0.4664 (increased)</td><td>2.6854</td></tr> <tr> <td>Road area & drainage</td><td>1.0116</td><td>0 (will remain same)</td><td>1.0116</td></tr> <tr> <td>Green Area (33%)</td><td>2.0142</td><td>0 (will remain same)</td><td>2.0142</td></tr> <tr> <td>Open Area</td><td>0.8255</td><td>0.4664 (reduced)</td><td>0.3591</td></tr> <tr> <td>Total Area</td><td>6.0703</td><td></td><td>6.0703</td></tr> </table>	Particulars	Existing (Ha)	Expansion (Ha)	Area upon expansion (Ha)	Covered area	2.2190	0.4664 (increased)	2.6854	Road area & drainage	1.0116	0 (will remain same)	1.0116	Green Area (33%)	2.0142	0 (will remain same)	2.0142	Open Area	0.8255	0.4664 (reduced)	0.3591	Total Area	6.0703		6.0703	-
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S. No.	Particulars	Details	Remarks																																																																								
3	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 & 20/2/2025	The land was transferred from DDA to MCD and then was handed over to M/s Tehkhand Waste to Electricity Project Limited through a lease deed agreement dated 25.09.2018.	Registration No. 5.302 dated 25.09.2018 and agreement is up to 25 years																																																																								
4.	Existence of habitation & involvement of R&R, if any.	Project site: Not applicable Study Area: <table> <tr> <th>Name of Habitat</th> <th>Distance (Km)</th> <th>Direction</th> </tr> <tr><td>Railway Colony</td><td>0.41</td><td>SE</td></tr> <tr><td>Prem Nagar</td><td>0.48</td><td>SSW</td></tr> <tr><td>Pul Pehladpur</td><td>1.10</td><td>NNW</td></tr> <tr><td>Tuglaqabad Village</td><td>1.37</td><td>NW</td></tr> <tr><td>Tehkhand</td><td>1.39</td><td>NNE</td></tr> <tr><td>Tuglaqabad Extension</td><td>2.54</td><td>NW</td></tr> <tr><td>Sarita Vihar</td><td>2.58</td><td>NE</td></tr> <tr><td>Tajpur Pahari</td><td>2.72</td><td>ESE</td></tr> <tr><td>Talimabad</td><td>2.76</td><td>WNW</td></tr> <tr><td>Govindpuri</td><td>3.24</td><td>NNW</td></tr> <tr><td>Madanpur Khadar</td><td>3.53</td><td>NE</td></tr> <tr><td>Gupta Colony</td><td>3.79</td><td>SW</td></tr> <tr><td>Jasola Vihar</td><td>4.19</td><td>NNE</td></tr> <tr><td>Kalkaji</td><td>4.20</td><td>NNW</td></tr> <tr><td>Mithapur</td><td>4.28</td><td>ESE</td></tr> <tr><td>Sarai Khawaja Village</td><td>4.31</td><td>SE</td></tr> <tr><td>Devli</td><td>4.34</td><td>SW</td></tr> <tr><td>Sangam Vihar</td><td>4.38</td><td>W</td></tr> <tr><td>Jaitpur</td><td>4.45</td><td>W</td></tr> <tr><td>Dakshinpuri</td><td>4.46</td><td>WNW</td></tr> <tr><td>Dr. Ambedkar Nagar</td><td>4.56</td><td>NW</td></tr> <tr><td>Khanpur</td><td>4.64</td><td>W</td></tr> <tr><td>GK II</td><td>4.67</td><td>NW</td></tr> </table> The nearest habitation is Tughlakabad Railway Colony 0.41 km, East. However there is no R & R involved in the said project. Hence Not applicable.	Name of Habitat	Distance (Km)	Direction	Railway Colony	0.41	SE	Prem Nagar	0.48	SSW	Pul Pehladpur	1.10	NNW	Tuglaqabad Village	1.37	NW	Tehkhand	1.39	NNE	Tuglaqabad Extension	2.54	NW	Sarita Vihar	2.58	NE	Tajpur Pahari	2.72	ESE	Talimabad	2.76	WNW	Govindpuri	3.24	NNW	Madanpur Khadar	3.53	NE	Gupta Colony	3.79	SW	Jasola Vihar	4.19	NNE	Kalkaji	4.20	NNW	Mithapur	4.28	ESE	Sarai Khawaja Village	4.31	SE	Devli	4.34	SW	Sangam Vihar	4.38	W	Jaitpur	4.45	W	Dakshinpuri	4.46	WNW	Dr. Ambedkar Nagar	4.56	NW	Khanpur	4.64	W	GK II	4.67	NW	Status of R&R. Not applicable
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5.	Existence of school and hospital if any.	A. <u>School</u> <table> <tr> <th>School</th> <th>Distance</th> <th>Direction</th> </tr> <tr> <td>MCD Primary School (BOYS)</td> <td>0.49 Km</td> <td>SE</td> </tr> <tr> <td>Apollo Public School</td> <td>0.76 Km</td> <td>SW</td> </tr> </table>	School	Distance	Direction	MCD Primary School (BOYS)	0.49 Km	SE	Apollo Public School	0.76 Km	SW																																																																
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		Government Girls Senior Secondary School			0.79 Km	ESE	
		Sky High Modern School			0.95 Km	WNW	
		MCD Primary School, Railway Colony			1.07 Km	ESE	
		New Sangam Public School			1.19 Km	W	
		Nav Jai bharti Public School			1.39 Km	SE	
		Manav Rachna International School Eros Garden,			1.43 Km	SSE	
		New Motherland Public School			1.56 Km	ESE	
		Govt. Boys Sr. Sec. School No 1			1.67 Km	E	
		Bal Upwan Public School			1.86 Km	SE	
		Ramchander Memorial Public School			1.92 Km	SE	
		St. Columbus School			2.19 Km	SE	
		Saraswati Vidya Niketan Public School			2.39 Km	SE	
		Little wings play school			2.41 Km	SE	
		Ashiyani Public School Faridabad, New Delhi, Haryana 121009			2.46 Km	SSE	
		Kinderzone School			3.23 Km	SSE	
		B. <u>Hospital</u>					
		Hospital		Distance	Direction		
		OKHLA PH-I ESI Hospital		0.50 Km	NNE		
		MAX Lab		0.92 Km	SE		
		Tuglakabad Railway Health Unit N R Hospital		1.02 Km	ESE		
		Western Central Railway Hospitals		1.02 Km	ESE		
		Jeewan Jyoti Hospital		1.21 Km	NNE		
		Jain Charitable Hospital		1.24 Km	SE		
		Sarvopari Hospital		1.56 Km	SE		
		Supreme Hospital		1.98 Km	SE		
BTPS Hospital		2.03 Km	East				

S. No.	Particulars	Details	Remarks																					
		<table><tr><td>ECHS Polyclinic Hospital</td><td>2.44 Km</td><td>WNW</td></tr><tr><td>Health City Clinic Landmark</td><td>2.70 Km</td><td>ESE</td></tr><tr><td>Majeedia Unani Hospital</td><td>2.77 Km</td><td>WNW</td></tr><tr><td>Hakeem Abdul Hameed Centenary Hospital</td><td>2.78 Km</td><td>WNW</td></tr><tr><td>Unity Hospital</td><td>3.11 Km</td><td>SE</td></tr><tr><td>Batra Hospital & Medical Research Centre</td><td>3.35 Km</td><td>WNW</td></tr><tr><td>Universal Hospital DND</td><td>3.41 Km</td><td>SE</td></tr></table> Mitigation Measures: - Proposed: The proposed Boiler of up to 100 TPH will be installed as the 3rd boiler with the Best available technology and State-of-the-art technology pollution control devices. The proposed bag filters will be designed with 130% capacity, providing additional margin for efficient emission control. - Emissions from stacks are maintained within the CPCB standards and as per emission standards prescribed in CTO. The same will be maintained after expansion. - Online Continuous Emission Monitoring System (OCEMS) already installed at the site. - The OCEMS and CAAQMS were installed on 10.12.2022 & 17.02.2023 for stack emission & ambient air monitoring. The OCEMS and CAAQMS are connected with DPCC & CPCB Servers for online monitoring of prescribed parameters. - The Air dispersion modeling of existing and proposed point sources has been done. The modelling suggests that the proposed expansion will have negligible incremental to the background concentration. 3 No. of Anti-Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas. - Manual Sprinkling is also done regularly. - The entry gates have sensor-based wheel washing systems for vehicle cleaning and washing.	ECHS Polyclinic Hospital	2.44 Km	WNW	Health City Clinic Landmark	2.70 Km	ESE	Majeedia Unani Hospital	2.77 Km	WNW	Hakeem Abdul Hameed Centenary Hospital	2.78 Km	WNW	Unity Hospital	3.11 Km	SE	Batra Hospital & Medical Research Centre	3.35 Km	WNW	Universal Hospital DND	3.41 Km	SE	
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		- The materials are kept covered using green net. - Continuous Ambient Air Quality Monitoring Station (CAAQMS) already installed. - Storing of construction material in covered condition at project site. - Proper route management of the traffic for smooth ingress and egress of traffic. - Monitoring of Ambient Air Quality at periodical intervals.																															
6.	Latitude and Longitude of all corners of the project site.	A. Plant site <table><thead><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr></thead><tbody><tr><td>A</td><td>28°30'35.31"N</td><td>77°16'50.83"E</td></tr><tr><td>B</td><td>28°30'32.42"N</td><td>77°16'56.59"E</td></tr><tr><td>C</td><td>28°30'23.04"N</td><td>77°16'51.19"E</td></tr><tr><td>D</td><td>28°30'25.47"N</td><td>77°16'44.93"E</td></tr></tbody></table>	Point	Latitude	Longitude	A	28°30'35.31"N	77°16'50.83"E	B	28°30'32.42"N	77°16'56.59"E	C	28°30'23.04"N	77°16'51.19"E	D	28°30'25.47"N	77°16'44.93"E																
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D	28°30'25.47"N	77°16'44.93"E																															
7	Elevation of the project site	The project site elevation varies from 249 m to 260 m above mean sea level (amsl)																															
8	Involvement of Forest land if any	Nil	Not applicable																														
9	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	Project site: There are no water body within the project site Study area -The following are within 5km radius from the project site <table><thead><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr></thead><tbody><tr><td>Pond Near Prem Nagar</td><td>0.51 Km</td><td>West</td></tr><tr><td>Pond Near Chugi No 2</td><td>0.57 Km</td><td>SSW</td></tr><tr><td>Hari Singh Pond</td><td>0.60 Km</td><td>W</td></tr><tr><td>Pond Near Tughlakabad District Park</td><td>1.00 Km</td><td>W</td></tr><tr><td>Pond Near Tughlakabad Fort</td><td>1.03 Km</td><td>WSW</td></tr><tr><td>Pond Near Tughlakabad</td><td>1.10 Km</td><td>NNW</td></tr><tr><td>Pond Near Laal Kuwa</td><td>1.15 Km</td><td>SE</td></tr><tr><td>Pond Near Gali No1</td><td>1.39 Km</td><td>SSW</td></tr><tr><td>Drain near Okhla Phase 2</td><td>1.60 Km</td><td>N</td></tr></tbody></table>	Water body	Distance	Direction	Pond Near Prem Nagar	0.51 Km	West	Pond Near Chugi No 2	0.57 Km	SSW	Hari Singh Pond	0.60 Km	W	Pond Near Tughlakabad District Park	1.00 Km	W	Pond Near Tughlakabad Fort	1.03 Km	WSW	Pond Near Tughlakabad	1.10 Km	NNW	Pond Near Laal Kuwa	1.15 Km	SE	Pond Near Gali No1	1.39 Km	SSW	Drain near Okhla Phase 2	1.60 Km	N	
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S. No.	Particulars	Details			Remarks																																	
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10	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	Study area Name & Distance of the ESZ/ESA: (a) Asola Wildlife Sanctuary ESZ is located at 0.72 km SW & Asola Wildlife Sanctuary is located at 1.65 km SW. (b) Okhla Bird Sanctuary ESZ is located at 4.76 Km NE and Okhla Bird Sanctuary is located at 4.83 km NE Status of Notification: a) Gazette Notification for ESZ & WLS of Asola Wildlife Sanctuary published in 2017. b) Gazette Notification for ESZ & WLS of Okhla Bird Sanctuary published in 2015. Authenticated map of ESZ projecting distance of																																				

S. No.	Particulars	Details	Remarks								
		ESZ from project site: The Map showing the distance has been submitted. Status of NBWL approval: Not applicable List of Reserved and Protected Forests: <table><tr><th>Forest Type</th><th>Name</th><th>Distance & Direction</th></tr><tr><td>Reserved Forest</td><td>Jahanpanah City Forest</td><td>2.78 km in WNW</td></tr></table> Mitigation Measures- Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Miyawaki plantation will be implemented in designated areas as per space availability.	Forest Type	Name	Distance & Direction	Reserved Forest	Jahanpanah City Forest	2.78 km in WNW			
Forest Type	Name	Distance & Direction									
Reserved Forest	Jahanpanah City Forest	2.78 km in WNW									
11	Archaeological sites monuments/ historical temples etc.	The following Archaeological Sites are in the radius of 2 km from the project site: <table><tr><th>Name</th><th>Distance & Direction</th></tr><tr><td>Nai-ka-kot in Tughlaqabad</td><td>0.44 km SW</td></tr><tr><td>Walls, gate and bastions of Adilabad (Mohammadabad) and causeway leading there to from Tughlakabad</td><td>1.18 km SW</td></tr><tr><td>Tomb of Ghiyasuddin Tughlakabad</td><td>1.76 km West</td></tr></table>	Name	Distance & Direction	Nai-ka-kot in Tughlaqabad	0.44 km SW	Walls, gate and bastions of Adilabad (Mohammadabad) and causeway leading there to from Tughlakabad	1.18 km SW	Tomb of Ghiyasuddin Tughlakabad	1.76 km West	NOC has been obtained from National Monument Authority vide File No. 04/02/2025/CA/Delhi/ No. 788, Dated 24.02.2026- stating that the project site/ aforesaid property falls beyond the regulated area of any centrally protected monument.
Name	Distance & Direction										
Nai-ka-kot in Tughlaqabad	0.44 km SW										
Walls, gate and bastions of Adilabad (Mohammadabad) and causeway leading there to from Tughlakabad	1.18 km SW										
Tomb of Ghiyasuddin Tughlakabad	1.76 km West										
13	Involvement of Critically Polluted Area/Severely. Polluted area as per 2018 CEPI score	Involvement of CPA/SPA-No (a) Critically Polluted-Not Applicable (b) Proximity to CPA/SPA - Okhla Industrial Area is located at 0.61 Km North	Proposed additional environmental safeguards as per MoEF&CC OM dated 31/10/2019: The stack emissions are within prescribed emission standards of CTO granted by DPCC, which are more								

S. No.	Particulars	Details	Remarks
			stringent than those specified under the SWM Rules, 2016 and 2026. ● Online Continuous Emission Monitoring System (OCEMS) and CAAQMS has already been installed at the site, which is already connected to DPCC & CPCB Servers. ● Greenbelt is already developed in 2.01 Ha land inside the project area which is 33% of the total project area and additionally Greenbelt will be developed in 1.65 Ha land adjacent to the project site at ESLF area. Land has been allocated by MCD vide letter no. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026 for greenbelt development. ● ZLD is being maintained at the plant site for the existing operations. The same will be followed after the expansion project. ● Maintaining MSW pit under negative pressure to mitigate escape out the odour from MSW Pit. ● The entry gates have sensor-based wheel washing systems for vehicle cleaning and

S. No.	Particulars	Details	Remarks
			washing. Use of Anti-Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas.

43.1.9: Fuel Requirement: The details of the municipal solid waste 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	Linkage document
Existing WtE	Municipal Solid Waste- 7,30,000	MCD	5-10 Km	Trucks and dumpers	Concession agreement between MCD and TWEPL
Proposed WtE	Municipal Solid Waste- 3,65,000	MCD	5-10 Km	Trucks and dumpers	

43.1.10: Water Requirement: Existing Water requirement is 490 m³/day, water requirement is obtained from Okhla STP and permission for the same has been obtained from Delhi Jal Board vide letter no. F-1/DJB/EE(SDW)V/2017/1346 dated 13.10.2017. The water requirement for the proposed project is estimated as 632 m³/day, out of which 7 m³/day of fresh water requirement will be obtained from the DJB and the remaining requirement of 625 m³/day will be met by the treated water from Okhla STP and in house treated water. The water is transported to the plant site through the underground pipeline. No groundwater extraction is involved in the project.

43.1.11: Power Requirements: Existing power requirement of 3.5 MW is obtained from Inhouse (WtE Plant). The power requirement for the proposed project is estimated as 6.3 MW, which will be obtained from the Inhouse (WtE Plant).

