



सत्यमेव जयते

Government of India
Ministry of Environment, Forest and Climate Change
IA Division
(Non-Coal Mining)



Minutes of AGENDA FOR 29th MEETING OF THE EXPERT APPRAISAL COMMITTEE (NON-COAL MINING SECTOR), SCHEDULED TO BE HELD DURING 9th & 10th MAY, 2024 THROUGH VIDEO CONFERENCING (VC) meeting No. n-Coal Mining held from 09/05/2024 to 10/05/2024 **Date: 21/05/2024**

MoM ID: EC/MOM/EAC/293682/4/2024
Agenda ID: EC/AGENDA/EAC/293682/4/2024
Meeting Venue: N/A
Meeting Mode: Virtual
Date & Time:

09/05/2024	10:30 AM	05:30 PM
10/05/2024	10:30 AM	05:30 PM

1. Opening remarks

The 29th meeting of the Re-Constituted Expert Appraisal Committee (EAC) for Environmental Appraisal of Mining Projects (Non-Coal) of the Ministry of Environment, Forest and Climate Change was held during 9-10th May, 2024 through video conference. The list of participants is annexed herewith. After login of the Committee Members through video conference link provided by NIC discussion on each of the Agenda Items was taken up ad-seriatim.

2. Confirmation of the minutes of previous meeting

(1.0) Deliberation & Circulation on the Minutes of 28th EAC (Non-Coal Mining) meeting held during 14th March, 2024 & 15th March, 2024.

The minutes of the 28th Meeting of the EAC (Non-Coal) held during 14th March, 2024 & 15th March, 2024 were placed before the members of the EAC and confirmed by the Chairman.

3. Details of proposals considered by the committee

Day 1 -09/05/2024

3.1. Agenda Item No 1:

3.1.1. Details of the proposal

"Surve Larung Lumshnong Limestone Deposit (44.58 Ha.)" with a proposed maximum excavation 1366475.2 TPA (654577 TPA of limestone and 711898.2 TPA of waste including topsoil) by M/s. Green Valliey Industries Limited. by GREEN VALLIEY INDUSTRIES LIMITED located at EAST JAINTIA HILLS,MEGHALAYA			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/ML/MIN/457835/2024	IA-J-11015/25/2024-IA-II(N CM)	01/04/2024	Mining of minerals (1(a))

3.1.2. Project Salient Features

The proposal is for Terms of Reference (ToR) for Surve Larung Lumshnong Limestone Deposit with total excavation capacity of 1366475.2 TPA (654577 TPA of Limestone and 711898.2 TPA of Waste including Topsoil) in ML area of 44.58 Ha by M/s. Green Valliey Industries Limited located at Village Lumshnong, District East Jaintia Hills, Meghalaya.

2. The details of the project as ascertained from the document submitted by the Project Proponent and as revealed from the discussions held during the meeting are given as under:

- i. The mine lease area is located between Latitude: 25°11'02.49" N to 25°11' 21.32" N and Longitude: 92° 23' 38.79" E to 92° 24' 23.78" E. The mine lease area falls under the Survey of India Toposheet No: 83C/8 and falls in Seismic Zone-V.
- ii. The project activity listed at schedule no. 1(a) of Mining of Minerals. The instant project attracts General condition due to the presence of Eco-Sensitive Zone of the Narpuh Wildlife Sanctuary at 3.47 km and Narpuh Wildlife Sanctuary at 4.62 km in SE direction in SE to the project site and falls under Category "A" of the schedule of the EIA Notification, 2006.
- iii. Details of Mine Lease in a chronological manner:

S.No.	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1	Letter of Intent/ authorization order- MG.75/2022/220	28.09.2022	Limestone	-	Mining & Geology Department, Government of Meghalaya	44.58 ha.

iv. Land Use/Land Cover of the Mine Lease Area:

Private land	Nil
Government land	Nil
Forest land	44.58 ha.

Total Mining lease area (MLA), ha	44.58 ha.
Private land for crusher, workshop & other infrastructure outside the MLA	NA

v. Mining plan details:

Mining Plan(approved by Indian Bureau of Mines/DMG)	Letter No.	MCDR-MPCP0CaF1/7/2023-GUH-IBM_RO_GUH
	Date	03.10.2023.
	Mineral (Major/Minor)	Major
	Mine Lease Area, Ha	44.58
	Validity	5 years
Mining Parameters	Quantitative Description	
Method of Mining	Opencast mechanized mining using HEMM	
Drilling/Blasting	Deep hole drilling & blasting.	
Geological Reserves	33.82 million tons of Limestone	
Mineable Reserves	21.36 million ton of Limestone	
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/Waste, MTPA)	1366475.2 TPA (654577 TPA of limestone and 711898.2 TPA of Overburden/waste including topsoil).	
Life of mine	The life of mine is estimated at about 34 years considering the mineable reserves based on present exploration.	
Mine Bench Height & Bench Width	The width of the benches in mineral will be 9 m for safe operation of mining machinery. The height of the bench will be 6 m.	
No. of Mine Benches	23	
Existing Depth, m bgl	NA, as it is a green field project	

Ultimate Depth of Mining, m RL	448		
Ground Water Table, m RL	447.643		
Details of groundwater in intersection	The water table will not be intersected as it is at 447.643 mRL and mining will be done up to 448 mRL.		
Individual bench slope	80°		
Overall pit slope	About 34°		
Details of existing/ proposed Crusher	No crushing and screening plant is proposed in the mine.		
Mineral Beneficiation	NA		
RoM output size	-1000 mm		
Transportation details including capacity of dumper/tipper, mode of transport and distance	The material after blasting will be loaded by hydraulic excavators of about 0.90 m ³ bucket capacity into dumpers/tippers of 25 tons carrying capacity for its transportation to crusher and waste dump yards.		
Generation of Topsoil/OB & its Management during plan period & conceptual period	Max. 711898.2 TPA of overburden/waste including topsoil will be generated in any one year. Waste/OB will be dumped at earmarked places. The topsoil generated will be used extensively for plantation. About 10.04 million tons of waste and 0.10 million tons of soil will be generated upto the life of mine. Waste will be stacked separately in the temporary dump. The entire waste will be backfilled.		
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	There will be no rejection from the mine.		
vi. Water requirement:			
Total water required	50 KLD	Freshwater	40 KLD

Requirement	The total water requirement for the proposed mine will be around 50 KLD which will be sourced through water tankers from the company's cement plant.	Treated water 10 KLD
Source	NOC Obtained from Village Council on 16.08.2008	
Permission		
Additional information(if any)	The total water requirement for the proposed mine will be around 50 KLD, Out of this, 40 KLD will be sourced from the villages and the rest 10 KLD will be ETP-treated water.	

vii. Nearest village/town/ highway/railway station/water bodies

Particulars	Particular's Name	Distance & Directions
Village	Lumshnong	1.66 Km - WSW
Town	Khliehriat	18.93 km - NW
Highway	NH-6	0.57 km - SE
Interstate Boundary	<ul style="list-style-type: none"> ● Meghalaya-Assam State Boundary ● India-Bangladesh International Boundary 	11.37 Km SE 13.13 Km SSW
Railway station	Hilara railway station	33.45 km - SE
Water bodies	<ul style="list-style-type: none"> ● Um Badoh (Ephemeral Nala) ● Um Lunar ● Kukha Nala ● Khaddum Pieltleng Falls ● Thangpyrshaid Nala ● Lukha River ● Lubha River ● Dongtangle Nala ● Um Lutha Drain ● Um Lahe ● Um Sangat ● Sakha Nala ● Seshympa River ● Um Satein ● Wah Thariang Nala 	1.88 Km - WNW 2.33 Km - SE 3.56 Km - N 4.31 Km - SE 4.38 Km - NW 4.49 Km - SE 4.52 Km - SSE 4.63 Km - NE 5.03 Km - NW 5.49 Km - SSE 5.50 Km - NE 5.54 Km - NW 7.34 Km - W 7.91 Km - SW 7.99 Km - N 8.16 Km - NE

	<ul style="list-style-type: none"> ● Dongtongle Nala ● Um Thlu ● Apha Nala ● Um Tharang 	8.25 Km - NE 10.52 Km - SE 11.20 Km - SW
Forest	Narpuh Reserve Forest	8.42 km SW

viii. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant, and remarks
Forest land within the mine lease area and (if yes) status of Forest Clearance	Yes	The application for Stage-I forest clearance has been submitted on the MoEF&CC portal vide proposal no. FP/ML/MIN/QRY/463287/2024 dated 24.02.2024
National Park	No	Not Applicable
Wildlife Sanctuary	Yes	Narpuh Wildlife Sanctuary - 4.62 km SE
Eco-Sensitive Zone(ESZ) / Eco- Sensitive Area(ESA)	Yes	Narpuh Wildlife Sanctuary ESZ - 3.47 km SE
Coastal Regulation Zone (CRZ)	No	Not Applicable
Schedule-I species (No.s and name of schedule-I species with the authenticated letter)	No	The details will be submitted along with the EIA report.
Wildlife Conservation Plan	No	The conservation plan will be submitted along with the EIA report.

ix. Green belt/plantation details:

Proposed area for green belt/plantation	The mining lease comprised a total of 44.58 ha of land. Out of which, 41.44 ha will be used for mining and 3.14 ha will be the virgin area under the greenbelt. Out of the total mined-out area, 23.86 ha. will be backfilled and afforested and the rest 17.58 Ha will be covered by bench afforestation.
Budget for green plant & plantation till the end of 1	Rs. 87,64,740

Life of mine.	
No. of tree cuts in the mine lease area and compensatory afforestation	350 trees will be cut in the mine lease. A total of about 97386 trees will be planted up to the conceptual period.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	3.14 Ha.
x. Baseline detail:	
Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/others)	
Period of baseline data collection	Dec 2023 to February 2024
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Winter Season
xi. Details of project cost and employment:	
Particulars	(Rs. In Lakhs)
Project Cost	Rs 30.14 crores
Employment	94

3.1.3. Deliberations by the committee in previous meetings

N/A

3.1.4. Deliberations by the EAC in current meetings

<p>The instant proposal is for Terms of Reference for Surve Larung Lumshnong Limestone. The Project attracts General condition due to the presence of Eco-Sensitive Zone of Narpuh Wildlife Sanctuary located at 3.47 km from the project site and falls under Category “A” of the schedule of the EIA Notification, 2006.</p> <p>The EAC observed that the mine lease area falls near to Wildlife Sanctuary and located in the vicinity of Seismic Zone-V which requires special attention in order to protect local species, habitats</p>

during the mining. The EAC noted that the data collected during the month of December 2023 to February, 2024 needs to be relooked by the PP, the EAC was of the opinion that the baseline data collected during the aforesaid period doesn't take into account the hibernation period of the wildlife species prevalent in the mine lease area and its surroundings. The EAC opined that a comprehensive baseline data (at least 15 days) including the impact of mining caused on the local habitat and species should be collected by the PP.

Thereafter, the EAC enquired about the sourcing of water, PP replied that they will be sourcing their fresh water requirement of about 40 KLD for the instant mine from their cement plant which is located at distance of 13.33 km approx. PP informed that a water spring is located adjacent to their cement plant and they have obtained the NoC from the Gram Panchayat to source water from there for use in their proposed mine. EAC opined that presence of spring water establishes the fact that ground water table is not located at much depth. EAC stated that these activities will require movement of large number of water tankers to and fro from the mine lease area causing the rise in emission and traffic. The EAC enquired the ground water level of the mine lease area, PP informed that ground water is located at 447.643 mRL and the water table will not be intersected during the entire period of mining. The EAC advised the PP to provide the ground water level data for pre monsoon and post monsoon period. EAC also asked the PP to submit the impact of mining on the rivers near the mining lease area i.e . Lubha and Luka river.

From the KML presented during the meeting, EAC observed that the lease area is not far away from the ESZ of Narpuh Wildlife Sanctuary and has pristine green belt coverage. Accordingly, the EAC asked the PP about the movement of wildlife within the lease area and its surroundings. PP informed that the lease area is not a part of any wildlife corridor. However, EAC was of the opinion that there must be some movement of wildlife owing to its location and pristine nature. EAC advised the PP to conduct a study with regard to the movement of wildlife within and surrounding of mine lease area.

While discussing the transportation route from the mine lease area to the national highway 6, PP informed that they will construct a haul road of 2.3 km length to connect the mine lease area with the national highway. EAC was of the opinion that PP may explore the feasibility of laying a over belt conveyer upto the highway instead of cutting trees and making a haul road to ensure barrier free movement of wildlife. PP informed that they will explore the feasibility of the same.

The EAC further noted that PP has not proposed the use of crusher within the mine lease area. PP informed that they will be directly transporting the mined out mineral to their cement plant where they have already established a crusher. EAC was of the opinion that the PP should include the provision of installing one mobile crusher within the lease area, so that the mined ore is crushed before transportation through OLBC to the nearest highway (NH 6).

During the discussions, EAC pointed out that waste generation is more than the actual Mineral being generated and accordingly asked the PP to compute the cost-benefit analysis keeping in mind the waste generation from the mining.

In view of the above discussions, the EAC concluded that the mine lease area is located in the vicinity of the ecologically sensitive and fragile area. Thus, the EAC opined that it is necessary to ascertain the ground reality on the proposed methodology of mining, habitation, afforestation, transportation, situation of ground water and existing spring water and nearby river. The EAC was of the view that a site visit needs to be conducted by a sub committee comprising of EAC Members and officers from MoEF&CC. The EAC advised the Ministry to constitute a sub-committee for site visit. Based on the above observation, the EAC deferred the proposal and asked to submit the requisite information:

- i. The Project Proponent needs to submit the comprehensive baseline data (15 days) considering the impacts of mining upon local habitat and species. PP shall also submit the comparison of the existing baseline data of the industries located within 10 km periphery of the mine lease area.
- ii. PP needs to submit the NOC from Ministry of Defence.
- iii. PP shall explore the feasibility of laying a over belt conveyer upto the highway instead of cutting trees and making a haul road to ensure barrier free movement of wildlife.
- iv. PP shall explore the feasibility of incorporating a mobile crusher within the mine lease area for crushing the mineral before transportation.
- v. The Project Proponent needs to submit the NoC from the Gram Panchayat for withdrawal of water from existing spring water source.
- vi. The Project Proponent needs to submit the pre and post monsoon level of ground water.
- vii. The Project Proponent needs to compute the cost-benefit analysis w.r.t. generation of more waste than minerals and also conduct the scientific study for managing the dump within the ML area.
- viii. PP shall conduct a study and submit the report with regard to the movement of wildlife within and surrounding of mine lease area.
- ix. The project proponent should submit the compliance of the site visit to be conducted by a sub-committee comprising of EAC members and officers from the Ministry.

3.1.5. Recommendation of EAC

Deferred for ADS

3.2. Agenda Item No 2:

3.2.1. Details of the proposal

Amendment in EC of Bolani Ores Mines (6.90 Sq Miles ML) allowing liquidation of old iron ore dump fines produced from adjoining 5.10 Sq Miles ML and stacked in 6.90 Sq. Miles ML through dispatching for selling in open market or captive use directly or supplying to conversion agents for captive use of converted pellets without any change in approved configuration keeping the excavation and dispatch of dump fines from both mining leases within 3 MTPA as per the approved EC of 5.10 Sq. Miles ML by STEEL AUTHORITY OF INDIA LTD located at KENDUJHAR, ODISHA

Proposal For		Amendment in EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/OR/MIN/466261/2024	J-11015/418/2008-IA.II(NC M)	18/03/2024	Mining of minerals (1(a))

3.2.2. Project Salient Features

The instant proposal is for amendment in EC dated 21.12.2012, 17.02.2014, 30.07.2020, 05.08.2021, 19.09.2022 and 13.09.2023 for Bolani Iron Ore Mine with production capacity of 15,000 TPA of Manganese Ore (RoM) in the ML area of 1786.74 ha or 6.9 sq mile of M/s SAIL located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha.

