



File No: IA-J-11011/331/2024-IA-II(I)
Government of India
Ministry of Environment, Forest and
Climate Change
IA Division



Date 07/01/2026



To,

Sirbas sarkar
BHARAT COAL GASIFICATION AND CHEMICALS LIMITED
Registered Office: Bandhabahal Old PO Belpahar, BIT Colony, MCL
Lakhanpur, Jharsuguda, Odisha. 768211, India
bharatcoalgasificationandchemi@gmail.com

Subject: Grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 -regarding.

Sir/Madam,

This is in reference to your application submitted to MoEF&CC vide proposal number IA/OR/IND3/560375/2025 dated 14/12/2025 for grant of prior Environmental Clearance (EC) to the proposed project under the provision of the EIA Notification 2006 and as amended thereof.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC25A2409OR5864167N
(ii) File No.	IA-J-11011/331/2024-IA-II(I)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	5(f) Synthetic organic chemicals industry ,5(f) Synthetic organic chemicals industry ,5(f) Synthetic organic chemicals industry
(vi) Sector	Industrial Projects - 3
(vii) Name of Project	Setting Up of High Ash Coal to Ammonium Nitrate Plant for Bharat Coal Gasification and Chemicals Limited(BCGCL)
(viii) Name of Company/Organization	BHARAT COAL GASIFICATION AND CHEMICALS LIMITED
(ix) Location of Project (District, State)	JHARSUGUDA, ODISHA
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	Yes

3. Ministry of Environment, Forest and Climate Change has examined the proposal seeking Environmental Clearance for proposed setting up of high ash coal to ammonium nitrate plant located at Lakhanpur, Jharsuguda, Odisha by M/s Bharat Coal Gasification and Chemicals Limited.

4. The project is covered under the Category 'A' of item 5(f) of the Schedule of Environment Impact Assessment (EIA) Notification, 2006 (amended from time to time) as the project site is located outside notified industrial area. Project also attracts general condition of EIA Notification, as project is located within 5 km distance of Severely Polluted Area i.e. Ib Valley, Jharsuguda.

5. ToR has been issued by Ministry vide letter No. IA-J-11011/331/2024-IA-II(I) dated 04.03.2025. The project proposal was considered by the Expert Appraisal Committee (Industry-3) in its 119th meeting held on 23.12.2025 wherein the Project Proponent and the accredited Consultant M/s. Enviro Infra Solutions Private Ltd (NABET Accreditation Number QCI/NABET/ENV/ACO/25/3984 dated December 10, 2025 and validity till November 26, 2028), made a detailed presentation on the salient features of the project.

6. PP reported that the proposed Coal based Ammonium Nitrate plant would require a total land area of around 350 acres (141.64 hectares). Industry will develop greenbelt in an area of 40 % i.e., 56.65 hectares out of total area of the project. The estimated project cost is Rs.25016 Crore. Raw coal requirement for the project would be around 1.66 MMTPA (Wash Coal : 0.79 MMTPA, Washery Reject 0.87 MMTPA). The requirement of coal for the proposed Project would be met from MCL's Lakhanpur OCP mines. It is reported that project site does not fall in the forest land.

7. PP reported details/Status of Land Ownership/Land Possession as follows:

- Land is allotted to South eastern coal field limited, Bilaspur, M.P with vide letter no.43015/7/86-CA/LSW on dated 15th December, 1988.
- Gazette notification regarding Land allotment to South eastern coal field limited on dated 1 May 1987, S.O 1235.
- Mahanadi Coal Field limited, Sambhalpur, Odisha is created from South eastern coal field limited, Bilaspur on dated 31 May 1992.
- Joint Venture Company of CIL and BHEL, Bharat Coal Gasification & Chemicals Limited (CIN U23935OD2024GOI045884) Ref. No.: BCGCL/Land Lease/2024/06, Date: 02.07.2024 has been incorporated on 21.05.24. It is a subsidiary of Coal India Limited (CIL) in which CIL holds 51% and BHEL holds 49%. The objective of BCGCL is to set up a coal gasification project to produce Ammonium Nitrate at Lakhanpur, Odisha.
- Certificate that proposed site falls under category of lands not suitable or economically viable for coal mining activity with reference no. Office/1414/2023-EnM, MCL, HQ (MCL) (E-1114503).
- In July-2025, MCL Board has approved for leasing the identified land (350 acres) to BCGCL for establishment of Coal to Ammonium Nitrate Plant in Lakhanpur Area of MCL for a period of 30 years, with a provision of extension of another 5 years.
- In pursuance to the guidelines for use of land acquired under CBA (A&D) Act, 1957, issued by MOC vide 43022/2020-LIAR dated 22.04.2022, MCL has requested Ministry of Coal on 10.12.2025 to grant permission to use land for coal gasification purpose, as per point 4(5i) of OM 43022/2020-LIAR dated 22.04.2022. The proposal of MCL is under consideration at Ministry of Coal.

8. The details of products and capacity as under:

S. No.	Product Details (complete name)	CAS NO.	Existing Quantity	Proposed Quantity	Total Quantity	Uses
1.	Ammonium Nitrate (Melt)	-	-	5,28,000 MT/Annum (Melt Plant)	5,28,000 MT/Annum (Melt Plant)	Fertilizers and explosives Industry
2.	Ammonium Nitrate			1,32,000MT/annum (Prill Plant)	1,32,000MT/annum (Prill Plant)	Fertilizers and

	(Prill)					explosives Industry
--	---------	--	--	--	--	------------------------

The project has proposed manufacturing of 5,28,000 MT/Annum Ammonium Nitrate from Melt Plant and 1,32,000MT/annum Ammonium Nitrate from Prill Plant.

9. PP reported that there is no violation under EIA, 2006/court case/show cause/direction related to the project under consideration.

10. PP reported that there are no national parks, wildlife sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Hirakud water reservoir is at a distance of 6.09 km in North west direction. No schedule I species is reported in 10 km study area. Details of project site proximity (in km) to sensitive areas:

S.N.	Sensitive areas	Name	Distance
1	Habitation	Adhapara	0.5 Km
2	River/Waterbody	Mahanadi River	4.79 Km
3	Hospital	Community Health Centre (CHC)	5 Km
4	School	School Adhapara	1 Km
5	Forest	Hemgir Forest Range	7.94 Km

11. Ambient air quality monitoring was carried out at 8 locations during March to May, 2025. The baseline indicates the range of concentration PM₁₀ (55 to 159 $\mu\text{g}/\text{m}^3$), PM_{2.5} (37-90 $\mu\text{g}/\text{m}^3$) SO₂ (19.5 to 38.5 $\mu\text{g}/\text{m}^3$) and NO_x (22.1- 42 $\mu\text{g}/\text{m}^3$). AAQ modeling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be as follows:

S. No.	Pollutants	Max. GLC observed, ($\mu\text{g}/\text{m}^3$)	Distance and Direction
1	PM ₁₀	6.9	800, Towards NE
2	PM _{2.5}	3.7	800, Towards NE
3	SO ₂	3.5	800, Towards NE
4	NO _x	6.6	800, Towards NE
5	NH ₃	1.5	800, Towards NE

12. PP reported that the total water requirement is 69600 KLD of which fresh water requirement of 59208 KLD will be met from back water reservoir of Hirakud Dam which is located at a distance of around 6.09 Km from the battery limit of the plant. Whereas remaining water requirement of 10392 KLD will be met from recycled water.

13. Rainwater storage tank capacity (nos. x KL): - 5 nos. of Pits with capacity 255.6 KLD

14. Effluent of 13008 KLD will be treated through in-house 14400 KLD ETP. Treated effluent will be recycled/reused for industrial purposes and utilities purposes. Sewage will be treated in the STP. The plant will be based on Zero Liquid discharge system.

15. The Power requirement for the proposed project will be around 86 MWh which includes 2MWh for Conveyor to transport Coal from mine to plant site. Power requirements will be made available from the OTPCL's Grid. 3 x 2 MVA DG sets will be kept for emergency.

16. Company is proposing boiler having capacity 280Tons/hr. Electrostatic Precipitator will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm³ for the proposed boiler and stack height will be 60 m.

17. Details of fuel:

Proposing Boiler having capacity 280Tons/hr will be installed. Details of fuel requirement are given below.

Sr. No.	Raw Material-	Unit	Quantity
1	Coal- Feed	MT/Annum	792000
2	Coal-Fuel	MT/Annum	871200
3	Lime	MT/Annum	95040
4	Make-up Water(100 m ³)	100 m ³ /Annum	195386.40
5	Power	MWh	86

18. Details of Process emissions generation and its management:

PP reported that process emissions will be generated from boiler of 280 TPH capacity. Electrostatic Precipitator will be installed for controlling the particulate emissions within the statutory limit of 150 mg/Nm³ for the proposed boiler and stack height will be 60 m.