43.1.12: Baseline Environmental Studies:

Period	March to May 2024	Additional study (October 2025)
AAQ parameters at 12 Locations (min and max)	Core zone 2024: PM_{2.5} =121 µg/m³; PM₁₀ = 173 µg/m³ ; SO₂= 15 µg/m³; NO₂ =136 µg/m³ ; CO is 0.76 mg/m³ Buffer zone 2024: PM_{2.5} = 84 To 132 µg/m³ ; PM₁₀ = 104 To 194 µg/m³ ; SO₂ = 13 to 21 µg/m³ ; Nox =61 To 142 µg/m³; CO = 0.53 To 0.79 mg/m³	One month baseline (October 2025) Core zone 2025: PM_{2.5} =72.24 µg/m³ to 74.24 µg/m³; PM₁₀ = 182.81 µg/m³ to 188.30 µg/m³ ;SO₂ = 9.52 µg/m³ to 9.80 µg/m³; NO₂ = 24.61 µg/m³ to 25.34 µg/m³ ; CO = 0.58 µg/m³ to 0.59

Period	March to May 2024	Additional study (October 2025)
		mg/m ³ . Buffer zone 2025: PM2.5 = 70.07 To 92.46 µg/m ³ PM10 = 177.33 To 234 µg/m ³ SO2 = 9.24 To 12.1 µg/m ³ Nox = 223.88 To 31.50 µg/m ³ CO = 0.56 To 0.74 mg/m ³
Incremental GLC level	PM ₁₀ = 0.914 µg/m ³ With APCS (Level at onsite) SO2 = 2.39 µg/m ³ With APCS (Level at onsite)	-
Ground water quality at 6 locations	pH: 7.29 to 7.61, Total Hardness: 278 to 383 mg/l, Chlorides: 84 to 168 mg/l, Fluoride: 0.24 to 0.48 mg/l. Heavy metals such as Total Chromium: <0.05mg/l, Nickel:<0.01 mg/l, Copper:<0.01mg/l, Cadmium: <0.05 mg/l, Arsenic: <0.01 mg/l, Zinc: <0.001 mg/l, lead: <0.001mg/l, Iron: <0.001mg/l	Ground water quality at 8 locations pH: 6.80 to 7.48, Total Hardness: 460 to 1476 mg/l, Chlorides: 161.9 to 998.9 mg/l, Fluoride: 0.12 to 0.94 mg/l. Heavy metals such as Total Chromium, Nickel, Manganese, Copper, Mercury, Cadmium, Arsenic, Zinc, Selenium, Lithium are below the limit of quantification.
Surface water quality at 5 locations	pH: 7.26.to 7.92; DO: <2 to 4.1mg/l and BOD: 10.5 to 13.5 mg/l. COD from 196 to 416 mg/l	Surface water quality at 8 locations pH: 6.80 to 7.89; DO: BOD: 80.4 to 280 mg/l. COD from 130 to 470 mg/l
Effluent generation details and its treatment	Effluent generation from LTP Approx. 354 KLD of liquid leachate during the operational phase. Mode of treatment & reuse- Effluent will be treated in existing Leachate treatment plant. The treated water from Leachate treatment plant is recycled to DM Plant and rejected for quenching of bottom ash and FGCS Gas Cooling Domestic wastewater generation of approx. 6 KLD. Mode of treatment & reuse- Domestic wastewater will be treated in the existing Leachate treatment plant.	
Noise levels Leq (Day and Night) 12 locations	Core Zone (Industrial area) 66.2 dB (A) for the day time and 60.2 dB for the Night time. Buffer Zone (Industrial area) 62.1 dB (A) to 64.5 dB (A) for the day time and 56.7 dB (A) to 59.4 dB (A)for the Night time; (Residential area) 46.3 dB (A) to 53.3 dB (A) for the day time and 41.8 dB (A) to 46.2 dB (A)for the Night time; (silence area) 42.3 dB (A) for the day time and 38.4 dB for the Night time.	Noise levels Leq (Day and Night) 11 locations Core Zone (Industrial area) 60.2 dB (A) to 60.9 dB (A) for the day time and 51.6 dB (A) to 51.9 dB (A)for the Night time; Buffer Zone (Industrial area) 56.8 dB (A) to 57.8 dB (A) for the day time

Period	March to May 2024	Additional study (October 2025)																									
		and 46.8 dB (A) to 47.9 dB (A) for the Night time; (Residential area) 54.7 dB (A) to 56.9 dB (A) for the day time and 44.6 dB (A) to 45.2 dB (A) for the Night time; (silence area) 44.3 dB (A) for the day time and 37.2 dB for the Night time. (Commercial area) 64.8 dB (A) to 67.9 dB (A) for the day time and 57.9 dB (A) to 61.7 dB (A) for the Night time																									
Traffic assessment study findings	- Traffic study has been conducted at Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided) and Approach Road (Ma Anandmayee Marg) which is approximately 0.26 Km S from the plant site. - Transportation of raw material will be done 100% by road. - Existing PCU is 5143 PCU/hr on Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided) and existing level of service (LOS) is: 0.16 i.e. Cat "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>Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided)</td><td>863</td><td>5143</td><td>0.16</td><td>Cat "A"</td></tr><tr><td>App. Road 17 Mtr. with Divided Road 4 Lane 2 Way (Ma Anandmayee Marg)</td><td>373</td><td>5143</td><td>0.07</td><td>Cat "A"</td></tr></table> - PCU load after proposed project will be 5143 (Existing) + 5143 (Additional) PCU/hr and level of service (LOS) will be: <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>Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided)</td><td>905</td><td>5143</td><td>0.17</td><td>Cat "A"</td></tr></table>	Road	V (Volume in PCU/ hr.)	C (Capacity in PCU/ hr.)	Existing V/C Ratio	LOS	Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided)	863	5143	0.16	Cat "A"	App. Road 17 Mtr. with Divided Road 4 Lane 2 Way (Ma Anandmayee Marg)	373	5143	0.07	Cat "A"	Road	V (Volume in PCU/ hr.)	C (Capacity in PCU/ hr.)	Existing V/C Ratio	LOS	Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided)	905	5143	0.17	Cat "A"	
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Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided)	863	5143	0.16	Cat "A"																							
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Road	V (Volume in PCU/ hr.)	C (Capacity in PCU/ hr.)	Existing V/C Ratio	LOS																							
Mehrauli - Badarpur Road (4 Lane Road 2 way (Divided)	905	5143	0.17	Cat "A"																							

Period	March to May 2024					Additional study (October 2025)
	App. Road 17 Mtr. with Divided Road 4 Lane 2 Way (Ma Anandmayee Marg)	415	5143	0.08	Cat "A"	
	Conclusion: The level of service will include additional traffic due to proposed project. Road 1. The carrying capacity of the Mehrauli - Badarpur Road is much higher than the traffic volume. The traffic (to & fro) from the "Tehkhand Waste to Electricity Project Ltd." will not create traffic congestion. Mehrauli - Badarpur Road The volume/capacity ratio is likely to change from 0.16 to 0.17 with LOS being "A" to "A" Road 2. The carrying capacity of the Approach Road (Ma Anandmayee Marg).is much higher than the traffic volume. The traffic (to & fro) from the "Tehkhand Waste to Electricity Project Ltd." will not create traffic congestion Approach Road (Ma Anandmayee Marg). The volume/capacity ratio is likely to change from 0.07 to 0.08 with LOS being "A" to "A"					
Soil Quality at 10 Locations	Core zone 2024: Bulk density: 2.25 %; pH range 7.32-; Electrical conductivity (EC); 726 mS/m; calcium content: 16.5 mg/100g; sodium: 8.0 mg/100g; potassium: 5.0 mg/100g; Nitrogen: 16.5 mg/100g; Phosphorous:22.6 mg/100g; Cation Exchange Capacity (CEC):12.36 meq/100gm; Magnesium: 9.5 mg/100g; Organic Carbone: 0.68% Buffer zone 2024: Bulk density: 2.15 to 2.85 %; pH range 7.15 to 7.5; Electrical conductivity (EC); 632 to 845 mS/m; calcium content: 11.8 to 19.2 mg/100g; sodium: 7.0 to 12.0 mg/100g; potassium: 4.0 to 8.0 mg/100g; Nitrogen: 13.4 to 20.4 mg/100g; Phosphorous:4.0 to 8.0 mg/100g; Cation Exchange Capacity (CEC):10.38 to 16.48 meq/100gm; Magnesium: 6.2 to 9.4 mg/100g; Organic carbone: 0.57 to 0.95 %					Core zone October 2025: Bulk density: 1.22 g/cc; pH range 8.58; Electrical conductivity (EC); 428.0 µS/cm; calcium content: 64.0 mg/kg; sodium: 42.7 mg/kg; potassium: 45.76 mg/kg; Nitrogen: 131.7 mg/kg; Phosphorous:11.67 mg/kg; Cation Exchange Capacity (CEC):14.03 meq/100gm; Magnesium: 56.0 mg/kg; Organic Matter: 1.52% Buffer zone October 2025: Bulk density: 1.25 to 1.33 %; pH range 6.98 to 7.77; Electrical conductivity (EC); 75.7 to 365.0 mS/m; calcium content: 54.6 to 106.8 mg/kg; sodium: 36.4 to 89.6 mg/kg; potassium: 4.0 to 8.0 mg/kg; Nitrogen: 13.4 to 20.4 mg/kg; Phosphorous:10.20 to 47.9 mg/kg; Cation Exchange Capacity (CEC):11.2 to 17.2 meq/100gm; Magnesium: 12.5 to 44.2

Period	March to May 2024	Additional study (October 2025)
		mg/kg; Organic matter: 0.27 to 0.92 %
Flora and fauna	Total of 23 species listed under Schedule I of the Wildlife Protection Act. The Wildlife conservation Plan has been approved by Conservator of Forest (HQ) Wildlife officer vide F. No. 260/CWLW/WL/Jindal WLP/10983-85, dated 26.11.2025 from Department of Forest & Wildlife, New Delhi.	-
Hydrogeology study	The Hydrological study has been carried out by M/s Hydro Geo solution LLP, in October-December, 2025. - Elevation of water table in the study area ranged from 144 to 214.1 metres above mean sea level (m.amsl). The general ground water flow is towards north and northwest. A ground water trough is formed in the northwest. Groundwater flow gradient in the study area varies in all direction. - In-situ infiltration test study revealed a constant rate of infiltration 3.33 cm /hr. The infiltration rate in the area is considered moderate. - The Depth to ground water level during October 2025 ranged from 6.7 mbgl (Lajpat Nagar) to >100 mbgl (dry) at Tughlaqabad Biodiversity Park and Sangam Vihar. Depth to water level in the major part of the study area ranges from 80 to 90 m.bgl. Deeper water levels in the range of 90 to >100 m.bgl are observed in the northwestern part of the study area, whereas shallower water levels, ranging from 15 to 20 m.bgl are observed in the southeastern part of the study area. - Quality of ground water is fresh to brackish. Water is very hard. Fluoride and Nitrate is within permissible limits for drinking use in the study area. - Groundwater quality is largely satisfactory microbiologically, except at Tughlaqabad Village (Shiv Mandir) where E. coli and Total Coliform were detected, indicating faecal contamination. BOD (up to 4.9 mg/l) and COD (up to 19.6 mg/l) exceed desirable limits at several locations, pointing to organic loading likely attributable to leachate influence from the proximate Tehkhand landfill. - No groundwater abstraction will be done for the said project. STP Treated water from Okhla STP is used as the primary source of water. - No impact on ground water has been observed on the ground water regime due to the operations of the industry within the 2 Km radius. The details of the study have been submitted along with EIA report.	M/s Hydro Geo solution LLP
Impact study on bio-diversity and aquatic ecology	- The project is based on ZLD concept and there will be no effluent discharge from the plant. - Since, there is no major aquatic system in the area, the chances of impact on aquatic ecology would be insignificant. - A Greenbelt Development Plan has been submitted. - The excavated soil from the project site should be kept separately and can be used to boost restoration and green plantation activity.	M/s Perfact Enviro Solutions Pvt. Ltd.

Period	March to May 2024	Additional study (October 2025)
	- Yamuna river is at approx. 4.98 km, NE from the project site. - All vehicles inside the project site should maintain speed limit and will not blow horn unless it is required. - Awareness will be given to workers about the importance and conservation of terrestrial ecology and biodiversity. - Miyawaki plantation will be done adjacent to the project site at ESLF area and gap plantation within the project site in the existing available area..	
Risk assessment study	- Only flammable material is diesel/LDO/HSD for operations will be provided with fire fighting systems. - Fire water pumps shall be installed along with adequate water storage capacity. - Ensure Inspection and Maintenance of Pipelines of Boiler and other related equipment/ instruments/ connections like safety device, water level indicator, flanges etc. to avoid boiler explosion. - Special precautions like SOP to be considered during start-up and shut down failure of which may lead to fire box explosion/boiler explosion. - Periodical inspection and calibration of various types of electronic instruments shall be followed. - Ensure effective monitoring of the power plant safety. - Effective housekeeping to be maintained in the plant. - MSDS of the chemicals should be present at strategic locations and workers should be well trained to handle that chemical with appropriate PPE. - Gas monitoring equipment to be connected to the alarm (flammable oil). - Periodic Inspection and Maintenance of Fire Alarm & Fire Detection System to ensure its working when in need. - Periodic rehearsal of mock drill to ensure readiness to handle any emergency situation. - All safety precautions (SOP etc.) to be followed in any type of operation in the plant to avoid accidental situation. - Special precautions like no use of match boxes, cigarette lighters etc. also be followed to avoid fire in LDO/HSD storage area, loading/unloading of LDO tanker area. - SOP to be followed during loading/unloading of LDO to storage tank. LDO/HSD Tankers to be fitted with flame arrestors. Earthing/bonding during loading/unloading to be considered to avoid any static charge generation. - As per NFPA-85E, it is believed that improved instrumentation, safety interlocks and protective devices, proper operating sequences and a clearer understanding of the problem by both designers and operators can greatly reduce the risks and actual incidence of furnace/boiler explosions.	M/s Perfact Enviro Solutions Pvt. Ltd.
Epidemiological	The Epidemiological study has been carried out in	M/s IIHMR, Delhi

Period	March to May 2024	Additional study (October 2025)
Study	December, 2025 by International Institute of Health Management Research (IIHMR), Delhi within 5 km range of project site. Findings of the study: - Population & income: 1,921 households (5,720 people), median income ₹29,808/month, with most earning ≤₹30,000. - Demographics: Predominantly working-age (76.9%), fewer children (22.3%) and elderly (14%). - Exposure zones: Zone 1 (closest) poorer, more waste/industrial workers, weaker housing and water access; Zone 3 (farthest) better off. - Health outcomes: High prevalence of asthma (7.9%), bronchitis (7.9%), hypertension (12.9%), diabetes (7.5%); symptoms like cough, wheezing, diarrhea show clear dose-response with proximity. - Socioeconomic disparities: Poorest quartile bears highest disease burden (e.g., asthma 12.3% vs. 2.1% in richest), showing poverty and exposure jointly drive health risks. Conclusion: - Regional pollution (Okhla dumpsite, AQI 300–633) and poor sanitation infrastructure are major contributors. - Poorest quartile bears 5–7 x higher respiratory and GI burden than richest. - Education strongly protective: respiratory disease prevalence drops from 18.3% (illiterate) to 3.1% (higher educated). - Hence, a Direct causality between plant operations and morbidity cannot be established. - The details of the study have been submitted along with EIA report and ADS reply.	

43.1.13: 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)	Disposal
1	Recyclable (Ferrous & Non ferrous)	Process	4	Will be sold to registered recyclers
2	Manure (from composting)	Process	2	Used as compost/soil conditioner
3	Bottom Ash	Process	310	Ash Generated is utilized in road subgrade construction and embankment. Any unutilized material will be sent to SLF/ESLF..
4	Fly Ash	Process	47	Supplied to ash brick manufacturers and any unutilized material will be sent to SLF/ESLF

S. No.	Type of Waste	Source	Quantity generated (TPA)	Disposal
5	Inert	Process	444	Used for road construction and any unused material will be sent to SLF/ESLF.
6	Used Oil	Machine ries	7	Will be sold to registered recyclers
7	Sludge (WTP)	WTP	8	Sludge will be filter pressed and sent to incinerator in-boiler
8	Chemical Sludge (LTP)	LTP	3	Will be sold TSDF/ESLF
9	Domestic Solid Waste	Staff	12.8	Will be handled in- house Biogas digester

43.1.14: Public Consultation: As per the ToR accorded, instant proposal is exempted from the conduct of fresh public hearing in terms of the provisions contained under para 7(ii)a of EIA, 2006 on the following grounds. However, public consultation by obtaining responses in writing from concerned persons having a plausible stake in the environmental aspects of the project or activity shall be carried out as per the procedure prescribed under EIA, 2006 as amended.

- Proposed expansion of WTE was already envisaged under the proposal submitted for existing EC dated 26/07/2018.
- Proposed expansion of WTE from 25 to 45 MW will be confined to the existing land of 6.0703 Ha only.
- 6.0703 Ha is already undergone public hearing process as per the provisions contained under EIA Notification, 2006 at the time of grant of EC during 26/07/2018.
- No reduction in green belt area of 2.01 Ha due to the proposed expansion of WTE.
- Proposed expansion will facilitate disposal of additional 1000 tons per day of Municipal Solid Waste.
- State Govt. of Delhi has initiated the neutralization of the waste dump site and the existing project is playing a key role in reducing the waste dumped into landfills by using Municipal Solid waste to generate power.
- Central Pollution Control Board (CPCB) has introduced a new "blue category" to classify industries providing Essential Environmental Services (EES) like waste management and pollution control. This category recognizes activities such as waste-to-energy plants, sewage treatment plants, and landfill maintenance, which are crucial for managing pollution from both domestic and industrial sources.
- Increase in pollution load due to the proposed WTE expansion will be minimized by adopting additional environmental safeguards.

Details of advertisement given	Newspapers "Times of India" in English & "Navbharat times" in Hindi dated 30.09.2025
Date of public consultation	30.09.2025 to 29.10.2025
Venue	The draft EIA/EMP Report was made available on the portal https://dpcc.delhigovt.nic.in within 30 days
Presiding Officer	Member Secretary of Delhi Pollution Control Committee

	(DPCC)
Major issues raised	Noise Pollution, Air Pollution, Employment for rag pickers
No. of people attended / No. of query	Total 60 Nos. of representation received via mail in Public consultation proceedings

Action plan to address the concerns/issues raised from the public consultation process as per MoEF&CC OM dated 30/09/2020

Key Area Identified under Socio-EMP (CER) based on needs highlighted during Public Consultation with Action Plan and Budget (in Lakh)								
S. No.	Proposed Activities	Physical Targets	2026 - 2027	2027- 2028	2028- 2029	2029- 2030	2030- 2031	Total Amount (Rs. in Lakhs)
1	Water Shed Development (Tughlaqabad Pond)	Physical target	Tughlaqabad Pond (Bank Strengthening & Bund Repair, De-Silting Chamber Construction at Pond Inlets, Fencing & Boundary Protection, Inlet–Outlet Regulation & Overflow Control, Plantation & Peripheral Greening, Post-Construction Monitoring etc.)					
		Budget	3	3	2.5	2.5	2.1	13.1
2	Medical health Check-up Camps / Awareness (Medical Tests such as LFT, KFT, CBC, Eye Test etc.	Physical target / Beneficiaries	400-500 approx.	400-500 approx.	400-500 approx.	400-500 approx.	400-500 approx.	
		Budget	4	4	4	4	4	20
3	Employment/Skill Development (Providing skill development training)	Physical target / Beneficiaries	5 students/year from 10 km study area					
		Budget	2	2	2	2	2	10
4	Provision of Ambulance Facility (1 no.)	Physical target / Beneficiaries	Railway Colony, Tughlaqabad Village, Prem Nagar, Pul Prahladpur and other nearby villages within study area					
		Budget	10	3	3	10	4	30
5	Distribution of indoor plant (5000 saplings)	plant distribution	1000	1000	1000	1000	1000	
		Physical target / Beneficiaries	300 - 500	300 - 500	300 - 500	300 - 500	300 - 500	
		Budget	3	3	3	3	3	15
6	Solar RO Drinking Water Units (5 nos.)	Physical target / Beneficiaries	Okhla MCD School, DTC Tehkhand Bus Depot, ESIC Hospital, Railway Colony, Pul Prahladpur.					
		Budget	1	1	1	1	1	5
Total CER Expenditure (Rs. in Lakhs) (A)			23	16	15.5	22.5	16.1	93.1
Balance amount of CER from existing project (B)								23
Grand total A+B) (Rs. in Lakhs)								116.1

43.1.15: Cost of the Project: Existing capital cost of project was 4,375.48 In lakhs. The capital cost of the proposed project is Rs 1954.61 lakhs and the annual recurring cost towards

the environmental protection measures are Rs. 670 lakhs for existing and Rs. 132.81 lakh for the proposed project. The employment generation from the proposed project / expansion is 45 nos. The details of cost for environmental protection measures is as follows:

S. No.	Particulars	Capital				Recurring		
		As per EC (in Lakhs)	Actual expense incurred for existing plant (in Lakhs)	Proposed expansion (In lakhs)	Total after expansion (in lakhs)	As per EC (in Lakhs) estimated	Proposed expansion (in Lakhs) estimated	Total after expansion (in Lakhs) estimated
1	Air Pollution Control	1,355.00	2,514.08	3110	4,624.08	500	94	594
2	Water Pollution Control	1,040.00	1,580.00	-	1,580.00	80	18	98
3	Noise Pollution Control	No extra capital cost is required for noise pollution control as equipment to be purchased would be in accordance with noise compliance.	-	No extra capital cost is required for noise pollution control as equipment to be purchased would be in accordance with noise compliance.	-	10	0.01	10.01
4	Environment Monitoring & Management	120	158	125	283	40	5	45
5	Occupational Health & Safety	40	19.3	Existing fund allocation is adequate to cover OHS expenses for the expansion	40	20	2	22
6	Green Belt Development	100	22.5	20	42	15	8	23
7	Others (Odour control management, Sanitization, etc.)	50	0.7	1	1.7	5	0.2	5.2
8	Solar Panel & Solar Lights	-	1	175	176	-	5	5

		Capital				Recurring		
S. No.	Particulars	As per EC (in Lakhs)	Actual expense incurred for existing plant (in Lakhs)	Proposed expansion (In lakhs)	Total after expansion (in lakhs)	As per EC (in Lakhs) estimated	Proposed expansion (in Lakhs) estimated	Total after expansion (in Lakhs) estimated
	(through third party)							
9	Rainwater Collection & Harvesting	-	14.5	6	20.5	-	0.6	0.6
10	Others	-	-	10	10	-	-	-
11	CER Activities	-	98.6	116.1	214.7	-	-	-
Total		2,705.00	4,408.68	3,563.10	6,991.98	670	132.81	802.81
<i>Note: Recurring cost for air pollution control have been considered maximum for replacement of bag filter in every 5 years as per OEM guidelines.</i> <i>CER activities include cost of rejuvenation of Tughlaqabad Pond which is a part of watershed development. It also includes cost of Check-up Camps, Provision of Ambulance Facility, Distribution of indoor plant and installation of Solar RO Drinking Water Units</i>								

43.1.16: Greenbelt Development Plan: Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha. area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare. Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.