2. The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under: -

- i. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals and falls under Category "A" of the schedule of the EIA Notification, 2006 as the mining lease area is greater than 250 ha and appraised at Central level.
- ii. The mine lease area is located between Latitude 22°05'11.65848"N - 22°07'46.2869"N and Longitude 85°16'52.81330"E - 85°20'13.85260"E. The mine lease area falls under the Survey of India Toposheet no: 73 F/8 (F45H8) and falls in Seismic Zone-II.
- iii. The Project Proponent has submitted the chronology of the Environmental Clearance (EC) as mentioned below:
 - a. The Project Proponent obtained Environmental Clearance (EC) on 21.12.2012 for Bolani Iron Ore Mine with production capacity of 15,000 TPA of Manganese Ore (RoM) in the ML area of 1786.74 ha or 6.9 sq mile of M/s SAIL located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha.
 - b. The Project Proponent obtained Environmental Clearance (EC) on 21.12.2012 for enhancement of production of iron ore from 5.65 million TPA to 12.0 million TPA (ROM) in Bolani Iron Ore Mine (5.1 Sq. mile) along with installation of a new beneficiation plant of 12 million TPA throughput and pellet plant of 4.0 million TPA capacity of M/s SAIL, located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha.
 - c. Subsequently, the Project Proponent obtained amendment in EC dated 21.12.2012 on 17.02.2014 w.r.t Para 6 (iii) and in addition the following was added to the EC letter "There are two adjacent mining leases in 'Bolani Ore Mines viz Bolani 5.1 Sq. miles lease' 'Bolani 6.9 Sq. miles lease'. Bolani 5.1 Sq. miles lease is the iron ore bearing area whereas Bolani 6.9 Sq. miles lease is manganese ore bearing. Common infrastructure facilities for both the mines viz. railway siding & loading yard township, tailing pond, water intake point etc. are located in 6.9 Sq. miles lease" and that the mine working will be open cast fully mechanized instead of semi-mechanized.
 - d. Thereafter, PP obtained EC on 30th July, 2020 under para 7(ii) of EIA Notification 2006 (as amended) for change in excavation & dispatch pattern by increasing excavation and dispatch of iron ore fines from existing Fines Dumps up to 3.0 MTPA (from present 0.5 MTPA) and Modification of Mining parameters including updating of reserves and waste generation keeping total production within approved EC capacity of 12 MTPA. Bolani Iron Ore Mine (1321.45 ha) is located at Villages Boiani & Balagoda and Karo Reserve Forest (R.F.) in Barbil Tehsil, Champua Subdivision, Keonjhar District of Odisha with one of the specific condition that "This amendment is valid for a period of one year and the same may be extended after the site visit or compliance monitoring by Regional Office, whichever is earlier".
 - e. Further, PP obtained EC vide letter dated 05.08.2021 for amendment/extension of validity of EC dated 30.07.2020 for one year along with permitting dispatch of 8.5 MTPA ROM Iron Ore from mines, 1.5 MTPA from fines dump by SAIL's Bolani Rly. Siding and dispatch of 0.5 MTPA from Iron Ore from Mines and 1.5 MTPA from fines dump by Public Sidings Bolani/Barbil or by Road keeping total production within approved EC Capacity 12 MTPA under Para 7(ii) of the EIA Notification 2006.
 - f. Again, the PP obtained amendment in EC on 19.09.2022 for the amendment in EC's dated 30.07.2020 and 05.08.2021 for extension of validity of EC for a further period of one year along with permitting dispatch of 8.5 MTPA ROM Iron Ore from mines, 1.5 MTPA from fines dump by SAIL's Bolani Rly. Siding and dispatch of 0.5 MTPA from Iron Ore from Mines and 1.5 MTPA from fines dump by Public Sidings Bolani/Barbil or by Road keeping total production within approved EC Capacity 12.0 MTPA located at village Boiani, Tehsil Barbil, District Keonjhar, Odisha. This amendment in EC is valid upto 18.09.2023.
 - g. Later on, the PP obtained amendment in EC on 13.09.2023 for amendment in EC's dated 30.07.2020, 05.08.2021 & 19.09.2022 of M/s SAIL for extension of validity of Environmental Clearance for further period of 02 (Two) years to liquidate entire stock of old Dump Fines from Bolani Iron Ore Mines by (i) continue excavation of iron ore fines from old Fines Dumps maximum up to 3 MTPA for selling in open market or supplying to external pellet conversion agencies for captive use of converted pellets keeping the total production within EC capacity

of 12 MTPA, (ii) continue dispatch of 8.5 MTPA ROM Iron Ore from mines, 1.5 MTPA from fines dump with total dispatch up to 10 MTPA by SAIL's Bolani Rly. Siding and dispatch of 0.5 MTPA from Iron Ore from Mines and 1.5 MTPA from fines dump with total up to 2 MTPA through public roads leading to Public Sidings at Bolani / Barbilor beyond NH 520 within approved EC Capacity 12.0 MTPA, in the mine lease area of 1321.45 ha, located at Village Bolani, Tehsil- Barbil, District Keonjhar, Odisha.

iv. In the instant proposal, the Project Proponent requested for amendment in EC's letter dated 21.12.2012 for Bolani 6.90 Sq Miles ML (1786.74 ha) allowing liquidation of old iron ore dump fines produced from adjoining Bolani 5.10 Sq Miles ML and stacked in Bolani 6.90 Sq. Miles ML through dispatching for selling in open market or captive use directly or supplying to conversion agents for captive use of converted pellets without any change in approved configuration keeping the excavation and dispatch of dump fines from both mining leases, within 3.0 MTPA, as per the approved EC of Bolani 5.10 Sq. Miles ML under Para 7(ii) of the EIA Notification 2006 at Village Bolani, Balagoda, Limitur etc. Tehsil - Barbil, District Keonjhar, Odisha

v. The Project Proponent has submitted the following justification for instant proposal for liquidation on the strength of EC of Bolani 5.10 sq miles ML:

- No change in process and/or technology, product mix, handling capacity of the mineral.
- The assessed the likely impacts, on the local road infrastructure and air quality of the area, due to the proposed liquidation of dump fines shall remain unchanged.
- The baseline environmental data covering air, water, noise etc., in and around Mines, has been carried out and incorporated in the addendum to EIA/EMP Report which shows that the environmental quality in and around was found to be within the permissible limits.
- The proposed liquidation of fines will not only result in effective utilization of these low grade minerals, but also eliminates environmental hazards for Bolani 6.90 sq miles ML associated due to storage of fines besides meeting the iron ore demand during scarcity period of the country.

vi. The Project Proponent has informed that the 4.123 MT of iron ore dump fines stacked inside this ML, which were originally generated from the adjoining 5.10 Sq Mile ML, is proposed to be evacuated in the strength of Amended EC grant Order dated.13.09.2023 of Bolani 5.10 Sq Miles ML.

vii. The Project Proponent has submitted the following effect on configuration of Bolani 1321.45 ha or 5.10 SQ Miles ML area:

Plant / Equipment / Facility	Existing Configuration as per EC amendment order dated 13.09.2023	Configuration as per Instant Proposal	Remarks, if any
Iron ore excavation from Fines Dumps	3 MTPA Dump Fines from 5.10 sq miles ML	3 MTPA Dump Fines from 5.10 sq miles ML + 6.90 sq Mile ML	No change in handling quantity of dump fines from Bolani Ores Mines complex
Dispatch by SAIL's own siding	Max. up to 1.5 MTPA dump fines from 5.10 sq miles ML	Max. up to 1.5 MTPA dump fines from 5.10 sq miles ML + 6.90 sq Mile ML	Within the earlier approved EC capacity
Dispatch of dump fines by road	Max. up to 1.5 MTPA by Road & Rail or only Road from 5.10 sq miles ML	Max. up to 1.5 MTPA by Road & Rail or only Road from 5.10 sq miles ML + 6.90 sq Mile ML	By road to Bolani Public/Barbil Railway Siding or directly by road to the final destination
Dispatch of free	Max. up to 0.5 MTPA b	No Change	No Change from earli

sh Iron Ore on road	y Road & Rail or only Road from 5.10 sq Mile ML		er EC in despatch of max. 2MT PA(0.5MTPA fresh Iron Ore& 1.5M TPA dump fines) by road
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3.2.3. Deliberations by the committee in previous meetings

N/A

3.2.4. Deliberations by the EAC in current meetings

The instant proposal is for amendment of EC letter dated 21.12.2012 for liquidation of old iron ore dump fines produced from adjoining Bolani 5.10 Sq Miles ML and stacked in Bolani 6.90 Sq. Miles ML through dispatching for selling in open market or captive use directly or supplying to conversion agents for captive use of converted pellets without any change in approved configuration keeping the excavation and dispatch of dump fines from both mining leases.

The EAC pointed out that the instant application is inconsistent with the judgement passed by the Hon'ble Supreme Court in the matter of Goa foundation vs Union of India WP (C) No. 435/2012 dated 21.04.2014. As per the sub-para (ii) of para no. 71 of the judgement: *"dumping of minerals outside the leased area of the mining lessees is not permissible under the MMDR Act and the Rules made thereunder"*.

Therefore, the EAC asked the Project Proponent to submit the certificate from the state government for clarifying the exact duration in year in which the old iron ore dump fines are generated, their exact quantity and location of dump as per the then approved Mining plan. EAC also noted that the ML area as per the EC letter dated 21.12.2012 is 1786.74 ha while as per the documents submitted in the instant EAC meeting the lease area is 1586.36 ha or 6.9 Sq miles. Therefore, PP was advised to submit the Mine lease documents of Bolani iron ore mine of 6.9 Sq. miles along with its chronology. In view of the above, the Committee **deferred** the proposal and asked to submit the following information:

- i. The Project Proponent needs to justify their proposal w.r.t. judgement dated 21.04.2014 of Hon'ble Supreme Court in the matter of Goa Foundation Vs UOI.
- ii. The Project Proponent needs to submit the certificate from the Department and Mines Geology, Govt. of Odisha clearly stating the source of the dumped iron ore and its generation period (before or after year 2014). The State Govt. shall also mention the year till which the fine iron ores were dumped.
- iii. The Project Proponent needs to submit the year-wise authenticated quantity of old iron ore dump in tabular form.
- iv. The Project Proponent needs to submit the authenticated documents such as Mine plan or any other document showing the dumping location of old iron ore dump.
- v. The Project Proponent needs to submit the Mine lease documents certifying the exact mine lease area of 1786.74 ha or 1586.36 ha or 6.9 Sq miles.

3.2.5. Recommendation of EAC

Deferred for ADS

3.3. Agenda Item No 3:

3.3.1. Details of the proposal

Expansion of chrome ore production capacity from 0.3 MTPA to 0.9 MTPA at Sukurangi Chromite Mines by O DISHA MINING CORPORATION LIMITED located at JAJAPUR,ODISHA			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/OR/MIN/458763/2024	J-11015/348/2015-IA.II(NC M)	16/04/2024	Mining of minerals (1(a))

3.3.2. Project Salient Features

The proposal is for Mining of Chrome ore with enhancement in production capacity from 0.3 to 0.9 MTPA in the ML area of 382.709 ha by M/s Odisha Mining Corporation Ltd. located at villages Sukurangi, Saruabil, and village limits of Ostapal, Kamarda and Talangi, Tehsil Sukinda, District Jajpur, Odisha.

2. The details of the project as ascertained from the document submitted by the Project Proponent and as revealed from the discussions held during the meeting are given as under:

- i. The mine lease area is located between Latitude 21°02'32.10822"N to 21°03'46.96573"N and Longitude 85°47'47.57164"E to 85°49'19.86763"E. The mine lease area falls under the Survey of India Toposheet No: F45N16 and falls in Seismic Zone-II.
- ii. The project falls under Category "A" under schedule no. 1(a) of Mining of Minerals of the schedule of the EIA Notification, 2006 and its subsequent amendments.

iii. Detail of ToR:

ToR Proposal No.	IA/OR/MIN/458763/2024
Online application date for Form-I	25 th March 2024
Documents Submitted	Cover letter, CAF, Form 1 (Part A), Form 1 (Part B), kml file of the ML area, S oI Toposheet Map, Lease Deed, Authorization of Applicant, Conceptual Plan, Mining Plan drawings.
Production capacity in million tonnes per annum only	0.9 MTPA (ROM) Chrome Ore
Waste	8.5981 MTPA (Waste Rock)
Total Excavation(with break-up) in million tonnes per annum only	9.4981 MTPA
ROM in million tonnes per annum only	0.9 MTPA

Crusher	1 x 250 tph Primary Crusher and 1 x 250 tph Secondary Crusher will be set up. The Secondary Crusher will process the output of the Primary Crusher. 1 x 250 tph triple deck vibrating screen will be installed to screen crushed ROM to separate out -10 mm material (containing >40% Cr ₂ O ₃) – the final product.	
EIA/EMP uploaded on	The instant proposal is for approval of ToR. EIA-EMP report will be prepared based on approved ToR.	
Previous EC details	Accorded by MoEFCC vide letter No. J-11015/348/2015-IA.II(M) dated 30.07.2020 for Chrome Ore production capacity : 0.3 MTPA	
Application for the Mining lease area and Date	25.04.1970	
Validity of mine lease	19.09.2030	
Chronology of lease extension if any	From 20.09.1980 to 19.09.2000 [Initial] From 20.09.2000 to 19.09.2020 [1st Extension] From 20.09.2020 to 19.09.2030 [2nd Extension]	
Additional information (if any)	Sukurangi ML was granted and executed in favour of M/s Sirajuddin & Co. for a period of 20 years from 26.03.1959 to 25.03.1979. After 4 years of operations, it was determined on 05.04.1963 by the State Govt. Odisha Mining Corporation (OMC) was then allowed by the State Govt. vide their letter No. III(G)M, 13/70-5592-MG, dated 20.07.1970 to operate the said lease as an agent of the State Govt. till formal grant of the said lease to OMC in 1971 by expanding the area broken by M/s Sirajuddin & Co. Govt. of Odisha in their erstwhile Mining & Geology Dept. Proceeding No. III(G)-MG-10/78-7924 dated 05.08.1978 and granted a Mining Lease for exploration of chromite in Sukurangi chromite mines over an area of 382.709 ha for a period of 20 years. Lease has been extended up to 19-09-2030.	
	Letter No.	MCDR-MiFL0CR/12/2023-BBS-IBM_RO_BBS
	Date	19.03.2024
	Validity	2024-25 to 2028-29
Mining Parameters	Quantitative Description	

Bench Height	6 m										
Bench Width	10 m										
Method of Mining	A-Mechanized, Open Cast Mining										
Individual bench slope	70°										
Overall pit slope	24°-30°										
Drilling/Blasting	HEMM with deep hole drilling & blasting with combination of loaders and tippers.										
RoM output size	<table border="1"> <thead> <tr> <th>Type of crusher</th> <th>Product size in mm</th> </tr> </thead> <tbody> <tr> <td>Primary Crusher (Jaw Crusher)</td> <td>-100</td> </tr> <tr> <td>Secondary Crusher (Jaw Crusher)</td> <td>-50</td> </tr> <tr> <td>Triple Deck Vibrating Screen</td> <td>-10</td> </tr> </tbody> </table>			Type of crusher	Product size in mm	Primary Crusher (Jaw Crusher)	-100	Secondary Crusher (Jaw Crusher)	-50	Triple Deck Vibrating Screen	-10
Type of crusher	Product size in mm										
Primary Crusher (Jaw Crusher)	-100										
Secondary Crusher (Jaw Crusher)	-50										
Triple Deck Vibrating Screen	-10										
Life of mine	16 years on the basis of Proven Reserves. May be revised on the basis further detailed exploration.										
Transportation details	By trucks to consumers of nearby railway siding(s) at buyers' discretion										
Dumpers capacity	35 t										
Private land	97.5544 ha										
Government land	17.9446 ha										
Total Mining lease area (MLA)	382.709 ha										
Additional information(if any)	Forest Land (267.210 ha)										
Particulars	Particular's Name	Distance & Directions									
Nearest railway station	Baghupal on Padapahar Jn.	~21.5 km (E)									
Populated areas	Brahamnipal town	~23 km (SE)									
Nearest Highway	Daitari- Paradeep Express Highway	~18 km (NE)									
Water Bodies	a. Damsal Nala b. Talangi Nala c. Nadibarana Nala d. Pandaral Nala	0 (Damsal Nala flows through ML) 1.4 km (NE) 3.8 km (W) 7.5 km (S)									
Total water requirement	Potable: 60 m ³ /day Industrial: 530 m ³ /day	Fresh water	60 m ³ /day								

		Treated water	530 m ³ /day
Source	Industrial: Recycled effluents/mine discharge water Potable: Bore-wells		
Permission	NOC obtained from CGWA vide letter No. CGWA/NOC/MIN/REN/2/2022/7118, dated 02.11.2021, valid upto 30.11.2023. Renewal of NOC is under considerations.		
Additional information (if any)	No fresh water is utilized for Industrial purpose.		

ix. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter/Remarks
Forest Land	Yes	Forest Clearance obtained for the entire Forest Land (267.210 ha) within the ML area.
National Park	No	
Wildlife Sanctuary	No	
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area(ESA)	No	--

x. Availability of Schedule-I species in study area – Available/ Not Available If available - authenticated list of flora/fauna details

Schedule-1 species	Yes/No	Details of Certificate/letter/Remarks
Schedule-I species	Yes	Schedule-I fauna found in the 10 km study area are Ratel, Leopard, Sloth bear, Indian Elephant, Mouse deer, Pangolin, Wolf, Bengal Monitor Lizard, Python, Peafowl.
Status of Wildlife Conservation Plan Additional information (if any)	Approved	Revised Site-Specific Wildlife Conservation Plan approved by PCCF (WL) & CWLW, Odisha vide memo no. 8426/7WL-FD & WLC-159/2020 dated 16-10-2020.

xi. The status of Forest Clearance/Wildlife Clearance/CRZ/CGWA, if applicable:

The mine lease area comprises of 267.21 ha of Forest Land. Stage – II FC for the entire forest land (267.210 ha) within the ML area has been accorded. Details of FC accorded by MoEFCC are given below:

- Stage-II FC over 104.79 ha Forest land within ML area received vide letter no. F. No. 8-104/2000-FC dated 21.07.2011.
- Stage-II FC over 162.42 ha (including 24.15 ha for Safety Zone) Forest land within ML area received vide letter no. F. No. 8-22/2016-FC dated 31.07.2023.

xii. Status of CTE/CTO.