S. No.	Source / Stack / Unit	Key Emissions / Input Parameters	Mitigation Measures Proposed
1	Boiler Stack (280 TPH)	- Stack height: 60 m - ID: 0.5 m - Flue Gas Temp: 410°C - Exit velocity: 15 m/s - PM10: 5.1 g/s - PM2.5: 3.0 g/s - SOx: 5.4 g/s - NOx: 6.2 g/s	- High Pressure Sintered Metallic Filters - ESP / Multi-cyclone separators - Optimized combustion & regular maintenance
2	DG Set Stack (3 × 2 MVA)	- Stack height: 30 m - ID: 0.15 m - Flue Gas Temp: 350°C - Exit velocity: 9 m/s - PM10: 0.45 g/s - PM2.5: 0.27 g/s - SOX: 0.37 g/s - NOx: 0.41 g/s	- Low sulphur HSD - Stack height as per CPCB norms - Acoustic enclosure & periodic tuning - Cartridge filters for PM control
3	Nitric Acid Plant Stack	- Stack height: 63 m - ID: 1.8 m - Flue Gas Temp: 152°C - Exit velocity: 26 m/s - NOx: 18.6 g/s	- Tail Gas Treatment Unit (TGTU) - CEMS for continuous monitoring - Absorber column efficiency optimization
4	Common Scrubber Stack (AN Plant)	- Stack height: 33.5 m - ID: 2.2 m - Flue Gas Temp: 57°C - Exit velocity: 15 m/s - PM10: 2.3 g/s - NH₃: 3.9 g/s	- High-efficiency wet scrubber - Ammonia absorption system - Regular cleaning of spray nozzles - Continuous monitoring of NH₃ levels
5	Gasification Unit	- Bottom Ash Generation (solid waste) - Trace particulate emissions (minor)	- Dry/Slag handling system to avoid dust - Closed conveyance for bottom ash - Use of cyclones / bag filters for gasification off-gas cleaning - Bottom ash disposal in authorized TSDF / utilization in bricks, road base, etc.
6	Syngas Cleaning System	- PM and fine dust from syngas - Acid gases: SOx, H₂S, CO₂	- High Pressure Sintered Metallic Filters - Rectisol unit for acid gas removal - Gas Treatment Unit (GTU) - SRU for H₂S control

7	Internal Roads & Fugitive Sources	• Dust from vehicle movement, coal handling & raw material yard	• Water sprinkling with tankers • Fixed sprinkler and fogging system inside plant • PCC roads and vehicle speed control • Wide greenbelt around boundary
8	Sulphur-bearing Streams	• SO _x , H ₂ S from process gas	• Sulphur Recovery Unit (SRU) • Flaring system for emergency handling • Acid gas neutralization system • Online SO _x monitoring • Lime stock feeding to minimize SO _x emission • CFBC boiler is operating at Low temperature to minimize SO _x emission

19. Details of Solid waste/ Hazardous waste generation and its management:

PP reported following details of hazardous waste generation and its management:

Sr. No	Name of Waste	Source of Generation	Category No. (As per Sch-I&II2016)	Quantity	Mode of Treatment & Disposal Method
1	Discarded Containers/Drums	Storage & Handling of chemicals & consumables	Sch-I/33.1	98.29 MT/Year	Collection, Storage, Decontamination or sale to authorized decontamination facility
2	Used/Spent Oil	Filtration	Sch-I/5.1	40 KL/Year	Collection, Storage, Transportation & Disposal by selling to registered Refiners
3	ETP Sludge & MEE Salt	In-house ETP & MEE	Sch-I/35.3	15840 MT/Year	Collection, Storage, Transportation and disposal to TSDF.
4	Spent Ion Exchange resin	DM plant	Sch-I/35.1	2000 lit in 5 years	Collection, Storage, Transportation and Disposal to authorized TSDF.
5	De-NO _x Catalyst and De-N ₂ O Catalyst	Catalyst	Sch-I/18.1	17.5 m ³ / 2years & 7.4 m ³ / 2years	After catalyst life is over, the catalyst vendor/agency takes back these catalysts for safe disposal.
6	Catalyst (Pt /Rh)	Process	Sch-I/18.1	151.6 Kg/ 185 days	After catalyst life is over, the catalyst vendor/agency takes back these catalysts and replace with new one.
7	Toal ash (Fly ash+Bed ash)	Boiler	Non Hazardous	7,68,240 MT/Year	Backfilled to MCL mine void.

The municipal solid waste generation at the project site will be 197.5 Kg/day, which will be segregated into biodegradable waste and recyclable waste. Further, biodegradable waste will be composted at project site and recyclable waste will be sent to authorized recycler.

20. PP reported that Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 18.11.2025 and Public hearing notice was published on date 31.10.2025 in 2 nos. of prominent newspapers namely English daily i.e. The Statesman and in Odia daily i.e. (The Prameya). The Public Hearing was attended by 400 no. of persons. Public hearing was conducted on 18-11-2025 at 10:30 AM at Mouza - Kushraloi, Khatano. 124, Plot no. 1140(p), Area Ac. 2.00, Kisam-Patita, R.T.-Govt. (Abad JogyaAnabadi) of Jharsuguda district which was presided by Sri Sabyasachi Panda, OAS-A(SB), Sub-Collector.

The main issues raised during the public hearing and action plan to address the issues by PP is as given below:

SL NO.	ISSUES RAISED DURING THE PUBLIC HEARING	Reply from Proponent	Action Plan address the issues	Financial Budget with time line
I.	Protection of the Air, Water, Forest	Efficient water-management and wastewater treatment systems to ensure zero liquid	Efficient water-management and wastewater treatment systems to ensure	INR 500 Crs.has been assigned for ETP and ZLD

	& Environment	discharge (ZLD) & rainwater harvesting of (approx.) Rs. 250 Crs. will be installed. About 7,800 KLD wastewater will be treated through an Effluent Treatment Plant (ETP) of 8,600 KLD capacity. Air pollution control equipment like Sulphur recovery Units, Gas treatment unit, flare system, Selective Catalyst Reduction (SCR) system, ESPs, Cyclones, Filters, Scrubbers and Rectisol will be deployed for (approx.) Rs 700 Crs for mitigation and treatment of pollutants like SO_x, NO_x, CO, N₂O and H₂S etc. High Pressure sintered metallic filters will be provided for capturing the dust particle and particulate matters for the syn-gas. Water sprinkling arrangements will be done on regular basis using water tankers outside the plant premises and by installing fixed sprinklers inside the plant premises. A total capital cost of Rs.188.33 Crore and recurring expenditure of Rs. 1.52 Crore per annum has been earmarked towards environmental safeguards.	zero liquid discharge (ZLD) & ETP rainwater harvesting of (approx.) will be installed. 13008 KLD will be treated in ETP with capacity of 14400 KLD capacity. Air pollution control equipment like Sulphur recovery Units, Gas treatment unit, flare system, Selective Catalyst Reduction (SCR) system, ESPs, Cyclones, Filters, Scrubbers and Rectisol will be deployed for (approx.) for mitigation and treatment of pollutants like SO_x, NO_x, CO, N₂O and H₂S etc. High Pressure sintered metallic filters will be provided for capturing the dust particle and particulate matters for the syn-gas. Water sprinkling arrangements will be done on regular basis using water tankers outside the plant premises and by installing fixed sprinklers inside the plant premises. A total capital cost of Rs.1628.29 Crore and recurring expenditure of Rs. 1.52 Crore per annum has been earmarked towards environmental safeguards.	System in EMP Budget in 4 years INR 42.45 Crs.has been assigned for rainwater harvesting System in CER Budget in 5 years • INR 750 Crs for mitigation and treatment of pollutants like SO_x, NO_x, CO, N₂O and H₂S etc. in EMP Budget in 4 years. A total capital cost of Rs.1628.29 Crore and recurring expenditure of Rs. 1.52 Crore per annum has been earmarked towards environmental safeguards for 5 years
2	Employment	Employment will be given to the locals as per their qualifications and experience. Employment Generation during Construction Phase will be: Direct - 5,000; Indirect - 10,000 New Business Development- Construction Industries, Transportation Sector, Chemical processing Industries, Ancillary Service Industries, Equipment's & Spares.	Employment will be given to the locals as per their qualifications and experience. Employment Generation during Construction Phase will be: Direct - 5,000; Indirect - 10,000 New Business Development- Construction Industries, Transportation Sector, Chemical processing Industries, Ancillary Service Industries, Equipment's & Spares.	Budget has been allocated in Project cost for five years
3.	Education	Skill development training programme will be conducted in the local area. Strengthening of education facilities to the local govt. school.	Skill development training programme will be conducted in the local area. Strengthening of education facilities to the local govt. school.	INR 42.46 Cr. budget has been assigned in CER for Skill development for five years INR 21.23 Cr. Budget has been assigned in CER for Strengthening of education facilities for five years
4.	Health	Health camps and different Health & Hygiene program will be ensure towards awareness campaign in consultation with district administration. • At present there is a 50 bedded Hospital in area proposed as per the demand.	Health camps and different Health & Hygiene program will be ensured towards awareness campaign in consultation with district administration. • At present there is a 50 bedded Hospital in area proposed as per the demand.	INR 42.45 Cr. Budget has been assigned in CER for Health camps and different Health & Hygiene program for five years
5.	Road dust issues & its development	• The coal required for the plant will come through a 7-kilometre belt pipe conveyor from the Ib Valley washery. There will be no road transportation involved. • The bottom ash generated from the process will remain completely within the plant boundary. The ash will go directly into the mine void for dumping. Fly ash will also be available to local villagers at free of cost for brick manufacturing and other uses.	• The coal required for the plant will come through a 7-kilometre belt pipe conveyor from the Ib Valley washery. There will be no road transportation involved. • The bottom ash generated from the process will remain completely within the plant boundary. The ash will go directly into the mine void for dumping. Fly ash will also be available to local villagers at free of cost for brick manufacturing and other uses	Budget has been allocated in Project cost during construction period of four years