A. Greenbelt development Plan for Gap Plantation:

The Gap plantation has been progressively carried out in a phased manner, taking into consideration the observations made during inspections and the subsequent directions issued by authorities for improvement of the existing greenbelt in the premises.

Phase-1: (July–Aug 2025)

Gap plantation undertaken in compliance with the observations made during the IRO site visit conducted in July 2025.

S. No.	Species Name	Quantity
1	Bougainvillea glabra	30
2	Tabernaemontana divaricate	20
Total Count (No's)		50

Phase-2 (Jan-Feb 2026)

Gap Plantation was carried out pursuant to the observations made during the EAC Sub-Committee site visit conducted in November 2025

S. No.	Species Name	Quantity
1	Syzygium cumin	11
2	Holoptelea integrifolia	31
3	Butea monosperma	4
4	Cassia fistula	2
5	Eucalyptus citriodora	4
6	Bauhinia variegata	38
7	Jatropha curcas	48
8	Putranjiva roxburghii	22
9	Mimusops elengi	1
Total Count (Nos.)		161

Phase-3 (Apr 2026)

Gap plantation has been undertaken in pursuance of the directions issued by the EAC in the Agenda Meeting dated 08 April 2026, with consideration to strengthening the existing greenbelt.

S. No.	Species Name	Quantity
1	Pterospermum acerifolium	19
2	Alstonia scholaris	8
3	Neolamarckia cadamba	23
Total Count (No's)		50

Phase-4: Action plan (Jun- Jul 2026)

It is proposed to undertake plantation of 50 nos. of trees of more than 3 metres height, as part of the ongoing phased greenbelt development programme.

Expenditure of Gap Plantation

Period of plantation	Qty. (No's)	Plantation Cost (Rs. in lakhs)
July–Aug 2025	50	0.25
Jan-Feb 2026	161	Govt. Nursery
Apr 2026	50	0.79
Jun- Jul 2026	60	1
Total cost (Rs. in Lakhs)		2.04

B. Action Plan for additional Greenbelt of 1.65 Ha

Year	Trees	Shrubs/Herbs	Total Saplings	Capital Cost (INR)	Recurring Cost (INR)
2026-27	1000	1000	2000	7,000,00	3,000,00
2027-28	400	1500	1900	5,000,00	2,000,00
2028-29	400	1500	1900	6,000,00	3,000,00
Total	1800	4000	5800	18,000,00	8,000,00

43.1.17: Ash management for last three years

Year	Quantity generated (MT)	Quantity utilized (MT)	% of utilization	Balance quantity (MTPA)	No of storage silos with capacity
Bottom Ash FY 23-24 & 24-25)	230 MT/day	230 MT/day	100 %	Unutilized material sent to SLF/ESLF	-

Year	Quantity generated (MT)	Quantity utilized (MT)	% of utilization	Balance quantity (MTPA)	No of storage silos with capacity
Fly Ash (FY 23-24 & 24-25)	27 MT/day	27 MT/day	100 %	Unutilized material sent to SLF/ESLF	2x250 m3

A. Fly ash Details for the last three years = 9983.5 TPA (FY 23-24 & 24-25)

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)	27 MT/day	100	Supplied to ash brick manufacturers and any unutilized material sent to SLF/ESLF.
	Total	27 MT/day	100	

B. Bottom ash generation for the last three years = 83947.5 TPA (Avg. FY 23-24 & 24-25)

S. No.	Activity (as applicable)	Quantity	Percentage	Remarks (Prior approval of SPCB details to be mentioned)
1.	Construction of roads, road and fly over embankment	230 MT/day	100	As per guidelines
	Total	230 MT/day	100	

C. Proposed ash utilization plan for expansion project

Details	Existing generation (MTPA)	Proposed generation (MTPA)	Total	Utilization (MTPA)	Balance quantity (MTPA)	No of storage silos with capacity
Bottom Ash	230 MT/day	80 MT/day	310 MT/day	Use for road construction and any unutilized material will be sent to ESLF	Unutilized material will be sent to ESLF	-
Fly Ash	27 MT/day	20 MT/day	47 MT/day	Supplied to cement industries / ash brick manufacturers	Unutilized material will be sent to ESLF	2x250m ³ (Existing silos will be used)

43.1.18: Summary of court cases: Nil.

43.1.19: Summary of Show Cause Notices (Last two years): Nil.

43.1.20: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration shall be furnished.-Nil

43.1.21: Compliance to the observations of sub-committee site visit report dated 19.11.2025:

S. No.	Observation of the Sub-committee:	Compliance
1	The Committee observed the operational activities of the waste-to-energy generation at the site of Mis Tehkhand Waste to Electricity Project Limited. Bio-waste was handled through automated systems, wherein waste collection trucks unloaded directly into a designated pit, and the waste was subsequently fed into the digester using remote-controlled machinery. The entire process is being conducted within a closed facility controlled machinery. The entire process is being conducted within a closed facility maintained under negative pressure to control odor, biogas emissions, and potential contamination.	Noted
2	Municipal solid waste was digesting in the digestion chambers under optimum operating conditions. Following the digestion process, the waste was segregated using separators to remove solid materials such as metals, plastics, glass, stones, etc., from the liquid fraction. The digested solid waste was then stored as Refuse-Derived Fuel (RDF) through a parallel and alternate storage system. Acceptable RDF was transferred from the storage area to the boilers for energy generation. The generated leachate is being conveyed to the leachate treatment plant for appropriate treatment.	Noted
3	The committee observed the unpleasant odors surrounding the waste transportation corridors, in the waste handler area and suggested to the PP for taking the appropriate mitigation measures.	Cross ventilation is proposed in the truck reception area to mitigate unpleasant odours in the surroundings. Additionally, the following measures have been/will be implemented to control unpleasant odour: a) Sufficient quantity of sanitizer is inoculated at this point with a sprayer to reduce odor. b) MSW pit under negative pressure is being maintained to mitigate escape out the odour from MSW Pit. c) Indoor species such as Snake Plant, Peace Lily, Spider Plant, Aloe Vera, etc. will be planted, which will act as natural sinks for pollutants and odour and also purify the air.
4	The workers were not wearing suitable masks during the operation inside the project area and suggested to the PP for adequate protective gears and regular health checkup of the workers.	Noted. Proper PPE is provided to the workers, and their health checkups are conducted regularly.
5	The ash handling area within the project site is poorly maintained as there was ash spillage everywhere within the site. The Committee asked the proponent to take corrective action	Ash generated is stored in closed silos and only spills during transfer or transportation. The area observed by the committee will be entirely covered during the expansion project. However, good housekeeping practices are being

S. No.	Observation of the Sub-committee:	Compliance
	by properly providing a dyke wall all along the periphery of the ash handling area and improve the housekeeping.	maintained and trucks are properly covered with tarpaulin sheets on all sides to prevent any spillage. In the proposed expansion, the movement of trucks carrying ash will be re-routed to connect directly from the ash handling area to the main road/ESLF. This measure will not only improve housekeeping but also reduce the distance travelled by trucks, thereby minimizing the possibility of spillage.
6	The committee found that there is no proper boundary wall all around the project site. The committee suggested constructing a proper boundary wall around the project site on priority basis.	A proper boundary wall has been provided around the project site, along with the development of a thick greenbelt that acts as a natural sink for pollution. However, the erection of the boundary wall is still in progress.
7	The committee observed that the Green belt developed in the periphery of the Plant site is not satisfactory. The committee suggested increasing the plantation surrounding the boundaries and making a bio fencing by using the suitable Tree/shrubs/creepers.	Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha. area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare. Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.
8	The committee observed water testing facilities and available instruments and found outdated instruments not feasible for huge numbers of sample testing and needs technologically up gradation of the water testing laboratory.	The laboratory currently handles a limited number of samples and the existing equipment is working properly and is sufficient for present testing needs. Since large-scale testing is not required, technological upgradation is not deemed necessary at this stage. However, if the number of samples increases in the future, the requirement for equipment up gradation will be reviewed accordingly.
9	The committee found that a show Cause notice (SCN) has been issued by the Compliance and monitoring Division (CMD) of the Ministry and action closure report is still awaited for the same.	Noted. Further, after following up with the concern, the action closure report of the CCR was subsequently issued by the Regional Office, Lucknow vide File No. V/ENV/DLI/1412/2018 [E-Computer No. 271496], dated 10.02.2026.
Recommendation of the sub-committee		
1	Certified Compliance Report (CCR) with action taken plan for all non-compliance points to be submitted by the PP.	CCR obtained from MOEF&CC Regional Office, Lucknow vide File No. V/ENV/DLI/1412/2018/220 dated 01.08.2025. Minor observations were made by the officials. Action Taken Report for minor observations have been submitted to IRO vide Letter Ref. No. TWEPL/EXP/2025-26/008, dated 14.08.2025. The Current Action taken report with current status has been submitted to MOEF & IRO vide Ref. No.TWEPL/EXP/MOEFCC/2025-26/24 dated 15.12.2025. Further, the action closure report of the CCR was subsequently issued by the Regional Office, Lucknow vide File No. V/ENV/DLI/1412/2018 [E-Computer No. 271496], dated 10.02.2026.
2	Mechanism and monitoring protocol to	Half-yearly and annual health is carried out regularly since

S. No.	Observation of the Sub-committee:	Compliance
	be put in place regarding long term health impact of peoples working at the Plant site.	the operation of the plant.
3	Health assessment report and safety measures for employee (including both staff & workers) and the nearby population to be submitted.	Public Health Action Plan including Regular Medical Check-up & First Aid facility will be provided, Conduct of Mock drills, Training programme on health & Safety, and Health Check-up camps shall be organized. Support to the occupational Health center.
4	Details of the mode of transportation of waste for both existing and proposed operation shall be submitted.	Waste transportation in the existing operations is carried out using closed dumpers, hookloaders, compactors etc. and the same will be used for the proposed expansion project.
5	PP needs to explore and submit the action plan/control measures to mitigate/suppress the odors, contamination and ambient air pollution.	Following measures are/will be taken to control the odors, contamination and ambient air pollution: • Fragrant materials are used in the odour control system by using air solution methods. • Maintaining MSW pit under negative pressure to mitigate escape out the odour from MSW Pit. • Indoor species such as Snake Plant, Peace Lily, Spider Plant, Aloe Vera, etc. will be planted, which will act as natural sinks for pollutants and odour and also purify the air. • 3 No. of Anti-Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas. • Manual Sprinkling is also done regularly. • The entry gates have sensor-based wheel washing systems for vehicle cleaning and washing. • The materials are kept covered using green net. • Ambient air monitoring is being carried out at regular intervals, and reports are being submitted to DPCC. The same practice will be followed during the expansion project.
6	PP needs to submit detailed plans for development of bio fencing and greenbelt area around the boundary side, and plan for elevating the boundary wall of the project site.	Peepal, neem, sheesham, and banyan trees, along with 42 bougainvillea plants, have already been planted along the boundary wall. These will serve as biofencing and enhance the aesthetics of the site. Additionally, elevation of the boundary wall is under progress.
7	PP has to enhance the existing green belt and long trees to be planted across the boundary of the plant. PP should pursue with MCD for land provision to make the existing green cover from 33% to 40% by planting additional trees near the site, and check with PWD for planting trees along the site periphery.	Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare. Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.
8	The detail of stack emission pollution, and test reports of Furans & Dioxin and other emission parameters (Heavy Metals, PM, SO ₂ , etc) shall be submitted by the PP.	The Stack emissions monitoring is regularly carried out. The parameters like dioxin & Furan and other heavy metals are also considered in the analysis.
9	The standard methodology for bio-	The detailed methodology for bio-waste handing and biogas

S. No.	Observation of the Sub-committee:	Compliance															
	waste handling and biogas generation and bottling along with adequate safety measures for existing and proposed plants shall be submitted.	generation is given in below: Additionally, following safety measures will be taken: • Ensure proper ventilation and explosion proof equipment. • Use flame arrestors, relief valves, and automated process controls. • Flare excess biogas safely. • Inspect digesters and pipelines regularly. • Install gas leak detectors and alarms. • Maintain fire safety equipment and safe storage conditions. • Train workers in safe handling and emergency procedures. • Emergency response plans with drills and evacuation routes. • Scheduled maintenance of all equipment. • Continuous ambient air monitoring.															
10	PP shall conduct and submit microbial analysis reports regarding the existence of microbial contaminants in the ambient environment.	Microbial analysis in ambient air has been carried out within the plant premises.															
11	PP shall carry out a pollution load assessment comparing the existing adjacent open landfill with the WtE facility.	The comparison of adjacent Open landfill and the existing WtE facility is given below: <table> <tr> <th>Criteria</th><th>Open Landfill</th><th>Waste-to-Energy (WtE) Facility</th></tr> <tr> <td>Greenhouse Gas Emissions</td><td> • High methane emissions (25x more potent than CO₂). • Methane from anaerobic decomposition is often uncontrolled. </td><td> • CO₂ from combustion, but significantly lower net GHG emissions compared to methane release. • Controlled flue gas treatment reduces impact. </td></tr> <tr> <td>Air Pollution</td><td> • Fugitive emissions of volatile organic compounds (VOCs), odors, and dust. • No systematic control. </td><td> • Controlled combustion with scrubbers, filters, and selective non-catalytic reduction. • Lower particulate matter and NOx emissions. </td></tr> <tr> <td>Water Pollution</td><td> • Leachate contaminates groundwater and surface water with heavy metals, nitrates, and pathogens. </td><td> • No water contamination as plant is based on ZLD concept. • Ash residues are managed and stabilized before disposal. </td></tr> <tr> <td>Land Use</td><td> • Requires large tracts of land. • Long-term occupation and post-closure monitoring. </td><td> • Smaller footprint • Reduces land requirement by up to 90% compared to landfills. </td></tr> </table>	Criteria	Open Landfill	Waste-to-Energy (WtE) Facility	Greenhouse Gas Emissions	• High methane emissions (25x more potent than CO₂). • Methane from anaerobic decomposition is often uncontrolled.	• CO₂ from combustion, but significantly lower net GHG emissions compared to methane release. • Controlled flue gas treatment reduces impact.	Air Pollution	• Fugitive emissions of volatile organic compounds (VOCs), odors, and dust. • No systematic control.	• Controlled combustion with scrubbers, filters, and selective non-catalytic reduction. • Lower particulate matter and NOx emissions.	Water Pollution	• Leachate contaminates groundwater and surface water with heavy metals, nitrates, and pathogens.	• No water contamination as plant is based on ZLD concept. • Ash residues are managed and stabilized before disposal.	Land Use	• Requires large tracts of land. • Long-term occupation and post-closure monitoring.	• Smaller footprint • Reduces land requirement by up to 90% compared to landfills.
Criteria	Open Landfill	Waste-to-Energy (WtE) Facility															
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S. No.	Observation of the Sub-committee:	Compliance		
		Energy Recovery	None	Generates electricity and heat from waste combustion, offsetting fossil fuel use.
		Health Impacts	High risk of respiratory illness, vector-borne diseases, and exposure to toxic leachate.	- Lower direct exposure risks. - Emissions are regulated under environmental standards.
		Long-Term Legacy	- Persistent pollution for decades. - Methane continues for 20–30 years post-closure.	Residual ash requires safe disposal, but long-term pollution load is far lower
12	PP must obtain DPCC comments on the site criteria conditions and submit the same. DPCC recommendations/NOC on site suitability are required due to residential areas within 500 m.	A request letter for recommendation/NOC from DPCC on site suitability to DPCC has been submitted vide letter no. TWEPL/EX./2025-26/021 dated 21-11-2025. The recommendation letter from DPCC has received vide File No. DPCC/WMC-II/WTE Tehkhand Expansion Project/2025/2375-78, dated 26.02.2026.		
13	Detailed plans of Ash Handling & Storage and safety measures adopted for the existing and proposed plant shall be submitted. PP shall submit current ash disposal methodology and Toxicity characteristic leaching procedure (TCLP) test results confirming the non-hazardous nature of Ash generated.	The bottom ash generated is given for construction of Highway embankment. Any unutilized material will be sent to ESLF. The Fly Ash generated from the project is being supplied to ash brick manufacturers and any unutilized material will be sent to ESLF. Safety measures for handling ash are given below: 3 No. of Anti Smog Gun is available at the site for dust mitigation in vulnerable dusty areas like ash handling points and transfer areas. - Workers will receive training on safe waste handling, ash management, chemical storage, and interpretation of Material Safety Data Sheets (MSDS).		
14	Since current boiler stack height is 60 m, PP is required to recheck adequacy and submit scientific justification for retaining or increasing stack height. Considering the maximum stack height requirement, revised permissions are to be obtained as applicable.	The current boiler stack at 60 m height ensures that the exhaust plume is released into a higher atmospheric layer. This prevents "fumigation" (smoke settling near the ground) and allows for maximum dilution of pollutants before they reach the surrounding community. The Air dispersion modelling has been carried out to assess the dispersion from the stack. As per dispersion modelling report the stack height of 60 m is finalized.		
15	PP shall obtain NOC from ASI/Defense authority for the proposed expansion.	An application for obtaining the NOC was submitted to the ASI on 08.12.2025 vide reference no. TWEPL/EXP/ASI/2025-26/23. In response, a letter from ASI was received on 29.12.2025 vide File No T-19034/209/2025-M (46742), mentioning that obtaining permission does not fall under their purview and accordingly, the request for the NOC was resubmitted to the National Monument Authority on 15.01.2026 vide reference no. TWEPL/EXP/NMA/2025-26/026. NOC from NMA has been obtained vide File No.		

S. No.	Observation of the Sub-committee:	Compliance
		04/02/2025/CA/Delhi/No. 788, stating that the project site/aforesaid property falls beyond the regulated area of any centrally protected monument.
16	PP is required to submit an action closure report of the Show Cause Notice (SCN) issued.	The action taken review/closure report has been received from Regional Office, Lucknow vide File No. V/ENV/DLI/1412/2018 [E-Computer No. 271496], dated 10.02.2026.
17	Install mist sprinklers around the greenbelt, ensuring 50% coverage overlap (positioned such that no spot is left dry and no overwatering prevails), and position them 1-1.5 meters above ground level, with timers set to water early morning or late evening to minimize evaporation and removal of dust from the leaves.	10 standby mist sprinklers have been installed around the greenbelt, positioning 5 to 6 meters above ground level, covering an area of 20 m radially, spacing between approx. 12 meter.

43.1.22: Comments of State Pollution Control Board, Delhi as per Ministry's OM dated 14.01.2025 and SOP dated 08.10.2025:

DPCC vide letter dated 25.03.2026 has submitted their comments on Parivesh portal w.r.t the activity of Processing and Disposal of Municipal Solid Waste & Electricity Generation (Waste to Energy Plant) with Solid Waste Processing Capacity of (additional) 1000 Tons /day & Electricity Generation Capacity expansion of existing 25 MW to 45 MW by M/s. Tehkhand Waste to Electricity Project Limited.