- Consent to Establish (CTE) for 0.3 MTPA of Chrome ore has been granted by State Pollution

Control Board, Odisha vide letter no: 7315/IND-II-CTE-6476 on dated 21.05.2021.

b. Consent to Operate (CTO) has been granted from the State Pollution Control Board, Odisha vide letter no 4412/IND-I-CON-388 dated 28.03.2024 for 0.3 MTPA of Chrome ore and is valid up to 31.03.2025.

xiii. Green belt/plantation details:

Proposed area for green belt/plantation	Sl. No	Year	Green Belt Location (s)	Area Proposed to be Covered (Ha)	Number of Plants Proposed	Expected Survival Rate (%)	Estimated Expenditure (INR)
	1	2024-2025	Existing Dump	0.75	500	>85%	702479
2	2025-2026	Existing Dump	0.75	500	>85%	702479	
3	2026-2027	Existing Dump	0.75	500	>85%	702479	
4	2027-2028	Existing dump	0.75	500	85%	702479	
5	2028-2029	Existing Dump	0.75	500	85%	702479	

Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m wide all along ML area (except common boundary between adjoining South Kaliapani ML of OMC)	6.35
50m on either side of Damsal nala	18.00
10 m on either side of the road	1.9
Court Case	No
R & R details	No R&R
Affidavit/Undertaking	OMC has submitted an undertaking by way of notarized Affidavit dated 03.04.2024 in compliance of the Ministry's OM no. 3-50/2017-IA.III(Pt.) dated 30.05.2018.

xvii. Details of project cost and employment:

Particulars	(Rs. In Crore)
Project Cost	Total Cost Rs. 296.02 Crores [Existing Cost – 32.02 Crores; Expansion Cost – 264 Crores]
Employment	628

xviii. Additional information submitted by Project Proponent:

Violation of EIA Notification-1994/2006 for producing minerals without prior EC from Sukurangi Chromite mines during 1993-94 to 2008-09. Demand Notice for depositing Rs. 3,90,64,416 (Rs. Three

crore ninety lakh sixty-four thousand four hundred sixteen only) was issued by the office of Dy. Director of Mines, Jajpur Road Circle, Jajpur Road vide letter no. 547 dated 10.04.2018. OMC paid the entire penalty amount towards the demand raised.

3.3.3. Deliberations by the committee in previous meetings

N/A

3.3.4. Deliberations by the EAC in current meetings

The Instant proposal is for Terms of Reference for enhancement in production capacity from 0.3 to 0.9 MTPA without change in ML area for Sukurangi Chromite Mines. As per the kml file shown during the presentation, the EAC noted the presence of Nallah passing through the ML area. In order to manage the same, the Project Proponent was asked to prepare the conservation plan for Nallah. The EAC advised the Project Proponent to incorporate the advance technology by incorporating the latest machinery having the least carbon emission rate and having higher capacity. The EAC also asked the Project Proponent to submit the report on existing carbon emission rate and in which year the carbon emission will be neutralised.

Subsequently, the EAC emphasised that PP should submit a dump management plan incorporating the garland drain and plantation. The EAC made an observation that the PP needs to be cautious while dumping the Overburden, they should avoid dumping the overburden in the mineralised area and the forest area. The EAC also advised the PP to prepare progressive backfilling plan in order to reduce the dump accumulation.

Based on the above, EAC **recommended** the proposal in the 29th EAC meeting held during 9-10th May, 2024 for Terms of Reference for Mining of Chrome ore with enhancement in production capacity from 0.3 to 0.9 MTPA in the ML area of 382.709 ha by M/s Odisha Mining Corporation Ltd. located at villages Sukurangi, Saruabil, and village limits of Ostapal, Kamarda and Talangi, Tehsil Sukinda, District Jajpur, Odisha under provisions of EIA Notification, 2006 and its amendments therein with following additional specific conditions:

3.3.5. Recommendation of EAC

Recommended

3.3.6. Details of Terms of Reference

3.3.6.1. Specific

protection plan	
1.	The Project Proponent to prepare the conservation and protection plan for Nallah passing through the Mining Lease area.
machinery	
1.	The Project Proponent should submit the detail in terms of incorporation of machinery equipped with advance technology and having least carbon emission rate.
carbon foot prints	

1.	The Project Proponent needs submit the carbon foot prints and carbon sequestration study w.r.t. instant project.
plantation	
1.	The Project Proponent shall submit the status of plantation which will ensure carbon sequestration lost due to deforestation and other fossil fuel based activities.
2.	The Project Proponent needs to submit the action plan for carrying out plantation along the 7.5m barrier, safety zone and gap plantation. PP should also submit the details of no of saplings planted and to be planted, type of saplings existing and proposed, existing species wise survival rate and the area covered and to be covered under greenbelt/plantation, density of plantation along with the timeline and budget. The Project proponent also needs to submit the successful rate in compliance to the earlier EC.
dump management plan	
1.	The Project Proponent needs to prepare dump management plan by incorporating the garland drain and dump plantation.
progressive backfilling	
1.	The Project Proponent needs to submit the detail plan for progressive backfilling in order to reduce the dump accumulation.
total excavation	
1.	The project proponent needs to submit the total excavation which includes ROM, OB, IB etc during the submission of EC proposal.
sequence of mining	
1.	The Project Proponent needs to submit the year wise sequence of mining operation and plan for backfilling considering the site features such as habitations, school, water bodies, road, etc., and their impacts and mitigation.
restoration plan	
1.	The Project Proponent needs to submit the ecology restoration plan for the area to be backfilled and reclaimed by plantation along with re-grassing and an area which will be converted into water reservoir.
operational data	
1.	The Project Proponent needs to submit the efficacy and operational data of the EMP measures undertaken in the past.
real time data	

1.	Being an expansion proposal, the Project Proponent needs to submit the real time data monitored for ambient air quality, noise level, ground vibration, water quality, soil quality at the mine site, predominant downwind direction, nearest village, crusher and at other sensitive receptors. The Project Proponent should prepare the EMP considering the scenario of pollution to be generated for normative and peak total excavation for assessing air pollution, noise level and ground vibration.
state forest department	
1.	The Project Proponent needs to submit the letter from the State Forest Department regarding whether the dumping allowed upon the forest area for which forest clearance has been obtained for non-forestry purposes.
list of flora and fauna	
1.	The Project Proponent needs to submit authenticated list of flora and fauna as per the latest Wildlife Protection Amendment Act, 2022 and the involvement of National Park, Wildlife Sanctuary, ESA/ESZ within 10km radius of the study area.
public hearing	
1.	The Project Proponent needs to carry out the Public Hearing as per provisions of EIA Notification, 2006. PP should also submit the time bound action plan on concerns of the public through a separate budget with capital expenditure with a timeline of 3 years. The Project proponent shall ensure that the activities proposed under the public hearing shall be different from the CSR activities. The Project Proponent also needs to submit the implementation status of the earlier public hearing concerns.
plant species	
1.	The Project Proponent needs to undertake the enumeration of the plant species within the mine lease area before cutting them. The Project Proponent also needs to submit the compensatory afforestation plan for the no. of trees to be cut in the mine lease area and also to explore the possibility of tree transplantation.
past production details	
1.	The Project Proponent needs to submit the certified past production details from the inception of the mine till the time for submission of EC proposal.
ground water	
1.	The Project Proponent shall carry out the assessment of impact due to the proposed project as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP. The project proponent shall conduct hydrological study for projects involving intersection of ground water table as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP.
technology upgradation	

1.	The Project Proponent shall explore the possibility of reduction of specific water requirement by optimization / technology up gradation, etc. The efforts shall be delineated in the EIA/EMP.
recycle/re-use	
1.	The Project Proponent shall prepare the scheme for mandatory recycle/re-use of water as specified by the Central Ground Water Authority for different category areas seeking NoC for ground water withdrawal and the shall submit as part of EIA/EMP report.
possession certificate	
1.	The Project Proponent needs to submit the possession certificate for already acquired land and also the timeline for acquiring the remaining land at the time of submission of EC proposal. The Project Proponent also needs to submit the implementation status of R&R and data on socio economic that how the mining activity improved the quantity and quality of the local people.
certified compliance report	
1.	The Project Proponent needs to submit the latest Certified Compliance Report (CCR) by the Ministry's Regional Office as per Ministry's OM dated 08.06.2022 at the time of appraisal of EC.
drone survey	
1.	The Project Proponent shall conduct drone survey of the mine lease area which includes the mine pit area, dumping area, plantation and transportation route during the appraisal for EC.
transport route	
1.	The Project Proponent needs to submit the map showing the transport route of the mineral from the mine lease area to the destination, impact of details of habitation at a distance of 100m from the center on both sides of road, details of no. of trips/day to and fro, capacity of the dumper/tipper to be deployed and the dimensions of the road and the carrying capacity of the road. Project Proponent needs to submit SOP for transportation.

3.3.6.2. Standard

1(a)	Mining of minerals
project details	
1.	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994. The production details need to submit since inception of mine duly authenticated by Department of Mines & Geology, State Government.
2.	A copy of the document in support of rightful lessee of the mine should be submitted. In case of new mines copy of LoI granted by State Government to be submitted. PP should ensure that LoI is valid at the time of grant of ToR. PP should submit the copy of lease deed/supplementary lease deed/extension letter/transfer deed, from its

	initial grant to subsequent renewals/ transfer/extension of validity.
3.	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.
4.	PP should submit the District Survey Report (DSR) as per S.O. 3611(E) dated 25.07.2018 in case of minor minerals.
5.	Brief of proposal to be submitted which include total excavation of the material required for the production of certain quantity of the minerals, location of the project, mining lease area, latitude longitude, seismic zone etc. In case of expansion project details of expansion viz. expansion in mining lease area or expansion in production of any particular mineral or expansion in total excavation, latest certified Compliance report (CCR) from IRO of conditions granted in existing EC needs to be submitted.
6.	The PP should submit the real-time aerial video footage & video of the mining lease area and of the transportation route.
7.	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).
8.	Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.
9.	The PP should collect the Baseline data (BLD) in respect of initial level of the mining lease. For this permanent bench marks (BM) needs to be established at prominent location preferably close to mining leases in question and should have precisely known relationship to the level datum of the area, typically mean sea level.
10.	In case of sand mining, the entire mining lease area should be divided suitably into grids of 25 m x 25 m with the help of sections across the width of river and along the direction of flow of the river. The levels (MSL & RL) of the corner point of each grid needs to be recorded. Each Grid should be suitably numbered for identification. PP should identify grids which will be worked out and grids which will come under no mining zone i.e. safety barriers from the river bank. PP should comply with the sustainable sand mining management guidelines 2016 and enforcement and monitoring guidelines, 2020 etc.
11.	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
12.	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.
13.	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.
14.	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.
15.	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.
16.	Compliance of the Ministry's Office Memorandum No. F: 3-50/2017-IA.III (Pt.), dated 30.05.2018 on the

6.	judgment of Hon'ble Supreme Court, dated the 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India needs to be submitted and included in the EIA/EMP Report.
forest	
1.	PP shall submit a certificate from Chief Conservator of Forests regarding involvement of Forest Land in the mining lease area if any. In case forest land is involved i) PP should submit the proof of application made for obtaining forest clearance and ii) a map clearly showing the forest & non-forest area.
2.	Status of forestry clearance for the broken-up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.
3.	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.
4.	The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
court matters	
1.	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.
land environment	
1.	PP should submit the details of survey number [viz. survey no, area in hectare, classification of land (government, private, forest, grazing land etc.), villages] duly authenticated by State Government, falling in the mining lease area.
2.	The study area will comprise of 10km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.
3.	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.
4.	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.
wildlife	
1.	A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
2.	A detailed biological study of the study area [core zone and buffer zone] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. PP shall submit list of Schedule-1 species present in core and buffer zone duly authenticated by CWLW. In case of any Scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forest/Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost. Proof of its submission of conservation plan to the CWLW needs to be submitted.
3.	PP shall submit a certificate from Chief Wildlife Warden regarding distance of mining lease from the protected area falling within 10 KM of the mining lease. In case project requires clearance under Wildlife (Protection) Act,

	1972 then copy of application made for the same needs to be submitted.
baseline environment	
1.	One season (non-monsoon) [i.e. March - May (Summer Season); October - December (post monsoon season); December - February (winter season)] primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.
2.	Air quality modelling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modelling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The windrose showing pre-dominant wind direction may also be indicated on the map.
3.	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 from which samples were analyzed.
water environment	
1.	The water requirement for the Project, its availability and source should be furnished. Quantity of surface or ground water to be used for the Project should be indicated. A detailed water balance should also be provided. Submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided. The capital and recurring expenditure to be incurred needs to be submitted.
2.	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.
hydro geology	
1.	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be.
2.	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and BGL. A schematic diagram may also be provided for the same.
3.	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working bench will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished. In case of surface water is proposed to be utilized then Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.
transportation	
1.	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.

land acquisition and r&r	
1.	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
2.	R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need-based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.
socio-economic environment	
1.	Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.
2.	Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.
3.	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.
4.	Activity-wise time-bound action plan on the issues raised and commitment made during public hearing to be submitted as part of the final EMP Report in compliance of the Ministry's OM F.No.22-65/2017-IA.III dated 30th September, 2020.
environmental monitoring and management	
1.	It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large, may also be detailed in the proposed safeguard measures in each case should also be provided.
2.	Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
critically polluted areas, aravali & crz	
1.	Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.
2.	Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).

risk assessment & disaster management	
1.	Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.
2.	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.
3.	A Disaster Management Plan shall be prepared and included in the EIA/EMP Report.
miscellaneous	
1.	The general points are also to be followed: - a) All documents to be properly referenced with index and continuous page numbering. b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated. c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project. d) Where the documents provided are in a language other than English, an English translation should be provided. e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted. f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II (I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed. g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation. h) As per the circular no. J-11011/618/2010-IA.II (I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable. i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

3.4. Agenda Item No 4:

3.4.1. Details of the proposal

Laserda-Pacheri Manganese and Iron Ore Block of M/s. Thriveni Earthmovers Pvt. Ltd. by MS THRIVENI EARTHMOVERS PRIVATE LIMITED located at KENDUJHAR, ODISHA			
Proposal For		Fresh EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/OR/MIN/446058/2023	J-11015/113/2021-IA-II(NC M)	30/12/2023	Mining of minerals (1(a))

3.4.2. Project Salient Features

The instant proposal is for Environmental Clearance for Laserda - Pacheri Manganese and Iron Ore mining with production capacity of 1.545 MTPA (ROM) of Iron Ore, 1.182 MTPA of waste (Total Excavation of Iron Ore 2.728 MTPA) and 0.110 MTPA (RoM) of Manganese ore, 0.355 MTPA of waste
--

(Total Excavation of Manganese Ore 0.465 MTPA) along with Dry screening and crushing using 200 TPH x 2 Primary Crushing, 200 TPH x 2 Secondary Crushing, 200 TPH x 2 Tertiary Crushing, 250 TPH x 2 Vibrating Screen and 150 TPH x 1 Vibrating Screen in the ML area of 131.800 ha by M/s Thriveni Earthmovers Private Limited located at Villages Dhanurjapur, Kanarda and Laserda, Tehsil Barbil, District Keonjhar, Odisha.

2. The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under: -

i. The instant project activity is listed at schedule no. 1(a) Mining of Minerals and attracts the general conditions as the Odisha – Jharkhand Interstate Boundary is located at a distance of 3.19 km from the mine lease area and falls under Category ‘A’.

ii. The mine lease area is located between Latitude 22°03’16.60991’’N to 22°04’19.18502’’N and Longitude 85°17’53.81761’’ to 85°19’15.99748’’ E. The mine lease area falls under the Survey of India Toposheet No: F 45H8(73F/8) and falls in Seismic Zone-II.

iii. Details of Terms of Reference (ToR):

Date of application	Proposal No & File No	Consideration by EAC	Details of ToR	Date of accord
10.12.2021	IA/OR/MIN/44 6058/2023 & J-11015/113/20 21-IA-II(NCM)	28-29 Dec, 2021 & 7-9 Mar, 2022	ToR was issued to M/s Thriveni Earthmovers Private Limited for undertaking detailed EIA/EMP study along with recommendation made by NEE RI	28.03.2022

iv. Details of Mine Lease in chronological manner:

S.No	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/Minor)	Period of Grant	Granted by	Mine lease area in Ha
1	Letter of Intent for grant of Composite License No. IV (MISC)SM06/2017848 /SM, Bhubaneswar	27.01.2017	-	1 year from the date of its issuance	Govt. of Odisha	256.304
2	Composite License vide LrNo.IV (B)SM-100/2007-433/ SM,	19.01.2019	Manganese	24.01.2019 to 23.01.2021	Govt. of Odisha	256.304
3	Letter of Intent for grant of mining lease vide No.7731-I V(B)SM-100/2017/SM and LoI valid for a period of 3 years from the date of its issuance	21.09.2021	Manganese and Iron	50 years	Govt. of Odisha	131.889