6.	Water Supply to the affected village	Fresh and clean water will be provided to the local villagers in consultation with District Administration and local Sarpanch.	Fresh and clean water will be provided to the local villagers in consultation with District Administration and local Sarpanch.	INR 84.91 Cr. Budget has been assigned in CER for drinking water For Five years
7.	Ammonium Nitrate issue	To prevent any misuse of ammonium nitrate, stringent guidelines for its storage and transportation have already been issued by PESO and MoEF&CC. Gol. The storage and transportation of the product from the plant will strictly comply with these guidelines.	To prevent any misuse of ammonium nitrate, stringent guidelines for its storage and transportation have already been issued by PESO and MoEF&CC. Gol. The storage and transportation of the product from the plant will strictly comply with these guidelines.	
8.	Plantation	This project will be built on 350 acres, of which 40% will be developed as greenbelt. Creating a natural buffer around the facility.	This project will be built on 350 acres, of which 40% will be developed as greenbelt. Creating a natural buffer around the facility.	
9.	Relocation of Gram Panchayat Office of Kusraloi Panchayat	The Gram Panchayat Office of Kusraloi Panchayat shall not be shifted until the construction of new Gram Panchayat Office.	The Gram Panchayat Office of Kusraloi Panchayat shall not be shifted until the construction of new Gram Panchayat Office.	

21. Details/Status of approved Water Supply Permission: PP reported that approval has been taken from District Industry Centre Jharsuguda on 04/12/2024.

22. PP informed that the list of Project Displaced Families (PDFs), consisting of 126 families from Khandsa village and 99 families from Lechuapada village, has been duly approved by the Collector, Jharsuguda. The cut-off date for R&R has been declared as 01.01.2025. Against the sanctioned R&R amount of 45.46 crore, a total of 41.44 crore has already been disbursed to the eligible PDFs as resettlement benefits.

Details of R & R given below.

Sl. No.	Activity	Status
1.	Identification of PDF	PDF lists comprising 126 nos. from Khandsa village and 99 nos. from Lechuapada village had been approved by the Collector, Jharsuguda
2.	Declaration of R&R cut-off date	R&R cut-off date is 01.01.2025.
3.	R&R benefits to be extended to PDF's	Rs 41.44 Cr. has been disbursed out of sanctioned Rs 45.46 Cr as Resettlement benefit.

· In its meeting held on 21.07.2025, the Board deliberated on the proposal in detail and, based on the clarifications provided by GM (L&R), approved the leasing of 350 acres of MCL-acquired land to M/s Bharat Coal Gasification & Chemicals Limited (BCGCL) for establishing a Coal-to-Ammonium Nitrate Plant in the Lakhanpur Area of MCL for a period of 30 years, with a provision for a further extension of 5 years, as detailed in the agenda note.

· The process has already been initiated by MCL to obtain concurrence of Ministry of Coal, GOI for "amendment in the directions/ conditions contained in the vesting order issued under Section 11 (1) of the CBA Act pertaining to the earmarked land to be leased to BCGCL for establishment of a Coal to Ammonium Nitrate Plant in the Lakhanpur Area, MCL".

23. **Details of Best Technology Adopted:** PP reported that BHEL's Pressurized fluidized bed Gasification (PFBG) uses controlled oxygen and fluidization to convert high ash coal into syngas efficiently, aided by recycling for high carbon conversion thus increasing cold gas efficiency. Uniform mixing of coal, steam and Oxygen at temperature below ash fusion enables dry ash removal, while syngas cooling system produces steam for gasifier island. The technology produces steady product composition, no formation of tar and phenol and has lower heat loss due to moderate gasifier temperature.

24. PP reported that Industry will develop greenbelt in an area of 40 % i.e., 56.65 ha. out of total area of the project. The industry will plant 1,70,000 nos. of trees/saplings/plants.

25. Total Employment will be 3081 persons, 581 permanent employee's and approx. 500 contractual & temporary workers during the operation phase. 2000 no. of contractual employees during construction phase. Industry proposes to allocate Rs 375.34 crore @ of 1.5 % towards CER.

26. The estimated project cost is Rs 25016 Crores. Total capital cost earmarked towards environmental pollution control measures is Rs. 1682.94 Crore and the Recurring cost (operation and maintenance) will be about Rs 24.725 crore per annum. The breakup of capital and recurring cost of EMP during construction phase and operation phase is as follows:

A. Construction Phase EMP Budget

Sl. No.	Activity	Capital Cost (Crore)	Recurring Cost (Crore)
1	Air Pollution Control (temporary dust suppression, sprinkling)	20.00	–
2	Water Pollution Control (temporary drains, settling tanks, sanitation)	20.00	–
3	Noise Pollution Control Measures	0.20	–
4	Environmental Monitoring & Management	0.80	0.15
5	Occupational Health & Safety	0.80	0.25
6	Greenbelt Development – Phase I (Plantation)	13.50	23.00
7	Greenbelt Equipment (irrigation system, tankers, tools)	1.50	0.05
8	Rainwater Harvesting Structures	0.50	–
9	CER Activities	375.24	–
	Total (Construction Phase)	432.54	23.45

B. Operation Phase EMP Budget

Sl. No.	Activity	Capital Cost (Crore)	Recurring Cost (Crore)
1	Air Pollution Control Devices (1. SRU: INR 110 Cr. 2. ESP: INR 60 Cr 3. Scrubbers and Rectisols: INR 300 Cr. 4. Cyclone & Filter: INR 10 Cr. 5. Flare system: INR 220 Cr. 6. Abatement system in Nitric acid: INR 50 Cr.)	750.00	0.20
2	Water Pollution Control Measures (ETP, ZLD, reuse systems)	500.00	0.10
3	Noise Pollution Control Measures	–	0.05
4	Environmental Monitoring & Management	0.20	0.27
5	Occupational Health & Safety	0.20	0.30
6	Greenbelt Development – Phase II (Maintenance & survival)	–	0.30
7	Rainwater Harvesting (O&M)	–	0.055
	Total (Operation Phase)	1250.40	1.275

C. Grand Total EMP Cost

Component	Amount (Crore)
Total Capital Cost	1682.94

Total Recurring Cost	24.725
Overall EMP Cost	1707.665

Under Corporate Environment Responsibility (CER), the activity wise details are as given below:

S. No.	Activity Head	Detailed Activities	Year-1	Year-2	Year-3	Year-4	Year-5	Total
1	Drinking Water Infrastructure	Hand pumps, bore wells, overhead tanks, pipelines, water quality testing & maintenance in Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.	2.00	2.00	2.00	2.00	2.00	10.00
2	Peripheral Roads & other Infrastructures	Construction of various roads strengthening of water bodies, etc.	40.00	40.00	35.00	35.00	34.24	184.24
3	Education Facilities	School building repair, classrooms, furniture, smart boards, libraries, scholarships & learning materials	2.00	2.00	2.00	2.00	2.00	10.00
4	Rainwater Harvesting & Water Conservation	RWH pits, recharge trenches, percolation tanks, check dams, pond rejuvenation & awareness	10.00	10.00	10.00	10.00	10.00	50.00
5	Skill Development & Livelihood	Vocational training, IT skills, SHG support, entrepreneurship, placement assistance	2.00	2.00	2.00	2.00	2.00	10.00
6	Health Camps & Hygiene	Medical camps, mobile health units, medicines, sanitation kits, nutrition & hygiene awareness	5.00	5.00	5.00	5.00	5.00	25.00
7	Plantation & Green Development	Native species plantation, village parks, roadside greenery, maintenance & survival audits	7.00	7.00	7.00	5.00	5.00	31.00
8	Solar Lighting & Renewable Energy	Solar street lights, solar panels for schools & community buildings, maintenance & upgrades	7.00	7.00	15.00	12.00	14.00	55.00
		Year-wise Total	75.00	75.00	78.00	73.00	74.24	375.24

*All values in crores. Details are estimated.