43.1.23: ADS Information in chronology

M/s. Tehkhand Waste to Electricity Project Limited made an online application vide proposal no. Proposal No. IA/DL/THE/566057/2026, dated 10.02.2026. The proposal was initially considered in 41st meeting of the Expert Appraisal Committee (EAC) (thermal power projects) held on 08.04.2026. Proposal was deferred for want of additional information.

The proponent submitted the ADS reply vide letter bearing ref. no. TWEPL/EXP/MoEFCC/2026-27/004 dated 07.05.2026 uploaded on PARIVESH on 07.05.2026. Point-wise reply of ADS is given in table as below:

S. No.	ADS Point	Reply/Response of PP
1	Action closure letter from IA-CMD on the non-conformities observed in the conditions prescribed in the EC dated 26/07/2018 shall be submitted.	Action closure letter was issued by IA – C&MD on 6/5/2026.
2	Recommendations of the following additional studies carried out and its action plan with physical and financial outlay. Accordingly, revised EMP cost shall be submitted.	Revised EMP Cost has been submitted with ADS reply on PARIVESH portal.
i	Cumulative Environmental Impact Assessment study	Cumulative Environmental Impact Assessment study including all aspect, impact, proposed mitigation, budget, recurring budget & timeframe of implementation has been submitted with ADS reply on PARIVESH.

S. No.	ADS Point	Reply/Response of PP
ii	Geo-hydrological study	Geo hydrology study including all aspect, impact, proposed mitigation, budget, recurring budget & timeframe of implementation has been submitted with ADS reply on PARIVESH.
iii	Epidemiological study including Public Health Action Plan.	Epidemiological study including all aspect, impact, proposed mitigation, budget, recurring budget & timeframe of implementation has been submitted with ADS reply on PARIVESH.
iv	Water shed development	Water shed development including all aspect, impact, proposed mitigation, budget, recurring budget & timeframe of implementation has been submitted with ADS reply on PARIVESH.
v	Comments by Commission for Air Quality Management in National Capital Region and Adjoining Areas	Compliance of Comments by Commission for Air Quality Management in National Capital Region and Adjoining Areas has been submitted with ADS reply on PARIVESH.
3	Monitoring report of Ground water quality parameters like BOD, COD, Nitrate, Heavy Metals, Microbial culture analysis, Ground water level etc. of Core and Buffer zone.	The ground water monitoring has been done for parameters like BOD, COD, Nitrate, Heavy Metals and Microbial culture analysis. The analysis reports have been submitted with ADS reply on PARIVESH.
4	Clarification regarding installation of ESP/Bag Filter for control of Particulate Matter.	It is assured that a bag filter, similar to the arrangements adopted for the existing units, will be installed to ensure effective capture and removal of particulate matter. Any prior mention of an ESP was inadvertent and is hereby corrected.
5	Detailed action plan for the control of Odour Problem and its mitigation measures.	Odour control measures include maintaining the MSW pit under negative pressure with controlled capture and combustion of odorous gases in the boiler, plantation of tolerant species as pollutant/odour sinks, and use of herbal mist spray systems. Proposed measures include channelizing leachate plant fugitive emissions to the biogas plant for gas recovery, with separated gases (CH ₄ , CO ₂ , H ₂ S) further treated in the Flue Gas Cleaning System to eliminate residual odour.
6	Conclusive remarks of aero microbial study done at different locations in and around the project site.	The Aero microbial study has been carried out for 5 locations (2 within the project site and 3 around the project site). Based on the monitored data, the waste-to-energy plant shows no detectable pathogens and only a slight increase in common microbes that stay close to natural background levels. The details of sampling location, results, and the conclusion have been submitted with ADS reply on PARIVESH portal.
7	Compliance of the Schedule II of the Solid Waste Management Rules 2026 and its subsequent amendments regarding CBG Plant.	Noted and will abide by the condition. Standards for Compressed Biogas (Compressed Bio-Gas or bio-compressed natural gas) plants and household Bio-digester are given under Part - B of

S. No.	ADS Point	Reply/Response of PP
		Schedule - III of SWM Rules, 2026. Compliance of Biogas/ CBG, as per CPCB guidelines 2022, has been submitted with ADS reply on PARIVESH.
8	Flue gas and leachate treatment plan.	Flue gas and leachate treatment plans have been submitted with ADS reply on PARIVESH.
9	Detailed action plan for 3-tier Greenbelt development covering 40% of the project area including gap plantation in the existing green belt area. The additional area for the green belt development shall be identified by the proponent in consultation with MCD.	The Municipal Corporation of Delhi (MCD) has allocated land adjacent to the Project Site (ELSF), measuring 1.65 hectares, which will be fully utilized for plantation activities. The Action Plan has been submitted with ADS reply.
10	Clarification regarding anomalies observed in the AAQ data reported in the EIA report vis-à-vis with CAQMS data.	The variations are due to standard methodological differences between IS:5182 manual gravimetric monitoring and CAAQMS continuous analysers, including spatial-temporal averaging effects. It is therefore respectfully submitted that The PERFECT baseline is methodologically sound under IS:5182 (NAAQM Standards, 2009), with differences arising from known analytical characteristics of the respective methods. Accordingly, the EIA baseline remains accurate and conservative. The Technical Comparison Analysis report of Ambient Air quality data, CPCB Monitoring station data and CAAQMS data has been submitted with ADS reply on PARIVESH.
11	Compliance to the issues/concerns raised during the public hearing held for the existing EC dated 26/07/2018 and action plan to address the concerns/issues raised from the public consultation process as per MoEF&CC OM dated 30/09/2020 with physical and financial targets.	The Public Hearing for the 25 MW plant was conducted on 21.05.2018 under the supervision of the ADM. For the expansion phase, Public Consultation was conducted by DPCC between 30.09.2025 to 29.10.2025. Action plan has been prepared as per MoEF&CC's OM dated 30.09.2020 and submitted with ADS reply on PARIVESH portal.
12	Findings of the CPCB monitoring report regarding chlorine levels in the water samples and corrective action taken to address the same.	An inspection by CPCB in coordination with DPCC reported chloride in treated leachate at 780 mg/l against 600 mg/l; however, the CTO limit is 1000 mg/l, and the values are compliant. Compensation was paid under protest, with a request for withdrawal. Leachate monitoring is being carried out regularly as per CTO conditions.
13	Comments of DPCC dated 25/03/2026 and response of the project proponent.	Compliance of DPCC Comments dated 25.03.2026 has been submitted with ADS reply on PARIVESH portal.

43.1.24: Written Submission:

I. Leachate process flow diagram. Submit test reports of Raw leachate and treated leachate

Reply: The flow diagram of leachate process and test results of raw leachate and treated leachate is submitted by Project Proponent.

II. Odour parameters comparison with threshold values

Reply: The present limit available for Ammonia is 400 µg/m³ (as per NAAQS, 2009), 20 ppm for H₂S (as per OSHA) & no standard prescribed for total VOCs. Further, it is ensured to adhere the limits if prescribed by law in future.

Odour parameters comparison with threshold is submitted by Project Proponent.

III. Financial outlay on the basis of Epidemiology Study

Reply: An amount of ₹50 lakh has been allocated under Corporate Environment Responsibility (CER) activities which includes:

Medical health Check-up & Awareness Camps involving need based Medical Tests such as LFT, KFT, CBC, Eye Test etc.

Provision of Ambulance (1 No.) on call for Railway Colony, Tughlaqabad Village, Prem Nagar, Pul Prahladpur and other nearby villages within study area.

IV. Strategy for tackling with NIMBY Syndrome

Reply: We recognize the challenges posed by the NiMBY (“Not in My Back Yard”) syndrome and are actively working towards greater community participation through public sensitization, awareness initiatives, and encouraging visits to the plant.

Our objective is to help people understand the critical role of Waste-to-Energy operations, the environmental need of the hour, and the importance of sustainable coexistence.

During last one year, the plant has witnessed a footfall of more than 1,000 visitors, including Resident Welfare Association (RWA) representatives, school students, and college students.

In addition, awareness is being disseminated to promote responsible waste management practices.

Through our “Swachh Vahini” initiative, we are also collecting single-use plastic waste to sensitize citizens about the importance of waste segregation and recycling, while highlighting our continued contribution towards keeping Delhi cleaner and free from unmanaged waste.

V. Existing and Proposed Efficiency of Bag Filter

Reply: Existing Operating Plant:

The design efficiency of the Bag House Filter has been calculated based on the design parameters:

Inlet Flow: 150000 Nm³/Hr

Inlet Dust Load: 12 g/Nm³

Outlet Particulates: 30 mg/Nm³

The design efficiency of existing bag house filter is: 99.75 %

Proposed Expansion Plant:

The proposed Bag House Filter will be designed to ensure particulate removal up to 99.9% (0.15% higher than the existing) and compliance with the prescribed particulate standard i.e. less than 30 mg/Nm³.

VI. Ash Utilization status and Ash testing reports

Reply: The Ash Utilization data for FY’ 2025-26 is as follows:

Ash Utilization

Particulars	Generation (MT)	Utilization (MT)	Disposal MT)
Fly Ash	12816	12816	0
Bottom Ash	66936	66936	0
Total	79752	79752	Nil
Note: 1) Ash utilization is carried out in accordance with the DPCC directions dated 09.12.2024 and CTO issued by DPCC dated 10.01.2025. 2) Any unutilized ash, at any given time, is send to SLF/ESLF.			

The TCLP Test Reports of Fly Ash & Bottom Ash are submitted by Project Proponent.

VI. Greenbelt Development Plan

Reply: Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare. Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.

Observations and deliberation of the EAC

43.1.25: The Committee observed and noted the following:

- The Instant proposal is for seeking fresh Environment Clearance for setting up of a new power plant with a capacity of 45 MW enhancement from 25 MW to 45 MW in Tehkhand Village, Kalkaji Tehsil, Tehkhand District, New Delhi State of M/s Tehkhand Waste to Electricity Project Ltd.
- The EAC took into consideration the KML file on the Google Earth presented by the project proponent along with DSS of the project site on PARIVESH.
- The existing project was accorded EC on 26/07/2018 and the same has been implemented.
- Proposed expansion is envisaged within the existing land of 6.0703 Ha and no additional land is required for the proposed expansion.
- There is a Sanitary Landfills (SLF) located adjacent to WTE site, which is owned by Municipal Corporation of Delhi for which the Ministry accorded EC on 29/10/2018. This SLF is an interlinked project for the proposed WTE expansion as MSW from SLF will be sent to WTE for treatment and waste (ash & inert) from WTE will be sent to SLF for disposal.
- There is no involvement of forest land in the proposed project.
- There are three Archaeological Sites within the radius of 2 km from the project site namely Nai-ka-kot in Tughlaqabad (0.44 Km, SW); Walls, gate and bastions of Adilabad (Mohammadabad) and causeway leading there to from Tughlakabad (1.18 Km, SW) and Tomb of Ghiyasuddin Tughlakabad (1.76 Km, W) and NOC for the same has been obtained from National Monument Authority vide File No.

04/02/2025/CA/Delhi/No. 788, dated 24.02.2026-stating that the project site/aforesaid property falls beyond the regulated area of any centrally protected monument.

- viii. Asola Wildlife Sanctuary ESZ is located at 0.72 km SW & Asola Wildlife Sanctuary is located at 1.65 km SW from the project site. Okhla Bird Sanctuary ESZ is located at 4.76 Km NE and Okhla Bird Sanctuary is located at 4.83 km NE from the project site.
- ix. The project site is located at distance of 0.61 km from the Okhla Industrial Area which is a Critically Polluted Area (CPA) having CEPI score of 92.65.
- x. The technology to be employed for this WTE project is RDF combustion based reciprocating forward feed grate technology. The power generation capacity will be 45 MW. The quantity of MSW requirement for the project will be 3,65,000 MTPA.
- xi. Existing Water requirement is 490 m³/day, water requirement is obtained from Okhla STP and permission for the same has been obtained from Delhi Jal Board vide letter no. F-1/DJB/EE(SDW)V/2017/1346 dated 13.10.2017. The water requirement for the proposed project is estimated as 632 m³ /day, out of which 7 m³/day of fresh water requirement will be obtained from the DJB and the remaining requirement of 625 m³ /day will be met by the treated water from Okhla STP and in house treated water. The water is transported to the plant site through the underground pipeline. No groundwater extraction is involved in the project.
- xii. The Committee deliberated on the baseline data and incremental GLC due to the proposed project. The committee noted that the proponent is providing Boiler stack of 60 m height with APCS - Lime scrubber and activated carbon injection followed by Bag Filter for SO₂ control, Low NO_x combustion system and provision for Selective Non-Catalytic Reduction (SNCR) for NO_x control and stack with a height of 60 meters will be provided to control & regulate the air emission from the proposed project.
- xiii. For odour control, the committee noted that negative Pressure Ventilation in the MSW collection pit, ventilation air from MSW pit will be fired in the boiler and provision of fogging unit/mist system & herbal solution spray.
- xiv. The committee noted that with respect to water pollution control, proponent will be using Air cooling system, wastewater from raw water treatment facilities and the boiler section will be used for flue gas conditioning and dust suppression operations and leachate will be collected, treated, and reused in the main plant. Zero liquid discharge will be adopted.
- xv. The rejects/generated bottom ash is utilized in road subgrade construction and embankment. Any unutilized material will be sent to SLF/ESLF. Supplied to ash brick manufacturers and any unutilized material will be sent to SLF/ESLF
- xvi. Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development. Thus, a total of 3.66 ha area will be developed as a greenbelt. A 20-30 m wide greenbelt, consisting of at least 3 tiers around the plant boundary has been developed as greenbelt and green cover as per CPCB guidelines. Local and native species have been planted with a density of 2000 trees per hectare.

Total no. of 5800 saplings will be planted in the additional area and nurtured in 1.65 hectares in 3 years.

- xvii. As per MoEF&CC OM dated 29/10/25 the minimum Greenbelt requirement for projects located within the CPA is 40%, the instant proposal is situated 0.61 km away from the Okhla CPA. In view of this, Project Proponent has developed 2.01 ha. Greenbelt area which is about 33% of the total project area of 6.07 ha and proposed to develop greenbelt in additional land of approx. 1.65 ha provided by MCD at ESLF area which will increase the greenbelt to approximately 60% of the total project.
- xviii. The ToR letter for the project was issued under para 7(ii) a of EIA Notification, 2006 by MoEFCC dated 16.09.2025. The Public Hearing is exempted as per Para 7(ii)(a) of EIA Notification, 2006 and its subsequent amendments. Therefore, Public Consultation was conducted by the DPCC between 30.09.2025 to 29.10.2025, in compliance of EIA Notification, 2006 and its subsequent amendments. The committee advised the PP to implement the PH action plan in a time bound manner.
- xix. The capital cost of the proposed project is Rs 3,563.10 lakhs and the annual recurring cost towards the environmental protection measures are Rs. 670 lakh for existing and Rs.132.81 lakh for the proposed project. The employment generation from the proposed project / expansion is 45 nos.during the operation phase and 262 workers during the construction phase.
- xx. 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.
- xxi. The Committee deliberated on the Project Proponents response to comments of DPCC dated 25/03/2026 and found it satisfactory and advised the PP to adhere to the direction of DPCC.
- xxii. The Committee also deliberated on the comments received from Commission on Air Quality Management wherein it has been emphasized upon that proposed project shall undertake strict control measures to control the air pollution arising due to other activities linked to WTE plant construction and operation (e.g., C&D, transportation, road dust, etc) and all the Directions, Advisories and Orders issued by the Commission in this regard from time to time shall be followed strictly. The committee asked the proponent to ensure compliance with the same.
- xxiii. The EAC also deliberated on the written submission of the project proponent and found it satisfactory.
- xxiv. 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:

43.1.26: 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

- i. The incoming Municipal waste of 3,65,000 MTPA shall be processed at proposed waste to energy plant as committed. All the waste received shall be kept under a covered storage facility equipped with impermeable base and provision for collection of leachate leading to a leachate treatment and disposal facility.
- ii. All the environmental safeguards prescribed by the DPCC vide its letter dated 25.03.2026 for the instant expansion proposal in pursuance to the MoEF&CC O.M. dated 14.01.2025 and its subsequent amendment shall be complied with. Compliance in this regard shall be submitted to the Regional Office of MoEF&CC along with the six-monthly compliance report.
- iii. Project proponent shall take necessary precaution to minimize nuisance of odour, flies, rodents, bird menace and fire hazard in the waste storage pit, around & over windrows and in processing area.
- iv. Proponent shall ensure that pre-process and post-process rejects shall be removed from the compost processing facility on regular basis and shall not be allowed to pile at the site. Recyclables shall be sent to authorized recyclers. The non-recyclables having high calorific fraction (≥ 1500 kcal/kg) shall be segregated and sent to waste to energy.
- v. Project Proponent shall ensure that waste to be incinerated shall not be chemically treated with any chlorinated disinfectants and incineration of chlorinated plastics shall not occur. All the facilities in twin chamber incinerators shall be maintained to achieve a minimum temperature of 950°C in secondary combustion chamber and with a gas residence time in secondary combustion chamber not less than 2 seconds. Incinerators shall be operated with such temperature, retention time and turbulence, as to achieve Total Organic Carbon (TOC) content in the slag and bottom ash less than 3%, or the loss on ignition is less than 5% of the dry weight. The CO₂ concentration in tail gas shall not be more than 7%.
- vi. Project proponent shall ensure that utilization of ash generated in accordance with the directives of Delhi Pollution Control Committee (DPCC). No ash pond is permitted within the project site. Any unutilized ash and inerts from processing of municipal solid waste in the proposed expansion project shall be sent to Engineered Sanitary Landfill (ESLF) for its safe disposal. In case the concentration of toxic metals in incineration ash exceeds the limits specified in the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended from time to time, the Project Proponent shall send the ash to the Treatment, Storage and Disposal Facility for Hazardous Waste at Bawana in Delhi.
- vii. Online Continuous Stack Emission Monitoring System (OCEMS) shall be done through 24X7 online monitoring system. The emission Standards for Municipal Solid Waste based Thermal Power Plants as per Municipal Solid Waste Rules, 2026 dated 1.4.2026 (S.O. 1357 (E)) shall be complied (Refer Part C of Schedule II of Municipal Solid Waste Rules, 2026 dated 1.4.2026 (S.O. 1357 (E))). OCEMS shall be calibrated properly to ensure that data matches with the actual monitoring results.
- viii. The total water requirement for the proposed project is estimated as 632 m³ /day, out of which approx. 7 m³/day of fresh water requirement will be obtained from the DJB

and the remaining requirement of 625 m³ /day will be met from the treated water from Okhla STP, DJB and inhouse treated water. The water is transported to the plant site through the underground pipeline. No groundwater extraction is involved in the project. Air-Cooled Condenser shall be used to reduce fresh water requirement.