4	Revised Lease and authenticated DGPS Survey map vide Lr No. MXIII (b) 80/2015/8031/DM/ stating that after conduct of DGPS survey by ORSAC the area now comes to 131.800 hectares instead of 131.889 hectares	22.01.2021	Manganese and Iron	50 years	Govt. of Odisha	131.800
Private land		35.765				
Government land		1.684				
Breakup of forest land of 94.351 Ha						
Revenue forest		53.467 Ha				
Non forest land recorded as forest as on 25.10.1980		40.884 Ha				
Total Forest land		94.351				
Total Mining lease area (MLA), ha		131.800				
Additional information (if any)		<p>Project Proponent submitted that the mine lease involves Revenue and Sabik forest predominantly characterized with scattered growth of Sal, Mahua, Kendu etc. which is a tropically dry deciduous open forest. The non-forest land consists of agriculture & non-agriculture land as per revenue record. Project Proponent also submitted the letter from the Office of the Tahasildar, Barbil vide No. 4213/ dated 22.11.2021 showing the status of land schedule of non-forest land as on 25.10.1980 over 131.800 ha.</p> <p>In-principle approval under Section-2 of the Forest (Conservation) Act, 1980 has been granted by MoEF&CC (Forest Conservation Division) vide Lr. No.8-02/2023-FC dated 21.12.2023 for the use of the entire forest land of 94.351Ha.</p>				
Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	MP/A/14-ORI/BHU/2021-22				
	Date	18.11.2021				
	Mineral & (Major/Minor)	Manganese & Iron Ore				
	Mine Lease Area, Ha	131.800				
	Validity	5 years from the date of lease deed execution				

		on
Mining Parameters	Quantitative Description	
Method of Mining	Fully Mechanized (FM) Opencast mining method with drilling and blasting	
Drilling/Blasting	Wet Drilling and Controlled Blasting	
Geological Reserves	Iron – 8.368 Mil. Tonnes Manganese – 7.368 Mil. Tonnes	
Mineable Reserves	Iron – 6.226 Mil. Tonnes Manganese – 6.470 Mil. Tonnes It will be further increase after exploration in future.	
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	Iron – 2.728 Mil.T, (ROM -1.545 MTPA + Waste – 1.183 MTPA) Manganese – 0.465 Mil.Ts (ROM - 0.110 MTPA + Waste – 0.355 MTPA)	
Life of mine	62 years Life of mine may likely to be changed in future depending upon the future changes in cut-off grade, method of working, future resources and market demand.	
Mine Bench Height & Bench Width	Iron - Height -10m, Width-will be equal and more than the height Mn - Height -5m, Width-will be equal and more than the height	
No. of Mine Benches	Will be maintained as per the mining plan	
Existing Depth, m bgl	--	
Ultimate Depth of Mining, m bgl	392m RL	
Ground Water Table, m bgl	490m RL	
Details of ground water intersection	The groundwater table lies at a depth of 490mRL. Ultimate depth of mining will be 392m RL. Hence groundwater intersection is envisaged.	
Individual bench slope	80°	
Overall pit slope	37.5 °	
Details of existing/ proposed Crusher	Dry screening and crushing using 200 TPH x 2 Primary Crushing, 200 TPH x 2 Secondary Crushing, 200 TPH x 2 Tertiary Crushing, 250 TPH x 2 Vibrating Screen and 150 TPH x 1 Vibrating Screen	

Mineral Beneficiation	Dry screening and crushing using 200 TPH x 2 Primary Crushing, 200 TPH x 2 Secondary Crushing, 200 TPH x 2 Tertiary Crushing, 250 TPH x 2 Vibrating Screen and 150 TPH x 1 Vibrating Screen			
RoM output size	Iron: 5-18mm, Fines - -5mm, -10mm, 10-30mm, Lumps- +30mm Manganese: Lumps: +30mm,10-30mm			
Transportation details including capacity of dumper/tipper, mode of transport and distance	Iron and Manganese ore from the mines will be transported to Barbil and Bolani Railway Siding through Bolani-Kiriburu PWD road. The railway sidings of Bolani & Barbil are located at a distance of 5.6km and 12.0 km (by road) respectively.			
Generation of Topsoil/OB & its Management during plan period & conceptual period	Waste Management	Plan Period (Mil.cum)	Conceptual Period (Mil.cum)	Total (Mil.cum)
	Road Maintenance	0.353	4.546	4.899
	Dumping	0.789	4.201	4.990
	Backfilled in mine void	--	13.983	13.983
	Total	1.142	22.730	23.872
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	Mineral Reject	Plan Period (Mil.T)	Conceptual Period (Mil.T)	Waste Management
	Iron Ore	0.995	3.575	Sold Directly or Blended with High Grade
	Manganese Ore	0.184	4.714	
	Total	1.179	8.289	
	The mineral reject will be stacked in 3 places. The temporary mineral reject stack – 1 is for manganese ore. The temporary mineral reject stack – 2 & 3 is for iron ore. The temporary mineral reject stack 1 & 2 is on virgin area and mineral reject stack -3 will be on the top of the already refilled and reclaimed area of Laserda pit -1.			
Stack ID	Height (m)	Total Stack Quantity (m ³)		
Temporary MR Stack Yard – 1	10	73754		
Temporary MR Stack Yard – 2	30	260091		
Temporary MR Stack Yard – 3	15	95465		
Additional information(if any)	The Project Proponent submitted the letter from the Directorate of Mines, Odisha vide Lr No. MXIII (b) 36/2021 1197/DM, dated 09.02.2022 stating that the concerned Mining Officer along with the Jr. Mining Officer of Joint Director of Mines, Joda have enquired the matter in the field on 28.12.2021 & 29.12.2021 and it was observed that there are old excavations of low depth in 45 nos of patches of land covering 2.491 ha (approximately) present inside the applied ML area of Lasarda-Pacheri Manganese & Iron Block over an area of 131.800 ha of M/s Thriveni Earthmovers Private Limited. Those excavated areas are filled with thick vegetation growth, as it is evident from the surface map			

	attached during auction of Lasarda-Pacheri Manganese & Iron Block for composite license that many excavated quarry's were previously existed inside the composite license area before the grant of composite license to M/s Thriveni Earthmovers Private Limited. As per the report submitted Jr. Mining Officer of Joint Director of Mines, Joda there is no illegal mining carried out by M/s Thriveni Earthmovers Private Limited within the lease hold area.		
Total water requirement	983 KLD	Fresh water	911 KLD
		Treated water	72 KLD
Source	Borewell – 95 KLD, Mine Pit Water – 888 KLD		
Permission for withdrawal/ intersction along with details of grant and its validity	No Objection Certificate for Groundwater Abstraction from CGWA vide NOC No. CGWA/NOC/MIN/ORIG/ 2024/19982 dated 06.03.2024.		
Additional information (if any)	Based on CGWA Recommendation, the quantity will be optimized.		
Particulars	Particular's Name	Distance & Directions	
Village	Laserda	<300m	
Town	Barbil	5.7Km, NE	
Highway	NH-520 SH-10B SH-4	4.8Km, E 6.8Km, E 8.4Km, N	
Interstate Boundary	Odisha-Jharkhand Interstate Boundary	3.19Km	
Railway Station/Railway line	Barbil	6.3Km, NE	
Water Bodies	<ul style="list-style-type: none"> ❖Karo River ❖Seasonal Stream ❖Ganse Nala ❖Topadihi Nala 	<ul style="list-style-type: none"> ❖Passes through lease ❖Within lease area ❖1.4Km, SE ❖5.1Km, S 	
Forest	<ul style="list-style-type: none"> ❖Uliburu RF ❖Karo RF ❖Siddhamath RF ❖Lakrghat RF ❖Karampada RF ❖Thakurani RF 	<ul style="list-style-type: none"> ❖0.2Km, SE ❖<1Km, NW ❖1.4Km, SE ❖1.8Km, S ❖3.4Km, W ❖7.4Km, E 	
Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no,	

		date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	Yes	The Project Proponent submitted that an area of 94.351 Ha is a forest land. The Project Proponent submitted the in principle approved granted by the Ministry vide Lr. No: 8-02/2023-FC dated 21.12.2023 under Section - 2 of the Forest (Conservation) Act, 1980 in favour of M/s Thriveni Earthmovers Private Limited for non-forestry use of 94.351 ha of forest land including 4.261ha of safety zone (3.858 ha along the ML boundary and 0.403 ha along the PWD road) within the granted LoI for ML over 131.800 ha for Laserda Pacheri Manganese & Iron Ore Block in Keonjhar District of Odisha.
National Park	No	Project Proponent reported that there are no National Park, Wildlife Sanctuary, Tiger/ Elephant Reserve, Biosphere Reserve, Ramsar site within 10 km radius of the study area.
Wildlife Sanctuary	No	
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area (ESA)	Nil	
Elephant/Tiger Reserve	No	Karo Karampada – 2.31 km. The Project Proponent has submitted the map authenticated by Divisional Forest Officer, Keonjhar Division.
Coastal Regulation Zone (CRZ)	No	
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	Yes	Authenticated list of Flora and Fauna is obtained from Divisional Forest Officer, Keonjhar vide Letter No. 2044 dated 05.03.2024.
Wildlife Conservation Plan	Yes	Wildlife Conservation Plan approved by PCCF(WL) & CWLW, Odisha vide letter no. 10007/ CWLW-FDWC-FD-0024-2022 dated 11.09.2023 with a financial outlay of Rs. 390.402 Lakhs.
Proposed area for green belt/plantation and no. of saplings proposed	The Project Proponent has proposed to plant 2923 no. of saplings over an area of 2.923 ha along the Mining Lease boundary and 50 m of road safety zone in Laserda side with expected survival rate of 75% with a budget of Rs 5.84 Lakhs. In the post mining stage, overall an area of 127.29 Ha (96.57% of the total lease area) will be covered under vegetation. Plantation will be carried out in places like mined out area, waste dumps, mineral storag	

	e, reclaimed infrastructure area, unused and safety zone area etc.		
Budget for green plant & plantation till the end of life of mine.	Rs.5.84 Lakhs		
No. of tree cuts in the mine lease area and compensatory afforestation	Towards scheme of compensatory afforestation, an area of 91Ha of equal non-forest land and 104Ha of degraded forest land, a total demand of Rs. 5.92 Crores has been raised with the land value of Rs.2.38 Crores additional.		
Particulars for Green belt/plantation	Area covered (in Ha)		
7.5 m barrier & non-mineralized zone	2.923 Ha in Mine Boundary and 50m safety zone for road.		
Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)			
Period of baseline data collection	March, 2021 to May, 2021		
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Summer		
Predominant Wind direction (From)	SW & W		
Ambient Air Quality (no. of locations) and results	Locations	Parameters	Results
	10	PM10	38.2 – 78.6 g/m ³
		PM2.5	18.9 – 48.5 g/m ³
		SO ₂	4.2 – 13.5 g/m ³
		NO _x	9.6 – 19.2 g/m ³
Noise level (no. of locations) and results	Locations	Parameters	Results
	10	Day Eq Leq dB(A)	44.9 – 52.8
		Night Eq Leq dB(A)	37.2 – 43.2
Water Quality (no. of locations) and results	Surface Water Quality		
	Locations	Parameters	Results
	04	pH	7.72 – 7.96
		TDS (mg/l)	136 – 148
		Fluoride (mg/l)	0.12 – 0.2
		Chloride (mg/l)	28 – 32
		Fe (mg/l)	0.4 – 0.48
		Dissolved Oxygen (mg/l)	5.6 – 6.1
Biochemical Oxygen Demand (mg/l)		2.4 – 2.8	

	<p>Ground Water Quality</p> <table border="1"> <thead> <tr> <th>Locations</th> <th>Parameters</th> <th>Results</th> </tr> </thead> <tbody> <tr> <td rowspan="6">8</td> <td>pH</td> <td>7.68 – 8.2</td> </tr> <tr> <td>TDS (mg/l)</td> <td>282-346</td> </tr> <tr> <td>Fluoride (mg/l)</td> <td>0.19 – 0.22</td> </tr> <tr> <td>Chloride (mg/l)</td> <td>32-38</td> </tr> <tr> <td>Sulphates (mg/l)</td> <td>7.8 – 9.8</td> </tr> <tr> <td>Iron (mg/l)</td> <td>0.27 – 0.31</td> </tr> </tbody> </table>	Locations	Parameters	Results	8	pH	7.68 – 8.2	TDS (mg/l)	282-346	Fluoride (mg/l)	0.19 – 0.22	Chloride (mg/l)	32-38	Sulphates (mg/l)	7.8 – 9.8	Iron (mg/l)	0.27 – 0.31
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<p>Hydro geological study and results</p>	<p>Project Proponent reported that “Comprehensive report on groundwater conditions in both core and buffer zones with groundwater modeling for Laserda-Pacheri Manganese & Iron Ore Block of M/s. Thriveni Earthmovers Pvt. Lt d.’ prepared by Dr. Nallathambi Varadarajan (CGWA Accredited Ground Water Professional). Pumping test was conducted in an existing bore well in the core zone. Based on the pumping test analysis with various methods, the average K value obtained is 3.318m/d which is in conformity with regional aquifer parameters of shallow aquifer. The parameters for deeper bore wells are inferred from the lithology and an estimated value of 0.3318 m.day is used for deeper confined aquifers. The proposed mining activity at Laserda - Pacheri Manganese and Iron ore block requires mine dewatering to an extend of 13 48.8 m³/day for safe mining.</p> <p>Existing one bore well will pump for 6 to 8 hours with 5 HP motor and estimated pumping is 100 to 120 m³/day. The proposed 3 more bore wells will supplement the ultimate domestic water demand of 380 m³/day in the project area. The prevailing hydrogeological conditions and predicted drawdown for the withdrawal of ground water in the project area will have localised draw down and more induced recharge from Karo river.</p>																
<p>Traffic study (no. of locations) and results</p>	<p>Project Proponent reported that Iron and Manganese ore from the mines will be transported to Barbil and Bolani Railway Siding through Bolani-Kiriburu PWD road which is 9m width and strengthened earlier for the meant of transportation of minerals but at present there is no such mineral transportation as no mines are operating in the nearby areas apart from SAIL Bolani and SAIL Kiriburu which has own railway sidings inside their lease area. Near Bolani railway siding the road is touching to the Bolani main road (11m width) which is further connected to Barbil siding through Bolani-Barbil Road. This road further connected to Barjamda-Barbil Bhadrasahi SH-10B. Further SH-10 B joined to NH-520 (4 lane) at Bhadrasahi.</p> <p>The nearby railway sidings are Bolani & Barbil which are at a distance of 5.6 km and 12.0 Km (by road) respectively. While passing through Kiriburu Bolani Road, there is a bridge over Karo River with dimensions of around 60m length and 7m width and has the strength to sustain loaded trucks/dumpers. Trucks/Volvos of the local villagers usually pass through the bridge to move towards kiriburu or Barbil. Project Proponent will construct a bridge over riv</p>																

	er Karo having dimension of 60m length and 11m width. Permission has been obtained from PWD Department vide Letter No.5484 dated 13.07.2023. Bridge construction will start after obtaining EC and execution of lease deed. It is observed that 13 trips/hr for Iron ore and 1 Trip per hour for Manganese ore will be dispatched which is a maximum of 14 Trips/Hr. The road will continue to be in LOS 'A'.						
Advertisement for PH with date (name of major national daily and one regional vernacular daily newspaper)	30.05.2023 (Odisha), 04.06.2023 (Jharkhand), Regional Newspaper - The Sambad (Odisha), The Prabhatkhabar (Jharkhand), English Newspaper - The Times of India (Odisha), The Hindustan Times (Jharkhand)						
Date of PH	04.07.2023						
Venue	Mouza-Dhanurjaypur (Khata No.122, Plot No.4/1238)						
Chaired by	Additional District Magistrate (Revenue), Keonjhar						
Main issues raised during PH	Majority of the comments were related to employment to the locals, proper compensation for PAFs, Infrastructural developments, educational facilities, etc.						
Budget proposed for addressing issues raised during PH over 3 years	Rs 9.63 Cr						
R & R details	<p>The Project Proponent reported that an area of 42.242 Ha of land needs to be acquired. About 25 houses need to be shifted as per the 'Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013' and 'the Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2016'. The State Government has granted administrative approval under rule (3) of Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2016 (RFCTLAR&R Rules 2016) for land acquisition and leasing out the land for mining purpose till the validity of the lease.</p> <p>Land acquisition process by the State Government for handing over the same to the proponent is under progress. However, in line with the guidelines given in the above rules, the project proponent has worked out a compensation package and a comprehensive R & R study was undertaken by Asian Institute for Sustainable Development (AISD), Ranchi, Jharkhand.</p> <table border="1"> <tr> <td>Rehabilitation Cost</td> <td>Rs.39.05 Crores</td> </tr> <tr> <td>Periphery Development Cost</td> <td>As decided and determined by the RPDAC</td> </tr> <tr> <td>Support Cost for R&R Implementation (Implementation charges; Administration, Management, Monitoring etc.)</td> <td>10% of the total budget (a+b)</td> </tr> </table> <p>Further, the Project Proponent submitted that for effective implementation of R & R plan as well as the Peripheral Development Plan, the Project Proponent will constitute a Rehabilitation & Resettlement Cell (R & R Cell) for the project and Corporate Social Responsibility Cell (CSRC). R & R Cell will be responsible for the effective implementation of R & R entitlements while CSRC will take the responsibility of peripheral development. Both will assist RPDAC in monitoring and evaluation.</p>	Rehabilitation Cost	Rs.39.05 Crores	Periphery Development Cost	As decided and determined by the RPDAC	Support Cost for R&R Implementation (Implementation charges; Administration, Management, Monitoring etc.)	10% of the total budget (a+b)
Rehabilitation Cost	Rs.39.05 Crores						
Periphery Development Cost	As decided and determined by the RPDAC						
Support Cost for R&R Implementation (Implementation charges; Administration, Management, Monitoring etc.)	10% of the total budget (a+b)						