27. Action Plan to comply with the following mitigation measures as per Ministry's Office Memorandum 31st October, 2019 regarding projects located in Severely Polluted Areas as given below:

Environment Attributes	Mitigation Measures	Compliance as on date	Remark
Air			
i.	Stack emission levels should be stringent than the existing standards in terms of the identified critical pollutants.	Conditions stipulated in consents will be fulfilled and being complied; stack emissions levels are kept well within norms.	
		Sl. No.	Stack attached to.
		Stack Height (m)	Fuel
		Fuel Consumption rate	APC Measures
		Emission standard	
		1	Boiler (280 TPH)
		60	Coal
		2660MT/Day	ESP
		2	DG Set 3X2 MVA
		30	HSD
		1200 Lit/hr.	Adequate Stack height
		3	Gasifier
		-	Coal
		2400 MT/day	• Dry/Slag handling system to avoid dust • Closed conveyance for bottom ash • Use of cyclones / bag filters for gasification off-gas cleaning

		<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td>• Bottom ash disposal in authorized TSDF / utilization in bricks, road base, etc.</td><td></td></tr></table>							• Bottom ash disposal in authorized TSDF / utilization in bricks, road base, etc.		
						• Bottom ash disposal in authorized TSDF / utilization in bricks, road base, etc.					
ii.	CEMS may be installed in all large/medium red category industries (air polluting) and connected to SPCB and CPCB server.	• CEMS will be installed in premises for CPCB server connection.									
iii.	Effective fugitive emission control measures should be imposed in the process, transportation, packing etc.	• Air pollution control equipment like Sulphur recovery Units, Gas treatment unit, flare system, Selective Catalyst Reduction (SCR) system, ESPs, Cyclones, Filters, Scrubbers and Rectisol will be deployed. Rs 750 Crs for mitigation and treatment of pollutants like SOx,NOx, CO, N2O and H2S etc. • High Pressure sintered metallic filters will be provided for capturing the dust particle and particulate matters for the syn-gas. • Water sprinkling arrangements will be done on regular basis using water tankers outside the plant premises and by installing fixed sprinklers inside the plant premises. • A total capital cost of Rs. 1682.94 Crore and recurring expenditure of Rs. 24.725 Crore per annum has been earmarked towards environmental safeguards. Source of fugitive emissions are 1. Loading and unloading of Materials 2. Movement of Trucks/Vehicles/Hydra 3. Un paved Roads Following mitigation measures are adopted • Loading and unloading will be done through Cranes. • Ensure PUC certificates for all vehicles entering in the premises. • All transporting vehicles are properly covered. • All roads are paved. • Regular water sprinkling will be done.									
iv.	Transportation of materials by rail/ conveyor belt, wherever feasible.	Our raw material (Coal) will be transported through piped conveyor belt and finished products (Ammonium Nitrate melt and Prill) are transported in closed containers through trucks as per PESO Guidelines.									
v.	Encourage use of cleaner fuels (pet coke/ furnace oil/ LSHS may be avoided).	Syn gas will be produced from coal gasification and further purification process and it will be used as clean fuel to produce Ammonium nitrate.									
vi.	Best Available Technology may be used. For example; usage of EAF/SAF/ IF in place of Cupola furnace. Usage of Supercritical technology in	BHEL's Pressurized fluidized bed Gasification (PFBG) uses controlled oxygen and fluidization to convert high ash coal into syngas efficiently, aided by recycling for high carbon conversion thus increasing cold gas efficiency. Uniform mixing of coal, steam and Oxygen at temperature below ash fusion enables dry ash removal, while syngas cooling system produces steam for gasifier island. The technology produces steady product composition, no formation of tar and phenol and has lower heat loss due to moderate gasifier temperature.									

	place of sub-critical technology.		
vii.	Increase of green belt cover by 40% of the total land area beyond the permissible requirement of 33%, Wherever feasible.	The proposed Coal based Ammonium Nitrate plant would require a total land area of around 350 acres (141.64 hectares) available with company in which 40% is being used for green belt. The plantation and green belt development is being taken care in the project premises and the space reserved for plantation is about 56.65 Ha. which is 40% of the total plant area.	
viii.	Stipulation of greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc.	Avenue plantation will be carried out Gram Panchayat, near the Roads, School of Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal.	
ix.	Assessment of carrying capacity of transportation load on roads inside the industrial premises. If the roads required to be widened, shall be prescribed as a condition.	The coal which is being fed to the project will be through belt conveyor and will not require strengthening of road. Ammonium produced from this project will be transported by an existing road 9 Km) that will connect to NH49 Strengthening of km of linking road will be done by project proponent by investing approx. 50 Crore Rs.	
Water			
i.	Reuse/recycle of treated wastewater, wherever feasible.	Total water requirement is 69600 KLD of which fresh water requirement of 59208 KLD will be met from back water reservoir of Hirakund Dam which is located at a distance of around 6.09 Km from the battery limit of the plant. Whereas remaining water requirement of 10392 KLD will be met from recycled water. Effluent of 13008 KLD will be treated through in-house 14400 KLD ETP. Treated effluent will be recycled/reused for industrial purposes and utilities purposes. Sewage will be treated in the STP. The plant will be based on Zero Liquid discharge system. INR 500 Crs. is allocated for installation of ETP and ZLD System	
ii.	Continuous monitoring of effluent quality/quantity in large and medium Red Category Industries (water polluting).	"The proposed Coal-to-Ammonium Nitrate (Melt & Prill) complex is a Red Category industry as per CPCB classification; however, with respect to water pollution potential, the plant will operate on a Zero Liquid Discharge (ZLD) concept, and therefore falls under Orange Category for water pollution load, with no discharge outside the plant boundary" and continuous monitoring of the effluent may not be applicable. However regular monitoring of effluent characteristics will be done through NABL lab and results are well within the standard. The wastewater generated from the Process will be treated in ETP & the domestic waste generated is treated in STP. ZLD is being maintained. "The proposed Coal-to-Ammonium Nitrate (Melt & Prill) Plant falls in a severely polluted (CEPI) area; however, the project ensures no increase in the water pollution load as the facility will operate on a Zero Liquid Discharge (ZLD) system with complete recycling and no external effluent discharge. No wastewater will be discharged into any river, drain, or groundwater. All hazardous residues	CAS No's: Nitric Acid- 7697-37-2 AN Melt/AN Prills- 6484-52-2

		will be sent to authorized TSDF. Stormwater and wastewater systems are fully segregated, and online monitoring will be maintained as per SPCB/CPCB norms. Hence, the project is fully compliant with CEPI norms applicable to severely polluted areas.”																			
iii.	A detailed water harvesting plan may be submitted by the project proponent	Company will have an arrangement to utilize most of the rain water (5 Pits with capacity 255.6 KLD have already been provided in premises)																			
iv.	Zero liquid discharge wherever t-chno - economically feasible.	ZLD will be maintained. Same practice will be continued in future also.																			
v.	In case, domestic waste water generation is more than 10 KLD, the industry may install STP.	STP of capacity 30 KLD will be installed in the industry.																			
Land																					
i.	Increase of green belt cover by 40% of the total land area beyond the permissible requirement of 33%, wherever, feasible for new projects.	The proposed Coal based Ammonium Nitrate plant would require a total land area of around 350 acres (141.64 hectares) available with company in which 40%) is being used for green belt. The plantation and green belt development is being taken care in the project premises and the space reserved for plantation is about 56.65 Ha. which is 40% of the total plant area.																			
ii.	Stipulation of greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc.	Avenue plantation will be carried out Gram Panchayat, near the Roads, School of Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal.																			
iii.	Dumping of waste (fly ash, slag, red mud, etc.) may be permitted only at designated locations approved by SPCBs/ PCCs.	The ash shall remain within the plant boundary for further handling & directly dumping into the designated mine voids of MCL. The ash production from BCGCL is estimated to be 0.8 MTPA. The coal extraction capacity of nearby mines of MCL is 60 MTPA, so there will be enormous scope for dumping of BCGCL ash in MCL mine voids. Currently, a small mine void of 5 acres has been identified, which can accommodate the BCGCL ash for ~8 years of operation, after which alternative voids of MCL mines shall be identified in the nearby vicinity. Transportation from plant premises to mine voids will be done by covered Tippers. No public roads shall be utilized for the ash transportation. Water sprinkling arrangements will be done on regular basis by installing fixed sprinklers inside the plant premises and using water tankers outside the plant premises. Along with dumping of ash in the void, a layer of soil will be progressively laid for reclamation and green land-scaping.																			
iv.	More stringent norms for management of hazardous waste. The waste generated should be preferably utilized in co- processing.	<table><tr><th>S. No.</th><th>Name of Waste</th><th>Source of Generation</th><th>Category No. (As per Sch-I&II 2016)</th><th>Quantity</th><th>Mode of Treatment & Disposal Method</th></tr><tr><td>1.</td><td>Discarded Containers/ Drums</td><td>Storage & Handling of chemicals & consumables</td><td>Sch-I/33.1</td><td>200 Nos.</td><td>Collection, Storage, Decontamination or sale to authorized decontamination facility.</td></tr><tr><td>2.</td><td>Used/ Spent Oil</td><td>Filtration</td><td>Sch-I/5.1</td><td>20 KLPA</td><td>Collection, Storage, Transportation & Disposal by selling to registered Refiners.</td></tr></table>	S. No.	Name of Waste	Source of Generation	Category No. (As per Sch-I&II 2016)	Quantity	Mode of Treatment & Disposal Method	1.	Discarded Containers/ Drums	Storage & Handling of chemicals & consumables	Sch-I/33.1	200 Nos.	Collection, Storage, Decontamination or sale to authorized decontamination facility.	2.	Used/ Spent Oil	Filtration	Sch-I/5.1	20 KLPA	Collection, Storage, Transportation & Disposal by selling to registered Refiners.	
S. No.	Name of Waste	Source of Generation	Category No. (As per Sch-I&II 2016)	Quantity	Mode of Treatment & Disposal Method																
1.	Discarded Containers/ Drums	Storage & Handling of chemicals & consumables	Sch-I/33.1	200 Nos.	Collection, Storage, Decontamination or sale to authorized decontamination facility.																
2.	Used/ Spent Oil	Filtration	Sch-I/5.1	20 KLPA	Collection, Storage, Transportation & Disposal by selling to registered Refiners.																