- ix. Project proponent shall harvest rainwater in a storage tank within the plant premises and utilize the same for plantation, recharging water in the pond and domestic utilization as committed. PP shall provide separate garland drains to prevent mixing of leachate with storm water. 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.
- x. Project proponent shall implement the protective measure proposed in EMP in a time-bound manner. The budget earmarked for the same is Rs. 35.63 Crores (Capital) and Rs. 1.32 crores (recurring) for the proposed expansion 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.
- xi. Effluent of 354 KLD shall be treated through Leachate Treatment Plant. As committed by the Project proponent, Zero liquid discharge shall be adopted for the proposed plant. No wastewater will be discharged outside the project site. 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.
- xii. Project proponent shall implement the concurrent plantation plan in a time bound manner. Total of 3.66 ha. area (project site: 2.01 Ha; Outside project site: 1.65 Ha) shall be maintained as a greenbelt in a time frame of 2-3 years. Three tier green belt all along the periphery of the project site shall be developed by gap plantation in existing green belt area as per CPCB guidelines with tall saplings of not less than 2 meter height within 1 year. The budget earmarked for the greenbelt shall be kept in a separate account and audited annually.
- xiii. 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.
- xiv. Project proponent shall carry out community plantation with incentive scheme by distributing 5,000 saplings mainly of fruit species per year for a period of five years. Further, PP shall provide basic facilities to the nearby schools such as drinking water, sanitation facilities and shall also develop greenbelt around the nearby schools. Further, PP shall organize quarterly awareness programs for school students to educate them on the significance and preservation of trees.
- xv. Wildlife conservation plan as approved by the competent authority shall be implemented. Additional, budget shall be added in the plan, in case additional measures suggested by state wildlife department. The final Wildlife conservation plan duly approved by the CWLW shall be submitted to RO, MoEF&CC within a time

frame of three months from the date of grant of EC and the budget approved by the concerned authority shall be deposited in government account.

- xvi. 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.
- xvii. Project proponent shall install adequate number of anti-smog guns at the periphery of the project boundary facing inwardly at a suitable height and explore the possibility for vertical gardens in order to bring down the particulate matter concentration in the area along with carry out Water Sprinkling on roads inside the plant area/ administrative areas on a regular basis to control the air pollution. A logbook shall be maintained for the activity and be in six-monthly compliance report.
- xviii. Project proponent shall deploy mechanical road sweepers for everyday cleaning of the roads in and around plant site.
- xix. Environment Audit of plant shall be done annually and report shall be submitted to Regional office of the Ministry.
- xx. 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
- xxi. For the DG sets, emission limits and the stack height shall be in conformity with the extant regulations and the latest CPCB guidelines. Acoustic enclosure shall be provided to DG set for controlling the noise pollution.
- xxii. Project proponent shall ensure that plastic waste generated from the plant except chlorinated plastics shall be used as RDF for the in-house incinerators. The chlorinated plastics waste generated from the plant shall be stored separately in isolated area and disposed of strictly adhering to the Plastic Waste Management Rules 2026 (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 Project proponent.
- xxiii. 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 Greenbelt development. The action in this regard shall be submitted concerned RO in six monthly report.
- xxiv. All the Directions, Advisories and Orders of Commission for Air Quality Management in National Capital Region and Adjoining Areas from time to time shall be complied upon by the project proponent.

[B] Socio-economic

- i. All the recommendations of the epidemiological study report by IIMR Delhi shall be complied upon by the project proponent in a time bound manner and compliance status in this regard shall be submitted along with the six monthly compliance report. In addition to this, proponent shall carry out a Root Cause Analysis (RCA) study to assess the prevalence of water borne diseases in the areas adjacent to the proposed project. The study report along with the recommendations shall be submitted to the Regional Office of the Ministry along with the six monthly compliance report.
- ii. The budget proposed for PH is Rs. 1.16 Crores. The budget proposed shall be kept in a separate account and audited annually. Project proponent shall implement the action plan to address the issues raised during public hearing within a time frame of 5 years from the date of grant of EC. In addition to this, PP shall provide medical camps in the study area for better public health, strengthen existing roads, provide RO for drinking water, develop skills of local people, etc. as committed. Compliance status in this regard shall be submitted along with the six monthly compliance to the concerned Regional Office of MoEF&CC.
- iii. 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

- i. 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.
- ii. Consent under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974 and Authorization under Solid Waste Management Rules, 2026 and Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016 for the proposed project shall be obtained from the Delhi Pollution Control Committee.
- iii. 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. Part A, B & C of Schedule II of Solid Waste Management Rules, 2026 which came into force vide S.O. 1357 (E) on 01.04.2026 as amended from time to time shall be complied for standards for composting, treated leachate (generated from waste) and incineration of Municipal Solid Waste.
2. Environmental Guidelines for Compressed Biogas Plant (CBG)/Bio-CNG Plants, 2022 of CPCB shall be followed for biomethanation plant based on municipal solid waste.

B. Mode of transportation of municipal solid waste, ash and inerts:

1. Waste shall be transported in covered vehicles and the wheel-washing facility shall be provided at the entry and exit of the plant.
2. PP shall transport fly ash / bottom ash / inerts in properly covered vehicles and ensure that no fugitive emission occurs in the air during loading, unloading and transportation.

C. Air quality monitoring and Management:

1. Project proponent shall manage the foul odour emerging as a result of waste processing as per CPCB guidelines issued from time to time.
2. Negative Pressure shall be maintained in the Waste Storage Pit from the waste pit. Pressure monitoring system showing the atmospheric pressure and pressure inside the waste pit shall be installed and the data shall be transferred to CPCB and DPCC through server.
3. Selective Non-Catalytic Reduction (SNCR) system or Low NO_x combustion system shall be installed to achieve NO_x emission standard as prescribed in Solid Waste Management Rules, 2026 or by DPCC whichever is stringent.
4. Hydrated lime and activated carbon injection system shall be installed for controlling SO₂ and HCl emissions in flue gas. Bag Filter House made of PTFE (Polytetrafluoroethylene) with 130% design capacity for controlling Particulate matter emissions shall be installed to ensure that particulate matter (PM) emission meet the stipulated standards of 30 mg/Nm³.
5. One common stack with a height of 60 meters shall be provided with continuous online monitoring instruments for SO₂, NO_x and Particulate Matter as per extant rules.
6. Project proponent shall ensure that all the parameters including TOCs in stack emissions to meet the standards as prescribed in Solid Waste Management Rules, 2026 or by DPCC whichever are stringent.
7. Continuous Ambient Air Quality monitoring system shall be set up to monitor common/criteria pollutants from the flue gases such as PM₁₀, PM_{2.5}, SO₂, NO_x within the plant area at one location. 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.
8. Adequate dust extraction/suppression system shall be installed in waste handling, ash handling areas and material transfer points to control fugitive emissions.
9. Appropriate Air Pollution Control measures shall 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 be provided with 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. Personnel's handling municipal solid waste or being present on the tipping floor shall be provided with PPE like shoe covers, gloves, masks, etc.
2. A separate canteen far from the waste management area shall be provided for employees. All the basic sanitation facilities shall also be provided to all the employees.
3. Bi-annual Health check-up of all the workers is to be conducted. The study shall take into account chronic exposure of locals 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.
4. The PP should have one Community Health Centre in the campus, where the citizens from nearby area can have access to it and get treatment.

F. Water quality monitoring and Management:

1. Regular (at least once in six months) monitoring of groundwater quality in and around the proposed waste to energy plant 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.
2. The treated effluents emanating from the different processes such as RO & DM plant, boiler blow down, sewage, etc. conforming to the prescribed standards shall be recycled and reused. Sludge/ rejects will be disposed in accordance with the Hazardous Waste Management Rules.
3. Leachate of 354 KLD and sewage of 6 KLD making the quantum as 360 KLD shall be treated collectively in Leachate Treatment Plant to meet the standards as laid down in Solid Waste Management Rules, 2026. Treated leachate shall be recycled and utilized in the process and for quenching ash within the premises of the proposed WTE plant.
4. Project proponent shall use the sludge obtained from the Leachate Treatment Plant as fuel into incinerator after dewatering by screw press technique.

G. Risk Mitigation and Disaster Management:

1. PP shall install radioactive sensors at the entry point of the Waste to Energy plant to detect any radioactive material in the receiving municipal solid waste.
2. 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.
3. Only RDF shall be fed into incinerator for generation of energy and no other kinds of fuel shall be used.

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

1. Greenbelt covering 33% of the plot area i.e. 2.0142 ha has been developed inside the plant boundary. Additional plantation in an area of 1.65 ha will be undertaken in coordination with MCD at adjacent ESLF area as confirmed by MCD vide Letter No. EE/SLF/OKHLA/MCD/2025-26/D-593, dated 24.02.2026, regarding land allocation for greenbelt development.
2. In-situ/ex-situ Conservation Plan for the flora and fauna in the vicinity of the proposed site should be prepared and implemented.

I. Waste management:

1. Municipal solid waste management should be planned in accordance with extant Solid Waste Management Rules, 2026.
2. Toxicity Characteristic Leachate Procedure (TCLP) test shall be conducted for compost, ash produced or any other substance, potential of leaching heavy metals into the surrounding areas as well as into the groundwater.
3. Ash shall be utilized as per the directives of DPCC. Rejects/unutilized ash shall be disposed of in the Engineered Sanitary Landfill (ESLF). In case the concentration of toxic metals in incineration ash exceeds the limits specified in the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, as amended from time to time, the PP shall send the ash to the Treatment, Storage and Disposal Facility for Hazardous Waste at Bawana in Delhi.

J. Monitoring of compliance:

1. Energy Conservation Plan to be implemented as envisaged in the EIA / EMP report.
2. 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 & PM_{2.5} in case of ambient AAQ), SO₂, NO_x (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. Activities under Extended EMP 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 schedule of implementation with appropriate budgeting. Statement on the commitments (activity-wise) made during public hearing to facilitate the discussion on the Extended EMP in compliance of the shall be submitted.

Agenda item no. 43.2

43.2: Proposed Expansion of the Existing 1200 MW (10x120 MW) Captive Power Plant to 2280 MW by addition of 4x270 MW Sub-critical Captive Power Plant by M/s. NALCO at NALCO Nagar, Banarpal Block, **Angul District, Odisha – Prescribing of Terms of Reference – regarding.**

[Proposal No: IA/OR/THE/573338/2026; F. No. J-13012/9/2004.IA-II(T)]

43.2.1: M/s. National Aluminum Company Ltd (NALCO) has made an application online vide proposal no IA/OR/THE/573338/2026 dated 26.03.2026 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 does not attract general conditions and is to be appraised at Central Level.

Name of the EIA consultant: M/s Re Sustainability Solutions Pvt Ltd (S. No. 187, List of ACOs with their Certificate no NABET/EIA/25-28/RA0451; Valid up to 26.09.2028)

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

43.2.2: The existing captive power plant project unit 1 to 6 (6x120 MW) was accorded environmental clearance vide Lr. No. O.O.No14/13/81-Env dated 13.01.1982. Expansion of CPP 7th & 8th unit (2x120 MW) was accorded environmental clearance vide Lr. No.J-13-11/1/91/-IA-III dated 23.01.1992. Expansion of CPP 9th and 10th unit (2x120 MW) was accorded Environmental Clearance vide Lr. No F.No.J-13012/9/2004.IA-II(T) dated 30.07.2004. Amendment of EC for expansion of Ash pond was accorded Environmental Clearance vide Lr. No J-13012/9/2004-IA.II(T) dated 06.02.2014. Consent to Operate for the existing unit was accorded by Odisha State Pollution Control Board vide Lr. No. 6613/IND-I-CON-235 dated 29.03.2025. The validity of CTO is up to 31.03.2027.

43.2.3: Implementation status of the existing EC

S. No.	Configuration	Capacity (MW)	EC Dated	Implementation Status as on today	Production as per CTO
1	CPP - Sub critical 6x120MW (Unit 1 to 6)	720	13.01.1982	In Operation	720 MW
2	CPP -Sub critical 2 x 120 MW (Unit 7 & 8)	240	23.01.1992	In Operation	240 MW
3	CPP -Sub critical 2 x 120 MW (Unit 9 & 10)	240	30.07.2004	In Operation	240 MW
4	Amendment of EC for expansion of Ash pond	Construction of ash pond 4 ash mound on ash pond 2 and dyke raising of ash pond 1	06.02.2014	Presently Pond-I is in operation	-

43.2.4: Compliance to MoEF&CC Notification dated 11/07/2025 regarding SO₂ emission norms: The status of compliance to the SO₂ emission norms shall be furnished as per the MoEF&CC Notification dated 11/07/2025:

- Categorization details of TPP: Not yet done by CPCB Task Force
- Sulfur content of the coal to be fired in the boiler: Average sulphur content is < 0.5%
- Status of SO₂ emission control facility for the existing unit: CPP is dosing ammonia at inlet of ESPs for PM control, which may be partially contributing in SO_x emission reduction. The proposal for installation of FGD in units #7-10 have got administrative approval of the board. Scope, PQC etc. are being prepared for engaging one EPCM consultant for preparation of DPR for installation of FGD in units #7-10.
- 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: Stack height of 275 m will be provided as per guidelines GSR 742 (E) dated 30/08/1990 during establishment.

43.2.5: Environmental site settings

S. No.	Particulars	Details			Remarks															
1	Total land	CPP and Ash Pond-678.33 ha and Other infrastructure-141.52 [Private: 712.53 ha; Govt.: 107.32 ha;]			Land use: Industrial land															
2	Land use break up	Facilities	Existing Area in Hectares	Proposed Area in Hectares																
		Captive Power plant																		
		Power House Area	61.88	128.12																
		Coal Handling Systems	20.07	38.21																
		Water systems	27.03	32.29																
		Roads	14.58	19.72																
		Switch Yard	11.25	11.25																
		Green belt	237.63	142.85																
		Sub Total (A)	372.44	372.44																
		Ash Pond																		
		Ash pond 1,2,3 & 4	189.10	130.5																
		Other areas (dyke, ramp, office, pipeline, drains, open area)	68.02	31.84																
		Green Belt	48.77	143.55																
		Sub Total (B)	305.89	305.89																
		Total (A+B)	678.33	678.33																
		Others																		
		Captive Rail system/ROB	95.74	No change in the land area after expansion																
		HTT Line	30.31																	
		Water supply pipe line	9.32																	
		Ash pipe corridor	6.15																	
Sub Total	141.52																			
3	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 & 20/2/2025	Entire land is in possession of NALCO			Land documents are attached with TOR Application															
4	Existence of habitation& involvement of R&R, if any	Project site: NA Study Area: <table><tr><th>Habitation</th><th>Distance</th><th>Direction</th></tr><tr><td>Amantapur</td><td>10 m</td><td>W</td></tr><tr><td>Kulad</td><td>30 m</td><td>E</td></tr><tr><td>Gotamara</td><td>50 m</td><td>E</td></tr><tr><td>Bonda</td><td>60 m</td><td>S</td></tr></table> Mitigation Measures:			Habitation	Distance	Direction	Amantapur	10 m	W	Kulad	30 m	E	Gotamara	50 m	E	Bonda	60 m	S	Status of R&R.- NA
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S. No.	Particulars	Details	Remarks																																										
		- Development a multi-layer greenbelt 50 m width along the village boundary. - Use of dense native species with high dust attenuation capacity - Install closed/covered conveyors and transfer point enclosures. - Provide dry fog / water spray dust suppression systems at unloading & transfer points. - Regular water sprinkling on internal roads. - Ensure wind-breaking walls																																											
5	Existence of school and hospitals if any.	A. School Project site: No school at project site Study Area: <table><thead><tr><th>School</th><th>Distance</th><th>Direction</th></tr></thead><tbody><tr><td>Govt. High School, Gotamara</td><td>200 m</td><td>E</td></tr><tr><td>Saint Lawrence School, Tentoloi</td><td>2.72 km</td><td>NW</td></tr><tr><td>Omm Bidya Bharati Higher Secondary School</td><td>4.71 km</td><td>SW</td></tr><tr><td>Tapovanam International School, Turanga</td><td>5.68 km</td><td>SW</td></tr><tr><td>My Chhota School, pre school Turanga</td><td>6.18 km</td><td>W</td></tr><tr><td>Odisha Brigade School</td><td>6.61 km</td><td>W</td></tr></tbody></table> B. Hospital Project site: No Hospital at site Study Area: <table><thead><tr><th>Hospital</th><th>Distance</th><th>Direction</th></tr></thead><tbody><tr><td>Banarpal Govt. Hospital</td><td>1.2 km</td><td>E</td></tr><tr><td>Alpha Clinic, Hari Parida, Banarpal</td><td>1.6 km</td><td>E</td></tr><tr><td>Balaram Prasad New PHC</td><td>2.0 km</td><td>NW</td></tr><tr><td>Jaganath Clinic, Banarpal</td><td>2.1 km</td><td>E</td></tr><tr><td>NALCO Hospital</td><td>2.8 km</td><td>W</td></tr><tr><td>Santry Hospital, Gadasantri</td><td>4.7 km</td><td>S</td></tr></tbody></table>	School	Distance	Direction	Govt. High School, Gotamara	200 m	E	Saint Lawrence School, Tentoloi	2.72 km	NW	Omm Bidya Bharati Higher Secondary School	4.71 km	SW	Tapovanam International School, Turanga	5.68 km	SW	My Chhota School, pre school Turanga	6.18 km	W	Odisha Brigade School	6.61 km	W	Hospital	Distance	Direction	Banarpal Govt. Hospital	1.2 km	E	Alpha Clinic, Hari Parida, Banarpal	1.6 km	E	Balaram Prasad New PHC	2.0 km	NW	Jaganath Clinic, Banarpal	2.1 km	E	NALCO Hospital	2.8 km	W	Santry Hospital, Gadasantri	4.7 km	S	
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7	Elevation of the project site	106 to 138 M above mean sea level (as per google earth image)																																																																															
8	Involvement of Forestland if any.	No forest land involved	No-forest land involved																																																																														
9	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	Project site: No waterbody at site Study area <table><thead><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr></thead><tbody><tr><td>Bramani River</td><td>6.1 km</td><td>NE</td></tr><tr><td>Nandira Jor</td><td>2.4</td><td>N</td></tr><tr><td>Lingara Nadi</td><td>6.7</td><td>SW</td></tr></tbody></table> Mitigation measures- Maintaining zero discharge with respect to ash pond decanted water. 100% of water recycled back after treatment for using in the plant purpose.	Water body	Distance	Direction	Bramani River	6.1 km	NE	Nandira Jor	2.4	N	Lingara Nadi	6.7	SW	HFL of Brahmani River is 55.7m																																																																		
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S. No.	Particulars	Details	Remarks																		
		- Leachate is collected through dedicated drains/canals further connected to garland drain and diverted to dedicated ETP for further treatment and reuse in ash quenching and ash slurry making. - Construction of garland drains and stormwater management system around the ash dyke - Installation of piezometers for regular groundwater quality monitoring - Development of a greenbelt buffer zone between the ash dyke and the river - Maintenance of adequate freeboard to prevent overflow during monsoon - Periodic structural stability assessment and safety audits																			
10.	Archaeological sites monuments/ historical temples etc.	No Archaeological site present in the vicinity of project area.																			
11	Existence of ESZ/ESA/ National park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area	<u>Study area: No existence of ESA/ESZ</u> Name of the ESZ/ESA: NA Status of Notification: NA Distance of project from ESZ/ESA: NA Authenticated map of ESZ projecting distance of ESZ from project site: Not in study area Status of NBWL approval: NA List of Reserved and protected forests: <table><thead><tr><th>Name</th><th>Distance (km)</th><th>Direction</th></tr></thead><tbody><tr><td>Balaram prasad PF</td><td>2.1</td><td>NW</td></tr><tr><td>Ganthigarhia PF</td><td>5.6</td><td>SE</td></tr><tr><td>Baistambaragarhi RF</td><td>8.1</td><td>N</td></tr><tr><td>Sakasingha RF</td><td>8.7</td><td>W</td></tr><tr><td>Kauchiakhhol RF</td><td>8.7</td><td>NW</td></tr></tbody></table>	Name	Distance (km)	Direction	Balaram prasad PF	2.1	NW	Ganthigarhia PF	5.6	SE	Baistambaragarhi RF	8.1	N	Sakasingha RF	8.7	W	Kauchiakhhol RF	8.7	NW	
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12	Involvement of Critically Polluted Area/ Severely Polluted area as per 2018 CEPI score	Project is not located in Critically Polluted Area/Severely Polluted area																			

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

S.No.	Existing power plant and configuration capacity	Proposed power plant configuration and capacity	Total	Technology adopted
1	1200 MW (10x120 MW)	1080 MW (4x270 MW)	2280 MW	Sub Critical*

**Note: Ministry of Power vide OM dated 25/02/2026 clarified that provision of their O.M. No. 8/3/2002-Th-II (Vol. I) dated 13.11.2009 and its subsequent modification vide O.M. No. 5/18/2017-Th-II dated 01.02.2018 regarding capacity addition would be through super-critical units only are applicable only for plants to be set up by power generation utilities. There are no specific requirements prescribed for captive power plants. Accordingly, NALCO may adopt sub-critical technology for its proposed brownfield captive power plant expansion of 1080 MW (4 × 270 MW) at Angul, Odisha.*

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

Details	Fuel requirement (MTPA)	Source	Distance from site (Kms)	Mode of Transportation	Coal characteristics (Worst case scenario)	Linkage document
Coal	Existing: 6.820 Proposed: 4.821 Total: 11.641	Mahanadi Coalfield Limited and NALCO's Utkal D&E blocks, NLC	Maximum 100 km	Combination of two or three modes (road and rail)	Ash: 50 (%) Sulphur: 0.5 (%) Moisture: 14 (%) GCV: 3000Kcal/Kg	FSA with MCL and owned coal from NALCO's Utkal D&E block
LDO	4200 KL	Oil Marketing Company (OMC)	Maximum 1500 km	Rail	NA	

43.2.8: Water requirement: Existing Water requirement is 100800 KLD, which is being obtained from Bramani river and permission for the same has been obtained from Irrigation Dept. Govt. of Odisha Vide Lr. No. T313 Dated 04.03.1980 and further renewed vide letter no 2131 dated 30.03.2024 (Valid for 3 years). The water requirement for the proposed project is estimated as 77760 m³/day which will be obtained from the Bramani river. The permission for drawl of additional surface water will be obtained for additional quantity. The water will be transported to the plant site through Pipeline. The specific water consumption for the proposed power plant will be 3 m³/MWhr.