Court Case, No and its present status		Project Proponent informed that there is no litigation pending against the project.
Undertaking by Project Proponent w.r.t court case		Submitted
Affidavit as per Ministry's OM dated 30.05.2018	The Project Proponent submitted the Affidavit in a Non-judicial stamp paper of Rs. 50 bearing no. D 087496 dated 20.12.2021 to comply with all the statutory requirement & judgment of Hon'ble Supreme Court dated 2nd August 2017 in writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ors.	
Undertaking by Project Proponent in EIA/EMP report	The Project Proponent submitted a declaration stating that they have entrusted the EIA study to M/s. Creative Engineers & Consultants (CEC), Chennai who have been accredited by the National Accreditation Board for Education & Training (NABET), Quality Council of India. The Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) have been prepared as per the generic structure proposed in the EIA notification 2006, ToR issued by MoEF&CC. The prescribed ToR along with compliance is also incorporated in the EIA/EMP Report. This report is prepared based on the information and data obtained from the Mining Plan and technical studies undertaken by various consultants/institutes that have been engaged. The data given in the EIA/EMP report are factually correct to the best of knowledge.	
Undertaking by Consultant in EIA/EMP report	The EIA Consultant submitted an undertaking stating that M/s Thriveni Earthmovers Pvt. Ltd. obtained ToR under EIA Notification 2006 from MoEF&CC ToR Lr.No: J-11015/113/2021-IA II(NCM) dated 28.03.2022 for Laserda-Pacheri Manganese and Iron Ore Block for the peak production capacity of 1.545 MTPA (ROM) of Iron ore and 0.11 MTPA (ROM) of Manganese ore over an area of 131.800Ha in Dhanurjaypur, Kanarda and Laserda villages, Barbil Tehsil in Keonjhar District in Odisha. The prescribed TOR is complied with and incorporated in the EIA Report. The requirements regarding compliance of ToR has been explained to the project proponent. The present application is being submitted based on directions of the proponent. This report is based on the information and data obtained from approved Mining Plan, site visit & field study carried out by specialized agencies/ experts. The data generated and given in the EIA/EMP Report are factually correct. The sample collection and analyses are carried out by M/s Star Analytical Services, who are an MoEF&CC recognized and NABL accredited Laboratory.	
Plagiarism Certificate	The EIA Consultant submitted that the EIA Coordinator (EC) has gone through the report, and the consultant organization shall be fully accountable for any misleading information. It is certified that no unethical practices, plagiarism involved in carrying out the work and external data/ text has not been used without proper acknowledgement while preparing this EIA report.	
S. No	ADS Point	Reply by Project Proponent
1	The EAC opined that the Ministry may seek comments from the Project Elephant Division in t	Project Elephant Division of the Ministry has given the following Comments: i. As per the authentication of the DFO, Keonjhar the neare

the Ministry in this regard.

st elephant corridor i.e. Karo-Karampada is at a distance of 2.31 km from the project site, the user agency and the State Forest Department must undertake measures for the conservation and protection of elephants and their habitats and ensure to avoid the human-elephant conflict.

ii. Considering the migratory nature of the elephants, the user agency should take utmost care for prevention of falling of wildlife including the elephants into the mining pits and should take all the necessary steps so that the movement of elephants in the elephant corridor/ elephant habitat is not affected by the operations of the project.

iii. Also, while drafting the Integrated Regional Wildlife Conservation Plan, the elephant conservation and management plan should be made part of the same.

iv. Considering the conservation of elephants in the landscape and future perspective also, the Oversight Committee should regularly monitor and review the compliance of the conditions stipulated in the approval for above mentioned mines.

v. A proposed Bio-diversity Conservation Plan for this entire landscape shall also be prepared at the earliest by the State Govt. at the cost of user agency by including the elephant conservation plan.

vi. While consideration of the Environment Clearance, the above comments of the Project Elephant and the compliance of the conditions mentioned in the office memorandum dated 21.12.2023 of Forest Conservation Division shall also be considered for the instant proposal and also for the other similar proposals related to the mining in that elephant landscape.

Further, Ministry (Project Elephant Division) received the following comments from Chief Wildlife Warden, Odisha upon the ongoing court case matter related to the project:

i. One elephant corridor (Karo-Karampada which one out of 14 elephant corridors of Odisha) is falling within 10 Km of impact zone of the said lease boundary.

ii. Wildlife Society of Odisha, a NGO has filed O.A. no. 129/2016/EZ before Hon'ble NGT, Kolkata bench praying for notification of the said corridor as Eco-Sensitive Zone under EPA, 1986.

iii. Hon'ble NGT, Kolkata in their order dated 06.04.2023 have directed the state respondents to notify the elephant corridor in one-month time.

iv. State Government have filed W.P. (C) no. 1407 of 2023 before Hon'ble High Court of Odisha against order dated 06.04.2023 of Hon'ble NGT. v. Hon'ble High Court of Odisha in its order dated 04.05.2023 in the said W.P. have stayed further proceedings arising out of O.A. no. 129/2016/EZ.

As per the Chief Conservator of Forests (Wildlife-II), State Wildlife Headquarters, Odisha information the matter is su

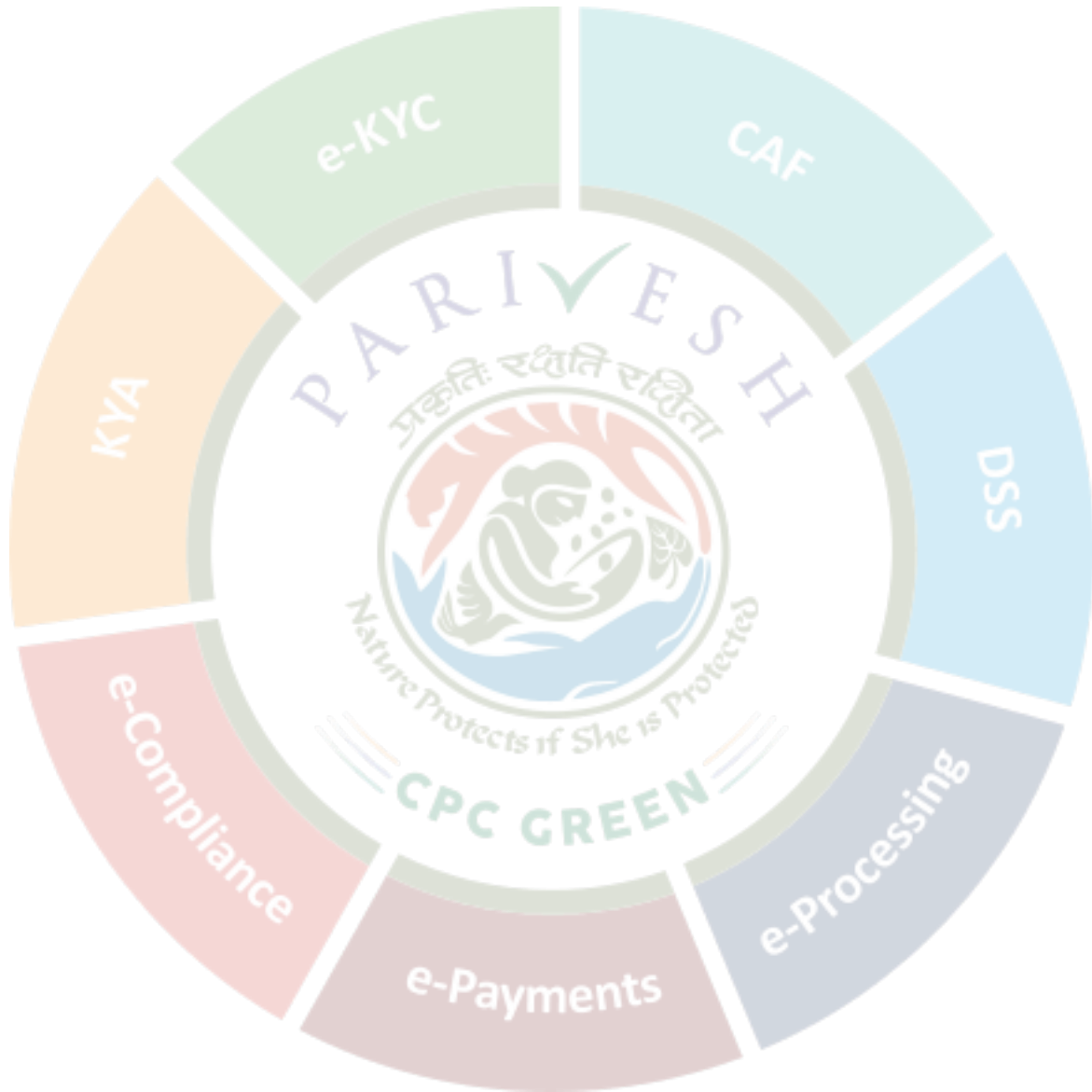
		b-judice and still pending before the Hon'ble High Court of Odisha.		
2	The Project Proponent needs to submit a letter from the State Forest Dept., w.r.t Karo Karampada Elephant Corridor and also the present status of the court case w.r.t Karo Karampada Elephant Corridor in WP (C) No. 14057/2023, 14706/2022 before Hon'ble High Court of Orissa and O.A No:129/2016/EZ & Executive application no. 03/2022 before Hon'ble NGT, Case no: 115/2013 before Judicial Magistrate of First Class (JMFC) Court, Barbil, Orissa and any court of law.	In this regard, the State Forest Dept. has furnished the letter w.r.t. status of the court cases of Karo-Karampada Corridor.		
3	The EAC noted that there is no reference from the Project Proponent regarding list of flora and fauna authenticated by the State Forest Dept. The EAC asked the Project Proponent to submit the authenticated list of Flora and Fauna as per latest Wildlife (Protection) Amendment Act 2022.	Flora and fauna list has been duly authenticated by DFO, Keonjhar vide Lr.No.2044 dated 05.03.2024.		
4	The Project Proponent needs to define the exact quantity w.r.t Suggested Ore Transport Mode (SOTM) as per the Recommendation of CSIR-NEERI Report on "Carrying Capacity Study for Environmentally Sustainable Iron and Manganese Ore Mining Activity in Keonjhar, Sundargarh and Mayurbhanj districts of Odisha State.	As per the SOTM recommended by CSIR-NEERI, project proponent informed that proposal comes under SOTM 3 i.e. EC capacity between 1 MTPA <3 MTPA. So, project proponent will dispatch minimum 70% (Max. 1.081 MTPA) by public railway siding and maximum 30% (Max. 0.464MTPA) by road – direct destination or by other public railway siding or above options.		
5	The Project Proponent needs to submit the current status of NOC for abstraction of groundwater	Project Proponent have obtained No Objection Certificate for Groundwater Abstraction from CGWA vide NOC No. CGWA/NOC/MIN/ORIG/2024/19982 dated 06.03.2024. As per the Recommendation of CGWA, the quantity will be optimized.		
Activities			Capital cost (Crores)	Recurring cost

		(Lakhs/ann um)
Mobile Water Sprinkling	60.0	7.20
Fixed Water Sprinkling	20.0	2.70
Wheel Washing Facility	35.0	5.0
Bridge Construction over Karo River	450.0	5.0
Greenbelt and Plantation	15.0	1.5
Vacuum cleaner	60.0	3.0
Dry fog system for crushing and screening plant	27.0	3.0
Continuous ambient air quality monitoring station	60.0	9.0
Parking Plaza for trucks with proper amenities	25.0	2.5
Construction of cement concrete road from mine entrance to exit	60.0	3.0
Effluent Treatment Plant	10.0	1.5
Sewage Treatment Plant	15.0	2.25
Surface Runoff Management Structures – Retaining Wall, Garland Drain, Settling Ponds	110.0	7.0
Rooftop Rainwater Harvesting	5.0	0.75
Piezometers – 2 Nos.	3.0	0.6
Electronic Display Board	3.0	0.3
Environmental Monitoring	8.0	2.4
EMC Manpower	-	23.0
Awareness Programs in nearby villages	-	6.0
ISO Certification	-	3.0
Total	966	88.7
Particulars	(Rs. In Crore)	
Total cost of EMP (Capital Cost of EMP + capital cost of Public hearing)	Rs.19.3 Lakhs (9.66 + 9.64) Capital cost Rs.88.7 Lakhs Recurring Cost	

Project Cost	Rs.96 Crores
Employment (No.s)	335

3.4.3. Deliberations by the committee in previous meetings

Date of EAC 1 :31/01/2024



Deliberations of EAC 1 :

The Project Proponent presented the KML file to indicate the site features in the study area of 10 km radius. The Project Proponent informed that the instant proposal attracts the general conditions as the Odisha – Jharkhand Interstate Boundary is located at a distance of 3.19 km from the mine lease area. The EAC on viewing the KML file noted that the river Karo is passing through the mine lease area. The Project Proponent informed the EAC that a bridge will be constructed over river Karo. The EAC asked about the dimensions of the bridge. The Project Proponent informed the EAC that at present, bridge over the Karo is around 60m length and 7m width and has the strength to sustain loaded trucks/dumpers. Trucks/Volvos of the local villagers usually pass through the bridge to move towards Kiriburu or Barbil. It is proposed to construct another bridge over river Karo having dimension of 60m length and 11m width and also NOC obtained from the Office of the Superintending Engineer, Keonjhar (R&B) Division vide letter dated 13.07.2023 for construction of bridge over river Karo within the mine lease area of Laserda – Pacheri Manganese and Iron Ore. Further, the Project Proponent informed the EAC that the mineral will be transported by road located adjacent to the mine lease area on the north western side to Barbil and Bolani Railway Siding through Bolani-Kiriburu PWD road. The width of the road is 11m. About maximum of 14 trips/hr will be transported from mines. There will be movement of hardly 1 rake/day from the Barbil/Bolani railway sidings.

The Project Proponent informed the EAC that the total mine lease area is 131.800 ha, out of which 94.351 ha is a forest land and 37.449 ha is a non-forest land. Stage-I Forest Clearance (FC) obtained on 21.12.2023 under Section - 2 of the Forest (Conservation) Act, 1980 in favour of M/s Thriveni Earthmovers Private Limited for non-forestry use of 94.351 ha of forest land including 4.261ha of safety zone (3.858 ha along the ML boundary and 0.403 ha along the PWD road) within the granted LoI for ML over 131.800 ha for Laserda Pacheri Manganese & Iron Ore Block. The Project Proponent also informed the EAC that there are no notified National Park, Wildlife Sanctuary, ESZ/ESA, etc., within 10 km radius of the study area. The EAC asked about the Elephant Corridor in the study area. The Project Proponent informed the EAC that as per the map authenticated by Divisional Forest Officer, Keonjhar Division, Karo Karampada Elephant Corridor is located at a distance of 2.31 km, NW.Wildlife Conservation Plan approved by PCCF(WL) & CWLW, Odisha on 11.09.2023 with a financial outlay of Rs. 390.402Lakhs. There is no movement of elephants observed in the mine lease area. The Karo Karampada Elephant Corridor is not yet notified. The EAC was of the view that if Elephant Corridors are notified as Protected Area under Wildlife (Protection) Act, 1972, the proposal that are connected with the corridors needs to be go through the Standing Committee of National Board for Wildlife (SCNBWL). The EAC opined that the Ministry may seek comments from the Project Elephant Division in the Ministry in this regard. The EAC also asked the Project Proponent to submit a letter from the State Forest Dept., w.r.t Karo Karampada Elephant Corridor and also the present status of the court case w.r.t Karo Karampada Elephant Corridor in WP (C) No. 14057/2023, 14706/2022 before Hon'ble High Court of Orrisa and O.A No: 129/2016/EZ & Executive application no. 03/2022 before Hon'ble NGT, Case no: 115/2013 before Judicial Magistrate of First Class (JMFC) Court, Barbil, Orissa and any court of law. The EAC noted that there is no reference from the Project Proponent regarding list of flora and fauna authenticated by the State Forest Dept. The EAC asked the Project Proponent to submit the authenticated list of Flora and Fauna as per latest Wildlife (Protection) Amendment Act 2022.

The Project Proponent informed the EAC that backfilling will be started from the 3rd year of mining operation on worked out Pit-1. Baseline study was carried out during March-May, 2021 (Summer Season). Predominant wind direction was from SW & W. Post projection of concentration of ambient air quality is within the NAAQS. NOC for abstraction of groundwater is under process. CSIR-CIMFR conducted a slope stability study to suggest scientific method for extraction of ore from the mine. From the tests the geotechnical parameter is found out and they are C avg.=57.27 Kpa, frictional angle avg.=7.60. From the slope stability analysis, it is determined that all the probable profiles have safety factor more than 1.3. During the plan period it is proposed to plant over 2.923 ha. of area along the Mining Lease boundary and 50 m of road safety zone in Laserda side. Advertisement for Public hearing (PH) was advertised on both States on 30.05.2023 in Odisha and 04.06.2023 in Jharkhand. PH was conducted on 04.07.2023. A budget of Rs 9.63 Cr has been earmarked to address the concerns raised during public hearing. There are 25 Project Affected Families (PAF) who will be losing their land spread over an area of 104.135 acres of land. The land will be purchased through acquisition process. Land acquisition process by the State Government for handing over the same to Project Proponent is under progress. A budget of Rs 966 Lakhs has been earmarked as a capital cost towards Environment Management Plan (EMP) and Rs 88.7Lakhs as a recurring cost. Based on the discussions held, the EAC **deferred** the proposal for want of following additional information: -

i. The EAC opined that the Ministry may seek comments from the Project Elephant Division in the Ministry in this regard.

ii. The Project Proponent needs to submit a letter from the State Forest Dept., w.r.t Karo Karampada Elephant Corridor and also the present status of the court case w.r.t Karo Karampada Elephant Corridor in WP (C) No. 14057/2023, 14706/2022 before Hon'ble High Court of Orrisa and O.A No: 129/2016/EZ & Executive application no. 03/2022 before Hon'ble NGT, Case no: 115/2013 before Judicial Magistrate of First Class (JMFC) Court, Barbil, Orissa and any court of law.

iii. The EAC noted that there is no reference from the Project Proponent regarding list of flora and fauna authenticated by the State Forest Dept. The EAC asked the Project Proponent to submit the authenticated list of Flora and Fauna as

per latest Wildlife (Protection) Amendment Act 2022.

iv. The Project Proponent needs to define the exact quantity w.r.t Suggested Ore Transport Mode (SOTM) as per the Recommendation of CSIR-NEERI Report on “Carrying Capacity Study for Environmentally Sustainable Iron and Manganese Ore Mining Activity in Keonjhar, Sundargarh and Mayurbhanj districts of Odisha State”

v. The Project Proponent needs to submit the current status of NOC for abstraction of ground water.