		<table><tr><td>3.</td><td>ETP Sludge & MEE Salt</td><td>In-house ETP & MEE</td><td>Sch-I/35.3</td><td>326 KLPA</td><td>Collection, Storage, Transportation and disposal to authorized recycler.</td></tr><tr><td>4.</td><td>Spent ion Exchange resin</td><td>DM plant</td><td>Sch-I/35.1</td><td>2000 lit in 5 years</td><td>Collection, Storage, Transportation and disposal to authorized recycler</td></tr><tr><td>5.</td><td>NO_x abator used 5 NO_x abator</td><td>Catalyst</td><td>Sch-I/18.1</td><td>7 MT/ five years</td><td>Collection, Storage, Transportation and disposal to authorized recycler</td></tr><tr><td>6.</td><td>Catalyst (Pt/ Rh)</td><td>Process</td><td>Sch-I/18.1</td><td>110 kg/year</td><td>Regeneration</td></tr></table>	3.	ETP Sludge & MEE Salt	In-house ETP & MEE	Sch-I/35.3	326 KLPA	Collection, Storage, Transportation and disposal to authorized recycler.	4.	Spent ion Exchange resin	DM plant	Sch-I/35.1	2000 lit in 5 years	Collection, Storage, Transportation and disposal to authorized recycler	5.	NO _x abator used 5 NO _x abator	Catalyst	Sch-I/18.1	7 MT/ five years	Collection, Storage, Transportation and disposal to authorized recycler	6.	Catalyst (Pt/ Rh)	Process	Sch-I/18.1	110 kg/year	Regeneration			
3.	ETP Sludge & MEE Salt	In-house ETP & MEE	Sch-I/35.3	326 KLPA	Collection, Storage, Transportation and disposal to authorized recycler.																								
4.	Spent ion Exchange resin	DM plant	Sch-I/35.1	2000 lit in 5 years	Collection, Storage, Transportation and disposal to authorized recycler																								
5.	NO _x abator used 5 NO _x abator	Catalyst	Sch-I/18.1	7 MT/ five years	Collection, Storage, Transportation and disposal to authorized recycler																								
6.	Catalyst (Pt/ Rh)	Process	Sch-I/18.1	110 kg/year	Regeneration																								
Other Condition (Additional)																													
i.	Monitoring of compliance of EC conditions may be submitted with third party audit every year.	Condition of monitoring of compliances of EC condition by third party will be followed after grant EC.																											
ii.	The % of the CER may be at least 1.5 times the slabs given in the OM dated 01.05.2018 for SPA and 2 times for CPA in case of Environmental Clearance.	<table><tr><td colspan="2">The CER amount as per OM dated 01.05.2018 for Capital Investment of Rs. Rs.25016 is Rs. 375.24 Cr (1.5 %).</td></tr><tr><td>S. N.</td><td>Activities</td><td>Revised Amount (crore)</td></tr><tr><td>1</td><td>Infrastructure creation for drinking water supply by providing hand pumps in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)</td><td>84.91</td></tr><tr><td>2</td><td>Cross drainage structure in village roads for better drainage at nearby villages Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)</td><td>63.64</td></tr><tr><td>3</td><td>Rainwater harvesting pits in village buffer zone (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)</td><td>84.91</td></tr><tr><td>4</td><td>Skill development training programme in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)</td><td>42.46</td></tr><tr><td>5</td><td>Scientific support to farmers for crop & fodder yield improvement in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)</td><td>21.23</td></tr><tr><td>6</td><td>Plantation in community areas with native species in nearby villages (Kusraloi, Adhapara, Remda,</td><td>21.23</td></tr></table>				The CER amount as per OM dated 01.05.2018 for Capital Investment of Rs. Rs.25016 is Rs. 375.24 Cr (1.5 %).		S. N.	Activities	Revised Amount (crore)	1	Infrastructure creation for drinking water supply by providing hand pumps in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	84.91	2	Cross drainage structure in village roads for better drainage at nearby villages Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	63.64	3	Rainwater harvesting pits in village buffer zone (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	84.91	4	Skill development training programme in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	42.46	5	Scientific support to farmers for crop & fodder yield improvement in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	21.23	6	Plantation in community areas with native species in nearby villages (Kusraloi, Adhapara, Remda,	21.23	PP agreed and abided by this condition.
The CER amount as per OM dated 01.05.2018 for Capital Investment of Rs. Rs.25016 is Rs. 375.24 Cr (1.5 %).																													
S. N.	Activities	Revised Amount (crore)																											
1	Infrastructure creation for drinking water supply by providing hand pumps in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	84.91																											
2	Cross drainage structure in village roads for better drainage at nearby villages Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	63.64																											
3	Rainwater harvesting pits in village buffer zone (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	84.91																											
4	Skill development training programme in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	42.46																											
5	Scientific support to farmers for crop & fodder yield improvement in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	21.23																											
6	Plantation in community areas with native species in nearby villages (Kusraloi, Adhapara, Remda,	21.23																											

			Kudaloi, Bandhbahal etc.)		
		7	Provision of solar panel lights in villages & government primary schools in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)	56.86	
		Total		375.24	

28. SPCB comments:

As per para 6 of OM no. IA-J-11013/20/2025-IA-P dated 25th November 2025, the project is exempted from obtaining comments from SPCB/PCCs till 31.01.2026.

29. Deliberations by the EAC:

The following points were discussed in the meeting:

(i) PP clarified that reasons for exceeding the baseline data w.r.t PM10 is due to dust generated from mining area as well as vehicle movement on road. PP committed that dust emission will be controlled by providing water sprinkling around the dust sources and regular dust removal/cleaning will be done from road side.

(ii) PP provided the details of the incorporation certificate and GST registration certificate of BCGCL.

(iii) PP provided the following mitigation measures for protection of ponds located on south -eastern side of project site.

(a) The pond located ~500m on south-eastern side from the plant boundary will be safeguarded through a protection and mitigation measures designed to prevent untreated runoff, effluent, and/or airborne contaminants from entering the water body.

(b) Key interventions include implementation of Zero Liquid Discharge, segregation of stormwater and process effluents. Periodic monitoring will be conducted to track water quality, supported by real-time monitoring of at critical points.

(c) Complementary measures such as efficient dust and air-emission control systems, dry handling of solid wastes will reduce indirect pollution pathways. Emergency spill containment systems, secondary storage barriers, and a structured spill-response plan will ensure rapid control of accidental releases.

(iv) PP provided the clarification on land acquisition Right of way for the Government and Private land :

a. The Project has obtained Single Window Clearance from High Level Clearance Authority (HLCA), Dept. of Industries Govt. of Odisha.

b. District Industries Centre, Jharsugada has assessed the requirement of Operational Water and certified the same to be 2,467 cum/hr vide their certificate dated 04.12.2025. The requirement shall be met from the back-water reservoir of Hirakud Dam.

c. Tendering activities are in progress for appointment of Consultant for (i) Identification of suitable intake water point with coordinates for construction of Intake Jetty, (ii) Suggest a suitable layout and drawl mechanism, (iii) Detailed route survey for laying of above ground pipeline for transmission of water to the plant site.

d. Based on the Consultant Report, the route with the minimum requirement of tenancy land and the least disturbance to local residents/community will be selected. Right of Way (RoW) shall be obtained for Govt. Land, and necessary acquisition / permissions shall be obtained for Tenancy Land.

e. Accordingly, the modalities for appointment of suitable contractor for laying of permanent water system will be finalized through tendering by project management consultant.

(v) PP provided the details of conveyance system for the coal transportation from coal Mining to project and ash transportation from project site to mine voids for its disposal;

MD/BCGCL informed that the BCGCL plant is situated at the pit head of Integrated Lakhanpur-Belpahar-Lilari open cast project of Mahanadi Coalfields Limited (MCL) with ML area of 4399.246 hectares. It may be seen from the plan that the coal conveying route and ash disposal route lies within the mine lease area and as such the entire operations of coal and ash transportation is confined within the mine boundary. The details of the coal and ash transportation are mentioned below:

Coal Transportation:

- i. Coal requirement (washed coal & rejects) for the project would be around 1.67 MMTPA.
- ii. The requirement would be met from nearby Ib Valley washery of MCL located at a distance of around 3 km from proposed plant site.
- iii. The coal required will come through belt pipe conveyor from the Ib Valley Washery to BCGCL plant site, within the existing MCL mine boundary. No road transportation shall be involved.
- iv. Permanent/Perennial arrangements for suppression of dust/fines will be made by installing fixed sprinklers en-route from the washery to the plant.