43.2.9: Power requirement: Existing power requirement of 100 MW is obtained from Existing Plant. The power requirement for the proposed project is estimated as 108 MW that will be obtained from the Existing Plant.

43.2.10: 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)	Disposal
1	Domestic waste	Plant and canteen	300	Nearest MSW disposal site
2	ETP Sludge	ETP	20	Nearest TSDF

43.2.11: Project Cost: Existing capital cost of project was Rs.1547 Crores. The capital cost of the proposed project is Rs.11313.47 Crores and the capital cost for environmental protection measures is proposed as Rs. 1358 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.136 Crores. The employment generation from the proposed project / expansion is 745 nos. (Permanent 545 nos. and Contractual 200 nos.)

43.2.12: Greenbelt development: Due to the proposed expansion, the greenbelt in the plant site area is rationalised from 237.63 Ha to 142.85 Ha and in the ash pond from 48.77 Ha to 143.55 Ha. Due to the proposed rationalisation, the existing greenbelt at the plant site is

maintained at 38.66 % which is more than the stipulated norms of 33%. Thus total of 286.40 Ha area (42.22% of total project area) will be developed as greenbelt. A 10-15 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.

42.3.13: Ash management: Ash management for last three years

Year	Quantity generated (MT)	Quantity utilized (MT)	% of utilization	Balance quantity (MTP)	No of storage silos with capacity
2025-2026*	2259267	1897457	83.99	361810	06 nos, 5000 MT
2024-2025	3332793	2680824	80.44	651969	06 nos, 5000 MT
2023-2024	2917869	2619412	89.77	298457	06 nos, 5000 MT
*till November 2025					

A. Fly ash Details for last three years: 2023-24: 2334295 MT; 2024-25: 2666234 MT; 2025-2026: 1807413 MT

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)	2023-24: 730516 MT 2024-25: 672544 MT 2025-26: 478329 MT	2023-24: 31.2% 2024-25: 25.2% 2025-26: 26.5%	As per MoEF act 2021, Audited by CPCB approved auditor.
2.	Construction of roads, road and fly over embankment	2023-24: 157320 MT 2024-25: 201600 MT 2025-26: 158367 MT	2023-24: 6.7% 2024-25: 7.6% 2025-26: 8.8%	As per MoEF act 2021, Audited by CPCB approved auditor
3.	Filling up of low-lying area	2023-24: 191760 MT 2024-25: 52800 MT 2025-26: 0 MT	2023-24: 8.2% 2024-25: 2% 2025-26: 0.6%	Audited by CPCB approved auditor
4.	Filling of mine voids:	2023-24: 956242 MT 2024-25: 1087321 MT 2025-26: 1247760 MT	2023-24: 40.9% 2024-25: 40.8% 2025-26: 44.04%	Permission from DGMS
5.	Total	2023-24: 2035838 MT 2024-25: 2014265 MT 2025-26: 1445605 MT	2023-24: 87.2% 2024-25: 75.5% 2025-26: 79.98%	

B. Bottom ash generation for last three years: 2023-24: 583574 MT; 2024-25: 666559 MT; 2025-26: 451854 MT

S.No.	Activity (as applicable)	Quantity	Percentage	Remarks (Prior approval of SPCB details to be mentioned)

1.	Filling of mine voids	2023-24: 583574 MT 2024-25: 666559 MT 2025-26:451854 MT	2023-24: 100% 2024-25: 100% 2025-26:100%	Permission from DGMS
	Total	2023-24: 583574 MT 2024-25: 666559 MT 2025-26:451854 MT	2023-24: 100% 2024-25: 100% 2025-26:100%	

C. Ash Pond Details

S.No.	Details of Ash pond	Ash pond 1	Total
1.	Status of ash pond (Active / Exhausted (yet to be reclaimed)/ Reclaimed)	Active	-
2.	Area (Ha)	67.66*	67.66
3.	Dyke height (m)	113 mRL	-
4.	Volume (m ³)	19.2 Million m ³	-
5.	Quantity of ash disposed (Metric Tons)	230.4 LMT	-
6.	Available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons)	0.52% @1.2 LMT	-
7.	Expected life of ash pond (number of years and months)	Active	-
8.	Type lining carried in ash pond: HDPE lining of LDPE lining or clay lining or No lining	No lining	-
9.	Mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	Wet Slurry LCSD	-
10.	Ratio of ash: water in slurry mix (1:_____):	1:9	-
11.	Ash water recycling system (AWRS) installed and functioning : Yes or No	Yes	-
12.	Quantity of wastewater from ash pond discharged into land or water body (m ³)	ZERO	-
13.	Last date when the dyke stability study was conducted and name of the organization who conducted the study:	15.10.2015	
14.	Last date when the audit was conducted and name of the organization who conducted the audit:	25.10. 25 Dr Suresh Prasad Singh Professor & Head Department of Civil Engineering National Institute of Technology, Rourkela, ODISHA, 769008	

* **Note:** Total ash pond area as per land use break up submitted to the Ministry is 189.10 Ha. Out of 189.10 Ha, active ashpond area is only 67.66 Ha. In the remaining land

D. Proposed ash utilization plan for expansion project

Details	Existing generation (MTPA)	Proposed generation (MTPA)	Total	Utilization (MTPA)	% of utilization	Balance quantity (MTPA)	No storage silos with capacity
Ash (Fly & bottom)	3.3	2.7	6.0	6.0	100	0	6 nos 5000 MT

Ash pond details: For the proposed expansion, existing ash pond of situated in an area of 67.66 Ha will be utilized and no new ash pond is proposed. In the remaining 121.44 Ha, 94.78 Ha will be brought under green belt development and 26.66 ha will be utilized for miscellaneous purposes.

43.2.14: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration: There is no court case/show cause against the proposed project. Further, there is no violation cases under the Environmental Protection Act, 1986, Van (Sanraksha Evam Samvardhan) Adhiniyam, 1980 and The Wildlife (Protection) Act, 1972.

43.2.15: ADS Information in chronology:

M/s. National Aluminum Company Ltd (NALCO) made an online application vide proposal no IA/OR/THE/573338/2026 dated 26.03.2026. The proposal was initially considered in 41st meeting of Re- constituted EAC (Thermal) held on 08.04.2026. Proposal was deferred for want of additional information.

The proponent submitted the ADS reply vide letter dated 04.05.2026 uploaded on PARIVESH 04.05.2026 Point-wise reply of ADS is given as below:

S No	ADS Point	Reply/Response of PP																													
i	Proponent to explore the feasibility of alternate land arrangement for the proposed expansion as there is clearing of existing green belt situated in an area of 94.78 Ha at the plant site.	NALCO has examined the feasibility of alternate land for the proposed expansion. However, due to technical constraints, limited land availability within the existing plant boundary, and the requirement for integration with existing infrastructure and utilities, the expansion is proposed within the current premises. It is submitted that although a portion of the existing greenbelt area (94.78 Ha) is likely to be affected. The existing trees which are suitable for shifting will be transplanted within the project premises, and the total number of trees will be maintained by planting additional trees in open areas. Accordingly, compensatory plantation is being undertaken within the project premises (ash pond area), including capped ash pond areas [Area available at closed ash pond –IV (18.6 Ha) & area available at ash pond II B (40 Ha), and open area available around ash pond (36.18 Ha)] which is part of the total project area (678.33 Ha.). Post-compensation, the overall greenbelt shall be maintained as 42.22% which is more than EC norms (minimum 33%). The details land breakup existing and after expansion is given the below table. <table><tr><th rowspan="2">Facilities</th><th colspan="2">Existing Area</th><th colspan="2">After Expansion Area</th></tr><tr><th>Ha</th><th>%</th><th>Ha</th><th>%</th></tr><tr><td>Captive power plant area</td><td></td><td></td><td></td><td></td></tr><tr><td>Power House Area</td><td>61.88</td><td>16.61</td><td>128.12</td><td>34.40</td></tr><tr><td>Coal Handling system@</td><td>20.07</td><td>5.39</td><td>38.21</td><td>10.26</td></tr><tr><td>Water System</td><td>27.03</td><td>7.26</td><td>32.29</td><td>8.67</td></tr></table>	Facilities	Existing Area		After Expansion Area		Ha	%	Ha	%	Captive power plant area					Power House Area	61.88	16.61	128.12	34.40	Coal Handling system@	20.07	5.39	38.21	10.26	Water System	27.03	7.26	32.29	8.67
Facilities	Existing Area			After Expansion Area																											
	Ha	%	Ha	%																											
Captive power plant area																															
Power House Area	61.88	16.61	128.12	34.40																											
Coal Handling system@	20.07	5.39	38.21	10.26																											
Water System	27.03	7.26	32.29	8.67																											

S No	ADS Point	Reply/Response of PP																
		Roads	14.58	3.91	19.72	5.29												
		Switch Yard	11.25	3.02	11.25	3.02												
		Green belt	237.63	63.80	142.85	38.36												
		Sub Total	372.44	100.00	372.44	100.00												
		Ash pond area																
		Ash pond 1,2,3 & 4	189.1	61.82	130.5	42.66												
		Other areas (dyke, ramp, office, pipeline, drains, open area)	68.02	22.24	31.84	10.41												
		Greenbelt	48.77	15.94	143.55	46.93												
		Sub Total	305.89	100.00	305.89	100.00												
		Total	678.33		678.33													
		Total greenbelt area	286.40	42.22	286.40	42.22												
		Other areas																
		Captive Rail system/ROB	95.74	No change in the land area after expansion														
		HTT Line	30.31															
		Water supply pipe line	9.32															
Ash pipe corridor	6.15																	
Total	141.52																	
ii	Map depicting the existing and proposed green belt development in the plant site as well as ash pond including its area covered/proposed compensatory plantation with different color code shall be submitted for consideration.	A revised map has been prepared and submitted in ADS reply showing: - Existing greenbelt area - Proposed / Compensatory plantation area All features have been clearly demarcated using distinct color codes for ease of interpretation along with area statistics.																
iii	Project proponent to clarify the ash dyke height details as it has been mentioned as 92 meters, 113 meters and 123 meters.	The existing project has four ash ponds having different dyke heights, the initial land area was 90 mRL, the details of the ash dyke height raising given below. The ash dyke raisings developed in a phased and engineered manner in compliance with CPCB/MoEF&CC guidelines after obtaining CTE from SPCB, ensuring structural stability and safety <table><tr><th>Details</th><th>Year</th><th>mRL</th><th>Remarks</th></tr><tr><td>Stage I</td><td>1986</td><td>90</td><td>Starter Dyke (Earthen type), Initial period</td></tr><tr><td>Stage II</td><td>1992</td><td>90 to 100</td><td>Composite dyke (Ash Core), Constructed in 3 Phases (Ash pond I and II) (90-93.4 mRL, 93.4-96.7 mRL)</td></tr></table>					Details	Year	mRL	Remarks	Stage I	1986	90	Starter Dyke (Earthen type), Initial period	Stage II	1992	90 to 100	Composite dyke (Ash Core), Constructed in 3 Phases (Ash pond I and II) (90-93.4 mRL, 93.4-96.7 mRL)
Details	Year	mRL	Remarks															
Stage I	1986	90	Starter Dyke (Earthen type), Initial period															
Stage II	1992	90 to 100	Composite dyke (Ash Core), Constructed in 3 Phases (Ash pond I and II) (90-93.4 mRL, 93.4-96.7 mRL)															

S No	ADS Point	Reply/Response of PP			
					& 96.7-100 mRL)
		Stage III	2001	100 to 104	Composite dyke (Ash Core) (Ash pond I and II)
		Stage IV	2008	104 to 107	Composite dyke (Ash Core) Ash pond I and II
		Stage V	2013	107 to 110	Composite dyke (Ash Core) Ash pond I only
		Stage VI	2017	110 to 113	Composite dyke (Ash Core) Ash pond I only
		Stage VII	2015 - 2026	107 to 123	Ash pond II (Ash mounding continue)
iv	Project proponent shall submit the details of the additional mitigation measures to be adopted as part of the expansion project as there are four villages namely Gotmara, Amantapur, Kulad and Bonda villages in the vicinity of the project site.	Considering the proximity of Gotmara, Amantapur, Kulad, and Bonda villages, the following mitigation measures shall be implemented. NALCO is also carrying out regular CSR activities in periphery of out project area, the amount spent during Financial Year (FY) 2021-22 is Rs 827.87 Lakhs, FY 2022-23 is Rs 984.85 Lakhs, FY 2023-24 is Rs 31.97 Lakhs, FY 2024-25 is Rs 112.36 Lakhs and FY 2025-26 is Rs 505.05 Lakhs. Further, NALCO undertakes that a 50 m wide greenbelt buffer will be maintained along the periphery of the project area, particularly in stretches adjoining nearby villages			
		Village	Distance /direction	Infrastru-cture proposed	Mitigation measures
		Gotmara	30m/E	Raw water reservoir and CHP	• Development a multi-layer greenbelt 50 m width along the village boundary. • Use of dense native species with high dust attenuation capacity • Install closed/covered conveyors and transfer point enclosures. • Provide dry fog / water spray dust suppression systems at unloading & transfer points. • Regular water sprinkling on internal roads. • Ensure wind-breaking walls
		Kulad	50m/S	Raw water reservoir, CW Pump and Storage godown	• Development of greenbelt buffer 50 m between reservoir and village side. • Carry out periodic water quality monitoring • Install acoustic enclosures for pumps and motors. • Provide anti-vibration

S No	ADS Point	Reply/Response of PP			
					pads / isolation mounts. • Construct noise barrier walls toward the village side. • Ensure covered storage (closed shed) to prevent dust dispersion. • Provide impervious flooring with spill containment (bund walls). • Install fire protection system (hydrants, sprinklers, extinguishers). • Maintain proper ventilation and housekeeping. • Store materials as per MSDS guidelines
		Bonda	60m/S	Cooling Tower	• Installation of high-efficiency drift eliminators to prevents fine droplets carrying dissolved solids/chemicals from reaching the village • Maintain uniform water distribution to avoid splashing and carryover. • Optimize tower height and airflow for proper dispersion. • Use natural draft / well-designed induced draft towers
		Amanta pur	10m/W	Flue gas Chimney	• Installation of 275 m height stack • SCR/SNCR → NO_x control • Advanced Electrostatic Precipitator (ESP) • Continuous monitoring System as per the guidelines of CPCB. • Development of greenbelt 50 m width between plant and village. • Organize periodic health check-up camps for nearby residents.
v	Ash dyke of the project is just 100m away from the Nandira River, mitigation measures to be followed in	Ash pond-II & IV has located approximately 100 m from the Nandira River. It is submitted that Ash pond-II & IV are presently not in operation. And will be used for greenbelt development. At present, Ash pond-I is in operation, which is located at an approximate distance of 600 m from the Nandira River, However following mitigation			

S No	ADS Point	Reply/Response of PP
	this regard shall be submitted.	measures are being adopted to safeguard the nearby water body: • Maintaining zero discharge with respect to ash pond decanted water. 100% of water recycled back after treatment for using in the plant purpose. • Leachate is collected through dedicated drains/canals further connected to garland drain and diverted to dedicated ETP for further treatment and reuse in ash quenching and ash slurry making. • Construction of garland drains and stormwater management system around the ash dyke • Installation of piezometers for regular groundwater quality monitoring • Development of a greenbelt buffer zone between the ash dyke and the river • Maintenance of adequate freeboard to prevent overflow during monsoon • Periodic structural stability assessment and safety audits. Compliance with CPCB/MoEF&CC guidelines for ash pond management.
vi	Project Proponent to validate the kml file that is uploaded in the application form.	As suggested, a proper survey has been conducted for the project site, including the ash pond area, to verify the actual project boundary. Based on the survey findings, the kml file has been duly validated and revised.
vii	Proponent shall submit action plan for additional Ambient Air Quality monitoring in 2 locations other than the proposed locations in North of the A6 point and between A2 & A9 point of the proposed AAQ monitoring locations	Additional Ambient Air Quality (AAQ) monitoring will be carried out at 2 locations North of A6 point and between A2 & A9 as suggested for a period of one month. The monitoring will cover key parameters, including PM₁₀, PM_{2.5}, SO₂, NO_x, CO, NH₃, and O₃, as per applicable standards. The monitoring will be carried out in accordance with CPCB guidelines using approved instruments such as Respirable Dust Sampler (RDS) and Fine Particulate Sampler (FPS). The duration of sampling will be aligned with the requirements of the National Ambient Air Quality Standards (NAAQS), 2009. The results will be analyzed, compared with prescribed standards, and duly incorporated in the final EIA Report along with interpretation and necessary mitigation measures.
viii	EAC observed that some part of Protected Forest is coming inside the project area as per the DSS, Project Proponent is required to give the clarification in this regard.	As suggested by the EAC the KML file has been validated through a detailed digital site survey. Based on this verification, the KML has been slightly revised. However, as per the DSS, same portion of forest area still appears within the revised boundary. It is clarified that, although DSS indicates the presence of forest area, the land belongs to NALCO as per Cadastral map. The Cadastral map is superimposed on the Google map and the same is attached in ADS Reply. Further revised ash pond boundary is also superimposed on the Survey of India Toposheet and the same is attached in ADS reply. NALCO will get required clarification/NOC from Forest department and same will be submitted during EC application.

43.2.16: Written Submission:

Query: Ash Management Details:

Reply: NALCO's approach to ash management marks a strategic shift from conventional disposal to sustainable utilization, mandated by stringent regulatory frameworks that emphasize industrial applications and mine stowing as preferred alternatives to traditional pond storage.