3.4.4. Deliberations by the EAC in current meetings

The instant proposal is for Environmental Clearance for Laserda- pacheri Manganese mining of Iron and Manganese. The Proposal attracts the general conditions as the Odisha – Jharkhand Interstate Boundary is located at a distance of 3.19 km from the mine lease area and falls under Category ‘A’.

An elephant corridor i.e. Karo-Karampada is located at a distance of 2.31 km from the project site, EAC took note of the replies submitted by the PP to the ADS raised during the 26th EAC meeting held during 31st January 2024- 1st February 2024. The EAC noted the comments received from the Project Elephant Division of the Ministry and asked the PP to take measures for the conservation and protection of elephants and their habitats in order to avoid the human-elephant conflict. EAC also noted that there are multiple court cases going on w.r.t. Elephant Corridor, therefore the Project Proponent should be vigilant enough to take note of those cases and be in the compliance of the outcome of the Hon’ble court’s decision.

Subsequently, the EAC stated that as per the SOTM recommendation by CSIR-NEERI, the proposal comes under SOTM 3 i.e. EC capacity between 1 MTPA &<3 MTPA. Therefore, the Project Proponent should make the transportation plan with minimum 70% (i.e. upto 1.081 MTPA) by public railway siding and maximum 30% (i.e. upto 0.464 MTPA) by road. Further, the EAC advised the PP to protect and conserve the river Karo which is passing through the mine lease area by prohibiting mining activity 50 m away from the river. The EAC also asked PP to implement the budget of Rs 9.63 Cr which has been earmarked to address the concerns raised during public hearing. EAC also took note of the implementing budget of Rs 966 lakhs which has been earmarked as a capital cost towards Environment Management Plan (EMP) and Rs 88.7 Lakhs as a recurring cost.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC in its EAC (Non-Coal Mining) meeting held during 9-10th May, 2024 **recommended** the proposal under the provisions of EIA Notification, 2006 and its subsequent amendments for grant of Environmental Clearance for Laserda - Pacheri Manganese and Iron Ore mining with production capacity of 1.545 MTPA (ROM) of Iron Ore, 1.182 MTPA of waste (Total Excavation of Iron Ore 2.728 MTPA) and 0.110 MTPA (ROM) of Manganese Ore, 0.355 MTPA of waste (Total Excavation of Manganese Ore 0.465 MTPA) along with Dry screening and crushing using 200 TPH x 2 Primary Crushing, 200 TPH x 2 Secondary Crushing, 200 TPH x 2 Tertiary Crushing, 250 TPH x 2 Vibrating Screen and 150 TPH x 1 Vibrating Screen in the ML area of 131.800 ha by M/s Thriveni Earthmovers Private Limited located at Villages Dhanurjyapur, Kanarda and Laserda, Tehsil Barbil, District Keonjhar, Odisha subject to the following specific conditions in addition to the standard EC conditions applicable for non-coal mining projects: -

3.4.5. Recommendation of EAC

Recommended

3.4.6. Details of Environment Conditions

3.4.6.1. Specific

protection of elephant corridor	
1.	The Project Proponent shall implement the measures for the conservation and protection of elephant corridor in order to avoid the human-elephant conflict.
sotm recommendation	
1.	The Project Proponent needs to implement the SOTM recommendation by CSIR-NEERI as the proposal comes under SOTM 3 i.e. EC capacity between 1 MTPA & <3 MTPA. Therefore, the Project Proponent should make the transportation plan with minimum 70% (i.e. upto 1.081 MTPA) by public railway siding and maximum 30% (i.e. upto 0.464 MTPA) by road.
six-monthly report	
1.	The Project Proponent needs to submit the six-monthly report upon the progressive status of transportation of mineral through Rail and Road.
action plan	
1.	The Project Proponent shall strictly adhere to the action plan to monitor the movement of wildlife in the vicinity of the mine lease area.
camera traps	
1.	The Project Proponent needs to use modern equipment's such as Camera Traps for ensuring presence and movement of wild animals in the study area in consultation with Wildlife Wing of Forest Department. Appropriate interventions shall be taken to minimise stress conditions for wild animals and to avoid Man Animal conflict.
river karo	
1.	The Project Proponent needs to take adequate measures for protection of the river Karo which is passing through the mine lease area. The PP needs to prohibit the mining activity upto 50 m on either side of the river Karo. The natural water bodies and other streams which are flowing in and around the mine lease area should not be disturbed and mining activity shall be prohibited within 50 m from their boundaries.
annual compliance	
1.	The Project Proponent needs to submit the annual compliance of the effectiveness of the Wildlife Conservation Plan to Ministry's Regional Office.
monitoring on surface water flow	
1.	Regular monitoring on surface water flow, turbidity & water quality shall be carried out and report shall be submitted quarterly to the Ministry's Integrated Regional Office.
caaqms	
1.	The Project Proponent should install the continuous ambient air quality monitoring stations (CAAQMS) as per the scientific study and in consultation with CPCB/SPCB. The real time data so generated should be displayed digitally at entry and exit gate of mine lease area for public display

	and shall be linked to server of CPCB/SPCB.
monitor	
1.	The Project Proponent shall monitor the air quality, noise level, water quality, water level and ground vibration during drilling and blasting at the lease boundary of the mine, near the village, crusher and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Regional Office.
scientific study	
1.	The Project Proponent needs to conduct the scientific study for carrying out blasting by the reputed Institute within a period of six months from the start of mining operations. The ground induced blasting vibrations shall be monitored regularly for every blast performed and the values of "peak particle velocity" and "Air Over Pressure" shall be maintained below the permissible value prescribed by the DGMS, from time to time. The data needs to be maintained and submitted along with the six monthly compliance report. The implementation status of the scientific study to be carried out by the reputed Institute shall be submitted to the Ministry's Regional Office and DGMS.
water sprinklers	
1.	The Project Proponent needs to install the permanent water sprinklers along the haul road and the approach road. Further, 10 nos. of fog canon/mist sprayer of at least 40 m throw shall be installed at various locations in the mine area.
garland drains	
1.	Garland drains and catch drains shall be regularly desilted and maintained periodically at regular intervals.
latest mining technologies	
1.	The Project Proponent needs to explore the possibility of using advanced/ latest mining technologies available so as to minimize the ecological impacts.
air pollution	
1.	The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, and other areas prone to air pollution. All the screens and screening plant should be properly covered and proper arrangement of dust suppression system should be provided for dust control. PP shall take necessary measures to avoid generation of fugitive dust emissions. The dense plantation shall be carried out in the vicinity of the crusher. The Stack emission monitoring of the Crusher/DG set shall be carried out at periodic intervals. Continuous noise monitoring meters shall be established inside and outside of the crusher.
7.5 m peripheral plantation	
1.	The Project Proponent needs to complete the entire 7.5 m peripheral plantation and safety barrier plantation within three years from the start of mining operations. The Project Proponent should plant quality sapling of 10 m height of native and fruit bearing species. In case of tall transplants (seedlings) the seedlings should have proper trained root stock with root biomass commensurate with seedling height to ensure good growth after out planting. Plantation shall be undertaken in consultation with the State Forest Department. The Project Proponent shall make the actual count on the saplings planted and its survival rate and in case of failure of achievement of 95% survival rate, action plan for achieving the target survival rate shall be submitted to the Ministry's Integrated

Regional Office.

public hearing budget

The budget of Rs 963.8 Lakhs to address the concerns raised by the public in the public hearing to be completed within 3 years from the date of start of mining operations. PP shall comply with all action plans made for public hearing concerns and make regular maintenance and record the progressive activity outcomes. Activity-wise details of Public Hearing Budget are as follows:

S.No.	Particulars	Budget (Rs. In Lakhs)
1.	Employment	504
2.	Drinking Water	30
3.	Road	50
4.	Electricity/Lighting	10
5.	Education	135.4
6.	Infrastructure	12.4
7.	Health	153
8.	Plantation	3
9.	Self-Employment and SHG support	44
10.	Sports	22
	Total	963.8

environment management plan

The Project Proponent should adopt the proper mitigation measures as proposed under EMP with budgetary provision of Rs 966 Lakh as capital cost and 88.7 lakh as recurring cost. The adoption of mitigation measures and monitoring of the same as proposed in the EMP shall be done under the supervision of the qualified environmental personnel. The implementation status of the same shall be submitted to the Ministry's Regional Office. The item-wise details of the Environment Management Plan is as follows:

S.No.	Item	Capital Cost (Rs. in Lakhs)	Recurring Cost (Rs. InLakhs)	Timeframe for Capital Cost
1.	Mobile Water Sprinkling	60.0	7.20	1st year onwards
2.	Fixed Water Sprinkling	20.0	2.70	1st year onwards

3.	Wheel Washing Facility	35.0	5.0	1st year onwards
4.	Bridge Construction over Karo River	450.0	5.0	6 months
5.	Greenbelt and Plantation	15.0	1.5	5 years
6.	Vacuum cleaner	60.0	3.0	1st year onwards
7.	Dry fog system for crushing and screening plant	27.0	3.0	1st year onwards
8.	Continuous ambient air quality monitoring station	60.0	9.0	1st year onwards
9.	Parking Plaza for trucks with proper amenities	25.0	2.5	1st year onwards
10.	Construction of cement concrete road from mine entrance to exit	60.0	3.0	1st year onwards
11.	Effluent Treatment Plant	10.0	1.5	1st year onwards
12.	Sewage Treatment Plant	15.0	2.25	1st year onwards
13.	Surface Runoff Management Structures – Retaining Wall, Garland Drain, Settling Ponds	110.0	7.0	1st year onwards
14.	Rooftop Rainwater Harvesting	5.0	0.75	1st year onwards
15.	Piezometers – 2 Nos.	3.0	0.6	1st year onwards
16.	Electronic Display Board	3.0	0.3	1st year onwards
17.	Environmental Monitoring	8.0	2.4	1st year onwards

18.	EMC Manpower	-	23.0	1st year onwards
19.	Awareness Programs in nearby villages	-	6.0	5 years
20.	ISO Certification	-	3.0	5 years
Total		966	88.7	

environment laboratory

1. The Project Proponent should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any non-compliance or infringement should be reported to the concerned authority.

single use plastic (sup)

1. The Project Proponent shall create awareness among the local people working within the project area as well as its surrounding area on the ban of Single Use Plastic (SUP) in order to ensure the compliance of Notification published by MoEF&CC on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report.

electric vehicles/cng/solar

1. The Project Proponent shall explore the possibility of using atleast 20% of Electric vehicles/CNG/Solar instead of diesel operation within three years.

conduct third party

1. The Project Proponent shall conduct third party audit of compliance of EC condition at an interval one year and its report shall be submitted to IRO, MoEF&CC.

central ground water authority (cgwa)

1. NoC from the Central Ground Water Authority (CGWA)/ Concerned Local authority, as the case may be, shall be obtained before drawing the ground water for the project activities.

transport equipment's

1. Over loading of transport equipment's should be avoided to prevent spillage. Vehicles involved in transporting the material should be covered with tarpaulin to prevent fugitive dust emission.

re-grass

1.	The mining lease holders will undertake to re-grass the mining area after ceasing of the mining operations and any other area which may have been disturbed due to their mining activities. They shall restore the land to a condition which is fit for cultivation, flora, fauna etc. The implementation report of the above said condition shall be submitted to the Ministry's Regional Office within six months.
crushing/screening activity	
1.	The Project Proponent shall adhere to the pollution control measures suggested by the Central Pollution Control Board (CPCB) in the environmental guidelines for crushing/screening activity.
court order	
1.	The Project Proponent shall comply with the directions passed in the matters which are sub-judice before the Hon'ble Supreme Court, High Court and NGT with regard to the elephant corridor.
periodically monitor	
1.	The Project Proponent shall periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance on occupational health shall be carried out every year for mine workers. PP will also organize medical camp for the benefit of the local people and also the monitor the health impacts due to mining activity.

3.4.6.2. Standard

1(a)	Mining of minerals
statutory compliance	
1.	This Environmental Clearance (EC) is subject to orders/ judgment of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, Common Cause Conditions as may be applicable.
2.	The Project proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India &Ors before commencing the mining operations.
3.	The State Government concerned shall ensure that mining operation shall not be commenced till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of Judgment of Hon'ble Supreme Court dated 2nd August, 2017 in Writ Petition (Civil) No. 114 of 2014 in matter of Common Cause versus Union of India & Ors.
4.	The Project Proponent shall follow the mitigation measures provided in MoEFCC's Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".
5.	A copy of EC letter will be marked to concerned Panchayat / local NGO etc. if any, from whom suggestion / representation has been received while processing the proposal.
6.	State Pollution Control Board/Committee shall be responsible for display of this EC letter at its Regional office, District Industries Centre and Collector's office/ Tehsildar's Office for 30 days.

7.	The Project Authorities should widely advertise about the grant of this EC letter by printing the same in at least two local newspapers, one of which shall be in vernacular language of the concerned area. The advertisement shall be done within 7 days of the issue of the clearance letter mentioning that the instant project has been accorded EC and copy of the EC letter is available with the State Pollution Control Board/Committee and web site of the Ministry of Environment, Forest and Climate Change (www.parivesh.nic.in). A copy of the advertisement may be forwarded to the concerned MoEFCC Regional Office for compliance and record.
8.	The Project Proponent shall inform the MoEF&CC for any change in ownership of the mining lease. In case there is any change in ownership or mining lease is transferred. PP needs to apply for transfer of EC as per provisions of the para 11 of EIA Notification, 2006 as amended from time to time.
air quality monitoring and preservation	
1.	The Project Proponent shall install a minimum of 3 (three) online Ambient Air Quality Monitoring Stations with 1 (one) in upwind and 2 (two) in downwind direction based on long term climatological data about wind direction such that an angle of 120° is made between the monitoring locations to monitor critical parameters, relevant for mining operations, of air pollution viz. PM10, PM2.5, NO2, CO and SO2 etc. as per the methodology mentioned in NAAQS Notification No. B-29016/20/90/PCI/I, dated 18.11.2009 covering the aspects of transportation and use of heavy machinery in the impact zone. The ambient air quality shall also be monitored at prominent places like office building, canteen etc. as per the site condition to ascertain the exposure characteristics at specific places. The above data shall be digitally displayed within 03 months in front of the main Gate of the mine site.
2.	Effective safeguard measures for prevention of dust generation and subsequent suppression (like regular water sprinkling, metalled road construction etc.) shall be carried out in areas prone to air pollution wherein high levels of PM10 and PM2.5 are evident such as haul road, loading and unloading point and transfer points. The Fugitive dust emissions from all sources shall be regularly controlled by installation of required equipments/ machineries and preventive maintenance. Use of suitable water-soluble chemical dust suppressing agents may be explored for better effectiveness of dust control system. It shall be ensured that air pollution level conform to the standards prescribed by the MoEFCC/ Central Pollution Control Board.
water quality monitoring and preservation	
1.	In case, immediate mining scheme envisages intersection of ground water table, then Environmental Clearance shall become operational only after receiving formal clearance from CGWA. In case, mining operation involves intersection of ground water table at a later stage, then PP shall ensure that prior approval from CGWA and MoEFCC is in place before such mining operations. The permission for intersection of ground water table shall essentially be based on detailed hydro-geological study of the area.
2.	Project Proponent shall regularly monitor and maintain records w.r.t. ground water level and quality in and around the mine lease by establishing a network of existing wells as well as new piezo-meter installations during the mining operation in consultation with Central Ground Water Authority/ State Ground Water Department. The Report on changes in Ground water level and quality shall be submitted on six-monthly basis to the Regional Office of the Ministry, CGWA and State Groundwater Department / State Pollution Control Board.
3.	The Project Proponent shall undertake regular monitoring of natural water course/ water resources/ springs and perennial nallahs existing/ flowing in and around the mine lease including upstream and downstream. Sufficient number of gullies shall be provided at appropriate places within the lease for management of water. The parameters to be monitored shall include their water quality vis-à-vis suitability for usage as per CPCB criteria and flow rate. It shall be ensured that no obstruction and/ or alteration be made to water bodies during mining operations without justification and prior approval of MoEFCC. The monitoring of water courses/ bodies existing in lease area shall be carried out four times in a year viz. pre- monsoon (April May), monsoon (August), post-monsoon (November) and winter (January) and the record of monitored data may be sent regularly to Ministry of Environment, Forest and Climate Change and its Regional Office, Central Ground Water Authority and Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board. Clearly showing the trend analysis on six-monthly basis.
4.	Quality of polluted water generated from mining operations which include Chemical Oxygen Demand (COD) in mines run-off; acid mine drainage and metal contamination in runoff shall be monitored along with Total Suspended Solids (TDS), Dissolved Oxygen (DO), pH and Total Suspended Solids (TSS). The monitored data