Ash Transportation:

- i. Vide letter dated 14.12.2025, MCL has approved for utilization of its mine voids for disposal of ash to be generated by BCGCL.
- ii. The ash generated at BCGCL Plant shall remain within the plant boundary for further handling & directly dumping into the designated mine voids. Transportation from plant premises to mine voids will be done by covered Tippers. No public roads shall be utilized for the ash transportation. Pucca road with black top shall be used for transportation of ash. Water sprinkler shall be provided at loading and unloading of ash point.
- iii. Permanent/Perennial arrangements for dust suppression will be made by installing fixed sprinklers en-route from the plant to the mine void. Along with dumping of ash in the designated voids, a layer of soil will be progressively laid for reclamation and green land-scaping.

(vi) PP provided details of **Preventive measures proposed for potential ammonia leakage in nearby habitations and villages**. Ammonia will be stored in bulk quantities (2x5000 MT) within the plant boundary that are double-walled and maintained at required cryogenic temperature. One ammonia tank will be kept as standby arrangement. A comprehensive ammonia detection and alarm system, comprising fixed sensors with audible and visual alarms, shall be installed around storage tanks, process areas, and nearby locations, with regular testing to ensure functionality. Adequate emergency equipment—gas masks, breathing apparatus, eyewash stations, and safety showers—shall be readily accessible, and personnel shall be trained in their proper use. Clear warning signage, and immediate steps including emergency contact details shall be provided to nearby villages, OPGCL plant and other townships within the proximity of the plant.

(vii) PP submitted steam balance for the proposed project.

(viii) PP submitted revised water balance chart for the proposed project.

(ix) PP submitted the revised layout map indicating greenbelt and 90% of the periphery having green belt with of more than 30 mt and rest is more than 10 mt. The total green belt area is more than 40% of the project area.

(x) PP submitted the revised details of hazardous waste generation and its management. PP informed that area earmarked for interim storage of hazardous waste is 2500 m².

(xi) PP submitted details of green belt development plan and its budget:

Year-wise Afforestation Schedule

Sr. No.	Year of Plantation	Target of Plantation	Assumed Survival (%)	Replenishment of Casualties	Total
1	First year	85000	80	-	68000
2	Second year	85000	80	17,000	68000

(Source: EIS analysis)

Total 170000 saplings will be planted in two years in more than 40% of project area of the plant.

Greenbelt Development Budget (56.65 ha)

Total Greenbelt Area: 56.65 ha

Total Plants: 1,70,000 trees (with shrubs, herbs, lawn & gardens)

Plantation Period: 2 years

Average Density: -3,000 plants/ha

Table 2: Green Belt Budget (estimated)

Items	Cost per plant (Rs.)	Total cost for 1 st Year Plantation in Rs.	2 nd Year recurring cost (assuming 80% survival of plant)	3 rd Year onward recurring cost
Purchase cost of saplings	50	42,50,000	42,50,000	Nil
Tree planting cost	80	68,00,000	68,00,000	Nil
Watering cost (per year)	200	1,70,00,000	3,40,00,000	3,40,00,000
Maintenance cost (per year)	100	85,00,000	1,70,00,000	1,70,00,000
Manure / pesticides (per year)	150	1,27,50,000	2,55,00,000	2,55,00,000
Misc. cost for lawn, garden & greenery (lump sum)	—	5,00,000	2,00,000	2,00,000
Total	—	4,98,00,000	8,77,50,000	7,67,00,000

Total Greenbelt Budget (5 Years) earmarked is Rs 36.765 Crore for capital cost and maintenance cost.

The committee was satisfied with the response provided by PP on above information.

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures proposed during the implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, as amended from time to time.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for the grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate-legislations, etc., as may be applicable to the project. The

PP shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

30. **The EAC, after detailed deliberations, recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure 1.**

31. Minutes of the meeting may kindly be seen at:
https://parivesh.nic.in//utildoc/1212398663_1767185746405.pdf

32. Based on the recommendations made by EAC in its 119th meeting held on 22-23th Dec 2025, the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance for “ **Setting up of high ash coal to ammonium nitrate plant located at Lakhanpur, Jharsuguda, Odisha by M/s Bharat Coal Gasification and Chemicals Limited** ” under the provisions of the EIA Notification, 2006, and the amendments therein, subject to compliance of the Specific and General terms and conditions as mentioned at Annexure-1.

33. The Ministry reserves the right to stipulate additional conditions, if found necessary. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project. The Project Proponent is under obligation to implement commitments made in the Environment Management Plan, which forms part of this EC.

34. General Instructions:

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

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

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

(d) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during perational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate

account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.

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

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

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

This issues with the approval of the Competent Authority.

Copy To

1. The Deputy Director General of Forests (C), Ministry of Env., Forest and Climate Change, Integrated Regional Office, A/3, Chandersekharpur, Bhubaneswar, Odisha – 751023.
2. The Additional Chief Secretary, Department of Forest, Environment and Climate Change, Govt. of Odisha, Kharavel Bhavan, Bhubaneswar, Odisha.
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 32.
4. The Member Secretary, Odisha State Pollution Control Board, Paribesh Bhawan, A/118, Nilakantha Nagar, Unit – VIII, Bhubaneswar, Odisha 751012.
5. The Member Secretary, Central Ground Water Authority, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001.
6. Collector & District Magistrate, Jharsuguda, Office of the District Magistrate and Collector Jharsuguda PIN-768204 Odisha
7. Guard File/Record File/Monitoring File/MoEF&CC Website/Parivesh Portal.

Annexure 1

Specific EC Conditions for (Synthetic Organic Chemicals Industry)

1. Specific Conditions

S. No	EC Conditions
1.1	(i) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented
1.2	(ii) ESP along with adequate stack height shall be provided to the proposed coal fired boilers (2 nos. x 140 TPH) to control particulate emission as per CPCB /SPCB norms. Stack height shall be calculated as CPCB norms. Tail Gas Treatment Unit (TGTU) along with stack height of 63 m shall be provided to

S. No	EC Conditions
	Nitric Acid Plant. Ammonia absorption system along with stack height of 33.5 m shall be provided to common scrubber stack. Cyclones followed by bag filters shall be provided for gasification off-gas cleaning. Gas Treatment Unit (GTU) along with SRU shall be provided to Syngas Cleaning system. Stack height of 30 m along with acoustic enclosure shall be provided to each of the existing D.G. set (3 x 2 MVA) as per CPCB/SPCB norms.
1.3	(iii) Fugitive emissions in the work zone environment, product, raw materials storage area etc. shall be regularly monitored. Fixed and mobile Water sprinkling system shall be provided to suppress dust emission from road. PCC /bitumen roads shall be provided within the project site. Wide greenbelt around boundary shall be provided to control fugitive emissions. The emissions shall conform to the limits prescribed by SPCB.
1.4	(iv) Total fresh water requirement from back water reservoir of Hirakud Dam shall not exceed 59208 m ³ /day.
1.5	(v) NOC from the Competent Authority shall be obtained before start of the construction of plant for drawing of the water from back water reservoir of Hirakund Dam for the proposed expansion project activities. State Pollution Control Board / Pollution Control Committees shall not issue the Consent to Operate (CTO) under Air (Prevention and Control of Pollution) Act and Water (Prevention and Control of Pollution) Act till the project proponent shall obtain such permission.
1.6	(vi) Total industrial effluent generation shall not exceed 13008 KLD. Industrial effluent shall be treated in ETP comprising primary, secondary and tertiary treatment systems. PP shall ensure the treatment of effluent containing contaminants including dissolved gases such as hydrogen sulphide, carbonyl Sulphide, hydrogen cyanide etc. Dedicated treatment unit shall be provided for Cyanide effluent stream including monitoring mechanism for specific parameters. Domestic effluent shall be treated in STP and treated sewage shall be reused for horticulture purpose. The unit shall maintain Zero Liquid Discharge (ZLD) system.
1.7	(vii) The green belt of at least 15 m-30m width shall be developed in an area of 56.65 hectares i.e., 40% of the total plot area within plant premises. A total of 170000 nos. of trees shall be planted within plant premises. Tree saplings selected for the plantation should be of sufficient height, preferably 6-ft shall be planted in greenbelt area. Indigenous species shall only be developed as part of greenbelt and non-indigenous / alien species shall be replaced with native species. No invasive or alien or non-native tree species shall be selected for plantation. PP shall develop at least 20 variety of species as a part of greenbelt. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department and native species shall be developed. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP shall annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1 st July of every year for the