1. Disposal Strategies:

- Primary (Eco-Friendly): Dry ash is supplied to brick/cement units, and lean slurry is disposed of in abandoned allotted mines.
- Emergency Storage: Ash Pond, I serve as a temporary buffer during surplus or exigencies.

2. Infrastructure Status: The facility manages four ash ponds covering a total area of 168.26 Ha excluding utility area.

Pond	Area (Ha)	Current Status & Functional Role
Ash Pond I	67.66	Active: Used for emergency/temporary slurry storage
Ash Pond II	82.00	Exhausted: Currently undergoing reclamation works
Ash Pond III	-	Decantation: Functions as a channel for water clarification
Ash Pond IV	18.60	Closed: Completely exhausted and capped.

3. Water Recovery & Treatment: To ensure environmental compliance, the system operates a closed-loop water cycle: channels.

- Sedimentation: Slurry settles in ponds; supernatant water overflows into decanting
- Clarification: Ash Pond III facilitates final settlement of particles.
- Recycling: Clarified water is processed through the dedicated wastewater treatment plant and recycled back to the CPP.

4. Future Expansion: The proposed expansion project focuses on Dry Ash Collection & Evacuation. In the event of operational exigencies, the existing Ash Pond I will remain the designated backup for temporary storage.

Observation and deliberation of the EAC

43.2.17: The Committee observed and noted the following:

- i. The instant proposal is for Expansion of the Existing 1200 MW (10x120 MW) Captive Power Plant to 2280 MW by addition of 4x270 MW Sub-critical Captive Power Plant by M/s. NALCO at NALCO Nagar, Banarpal Block, Angul District, Odisha.
- ii. The committee observed that no alternative sites considered by the Project proponent, since the proposed project area has been coming inside the existing plant area. Total land requirement for the project is 678.33 ha. In addition to the above, about 141.5 Ha consists of the Captive Rail System/ROB (95.74 Ha), HT Line (30.31 Ha), Water Supply Pipeline (9.32 Ha), and Ash Pipe Corridor (6.15 Ha). No R & R is involved in the proposed project.

- iii. The project site is not located within CPA/SPA as per CEPI assessment 2018 of CPCB.
- iv. The committee noted that Brahmani River, Nandira Jor and Lingara nadi are located at 6.1 (NE), 2.4 (N) and 6.7 (SW) km, respectively, from the project boundary. The committee observed some reserved/protected forests such as Baistambaragarhi RF, Sakasingha RF, Kauchiakho R.F, Balaram prasad PF, Ganthigarhia PF etc. located within the study area.
- v. Coal requirement for the proposed project is about 4.821 MTPA that will be sourced from Nearby Commercial Coal Mines of MCL and owned coal from NALCO's Utkal D&E block and transported through combination of railway wagons and road. LDO (4200 KL/ Annum) will be transported by Railway.
- vi. Existing Water requirement is 100800 KLD, water requirement is obtained from Bramani river and permission for the same has been obtained from Irrigation Dept. Govt. of Odisha Vide Lr. No. T313 Dated 04.03.1980 and which got renewed vide letter no 2131 dated 30.03.2024 (Valid for 3 years). The water requirement for the proposed project is estimated as 77760 m³ /day which will be obtained from the Bramani river. The permission for drawl of additional surface water will be obtained for additional quantity. The water will be transported to the plant site through Pipeline. The specific water consumption for the proposed power plant will be 3 m³/MWhr.
- vii. Existing capital cost of project was Rs.1547 Crores. The capital cost of the proposed project is Rs.11313.47 Crores and the capital cost for environmental protection measures is proposed as Rs. 1358 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.136 Crores. The employment generation from the proposed project / expansion is 745 nos. (Permanent 545 nos. and Contractual 200 nos.)
- viii. Due to the proposed expansion the greenbelt in the plant site area is rationalised from 237.63 Ha to 142.85 Ha and in the ash pond from 48.77 Ha to 143.55 Ha, however due to the proposed rationalisation the existing greenbelt at the plant site is maintained at 38.66 % which is more than the stipulated norms of 33%. Thus total of 286.40 Ha area (42.22% of total project area) will be developed as greenbelt. A 10-15 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. With respect to green belt development in the instant proposal, MS apprised that the proposal was referred to Policy section and their comments/views on the same is given as below:
 - "If 33% was prescribed in the earlier EC, then the project proponent may not clear the existing green belt to reduce it. However, PP may relocate the green belt within the project site, subject to not reducing it from 33%.
 - If a specific green-belt percentage was not prescribed in the EC and the project proponent has *suo-moto* developed a certain percentage of greenbelt in the project site, then the same may be rationalised to not less than the minimum percentage as mentioned in the revised green belt norms."In the instant case, PP rationalized the green belt from 63.80 % to 38.36 %.
- ix. Baseline data for the proposed project was already collected for the period of January 2026 to March 2026 in study area.

- x. Existing Ash pond situated in an area of 67.66 ha will be used for proposed expansion and no new ash pond is envisaged. About 2.7 LMTPA ash will be generated and the same will be disposed with 100 % utilization by cement manufacturing, bricks manufacturing industries and filling mines etc. Unused fly ash, if any, will be stored to ash dyke.
- xi. EAC suggested the Project Proponent to quantify the Carbon Sink capacity of the existing Greenbelt and the translocated Greenbelt area.
- xii. EAC asked the Project Proponent to install the wind barrier along the village side for fugitive dust control and shall plant the saplings not less than 2 meter height along with it.
- xiii. EAC asked the Project Proponent to account the number of trees to be felled and accordingly compensate for the same in consultation with the State Forest Department
- xiv. Committee asked the Project Proponent to make provisions for Dry Bottom and Fly ash collection and if any ash to be disposed in the ash dyke it should be in HCSD form.
- xv. EAC opined that a site visit should be conducted by the Sub-committee of EAC to see the various issues pertaining to the instant project before consideration of EC proposal. The findings of the subcommittee report shall be incorporated in the final EIA/EMP report and the same shall be reported along with the ToR compliance.
- xvi. The EAC also deliberated on the written submission of the project proponent and found it satisfactory.

Recommendations of the Committee:

43.2.18: The EAC after detailed deliberations on the information submitted and as presented during the meeting **recommended** the proposal for grant of ToR **subject to uploading of written submissions on PARIVESH portal** 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.

Specific ToR:

[A] Environmental Management and Biodiversity Conservation

- i. Project proponent shall provide appropriate Pollution control measure for SO₂ emissions as per the applicable emission norms for the proposed project.
- ii. Project Proponent to take necessary permissions from the State Forest Department before felling/translocation of trees.
- iii. Project Proponent to obtain certified compliance report from the MoEF&CC RO office for the existing EC as per MoEF&CC OM dated 08/06/2022.
- iv. 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 Nandira River and Brahmani River corresponding to one in 25 years of flood as per Ministry's O.M. dated 14/02/2022.

- v. PP needs to submit NOC/permission from the State Water resource Department/Irrigation Dept. in case of diversion of any Nala/Stream/water bodies.
- vi. All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent and additionally ambient air at two more locations other than the proposed locations shall be monitored.
- vii. 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.
- viii. 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.
- ix. 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 power plant on aquatic life of Nandira River and action plan for complying with the recommendations of the study report shall be submitted.
- x. Project proponent shall commission a study on site specific hydrological studies for area drainage for existing and proposed 2280 MW power plant structure through reputed Government institute. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.
- xi. Project proponent shall prepare an integrated water shed management plan for protection and conservation of water bodies within the study area of the project site. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.
- xii. 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.
- xiii. 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 286.4 Ha (Plant site- 142.85 Ha + Ash Dyke- 143.55 Ha) of the project area as per MoEF&CC OM dated 29.10.2025 of MoEF&CC for greenbelt/green cover requirement for industries. 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.
- xiv. Action plan for development of three-tier plantation programme along the periphery of the project boundary and the coal transportation route shall be provided. PP shall submit concurrent plantation plan.
- xv. 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.

- xvi. 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.
- xvii. Action plan for dry ash collection system (Bottom ash and Fly ash) shall be submitted.
- xviii. Action plan for disposal of ash through High Concentration Slurry Disposal (only in emergency conditions) shall be submitted.
- xix. Proper protection measures like high-density polyethylene (HDPE) lining, appropriate height of bund and adequate distance between the proposed Ash pond and water body 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.
- xx. 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.
- xxi. Details pertaining to water source, treatment and discharge should be provided.
- xxii. PP shall provide the details of wastewater treatment facilities to be installed within its capacity, timeline and budget.
- xxiii. Project Proponent to conduct Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
- xxiv. 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.
- xxv. 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.
- xxvi. PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2026 and to adhere Ministry's OM dated 18/07/2022.
- xxvii. Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted.
- xxviii. 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.
- xxix. 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 SO₂ emission norms.

- xxx. Details of air pollution control devices to be installed in the proposed 4x270 MW TPP along with its maintenance schedule shall be incorporated in EIA/EMP report.
- xxxi. Carbon emission due to proposed TPP and allied carbon sequestration/ carbon offsetting plan be submitted.
- xxxii. 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.
- ii. Project proponent shall carry out study on site specific design earthquake parameters for proposed 1080 MW (4x270 MW) power project through reputed institute.
- iii. Site specific risk assessment study followed by emergency preparedness plan shall be submitted.

[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.
- xv. The findings of the subcommittee report shall be incorporated in the final EIA/EMP report.

Agenda Item No.- 43.3:

43.3: Expansion of Talcher Thermal Power Project from existing 1320 MW (StageIII:2x660 MW) to 2120 MW by addition of Stage-IV (1x800 MW) Ultra Super Critical Technology Coal Based Power Plant by **M/s NTPC Limited** located at Gram panchayat Santaparha, Jagannathpur, Bantol, & Gurujanguli at Talcher in Tehsil Talcher Sadar, Angul District, Odisha Odisha – **Prescribing of Terms of Reference – regarding**

[Proposal No: IA/OR/THE/573359/2026; F. No. J-13012/31/2009-IA.II(T)]

43.3.1: **M/s NTPC Limited**, has made online application vide proposal no. IA/OR/THE/573359/2026 dated 25.03.2026 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 does not attract general conditions and is to be appraised at Central Level.

Name of the EIA consultant: M/s Rian Enviro Private Limited (REPL). [S. No. 195, List of ACOs with their Certificate / Extension Letter no; NABET/EIA/24-27/RA 0368 (Rev. 02) Valid up to 11.09.2027 Rev. 02]

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

43.3.2: In the aforementioned project site, the Stage-I (4x60 MW) & Stage-II (2x110 MW) with total capacity 460 MW have been implemented by erstwhile M/s Orissa State Electricity Board (OSEB) and was subsequently taken over by NTPC in 1995. Meanwhile, M/s. NTPC obtained another EC for setting up of 2x660 MW (Stage-III) Coal based Ultra Super Critical Talcher Thermal Power Project, Near Talcher Town, Tehsil Talcher Sadar, Angul District, Odisha by M/s. NTPC Limited vide Letter.no. J-13012/31/2009-IA.II(T) dated 12.09.2018. The said EC was amended on 16/03/2022 and 24/02/2026. Presently, Stage-I & II units have been decommissioned since 31.03.2021. Consent to Establish for the Stage III was accorded by Odisha State Pollution Control Board vide letter. No. IND-II-CTE-6828 dated 28.02.2023. The validity of CTE is up to 27.02.2028. Presently, the Stage-III (2x660 MW) is under construction.

Present proposal is for setting up of another 1x800 MW TPP in the available land within stage I to III.

43.3.3: Implementation status of the existing EC

S. No	Configuration	Capacity (MW)	As per EC dated	Implementation Status as on 08.05.2026	Production as per CTE
1	Stage-III: 2x660 MW	1320	12.09.2018	Under Construction	1320 MW

43.3.4: Compliance to MoEF&CC Notification dated 11/07/2025 regarding SO₂ emission norms: The status of compliance to the SO₂ emission furnished as per the MoEF&CC Notification dated 11/07/2025;

- Categorization details of TPP: Category-B (as given by OSPCB to the task force)
- Sulfur content of the coal to be fired in the boiler: 0.5% max.
- Status of SO₂ emission control facility for the existing unit: FGD is under erection for Stage III unit with stack height of 275 meters.
- Proposed expansion: Stack height of 275m with FGD for Stage-IV unit is envisaged.

43.3.5: Environmental site settings

S. No	Particulars	Details				Remarks
1.	Total land	433.72 Ha [Private land: 174.38 Ha, Govt.: 252.34 Ha & Forest land: 6.996 Ha]				Land use: Industrial
2	Land use breakup	S. No.	Facilities	Existing Area (In Ha) Stage-III	Proposed Area (In Ha) Stage-IV	Total Area (In Ha)
		1	Main Plant	77.04	42.08	119.12
		2	Township (Common)	28.70	--	28.70
		3	Reservoir	7.24	1.82*	9.06
		4	Make-up water PH (Common); Forest land	0.95	---	0.95
		5	Makeup water Pipeline Corridor (Common), including 6.046 Ha of Forest land.	27.80	---	27.80
		6	Ash water Corridors (Common)	8.08	---	8.08
		7	Greenbelt-Inside main plant (Common)	14.44	---	14.44
		8	Greenbelt-Outside main plant (Common)	128.28	---	128.28
		9	Public use land (Common)	14.71	---	14.71
		10	Temp. Ash dyke land# (Common)	65.27	---	65.27
		11	Balance land for Future use (Common)	17.31	---	17.31
			Total (Ha)	389.82	43.90	433.72
		* 1.82 Ha=0.59+1.23 (0.59 already in possession and 1.23 Ha acquisition in process) # No permanent ash dyke is envisaged, provision of temporary ash dyke for emergency use only is proposed.				

3	Land acquisition details as per MoEF&CC O.M. dated 7/10/2014 & 20/2/2025	The total 433.72 Ha land comprises of Private land: 174.38 Ha, Govt. land: 252.34 Ha and Forest land: 6.996 Ha]. In addition to existing 432.49 Ha of land in use, about 1.23 Ha of Govt. land shall be acquired.	Break up of land and its lease/ LOI/ Consent/ Possession details are submitted with application form.																																																												
4.	Existence of habitation & involvement of R&R, if any.	Project site: NTPC Township Study Area: <table><tr><th>Habitation</th><th>Distance (Km)</th><th>Direction</th></tr><tr><td>Jagannathpur</td><td>0.5</td><td>W</td></tr><tr><td>Nuagaon</td><td>0.8</td><td>S</td></tr><tr><td>Gurujangli</td><td>0.7</td><td>SE</td></tr><tr><td>Bhoghabereni</td><td>1.26</td><td>S</td></tr><tr><td>Bantol</td><td>1.15</td><td>NE</td></tr><tr><td>Budhapanka</td><td>5.0</td><td>SE</td></tr><tr><td>Jhadiamba</td><td>2.0</td><td>SW</td></tr><tr><td>Kendupali</td><td>1.20</td><td>W</td></tr><tr><td>Santhapada</td><td>1.75</td><td>NE</td></tr></table>	Habitation	Distance (Km)	Direction	Jagannathpur	0.5	W	Nuagaon	0.8	S	Gurujangli	0.7	SE	Bhoghabereni	1.26	S	Bantol	1.15	NE	Budhapanka	5.0	SE	Jhadiamba	2.0	SW	Kendupali	1.20	W	Santhapada	1.75	NE	No R&R issue																														
Habitation	Distance (Km)	Direction																																																													
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5	Existence of school and hospitals if any.	A. School Project site: DAV Public School Study Area: <table><tr><th>School</th><th>Distance (Km)</th><th>Direction</th></tr><tr><td>Nuagan Primary School</td><td>1</td><td>SE</td></tr><tr><td>Kukudula High School</td><td>1</td><td>N</td></tr><tr><td>Gadtal Regional Hr Sec School</td><td>0.2</td><td>E</td></tr><tr><td>TTPS Hr Sec School</td><td>0.35</td><td>W</td></tr><tr><td>Sri Jagganath Nodal HS</td><td>0.50</td><td>W</td></tr><tr><td>Tarun Nodal UPS</td><td>0.50</td><td>N</td></tr><tr><td>St. Xavior H S</td><td>0.55</td><td>N</td></tr><tr><td>Govt. UGHS Bhogerberini</td><td>1.1</td><td>S</td></tr><tr><td>Panchayat Nodal HS</td><td>1</td><td>S</td></tr></table> B. Hospital Project site: Ashalok Hospital Study Area: <table><tr><th>Hospital</th><th>Distance (Km)</th><th>Direction</th></tr><tr><td>S S Hospital</td><td>0.5</td><td>E</td></tr><tr><td>Subhalaxmi Nursing home</td><td>0.5</td><td>W</td></tr><tr><td>Health Centre Jaganathpur</td><td>0.5</td><td>W</td></tr><tr><td>Health Centre Bangu</td><td>0.55</td><td>N</td></tr><tr><td>Health Centre Gurujanguli</td><td>1.1</td><td>SE</td></tr><tr><td>Health Centre Jhariamba</td><td>2</td><td>E</td></tr><tr><td>Health Centre Tentuloi</td><td>2.8</td><td>W</td></tr><tr><td>Health Centre Pingua</td><td>2.6</td><td>SW</td></tr><tr><td>Health Centre Budhapanka</td><td>5.5</td><td>SE</td></tr></table> Mitigation measures:	School	Distance (Km)	Direction	Nuagan Primary School	1	SE	Kukudula High School	1	N	Gadtal Regional Hr Sec School	0.2	E	TTPS Hr Sec School	0.35	W	Sri Jagganath Nodal HS	0.50	W	Tarun Nodal UPS	0.50	N	St. Xavior H S	0.55	N	Govt. UGHS Bhogerberini	1.1	S	Panchayat Nodal HS	1	S	Hospital	Distance (Km)	Direction	S S Hospital	0.5	E	Subhalaxmi Nursing home	0.5	W	Health Centre Jaganathpur	0.5	W	Health Centre Bangu	0.55	N	Health Centre Gurujanguli	1.1	SE	Health Centre Jhariamba	2	E	Health Centre Tentuloi	2.8	W	Health Centre Pingua	2.6	SW	Health Centre Budhapanka	5.5	SE	
School	Distance (Km)	Direction																																																													
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		The mitigation measures proposed for air pollution control which will minimize impact on all sensitive receptors are as under:- - Advanced air pollution control systems including High Efficiency ESP, Stack with height 275m, NOx control systems and FGD are proposed to meet prescribed emission standards. - Water pollution prevention & control systems; ETP, STP etc. and ensuring Zero Liquid Discharge. - Greenbelt will be developed at TTPP to mitigate pollution impacts. - Tree plantation at schools, health centers, temples etc.																															
6.	Latitude and Longitude of all corners of the project site.	A. Plant site <table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>A</td><td>20°54'41"N</td><td>85°12'10"E</td></tr><tr><td>B</td><td>20°55'5"N</td><td>85°12'31"E</td></tr><tr><td>C</td><td>20°54'2"N</td><td>85°12'11"E</td></tr><tr><td>D</td><td>20°54'10"N</td><td>85°12'36"E</td></tr></table> B. Township <table><tr><th>Point</th><th>Latitude</th><th>Longitude</th></tr><tr><td>1</td><td>20°54'26"N</td><td>85°12'46"E</td></tr><tr><td>2</td><td>20°54'20"N</td><td>85°12'58"E</td></tr><tr><td>3</td><td>20°54'10"N</td><td>85°12'36"E</td></tr><tr><td>4</td><td>20°54'7"N</td><td>85°13'0"E</td></tr></table> C. Ash Pond – No permanent ash pond is envisaged	Point	Latitude	Longitude	A	20°54'41"N	85°12'10"E	B	20°55'5"N	85°12'31"E	C	20°54'2"N	85°12'11"E	D	20°54'10"N	85°12'36"E	Point	Latitude	Longitude	1	20°54'26"N	85°12'46"E	2	20°54'20"N	85°12'58"E	3	20°54'10"N	85°12'36"E	4	20°54'7"N	85°13'0"E	
Point	Latitude	Longitude																															
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3	20°54'10"N	85°12'36"E																															
4	20°54'7"N	85°13'0"E																															
7.	Elevation of the project site	Main Plant: 70-73 m above mean sea level Township: 70-73 m above mean sea level Ash Pond: No permanent ash pond is envisaged																															
8.	Involvement of Forest land if any.	Total Forest Land Involved: 6.996 Ha 0.95 Ha for Make-up water pump house at Samal (Forest Clearance Stage-II already been accorded by MoEF&CC vide Letter no. 5-ORB327/2017-BHU dated 01.05.2023) 6.046 Ha for Make-up water pipeline corridor from Samal barrage to TTPP site (Forest Clearance Stage-II already been accorded by MoEF&CC vide Letter no. FP/OR/Pipeline/446796/2023 dated 16.07.2025)																															
9.	Water body (Rivers, Lakes, Pond, Nala, Natural Drainage, Canal etc.) exists within the project site as well as study area	Project site: NA Study area: <table><tr><th>Water body</th><th>Distance</th><th>Direction</th></tr><tr><td>Brahmani River</td><td>2 km</td><td>E</td></tr><tr><td>Nandira Jhor (Nallah)</td><td>Adjacent to project</td><td>S</td></tr></table> Mitigation measures: - Nandira Jhor, a small rivulet/nallah leading to the Brahmani River, flows adjacent to the southern boundary of the project site. There is a road of width 9 meters between the plant boundary and Nandira Jhor. - The existing TTPP Stage-III (under construction) is designed as a Zero Liquid Discharge (ZLD) facility, and the proposed Stage-IV will also operate under ZLD conditions. No effluent discharge into Nandira Jhor is envisaged, and compliance will be ensured through effluent monitoring systems. - Regular monitoring will be carried out in the Upstream and Downstream to assess the water quality. - Greenbelt development will be undertaken at Santhpada and Jhariamba near to the Brahmani River to strengthen ecological	Water body	Distance	Direction	Brahmani River	2 km	E	Nandira Jhor (Nallah)	Adjacent to project	S	HFL of Brahmani River is 62.26 amsl (As per Irrigation Dept. Angul Letter dated 16.01.2025)																					
Water body	Distance	Direction																															
Brahmani River	2 km	E																															
Nandira Jhor (Nallah)	Adjacent to project	S																															