	shall be uploaded on the website of the company as well as displayed at the project site in public domain, on a display board, at a suitable location near the main gate of the Company. The circular No. J- 20012/1/2006-IA.II (M) dated 27.05.2009 issued by Ministry of Environment, Forest and Climate Change may also be referred in this regard.
5.	Project Proponent shall plan, develop and implement rainwater harvesting measures on long term basis to augment ground water resources in the area in consultation with Central Ground Water Board/ State Groundwater Department. A report on amount of water recharged needs to be submitted to Regional Office MoEFCC annually.
6.	Industrial waste water (workshop and waste water from the mine) should be properly collected and treated so as to conform to the notified standards prescribed from time to time. The standards shall be prescribed through Consent to Operate (CTO) issued by concerned State Pollution Control Board (SPCB). The workshop effluent shall be treated after its initial passage through Oil and grease trap.
7.	The water balance/water auditing shall be carried out and measure for reducing the consumption of water shall be taken up and reported to the Regional Office of the MoEF&CC and State Pollution Control Board/Committee.
noise and vibration monitoring and prevention	
1.	The peak particle velocity at 500m distance or within the nearest habitation, whichever is closer shall be monitored periodically as per applicable DGMS guidelines.
2.	The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day /night hours.
3.	The Project Proponent shall take measures for control of noise levels below 85 dBA in the work environment. The workers engaged in operations of HEMM, etc. should be provided with ear plugs /muffs. All personnel including laborers working in dusty areas shall be provided with protective respiratory devices along with adequate training, awareness and information on safety and health aspects. The PP shall be held responsible in case it has been found that workers/ personals/ laborers are working without personal protective equipment.
mining plan	
1.	The Project Proponent shall adhere to approved mining plan, inter alia, including, total excavation (quantum of mineral, waste, over burden, inter burden and top soil etc.); mining technology; lease area; scope of working (method of mining, overburden & dump management, O.B& dump mining, mineral transportation mode, ultimate depth of mining, concurrent reclamation and reclamation at mine closure; land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life; etc.).
2.	The land-use of the mine lease area at various stages of mining scheme as well as at the end-of-life shall be governed as per the approved Mining Plan. The excavation vis-à-vis backfilling in the mine lease area and corresponding afforestation to be raised in the reclaimed area shall be governed as per approved mining plan. PP shall ensure the monitoring and management of rehabilitated areas until the vegetation becomes self-sustaining. The compliance status shall be submitted half-yearly to the MoEFCC and its concerned Regional Office.
land reclamation	
1.	The Overburden (O.B.), waste and topsoil generated during the mining operations shall be stacked at earmarked OB dump site(s) only and it should not be kept active for a long period of time. The physical parameters of the OB / waste dumps / topsoil dump like height, width and angle of slope shall be governed as per the approved Mining Plan and the guidelines/circulars issued by D.G.M.S. The topsoil shall be used for land reclamation and plantation.
2.	The slope of dumps shall be vegetated in scientific manner with suitable native species to maintain the slope stability, prevent erosion and surface run off. The selection of local species regulates local climatic parameters and

	help in adaptation of plant species to the microclimate. The gullies formed on slopes should be adequately taken care of as it impacts the overall stability of dumps. The dump mass should be consolidated with the help of dozer/ compactors thereby ensuring proper filling/ leveling of dump mass. In critical areas, use of geo textiles/ geo-membranes / clay liners / Bentonite etc. shall be undertaken for stabilization of the dump.
3.	Catch drains, settling tanks and siltation ponds of appropriate size shall be constructed around the mine working, mineral yards and Top Soil/OB/Waste dumps to prevent run off of water and flow of sediments directly into the water bodies (Nallah/ River/ Pond etc.). The collected water should be utilized for watering the mine area, roads, green belt development, plantation etc. The drains/ sedimentation sumps etc. shall be de-silted regularly, particularly after monsoon season, and maintained properly.
4.	Check dams of appropriate size, gradient and length shall be constructed around mine pit and OB dumps to prevent storm run-off and sediment flow into adjoining water bodies. A safety margin of 50% shall be kept for designing of sump structures over and above peak rainfall (based on 50 years data) and maximum discharge in the mine and its adjoining area which shall also help in providing adequate retention time period thereby allowing proper settling of sediments/ silt material. The sedimentation pits/ sumps shall be constructed at the corners of the garland drains.
transportation	
1.	No Transportation of the minerals shall be allowed in case of roads passing through villages/ habitations. In such cases, PP shall construct a 'bypass' road for the purpose of transportation of the minerals leaving an adequate gap (say at least 200 meters) so that the adverse impact of sound and dust along with chances of accidents could be mitigated. All costs resulting from widening and strengthening of existing public road network shall be borne by the PP in consultation with nodal State Govt. Department. Transportation of minerals through road movement in case of existing village/ rural roads shall be allowed in consultation with nodal State Govt. Department only after required strengthening such that the carrying capacity of roads is increased to handle the traffic load. The pollution due to transportation load on the environment will be effectively controlled and water sprinkling will also be done regularly. Vehicular emissions shall be kept under control and regularly monitored. Project should obtain Pollution Under Control (PUC) certificate for all the vehicles from authorized pollution testing centers. [If applicable in case of road transport].
2.	The Main haulage road within the mine lease should be provided with a permanent water sprinkling arrangement for dust suppression. Other roads within the mine lease should be wetted regularly with tanker-mounted water sprinkling system. The other areas of dust generation like crushing zone, material transfer points, material yards etc. should invariably be provided with dust suppression arrangements. The air pollution control equipments like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, belt-conveyors and other areas prone to air pollution. The belt conveyor should be fully covered to avoid generation of dust while transportation. PP shall take necessary measures to avoid generation of fugitive dust emissions.
green belt	
1.	The Project Proponent shall develop greenbelt in 7.5m wide safety zone all along the mine lease boundary as per the guidelines of CPCB in order to arrest pollution emanating from mining operations within the lease. The whole Green belt shall be developed within first 5 years starting from windward side of the active mining area. The development of greenbelt shall be governed as per the EC granted by the Ministry irrespective of the stipulation made in approved mine plan.
null	
1.	The Project Proponent shall carryout plantation/ afforestation in backfilled and reclaimed area of mining lease, around water body, along the roadsides, in community areas etc. by planting the native species in consultation with the State Forest Department/ Agriculture Department/ Rural development department/ Tribal Welfare Department/ Gram Panchayat such that only those species be selected which are of use to the local people. The CPCB guidelines in this respect shall also be adhered. The density of the trees should be around 2500 saplings per Hectare. Adequate budgetary provision shall be made for protection and care of trees.
2.	The Project Proponent shall make necessary alternative arrangements for livestock feed by developing grazing land with a view to compensate those areas which are coming within the mine lease. The development of such

	grazing land shall be done in consultation with the State Government. In this regard, Project Proponent should essentially implement the directions of the Hon'ble Supreme Court with regard to acquisition of grazing land. The sparse trees on such grazing ground, which provide mid-day shelter from the scorching sun, should be scrupulously guarded/ protected against felling and plantation of such trees should be promoted.
public hearing and human health issues	
1.	Project Proponent shall make provision for the housing for workers/labors or shall construct labor camps within/outside (company owned land) with necessary basic infrastructure/ facilities like fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche for kids etc. The housing may be provided in the form of temporary structures which can be removed after the completion of the project related infrastructure. The domestic waste water should be treated with STP in order to avoid contamination of underground water.
corporate environment responsibility (cer)	
1.	The Project Proponent shall submit the time- bound action plan to the concerned regional office of the Ministry within 6 months from the date of issuance of environmental clearance for undertaking the activities committed during public consultation by the project proponent and as discussed by the EAC, in terms of the provisions of the MoEF&CC Office Memorandum No.22-65/2017-IA.III dated 30 September, 2020. The action plan shall be implemented within three years of commencement of the project.
miscellaneous	
1.	The Project Proponent shall prepare digital map (land use & land cover) of the entire lease area once in five years purpose of monitoring land use pattern and submit a report to concerned Regional Office of the MoEF&CC.
2.	The Project Authorities should inform to the Regional Office regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
3.	The Project Proponent shall submit six monthly compliance reports on the status of the implementation of the stipulated environmental safeguards to the MOEFCC & its concerned Regional Office, Central Pollution Control Board and State Pollution Control Board.
4.	A separate 'Environmental Management Cell' with suitable qualified manpower should be set-up under the control of a Senior Executive. The Senior Executive shall directly report to Head of the Organization. Adequate number of qualified Environmental Scientists and Mining Engineers shall be appointed and submit a report to RO, MoEF&CC.
5.	The concerned Regional Office of the MoEF&CC shall randomly monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the MoEF&CC officer(s) by furnishing the requisite data / information / monitoring reports.
6.	In pursuant to Ministry's O.M No 22-34/2018-IA.III dated 16.01.2020 to comply with the direction made by Hon'ble Supreme Court on 8.01.2020 in W.P. (Civil) No 114/2014 in the matter Common Cause vs Union of India, the mining lease holder shall after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to other mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc.
7.	The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
8.	Concealing factual data failure to comply with any or submission of false/ fabricated data and of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.
9.	The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and

	also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.
10.	Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

3.5. Agenda Item No 5:

3.5.1. Details of the proposal

Proposed Dhaukan-Dhaurra-Urdaurra Iron Ore Block by M/s Pacific Iron Manufacturing Ltd. located at Niwari, MADHYA PRADESH			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/MP/MIN/469536/2024	J-11015/29/2024-IA.II(NCM)	17/04/2024	Mining of minerals (1(a))

3.5.2. Project Salient Features

The proposal is for Terms of Reference for Dhaukan-Dhaurra-Urdaurra Iron Ore Block with total production capacity of 46,90,419.50 TPA of R.O.M. (20,57,516.70 TPA of Iron ore & 26,32,902.80 TPA of Waste) along with installation of 500 TPH capacity of Jaw Crusher & Cone Crusher in ML area of 153.031 ha by M/s Pacific Iron Manufacturing Ltd located at Village(s) Dhaukan, Dhaurra and Urdaurra, Taluka Prithvipur, District Niwari, State Madhya Pradesh.

2. The details of the project as ascertained from the document submitted by the Project Proponent and as revealed from the discussions held during the meeting are given as under:

- i. The mine lease area is located between Latitude 25°13'12.00"N to 25°13'42.58"N and Longitude 78°36'46.39"E to 78°38'28.49"E. The mine lease area falls under the Survey of India Toposheet No: 54 K/12 and falls in Seismic Zone-II.
- ii. The proposed project activity is listed at schedule no. 1(a) of Mining of Minerals. The project attracts General condition due to the presence of Orchha Wildlife Sanctuary at a distance of 2.26 Km and its Eco Sensitive Zone (ESZ) at a distance of 0.11 km from the mine area.
- iii. The project is at distance of 4.26 km from Uttar Pradesh-Madhya Pradesh Interstate Boundary in the WSW direction from the mine site and falls under Category "A" of the schedule of the EIA Notification, 2006.

iv. Details of Mine Lease:

S. No.	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/Minor)	Period of Grant	Granted by	Mine lease area in Ha
1.	LOI	27.07.2022	Iron Ore (Major Mineral)	50 years	Secretary, Govt. of Madhya Pradesh, Mineral Resources	153.031

					ce Department	
Land Use/ Land Cover of the Mine Lease Area:						
Private land					:	73.282
Government land					:	79.749
Forest land					:	00
Total Mining lease area (MLA), ha					:	153.031
Private land for crusher, workshop & other infrastructure outside the MLA					:	NA
Private land, ha					:	73.282
Government land, ha					:	79.749
Forest land					:	00
Total Mining lease area (MLA), ha					:	153.031
Private land for crusher, workshop & other infrastructure outside the MLA					:	NA
Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/ DMG)	:	Letter No.	Nil			
	:	Date	Submitted on 20.03.2024			
	:	Mineral & (Major/ Minor)	Major			
	:	Mine Lease Area, Ha	153.031 Ha.			
Additional information (if any)	:	Mining Plan along with the PMCP has been submitted to the Office of IBM, Jabalpur on dated 20.03.2024. Approval is under process.				
Mining Parameters	:	Quantitative Description				
Method of Mining	:	Opencast Mechanized Method				
Drilling/Blasting	:	Drilling: Self-Propelled Hydraulic Drill with Top Hammer Blasting: Controlled blasting will be done under the supervision of competent Mining Engineer following safety precautions as laid down in the Metalliferous Mines Regulation 1961				
Geological Reserves	:	4,27,06,039.86 MT				
Mineable Reserves	:	2,85,50,437.93 MT				
Breakup of Total Excavation (:	46,90,419.50 TPA of ROM. (20,57,516.70 TPA of Iron ore &				

Topsoil/ OB/ SB/ IB/ Mineral Rejects/ Waste, MTPA)		26,32,902.80 TPA of Waste)
Life of mine	:	50 Years
Mine Bench Height & Bench Width	:	Bench height will be kept 6m and width of the bench will be kept 6m.
No. of Mine Benches	:	New pit -A=14 no's of benches, New pit -B =8 no's benches as per First five year working proposal and end of conceptual period about dhaukan block =22-25 no's benches and Dhaura Urdaura blocks =18-23 no's benches will be developed.
Existing Depth, m bgl	:	1-6m depth
Ultimate Depth of Mining, m bgl	:	222 mRL
Ground Water Table, m bgl		215 mRL
Details of ground water intersection	:	At the end of fifth year, mine working will confined upto 222 mRL which is 36 m below the lowest elevation i.e. 258 mRL and 7m above the ground water table found at 215 mRL. No water table intersection during the plan period.
Individual bench slope	:	88 ⁰
Overall pit slope	:	45 ⁰
Details of existing/ proposed Crusher	:	Proposed Jaw Crusher (500 TPH) & Cone Crusher (500 TPH)
Mineral Beneficiation	:	NA
RoM output size	:	Lumps & Fines
Transportation details including capacity of dumper/tipper, mode of transport and distance	:	Mined mineral will be transported through dumper of capacity 24 T by the road (via NH-539: 4.0 Km, NE direction).
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	:	As per the mining plan, approx. 94,10,794.80 Tonnes of Mineral waste will be generated which, will be temporarily dumped within the mine lease boundary and further will be used for backfilling of some part of excavated area.
Total water requirement		15 KLD
Source	:	Ground water

Permission for with drawal/ intersection along with details of grant and its validity	:	NoC from CGWA will be taken and submitted during the final EIA/ EMP report.
Particulars	Particular's Name	Distance (Km) & Direction
Village	Hamirpur	0.07, SW
Town	Prithvipur	9.63, E
Highway	NH-539	4.0, NE
Interstate Boundary	Uttar Pradesh-Madhya Pradesh Interstate Boundary	4.26, WSW
Railway Station/Railway line	Orchha Railway Station	19.31, North
Water Bodies	Barda Nala	2.0, N
Forest	Tapariyan Hararan P.F.	0.38, N
Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/ letter is sued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	No forest land is involved within the Mining Lease area.	Certificate will be submitted at the time of final EC.
National Park	None within 15 Km radius	--
Wildlife Sanctuary	Orchha Wildlife Sanctuary - 2.26 Km, NNW	DCF certificate will be submitted at the time of final EC
Elephant/Tiger Reserve	None within 15 Km radius	--
Eco-Sensitive Zone (ESZ)/ Eco-Sensitive Area (ESA)	Eco Sensitive Zone (ESZ) of Orchha Wildlife Sanctuary - 0.11 km, WNW	DCF certificate will be submitted at the time of final EC
Coastal Regulation Zone (CRZ)	None within 15 Km radius	--
Schedule-I species (N)	The proposal is for obtaining Terms of Re	--

os and name of schedule-I species with authenticated letter)	ference. The details will be submitted in the final EIA/ EMP Report and also presented during the final EC presentation.	
Wildlife Conservation Plan	The proposal is for obtaining Terms of Reference. The details will be submitted in the final EIA/ EMP Report and also presented during the final EC presentation.	
Proposed area for green belt/ plantation and no. of saplings proposed	: Proposed area for green belt: 50.5 Ha. No. of saplings proposed: 1,26,225 saplings	
Budget for green plant & plantation till the end of life of mine.	: The proposal is for obtaining Terms of Reference. The details will be submitted in the final EIA/ EMP Report and also presented during the final EC presentation.	
Budget for nursery	:	
Details of existing plantation and its survival rate	:	
No. of tree cuts in the mine lease area and compensatory afforestation	:	
Particulars for Green belt/ plantation	: Area covered (in Ha)	
7.5m barrier & non-mineralized zone	: 50.5	
R & R details	There are approx. 25 no of household within site including human settlements over an area of 2.67 hectare. However, no mining activities will be carried near the settlement and proper safety boundary will be left around the settlement.	
Court Case, No and its present status	: No court case pending against the Project Proponent.	
Particulars	(Rs. In Crore)	
Project Cost	Rs.10.00 Crore	
Employment (No's)	103	

3.5.3. Deliberations by the committee in previous meetings

N/A

3.5.4. Deliberations by the EAC in current meetings

The instant proposal is for Terms of Reference considered at central level owing to the applicability of general condition i.e. the presence of Orchha Wildlife Sanctuary at 2.26 Km and ESZ at 0.11 km along with Interstate Boundary of UttarPradesh & Madhya Pradesh which is located at a distance of 4.26 km from the project boundary.