S. No	EC Conditions
	activities carried out during previous year.
1.8	(viii) A total of 1,989 trees have been located in the plot area. PP shall obtain prior approval from the State Government Authority for any removal of tree. PP shall carry out transplantation of tree instead cutting.
1.9	(ix) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.
1.10	(x) Roof top rain water shall be collected in 5 x 255.6 KL underground impermeable storage tank. The rain water collected shall be reused within the plant after filtration as per requirement. Storm water from the open area shall be collected separately and stored in an underground impermeable storage tank, which shall be recycled/reused within the plant premises.
1.11	(xi) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions by engaging Environment Officials. In addition to this, one safety & health officer as per the qualification given in Factories Act, 1948 shall be engaged within a month of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
1.12	(xii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP Rs. 432.54 Crores (Capital cost) and Rs. 23.45 Crore per annum (Recurring cost) during construction phase and the budget proposed under EMP Rs. 1250.4 Crores (Capital cost) and Rs. 1.275 Crore per annum (Recurring cost) during Operation phase shall be kept in a separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.
1.13	(xiii) Plantation of saplings shall be carried out as a part of tree plantation campaign "EK PED MAA ke NAAM" and details of the same to be uploaded in the Meri LiFE portal (https://merilife.nic.in) in

S. No	EC Conditions
	respect to this Ministry's OM No. IA3-22/3/2024-IA.III(E-241594) dated 24th July 2024.
1.14	(xiv) All the hazardous waste shall be managed and disposed as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016. Hazardous waste such as Distillation Residue and Off Specification Products shall be either sent to common incineration site or send for coprocessing. Solid waste shall be segregated into dry and wet garbage at site in accordance to the Solid Waste Management Rules, 2016. Wet garbage shall be converted into compost and used as manure for greenbelt development.
1.15	(xv) The ash generated at BCGCL Plant shall be dumped into the designated mine voids in an environmentally sound manner. Fly ash shall be collected in Silo. Transportation from plant premises to mine voids will be done by covered Tippers. Water sprinkling arrangements shall be done on regular basis using water tankers outside the plant premises and by installing fixed sprinklers inside the plant premises. Pucca road shall be constructed with proper loading and unloading facility as well as pollution control measures for handling and transportation of ash. PP shall follow the MoEF&CC's guidelines for utilization of flyash by backfilling in mine voids.
1.16	(xvi) The project proponent shall comply with the environment norms for 'synthetic organic chemical' as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 608 (E), dated 21.7.2010 under the provisions of the Environment (Protection) Rules, 1986.
1.17	(xvii) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996. The occupier of new as well as expansion projects shall be required to comply with the provisions of the MSIHC Rules, 1989 including notifying their activities or seeking site approval from the concerned authorities, to address operational safety aspects. In doing so, various schedule, particularly Schedule-5 of the said rules may be referred.
1.18	(xviii) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.
1.19	(xix) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report. PP shall take all the safety measures while storing ammonia and ammonium nitrate. PP shall obtain industrial license from DPIIT for manufacturing of ammonium nitrate.

S. No	EC Conditions
1.20	(xx) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.
1.21	(xxi) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.
1.22	(xxii) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.
1.23	(xxiii) There shall be adequate space inside the plant premises earmarked for parking of vehicles for raw materials and finished products and no parking to be allowed outside on public places.
1.24	(xxiv) Storage of raw materials shall be either in silos or in covered areas to prevent dust pollution and other fugitive emissions. All stockpiles should be constructed over impervious soil and garland drains with catch pits to trap runoff material shall be provided. Chemicals shall be stored in covered sheds and wind breaking walls/curtains shall be provided around coal storage area to prevent its suspension during high wind speed. All Internal roads shall be paved. The Air Pollution Control System shall be interlocked with process plant/machinery for shutdown in case of operational failure of Air Pollution Control Equipment.
1.25	(xxv) PP shall sensitize and create awareness among the people working within the project area as well as its surrounding area on the ban of Single Use Plastic in order to ensure the compliance of Notification published by MOEFCC on 12th August, 2021. A report along with photographs on the measures taken shall also be included in the six-monthly compliance report being submitted to concerned authority.
1.26	(xxvi) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

S. No	EC Conditions																																	
1.27	As proposed, PP shall comply with the following mitigation measures as per Ministry's Office Memorandum 31st October, 2019 regarding Projects located in Severely Polluted Area:																																	
	Environment Mitigation Attributes	Measures	Compliance as on date			Remark																												
	Air	Conditions stipulated in consents will be fulfilled and being complied; stack emissions levels are kept well within norms. <table> <tr> <th>Sl. No.</th> <th>Stack attached to.</th> <th>Stack Height (m)</th> <th>Fuel</th> <th>Fuel Consumption rate</th> <th>APC Measures</th> <th>Emission standard</th> </tr> <tr> <td>1.</td> <td>Boiler (280 TPH)</td> <td>60</td> <td>Coal</td> <td>2660MT/Day</td> <td>ESP</td> <td></td> </tr> <tr> <td>2.</td> <td>DG Set 3X2 MVA</td> <td>30</td> <td>HSD</td> <td>1200 Lit/hr.</td> <td>Adequate Stack height</td> <td></td> </tr> <tr> <td>3.</td> <td>Gasifier -</td> <td></td> <td>Coal</td> <td>2400 MT/day</td> <td></td> <td></td> </tr> </table>					Sl. No.	Stack attached to.	Stack Height (m)	Fuel	Fuel Consumption rate	APC Measures	Emission standard	1.	Boiler (280 TPH)	60	Coal	2660MT/Day	ESP		2.	DG Set 3X2 MVA	30	HSD	1200 Lit/hr.	Adequate Stack height		3.	Gasifier -		Coal	2400 MT/day		
	Sl. No.	Stack attached to.	Stack Height (m)	Fuel	Fuel Consumption rate	APC Measures	Emission standard																											
	1.	Boiler (280 TPH)	60	Coal	2660MT/Day	ESP																												
	2.	DG Set 3X2 MVA	30	HSD	1200 Lit/hr.	Adequate Stack height																												
	3.	Gasifier -		Coal	2400 MT/day																													
	i.	Stack emission levels should be stringent than the existing standards in terms of the identified critical pollutants.	Dry/Slag handling system to avoid dust Closed conveyance for bottom ash Use of cyclones / bag filters for gasification off-gas cleaning Bottom ash disposal in authorized TSDF / utilization in bricks, road base, etc.																															
	ii.	CEMS may be installed in all large/medium red category industries (air polluting) and connected to SPCB and	CEMS will be installed in premises for CPCB server connection.																															

S. No	EC Conditions
	CPCB server. · Air pollution control equipment like Sulphur recovery Units, Gas treatment unit, flare system, Selective Catalyst Reduction (SCR) system, ESPs, Cyclones, Filters, Scrubbers and Rectisol will be deployed. Rs 750 Crs for mitigation and treatment of pollutants like Sox,NOx, CO, N2O and H2S etc. · High Pressure sintered metallic filters will be provided for capturing the dust particle and particulate matters for the syn-gas. · Water sprinkling arrangements will be done on regular basis using water tankers outside the plant premises and by installing fixed sprinklers inside the plant premises. · A total capital cost of Rs. 1628.39 Crore and recurring expenditure of Rs. 1.52 Crore per annum has been earmarked towards environmental safeguards. Source of fugitive emissions are 1. Loading and unloading of Materials 2. Movement of Trucks/Vehicles/Hydra 3. Un paved Roads Following mitigation measures are adopted · Loading and unloading will be done through Cranes. · Ensure PUC certificates for all vehicles entering in the premises. · All transporting vehicles are properly covered. · All roads are paved. · Regular water sprinkling will be done. Transportation of materials by rail/ conveyor belt, wherever feasible. Encourage use of cleaner fuels (pet coke/ furnace oil/ LSHS may be avoided). Best Available Technology may be used. For example; usage of EAF/SAF/ IF in place of Cupola furnace. Usage of Supercritical iii. Effective fugitive emission control measures should be imposed in the process, transportation, packing etc. iv. Transportation of materials by rail/ conveyor belt, wherever feasible. v. Encourage use of cleaner fuels (pet coke/ furnace oil/ LSHS may be avoided). vi. Best Available Technology may be used. For example; usage of EAF/SAF/ IF in place of Cupola furnace. Usage of Supercritical Our raw material (Coal) will be transported through piped conveyor belt and finished products (Ammonium Nitrate melt and Prill) are transported in closed containers through trucks as per PESO Guidelines. Syn gas will be produced from coal gasification and further purification process and it will be used as clean fuel to produce Ammonium nitrate. BHEL's Pressurized fluidized bed Gasification (PFBG) uses controlled oxygen and fluidization to convert high ash coal into syngas efficiently, aided by recycling for high carbon conversion thus increasing cold gas efficiency. Uniform mixing of coal, steam and Oxygen at temperature below ash fusion enables dry ash removal, while syngas cooling system produces steam for gasifier island. The technology produces steady product composition, no formation of tar and phenol and has lower heat loss due to moderate gasifier temperature.