		buffering. Both existing Stage-III (under construction) and proposed Stage-IV units will operated under Zero Liquid Discharge (ZLD) conditions. No wastewater discharge into the Brahmani River is envisaged and compliance will be ensured through effluent monitoring systems																																				
10.	Archaeological Sites monuments / historical temples etc.	<table><tr><th>Archaeological Site</th><th>Distance</th><th>Direction</th></tr><tr><td>Anantashayana Vishnu at Saranga</td><td>5.5 km</td><td>NE</td></tr><tr><td>Ashtsambhu Temple at Kaulao</td><td>10.5 km</td><td>NE</td></tr></table>	Archaeological Site	Distance	Direction	Anantashayana Vishnu at Saranga	5.5 km	NE	Ashtsambhu Temple at Kaulao	10.5 km	NE		NOC for same has been obtained from ASI.																									
Archaeological Site	Distance	Direction																																				
Anantashayana Vishnu at Saranga	5.5 km	NE																																				
Ashtsambhu Temple at Kaulao	10.5 km	NE																																				
11.	Existence of ESZ/ ESA/ national park/ wildlife sanctuary/ biosphere reserve/ tiger reserve/ elephant reserve etc. if any within the study area.	Study area - Name of the ESZ/ESA: Not Applicable - Status of Notification: Not Applicable - Distance of project from ESZ/ESA: Not Applicable - Authenticated map of ESZ projecting Not Applicable - Distance of ESZ from project site: Not Applicable - Status of NBWL approval: Not Applicable List of Reserved and Protected Forests: <table><tr><th>Forest Name</th><th>Distance</th><th>Direction</th></tr><tr><td>Hirapur RF</td><td>6.2 km</td><td>WNW</td></tr><tr><td>Kauchiakhhol RF</td><td>6.9 km</td><td>WNW</td></tr><tr><td>Rakas RF</td><td>7.3 km</td><td>NW</td></tr><tr><td>Makundanali RF</td><td>5.6 km</td><td>NW</td></tr><tr><td>Gengutia RF</td><td>4.6 km</td><td>N</td></tr><tr><td>Kandhal RF</td><td>8.5 km</td><td>N</td></tr><tr><td>Petachira RF</td><td>7.2 km</td><td>N</td></tr><tr><td>Khalpal RF</td><td>9 km</td><td>NE</td></tr><tr><td>Balaram Prasad PF</td><td>4.9 km</td><td>SW</td></tr><tr><td>Paturia RF</td><td>7.7 Km</td><td>N</td></tr></table>			Forest Name	Distance	Direction	Hirapur RF	6.2 km	WNW	Kauchiakhhol RF	6.9 km	WNW	Rakas RF	7.3 km	NW	Makundanali RF	5.6 km	NW	Gengutia RF	4.6 km	N	Kandhal RF	8.5 km	N	Petachira RF	7.2 km	N	Khalpal RF	9 km	NE	Balaram Prasad PF	4.9 km	SW	Paturia RF	7.7 Km	N	
Forest Name	Distance	Direction																																				
Hirapur RF	6.2 km	WNW																																				
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Rakas RF	7.3 km	NW																																				
Makundanali RF	5.6 km	NW																																				
Gengutia RF	4.6 km	N																																				
Kandhal RF	8.5 km	N																																				
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Khalpal RF	9 km	NE																																				
Balaram Prasad PF	4.9 km	SW																																				
Paturia RF	7.7 Km	N																																				
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 CPA/SPA No Proximity to CPA/SPA																																				

43.3.6: 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.	2x660 MW (1320 MW) Under Construction	1x800 MW (800 MW)	2120 MW	Ultra Super Critical

43.3.7: The details of the fuel (Coal) 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 characteristics (Worst case scenario)	Linkage document
Existing: TTPP, Stage-III (Under Construction)	5.85	MCL Mines, Talcher	10	Rail & Pipe Conveyor system	Ash: 34 % Sulphur: 0.55 % Moisture: 15 (%) GCV: 2900-4100 Kcal/Kg	LoA with MCL dtd. 26.10.2023 available
Proposed: TTPP, Stage-IV	3.94	Yet to be allocated	10	Rail & Pipe Conveyor system	Ash: 41 % Sulphur: 0.50 % Moisture: 15 (%) GCV: 3300-4100 Kcal/Kg	Yet to be done

The details of the fuel 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 (KL per Annum)	Source	Distance from site (Kms)	Mode of Transportation	LDO Characteristics
Existing: TTPP, Stage-III (Under Construction)	5000 (assuming 85 % PLF with normative oil consumption 0.5 ml/kwh)	BPCL/ HPCL/ IOCL	>600	Rail	Applicable IS 15770: 2021 Sulphur –0.005-1.5 (%)
Proposed: TTPP, Stage-IV	3500 (assuming 85 % PLF with normative oil consumption 0.5 ml/kwh)	BPCL/ HPCL/ IOCL	>600	Rail	Applicable IS 15770: 2021 Sulphur –0.005-1.5 (%)

43.3.8: Water Requirement: Water requirement proposed for TTPP, Stage-III project is 95040 m³/day (3960 m³/hr) at operational phase (Presently project is under construction phase) and permission for the same has been obtained from Water Resource Department (WRD), Government of Odisha vide letter no 19522/WR dated 16.07.2025. The water requirement for the proposed TTPP, Stage-IV project is estimated as 30000 m³/day (1250 m³/hr), which shall be met partly from existing allocation of Water for Stage-III and for the balance requirement, allocation is yet to be tied up. The water will be transported to the plant site through a pipeline from 26 km from the distance from Samal barrage on the Brahmani River. The specific water consumption for the power plant will be maintained within the existing norms of 3.0 m³/MWhr.

43.3.9: Power Requirement: Power requirement of 82.5 MW for Stage-III proposed at operational phase (Presently project is under construction phase) will be obtained from Self generation of TTPP. The power requirement for the proposed project Stage-IV is estimated as 58 MW, that will be obtained from the Self generation of TTPP.

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

Sr. No.	Type of Waste	Source	Quantity generated (TPA)	Mode of Treatment	Disposal	Remarks
1	Municipal Solid Waste	Residential colony, Guest house and Plant office	328	Composting, Reuse, disposal through recycler	In house composting, Reuse & through Co-processor/ Recycler	
2	Plastic packaging waste	Packaging of goods	05	—	Reuse & through Co-processor/ Recycler	
3	E-waste	IT, C&I and Elect. Equipments	05	—	Disposal through authorized recycler	
4	Used Batteries	Backup power system	05	—	Disposal through authorized recycler	Provision in contract for buy-back
5	Bio Medical waste	Hospital	02	—	Disposal through authorized agency	
6	Hazardous Waste					
6.1	Used or Spent Oil	Operation & Maintenance works	100	—	Disposal through authorized recyclers	
6.2	Empty barrel/containers/ Liners	Operation & Maintenance work	10	—	Disposal through authorized Recyclers	
6.3	Spent ion exchange Resins	Water treatment	02	—	TSDF	
6.4	Rock wool Insulation materials	Operation & Maintenance work	10	—	TSDF	

43.3.11: Project Cost: Existing capital cost of TTPP, Stage-III project is Rs. 12543.00 Cr. The capital cost of the proposed (Stage-IV TTPP) project is Rs. 11678.04 Cr (At Current Cost level) and the capital cost for environmental protection measures is proposed as Rs.1661.8 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs.33 Crores. The employment generation from the proposed project/expansion is 80 (Permanent) & 4000 (Contractual) during construction and 125 (Permanent) & 600 (Contractual) during operation.

43.3.12: Greenbelt Development: Green belt development has been proposed in 142.72 Ha area which is about 33% of the total project area of 433.72 Ha (Total land for Stage III& IV) with total sapling of 356800 Trees. Greenbelt will be developed as per CPCB guidelines with

Local and native species with a density of 2500 trees per hectare. Total no. of 356800 saplings will be planted and nurtured in 142.72 Ha hectares in five (05) years.

43.3.13: Ash Management: Ash management for last three years- Not Applicable as the units under Stage-I & II of the project have already been decommissioned since 31.03.2021 and the construction of the Stage-III (2x660 MW) project is under progress at present.

A. Proposed ash utilization plan for expansion project:

Details	Existing generation (LMT/Yr.)	Proposed generation Stage-III (LMT/Yr.)	Proposed generation Stage-IV (LMT/Yr.)	Total (LMT/Yr.)	Utilization (LMT/Yr.)	% of utilization	Balance quantity (LMT/Yr.)	No. of storage silos with capacity
Ash (Fly & Bottom)	NA	23	16.2	39.2	39.2	100%	Nil	For Stage III: 4x1750 MT=7000 MT (DFA Silos) Envisaged For Stage IV: 2x1500 + 1x1000 =4000 MT (DFA Silos) & 2x1500= 3000 MT (Dry Bottom Ash) DBA Silos Envisaged

43.3.14: Summary of violation under EIA, 2006/court case/show cause/direction if any, related to the project under consideration: No court cases related to Environment

Other Court Cases pending- 47 Nos.

1. Appeal- 04 (Service matter)
2. Writ Petition (Civil)- 25 (Service matter-19, Contract matter-4, Admn. Matter-1)
3. Other: Misc.- 18 (Service matter-07, Contract matter-03, Labor matter-03, Land matter-01, Accident-04)

Further, there is no violation cases under the Environmental Protection Act, 1986, Van (Sanraksha Evam Samvardhan) Adhiniyam, 1980 and The Wildlife (Protection) Act, 1972.

Observation and deliberation of the EAC

43.3.15: The Committee observed and noted the following:

- The instant proposal is for Expansion of Talcher Thermal Power Project from existing 1320 MW (StageIII:2x660 MW) to 2120 MW by addition of Stage-IV (1x800 MW) Ultra Super Critical Technology Coal Based Power Plant by M/s NTPC Limited at Gram panchayat Santaparha, Jagannathpur, Bantol, & Gurujanguli at Talcher in Tehsil Talcher Sadar, Angul District, Odisha.

- ii. The committee observed that no alternative sites considered by the Project proponent, since the proposed project area has been coming inside the existing plant area. Total land requirement for the proposed project is 433.72 ha (Private:174.3ha, Govt.: 252.34 Ha & Forest land: 6.996 Ha). No R & R is involved in the proposed project.
- iii. There is involvement of total 6.993 Ha of forest land in the project out of which for 0.95 Ha Stage-II Forest Clearance has already been accorded by MoEF&CC vide Letter no. 5-ORB327/2017-BHU dated 01.05.2023 and for 6.046 Ha Stage-II clearance has been accorded by MoEF&CC vide Letter no. FP/OR/Pipeline/446796/2023 dated 16.07.2025.
- iv. The project site is not located within any Critically Polluted Area/ Severely Polluted area as per 2018 CEPI score.
- v. The committee noted that Nandira Jhor (Nallah) is Adjacent to project and Brahmani River is located at 2 km (E), from the project boundary. The committee observed that Gengutia RF, Balaram Prasad PF and Makundanali RF is located 4.6(N), 4.9(PF) and 5.6(NW) km, respectively, within the study area.
- vi. Coal requirement for the proposed project is about 3.94 MTPA that will be sourced from Nearby Commercial Coal Mines and transported through railway wagons and pipe conveyor system. LDO (3500 KL/Annum) will be transported by Rail.
- vii. Water requirement proposed for TTPP, Stage-III project is 95040 KLD at operational phase (Presently project is under construction phase) and permission for the same has been obtained from Water Resource Department (WRD), Government of Odisha vide letter no 19522/WR dated 16.07.2025. The water requirement for the proposed TTPP, Stage-IV project is estimated as 30000 KLD, which shall be met partly from existing allocation of Water for Stage-III and for the balance requirement, allocation is yet to be tied up. The water will be transported to the plant site through a pipeline from 26 km from the distance from Samal barrage on the Brahmani River. The specific water consumption for the power plant will be maintained within the existing norms of 3.0 m³/MWhr.
- viii. Power requirement of 82.5 MW for Stage-III proposed at operational phase (Presently project is under construction phase) will be obtained from Self generation of TTPP. The power requirement for the proposed project Stage-IV is estimated as 58 MW, which in full will be obtained from the Self generation of TTPP.
- ix. Existing capital cost of TTPP, Stage-III project is Rs. 12543.00 Cr. The capital cost of the proposed TTPP, Stage-IV project is Rs. 11678.04 Cr (At Current Cost level) and the capital cost for environmental protection measures is proposed as Rs.1661.8 Crores. The annual recurring cost towards the environmental protection measures is proposed as Rs. 33 Crores. The employment generation from the proposed project/expansion is 80 (Permanent) & 4000 (Contractual) during construction and 125 (Permanent) & 600 (Contractual) during operation.
- x. Green belt development has been proposed in 142.72 Ha area which is about 33% of the total project area of 433.72 Ha (Total land for Stage III & IV) with total sapling of 356800 Trees. Greenbelt will be developed as per CPCB guidelines with Local and native species with a density of 2500 trees per hectare. Total no. of 356800 saplings will be planted and nurtured in 142.72 Ha hectares in five (05) years
- xi. The proposed units (1x800 MW) will incorporate high-efficiency Electrostatic

Precipitators (ESP) to control particulate matter and selective catalytic reduction system (SCR) to control the NO_x emission. For SO₂ emission, FGD and 275 m high Chimney is proposed. EAC suggested to incorporate detailed SO₂ emission norms and their control facility/technology in the EIA/EMP reports.

- xii. Project Proponent has proposed to collect baseline data for the instant proposal from October 2026 to December 2026.
- xiii. EAC observed that the Ash Pond is near the Nandira Jhor and asked the Project Proponent to develop the thick green belt all along the periphery of the Nandira Jhor.

Recommendations of the Committee:

43.3.16: 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 to get the CCR report from the MoEF&CC RO office for the existing EC as per MoEF&CC OM dated 08/06/2022.
- ii. 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 Brahmani River and corresponding to one in 25 years of flood as per Ministry's O.M. dated 14/02/2022.
- iii. PP needs to submit NOC/permission from the State Water resource Department/Irrigation Dept. in case of diversion of any Nala/Stream/water bodies.
- iv. All the parameters as mentioned in the National Ambient Air Quality Standards (NAAQS) shall be monitored by the project proponent at the proposed locations.
- v. 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.
- vi. 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.
- vii. Biodiversity analysis of the project site and study area shall be done through any NABET accredited consultant.
- viii. Project proponent shall submit a study on site specific hydrological studies for area drainage for existing and proposed 2120 MW power plant structure through reputed Government institute. The study report along with the action plan for implementing the recommendations of the report shall be submitted along with the EIA/EMP report.
- ix. Project proponent shall prepare an integrated water shed management plan for protection and conservation of water bodies within the study area of the project site.

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 142.72 Ha of the project area as per MoEF&CC OM dated 29.10.2025 of MoEF&CC for greenbelt/green cover requirement for industries. 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 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 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. 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.
- xxiii. 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.
- xxiv. PP shall submit the action plan to adhere to the Plastic Waste Management Rules 2026 and to adhere Ministry's OM dated 18/07/2022.
- xxv. Details on renewable energy (solar plant) proposed to be installed as energy conservation measures shall be submitted.
- xxvi. 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.
- xxvii. 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 SO₂ emission norms.
- xxviii. Details of air pollution control devices to be installed in the proposed 1x800 MW TPP along with its maintenance schedule shall be incorporated in EIA/EMP report.
- xxix. Carbon emission due to proposed TPP and allied carbon sequestration/ carbon offsetting plan be submitted.
- xxx. 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.
- ii. Project proponent shall carry out study on site specific design earthquake parameters for proposed 800 MW (1x800 MW) power project through reputed institute.
- iii. Site specific risk assessment study followed by emergency preparedness plan shall be submitted.

[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 modelling.
- 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 analyse 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 43rd MEETING HELD DURING 14th MAY, 2026 THROUGH VIRTUAL MODE

S. No.	Name & Address	Role	14.05.2026
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	Absent
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	Present
14.	Shri Sundar Ramanathan	Scientist 'F' & Member Secretary	Present
15.	Dr. Rajesh Prasad Rastogi	Scientist 'D'	Present

ANNEXURE-II

APPROVAL OF CHAIRMAN – EAC

5/21/26, 9:29 AM

Sent - Mail (rp.rastogi@gov.in)

Re: Final MoM of the EAC Thermal meeting held on 14/05/2026

Inderpal Singh Matharu

7:24 AM INBOX

RAJESH PRASAD RASTOGI, Sundar Ramanathan

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 Rastogi ji,

Thanks for finalizing the MoM of the 43rd EAC Thermal meeting held on 14/05/2026.. All the points which were discussed during the meeting and later on amended in zero draft of it, have been incorporated very articulately. I approve the final MoM Of 43rd EAC held on May 2026.

Sincerely Yours

Inder Pal Singh Matharu

Chairman

EAC for Coal Mining and Thermal Power

MoEF&CC, GoI

On Wed, May 20, 2026 at 6:34 PM RAJESH PRASAD RASTOGI <rp.rastogi@gov.in> wrote:



Final MOM_43rd_EAC_THERMAL.docx

224.6 KB