S. No	EC Conditions
	technology in place of sub-critical technology. Increase of green belt cover by 40% of the total land area beyond the permissible requirement of 33%, Wherever feasible. Stipulation of greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. Assessment of carrying capacity of transportation load on roads inside the industrial premises. If the roads required to be widened, shall be prescribed as a condition. Water Reuse/recycle of treated wastewater, wherever feasible. vii. The proposed Coal based Ammonium Nitrate plant would require a total land area of around 350 acres (141.64 hectares) available with company in which 40%) is being used for green belt. The plantation and green belt development is being taken care in the project premises and the space reserved for plantation is about 56.65 Ha. which is 40% of the total plant area. viii. Avenue plantation will be carried out Gram Panchayat, near the Roads, School of Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal. ix. The coal which is being fed to the project will be through belt conveyor and will not require strengthening of road. Ammonium produced from this project will be transported by an existing road 9 Km) that will connect to NH49 Strengthening of km of linking road will be done by project proponent by investing approx. 50 Crore Rs. i. Total water requirement is 69600 KLD of which fresh water requirement of 59208 KLD will be met from back water reservoir of Hirakund Dam which is located at a distance of around 6.09 Km from the battery limit of the plant. Whereas remaining water requirement of 10392 KLD will be met from recycled water. Effluent of 13008 KLD will be treated through in- house 14400 KLD ETP. Treated effluent will be recycled/reused for industrial purposes and utilities purposes. Sewage will be treated in the STP.

S. No	EC Conditions
	The plant will be based on Zero Liquid discharge system. INR 500 Crs. is allocated for ETP and ZLD System “The proposed Coal-to-Ammonium Nitrate (Melt & Prill) complex is a Red Category industry as per CPCB classification; however, with respect to water pollution potential, the plant will operate on a Zero Liquid Discharge (ZLD) concept, and therefore falls under Orange Category for water pollution load, with no discharge outside the plant boundary” and continuous monitoring of the effluent may not be applicable. However regular monitoring of effluent characteristics will be done through NABL lab and results are well within the standard. The wastewater generated from the Process will be treated in ETP & the domestic waste generated is treated in STP. ZLD is being maintained. “The proposed Coal-to-Ammonium Nitrate (Melt & Prill) Plant falls in a severely polluted (CEPI) area; however, the project ensures no increase in the water pollution load as the facility will operate on a Zero Liquid Discharge (ZLD) system with complete recycling and no external effluent discharge. No wastewater will be discharged into any river, drain, or groundwater. All hazardous residues will be sent to authorized TSDF. Stormwater and wastewater systems are fully segregated, and online monitoring will be maintained as per SPCB/CPCB norms. Hence, the project is fully compliant with CEPI norms applicable to severely polluted areas.” A detailed water harvesting plan may be submitted by the project proponent Zero liquid discharge wherever t-chno - economically feasible. In case, domestic waste water generation is more than 10 KLD, the industry may install STP. Land Increase of green belt cover by 40% of the total land area beyond the permissible requirement of 33%, wherever, feasible for new Company will have an arrangement to utilize most of the rain water (5 Pits with capacity 255.6 KLD have already been provided in premises) ZLD will be maintained. Same practice will be continued in future also. STP of capacity 30 KLD will be installed in the industry. The proposed Coal based Ammonium Nitrate plant would require a total land area of around 350 acres (141.64 hectares) available with company in which 40%) is being used for green belt. The plantation and green belt development is being taken care in the project premises and the space reserved for plantation is about 56.65 Ha. which is 40% of the total plant area. CAS No's: Nitric Acid- 7697-37-2 AN Melt/AN Prills- 6484-52-2

S. No	EC Conditions																												
ii.	projects. Stipulation of greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc.	Avenue plantation will be carried out Gram Panchayat, near the Roads, School of Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal.																											
iii.	Dumping of waste (fly ash, slag, red mud, etc.) may be permitted only at designated locations approved by SPCBs/ PCCs.	The ash shall remain within the plant boundary for further handling & directly dumping into the designated mine voids of MCL. The ash production from BCGCL is estimated to be 0.8 MTPA. The coal extraction capacity of nearby mines of MCL is 60 MTPA, so there will be enormous scope for dumping of BCGCL ash in MCL mine voids. Currently, a small mine void of 5 acres has been identified, which can accommodate the BCGCL ash for ~8 years of operation, after which alternative voids of MCL mines shall be identified in the nearby vicinity. Transportation from plant premises to mine voids will be done by covered Tippers. No public roads shall be utilized for the ash transportation. Water sprinkling arrangements will be done on regular basis by installing fixed sprinklers inside the plant premises and using water tankers outside the plant premises. Along with dumping of ash in the void, a layer of soil will be progressively laid for reclamation and green land-scaping.																											
iv.	More stringent norms for management of hazardous waste. The waste generated should be preferably utilized in co- processing.	<table><thead><tr><th>S. No.</th><th>Name of Waste</th><th>Source of Generation</th><th>Category No. (As per Sch-I&II 2016)</th><th>Quantity</th><th>Mode of Treatment & Disposal Method</th></tr></thead><tbody><tr><td>1.</td><td>Discarded Containers/ Drums</td><td>Storage & Handling of chemicals & consumables</td><td>Sch-I/33.1</td><td>200 Nos.</td><td>Collection, Storage, Decontamination or sale to authorized decontamination facility.</td></tr><tr><td>2.</td><td>Used/ Spent Oil</td><td>Filtration</td><td>Sch-I/5.1</td><td>20 KLPA</td><td>Collection, Storage, Transportation & Disposal by selling to registered Refiners.</td></tr><tr><td>3.</td><td>ETP Sludge & MEE Salt</td><td>In-house ETP & MEE</td><td>Sch-I/35.3</td><td>326 KLPA</td><td>Collection, Storage, Transportation and disposal to</td></tr></tbody></table>				S. No.	Name of Waste	Source of Generation	Category No. (As per Sch-I&II 2016)	Quantity	Mode of Treatment & Disposal Method	1.	Discarded Containers/ Drums	Storage & Handling of chemicals & consumables	Sch-I/33.1	200 Nos.	Collection, Storage, Decontamination or sale to authorized decontamination facility.	2.	Used/ Spent Oil	Filtration	Sch-I/5.1	20 KLPA	Collection, Storage, Transportation & Disposal by selling to registered Refiners.	3.	ETP Sludge & MEE Salt	In-house ETP & MEE	Sch-I/35.3	326 KLPA	Collection, Storage, Transportation and disposal to
S. No.	Name of Waste	Source of Generation	Category No. (As per Sch-I&II 2016)	Quantity	Mode of Treatment & Disposal Method																								
1.	Discarded Containers/ Drums	Storage & Handling of chemicals & consumables	Sch-I/33.1	200 Nos.	Collection, Storage, Decontamination or sale to authorized decontamination facility.																								
2.	Used/ Spent Oil	Filtration	Sch-I/5.1	20 KLPA	Collection, Storage, Transportation & Disposal by selling to registered Refiners.																								
3.	ETP Sludge & MEE Salt	In-house ETP & MEE	Sch-I/35.3	326 KLPA	Collection, Storage, Transportation and disposal to																								

S. No	EC Conditions					
						authorized recycler. Collection, Storage, Transportation and disposal to authorized recycler
		4.	Spent ion Exchange resin	DM plant	Sch-I/35.1	2000 lit in 5 years
		5.	NOx abator used 5 NOx abator	Catalyst	Sch-I/18.1	7 MT/ five years
		6.	Catalyst (Pt/ Rh)	Process	Sch-I/18.1	110 kg/year
						Collection, Storage, Transportation and disposal to authorized recycler
						Regeneration
	Other Condition (Additional)					
	i.	Monitoring of compliance of EC conditions may be submitted with third party audit every year.				
		Condition of monitoring of compliances of EC condition by third party will be followed after grant EC.				
		The CER amount as per OM dated 01.05.2018 for Capital Investment of Rs. Rs.25016 is Rs. 375.24 Cr (1.5 %).				
		S. N.	Activities		Revised Amount (crore)	
	ii.	1	Infrastructure creation for drinking water supply by providing hand pumps in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)		84.91	PP agreed and abided by this condition.
		2	Cross drainage structure in village roads for better drainage at nearby villages Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)		63.64	
		3	Rainwater harvesting pits in village buffer zone (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)		84.91	
		4	Skill development training programme in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.)		42.46	
		5	Scientific support to farmers for		21.23	

S. No	EC Conditions
	crop & fodder yield improvement in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.) 6 Plantation in community areas with native species in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.) 21.23 7 Provision of solar panel lights in villages & government primary schools in nearby villages (Kusraloi, Adhapara, Remda, Kudaloi, Bandhbahal etc.) 56.86 Total 375.24

Standard EC Conditions for (Synthetic organic chemicals industry)

1.

S. No	EC Conditions
1.1	No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
1.2	The Project proponent shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.
1.3	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
1.4	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
1.5	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. The activities shall be undertaken by involving local villages and administration. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.

S. No	EC Conditions
1.6	The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
1.7	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
1.8	The project proponent shall also upload/submit six monthly reports on Parivesh Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
1.9	The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Integrated Regional Office of MoEF&CC by e-mail.
1.10	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at https://parivesh.nic.in/ . This shall be advertised 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 of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
1.11	The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
1.12	This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

Additional EC Conditions

N/A