The PP presented the KML file and explained the existing environmental sensitive's to the EAC. The EAC noted that presence of Ken-Betwa river at distance of 4.7 Km from the project boundary and enquired whether the lease area is part of Ken-Betwa Project. The PP informed that they are not aware, the EAC asked the PP to obtain a certificate from the State Govt. stating that proposed mine lease is not a part of Ken-Betwa project. The EAC also enquired about the transportation route, PP informed that they will use the existing national highway (NH-539) to transport the ore to their existing plant. The EAC asked the PP to submit the detailed transportation route. The EAC also asked the PP to explore the possibility of setting up a Conveyor belt system upto the Railway siding. Further PP informed that approximately 25 houses exist within the ML area. Accordingly, the EAC asked the PP to conduct a detail socio-economic study of the inhabitants within the lease area. The project proponent/Consultant has not presented their presentation satisfactorily and therefore cautioned the consultant/PP to improve their presentation skill in the next EAC meeting.

Based on the above observation, the EAC **deferred** the proposal and asked to submit the requisite information:

- i. PP shall submit a certificate from the State Government stating that the lease area is not a part of Ken –Betwa Project.
- ii. PP shall explore the possibility of implementation of Conveyor belt upto the nearest Railway siding and submit the detail plan with date of completion of project.
- iii. PP shall submit the detailed socio-economic study of the inhabitants present within the lease area.
- iv. PP shall submit detail waste management plan.
- v. PP shall install permanent water sprinklers instead of water tanker.
- vi. PP shall submit break up of project cost.

3.5.5. Recommendation of EAC

Deferred for ADS

3.6. Agenda Item No 6:

3.6.1. Details of the proposal

Mining of Magnesite and Dunite (Mine Lease Area 622.29 Ha, Production Capacity 26,43,936 MTPA ROM) by SAIL REFRACTORY COMPANY LIMITED located at SALEM, TAMIL NADU

Proposal For		Fresh EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/TN/MIN/465426/2024	F.No.23-166/2018-IA.III (V)	17/04/2024	Mining of minerals (1(a))

3.6.2. Project Salient Features

The instant proposal is for grant of Environmental Clearance (Violation category under Ministry's Notification dated S.O. 804(E) dated 14.03.2017) for Magnesite and Dunite mining with the Production Capacity of 26,43,936 MTPA ROM (which includes 115071 TPA Magnesite and 67104 TPA Dunite) in the ML area of 622.29 Ha of M/s SAIL Refractory Company Limited located at Village Thathaiyanagarpatti, Moongilpadi, Karuppur, Vellakkapatti, Mallamoopanpatti Taluk Omalur & Salem,

District Salem, Tamil Nadu.

2. The details of the project as ascertained from the document submitted by the Project Proponent and as revealed from the discussions held during the meeting are given as under:

i. The mine lease area is located between Latitude: 11⁰41'19.86645'' N to 11⁰44'55.08940'' N and Longitude: 78⁰05' 10.30542'' E to 78⁰08'51.75760'' E. The mine lease area falls under the Survey of India Toposheet No: 58-I/02 and falls in Seismic Zone-III.

ii. Details of ToR:

Date of application	Proposal No/ File No	Details of ToR				Date of accord
31.01.2017	IA/TN/MIN/62144/2017 F.No.23-166/2018-IA. III(V)	Terms of References (ToR) was issued vide F.No.23-166/2018-IA. III(V) dated 17.09.2021.				17.09.2021
S.No.	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of Grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
	The Mining Lease was granted to M/s Burn Standard Company Ltd. (BSCL, A Govt. of India Undertaking) Salem-636005, Tamil Nadu for a period of 20 years vide G.O. No. 853 dated 05.06.1979, over an extent of 622.69 Ha and the lease deed was executed on 21.04.1980 for a period of 20 years and expires on 20.04.2000.	05.06.1979	Magnesite	20 Years	State Govt. of Tamil Nadu	622.69
	Supplementary Lease Deed was executed on 20.03.1989 for exploitation of Dunite in addition to magnesite.	20.03.1989	Magnesite & Dunite	--	State Govt. of Tamil Nadu	622.69
	Ministry of Heavy Industries & Public Enterprises, GoI, vide memo dated 17.11.2011 transferred the Refractory unit	17.11.2011	Magnesite & Dunite	20 Years	Ministry of Heavy Industries & Public Enterprises	622.69

S.No.	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of Grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
	of M/s BSCL at Salem with all assets, and liabilities to M/s Steel Authority of the India Limited (SAIL). Accordingly, M/s Steel Authority of the India Limited (SAIL) owned the entire lease and Refractory Plant and named the unit as SAIL Refractory Company Limited (SRCL) w.e.f. 16.12.2011. After taking over SRCL also continued mining with valid Consent to Operate from Tamil Nadu Pollution Control Board.					
	Industries, Investment Promotion and Commerce (MMA. 1) Department, Secretariat, Chennai - 600009, Tamil Nadu vide their letter No 10839/MMA.1/2019-2 Dated: 02.11.2022 issued Letter of Intent to SAIL Refractory Company Limited in respect of the mining lease granted in G.O No.853, dated 05.06.1979.	02.11.2022	Magnesite & Dunite	Lease valid up to 20.04.2029	State Govt. of Tamil Nadu	622.67 hectares

Additional information as provided by the Project Proponent is given as under:-

- The application for renewal of mining lease was made by M/s Burn Standard Company Ltd. as per norms on 14.04.1999, i.e. one year before the expiry of mining lease and mining was continued under deemed condition with valid Consent to Operate (CTO) from Tamil Nadu Pollution Control Board.
- During the process of Transfer of lease in name of SRCL from BSCL, Government of Tamil Nadu sought for a payment of EC violation amount of Rs. 36.76 Crores in respect for G.O. No. 853. Subsequently, SRCL has paid EC violation amount of Rs. 36.76 Crores on 11.01.2022.

Details of grant of Mine Lease deed execution:

S. No	Details of grant of Mine Lease deed execution	Period of Grant		Name of the Mineral	ML area (Ha)
		From	To		
1.	Industries, Investment Promotion and Commerce (MMA.1) Department, Secretariat, Chennai - 600009, Tamil Nadu vide their letter No 10 839/MMA.1/2019-2 dated 02.11.2022 issued Letter of Intent to SAIL Refractory Company Limited in respect of the mining lease granted in G.O No. 853, dated 05.06.1979.	02.11.2022	20.04.2029	Magnesite & Dunite	622.69
Private land		Nil			
Government land		622.69			
Forest land		Not Applicable			
Total Mining lease area (MLA), ha		622.69			
Private land for crusher, workshop & other infrastructure outside the MLA		Not Applicable			
Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	TN/SLM/MG&DU/ROMP-1589. MDS			
	Date	03.08.2020			
	Mineral & (Major/Minor)	Magnesite: Major Dunite: Major			
	Mine Lease Area, Ha	622.69 Ha			
	Validity	5 years			
Mining Parameters	Quantitative Description				
Method of Mining	Other than Fully Mechanized Opencast Mining method				
Drilling/Blasting	6 m				
Geological Reserves	Magnesite: 23.95 Million Tonnes Dunite: 16.423 Million Tonnes				
Mineable Reserves	Magnesite: 0.745 Million Tonnes Dunite: 0.654 Million Tonnes				
Breakup of Total Excavation	2643936 MTPA ROM				

(Topsoil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	
Life of mine	About 10 years (Based on detailed exploration life of mine can change)
Mine Bench Height & Bench Width	6/6m
No. of Mine Benches	NA
Existing Depth, m bgl	NA
Ultimate Depth of Mining, m bgl	Block II: 48m
Ground Water Table, m bgl	Pre-Monsoon: On the basis of depth of water level of the study area, the pre monsoonal depth to water level varies from less than 25.78 to 61.12 m bgl in the study area. Post-Monsoon: On the basis of depth of water level of the study area, the post monsoonal depth to water level varies from less than 20.00 to 59.14 m bgl in the study area.
Details of ground water inter section	The Water table is found at a depth of 55m during summer and 52m (285 to 290 m RL) during rainy season. The depth of water table fluctuation is verified by observing the water levels in the above seasons in the nearby wells. ♣Maximum Depth of Working: 349m RL in Red Hills (Block-I) ♣Maximum Depth of Working: 330m RL in Block-II From above it is clear that working will not intersect ground water table.
Individual bench slope	60 ⁰
Overall pit slope	45 ⁰
Details of existing/ proposed Crusher	Not Applicable
Mineral Beneficiation	Not Applicable
RoM output size	2643936 MTPA ROM
Transportation details including capacity of dumper/tipper, mode of transport and distance	Within Lease After drilling blasting excavated ROM will be shifted to spoil banks by using Excavator & 15 tonne tipper combination Outside Lease The magnesite and dunite minerals from spoil bank will be transported to SRCL factory using hired trucks of 10 tonnes capacity.

Generation of Topsoil/OB & its Management during plan period & conceptual period	There is no generation of Top soil from the mine. Entire Overburden/waste generated from the mine has been planned to be dumped inside the existing mine lease area.								
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	Entire Overburden/waste generated from the mine has been planned to be dumped inside the existing mine lease area.								
Total water requirement	90 KLD	Fresh water	90 KLD						
		Treated water	--						
Source	This water will be supplied from the available bore holes present in the mining lease area.								
Permission for withdrawal/ intersection along with details of grant and its validity	PP has submitted the application to Water Resource Department, Chennai for ground water withdrawal.								
Particulars	Particular's Name	Distance & Directions							
Village	Karuppur	1.22 Km in WSW							
Town	Salem - Block (Block 1-3) (Block 4)	10 km in SE 6 Km in SE							
Highway	NH 7/NH 44	<table border="1"> <thead> <tr> <th>Block</th> <th>Distance & Direction</th> </tr> </thead> <tbody> <tr> <td>Block- (1-3)</td> <td>2 Km, SW</td> </tr> <tr> <td>Block 4</td> <td>800 m, NE</td> </tr> </tbody> </table>		Block	Distance & Direction	Block- (1-3)	2 Km, SW	Block 4	800 m, NE
Block	Distance & Direction								
Block- (1-3)	2 Km, SW								
Block 4	800 m, NE								
Interstate Boundary	None within 10 km radius	-							
Railway Station/Railway line	Salem Railway station	3 Km							
Water Bodies	SarbangaNadiTirumanaimuttar River	7 Km in W 2.5 in E							
Forest	Nagarmalai RF Kumubalpatti RF Kanjeri RF Pannikaradu RF Kanjamali RF Kapputu RF Maryland RF Sanyasi Malai AtturGhat Extension AtturGhat Kanjeri Extension	1.1K in E 100 m in NE 6.7Km in N 3.2Km in N 6.8 Km in SW 4.8 km in E 9.6 in NE 9.0 in NE 9.2 Km in N 9.2 Km in N 9.3 Km in N							

Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	No	None within 10 km radius
National Park	No	None within 10 km radius
Wildlife Sanctuary	No	None within 10 km radius
Elephant/Tiger Reserve	No	None within 10 km radius
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area (ESA)	No	None within 10 km radius
Coastal Regulation Zone (CRZ)	No	None within 10 km radius
Schedule-I Species (No.s and name of schedule-I Species with authenticated letter)	Yes	<ol style="list-style-type: none"> 1. Gaur (Bosgaurus), 2. Bonnet macaque (Macacaradiata) 3. Jungle cat (Felischaukelaarti) 4. Small Indian civet (Viverriculaindica) 5. Sambar (Rusa unicolor) 6. Golden jackal (Canis aureus) 7. Sloth bear (Melursusursinus) 8. Honey badger (Mellivoracapensis) 9. Indian Porcupine (Hystrixindica) 10. South-Eastern langur (Semnopithecus riam) 11. Indian chevrotain (Moschiolaindica) 12. Rusty-spotted cat (Prionailurusrubiginosus) 13. Asian palm civet (Paradoxurushermaproditus) 14. Bengal fox (Vulpesbengalensis) 15. Indian Pangolin (Maniscrassicaudata) 16. Indian muntjak (Muntiacusmuntjak) 17. Gray slender loris (Loris lydekkerianus) 18. Indian Peafowl (Pavocristatus) 19. Crested Serpent Eagle (Spilornischeela) 20. Russell's viper (Daboiarusselii) 21. Indian Python (Python molurus) 22. Common krait (Bungaruscaeruleus)
Wildlife Conservation Plan	Yes	Schedule-I Species are present in the study area, for which a Conservation Plan for an amount of Rs 43.30 Lakhs has been prepared. The Conservation Plan has been approved by O/o PCCF, Chennai vide letter Ref N

		o. WL5/21661/2023 dated 09.08.2023.
Proposed area for green belt/plantation and no. of saplings proposed	Area: 16.63 Ha. No. of Saplings: 41581	
Budget for green plant & plantation till the end of life of mine.	153 Lakhs	
Details of existing plantation and its survival rate	Area for Green belt: 58.26 Ha Survival Rate: 95%	
No. of tree cuts in the mine lease area and compensatory afforestation	Not Applicable	
Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)		
Period of baseline data collection	March to May 2021	
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Pre-Monsoon	
Predominant Wind direction (From)	Northeast (NE)	
Ambient Air Quality (8) and results	PM ₁₀ – 74.10 to 80.74 µg/m ³ PM _{2.5} – 36.76 to 43.97 µg/m ³ SO ₂ – 13.42 µg/m ³ to 8.7 µg/m ³ NO _x – 23.01 µg/m ³ to 16.66 µg/m ³ CO – 0.7 to 0.9 mg/m ³	
Noise level (8 locations) and results	The Leq values at this location for day and night time was observed to be 71.9 and 63.0 dB (A) respectively, which can be attributed to local prevailing environment (Mining, industrial, Railway siding and Highway). However, the recorded noise levels were found to be within the mining zone limits (75 dB (A))	
Water Quality (8 locations) and results	<p>Ground Water: All the Parameters Like pH varies from 7.42 to 7.77, Total Hardness varies from 308.45 to 378.46 mg/l., Total Dissolved Solids varies from 562 to 697 mg/l, Chlorides 82.53 to 115.23 mg/L etc. are found within the permissible limits. Bacteriological studies revealed the absence of Total coliform.</p> <p>Surface Water: All the Parameters Like pH varies from 7.47 to 7.8, Total Hardness varies from 641 to 740.82 mg/l, Total Dissolved Solids varies from 818 to 1048 mg/l, Dissolved Oxygen – 5.1 mg/l to 6.5 mg/l etc. are found within the permissible limits. Total Coliform count is measured 900 to 1600 MPN/100ml.</p>	

Soil Quality (8 locations) and results	pH- 7.58 to 7.76 Organic matter- 0.31% to 0.7% Electrical Conductance - 0.26 µ/cm to 0.364 m S/cm Available Nitrogen - 126 Kg/ha to 247 Kg/ha Available Phosphorous - 9.86 kg/ha to 18.11 Kg/ha Available Potassium - 107.59 Kg/ha to 225 Kg/ha
Traffic study (one locations) and results	The proposed project will not cause major impacts due to increase in the PCU/Day which is 366 PCU/day. The LOS study shows that the existing traffic scenario is “Good” and the free flow of vehicles is observed during the study period. Due to the mine project the traffic density will increase and the value of LOS will not change.
Advertisement for PH with date (name of major national daily and one regional vernacular daily newspaper)	The Indian Express Dated: 19.05.2023 DhinaThanthi Dated: 19.05.2023
Date of PH	04.07.2023
Venue	M/s Rajam Thirumana Mandapam, Indhira Nagar, near Rajam Hospital, Karuppur Village, Omalur Taluk, Salem District
Chaired by	Shree S. Karmegam, I.A.S, District Collector, Salem
Main issues raised during PH	<ul style="list-style-type: none"> • Employment opportunities for locals • Health facilities to be provided • Massive afforestation • Mining will be done as per statutory norms
Budget proposed for addressing issues raised during PH over 3 years	5 Lakhs for a period of five year
Particulars	Details of Letter along with date of grant and validity
Consent to Operate	Last renewal of consent under Air Act was obtained vide order no.4103 dated 29.05.2013 valid till 31.03.2014 Last renewal of consent under Water Act was obtained vide order no.6484 dated 29.05.2013 valid till 31.03.2014. PP have informed that Order no 4103 dated 29.05.2013 was revoked vide Proc. No T7/TNPCB/F-0950/RL/SLM/2013 Dated 19.07.2017
Certified Production Details from the inception of the mine (in tabular form)	The project has violated the EIA notification as the mine has been operating without Environmental Clearance since the

against the EC capacity)

inception of mining lease and during renewal of lease in year 2000, which is violation of EIA notification 2006. The mine was operated based on Consent to Operate (CTO) from Tamil Nadu Pollution Control Board since 1991.

The details of past production are authenticated by Department of Geology and Mining, Salem, Tamil Nadu vide letter no Roc.45/2018/ Mines A/Mag-1 on dated 1.11.2018 and Roc.333/2017/ Mines A on dated 08.05.2017.

Annual Production from 1993-94 to 2016-17

Year	Magnesite (TPA)	Dunite (TPA)
1993-1994	62000	13929
1994-1995	61000	7000
1995-1996	46000	14000
1996-1997	50000	7000
1997-1998	58000	5500
1998-1999	57000	5500
1999-2000	48000	4250
2000-2001	39500	9000
2001-2002	35900	9000
2002-2003	32500	11000
2003-2004	61000	16000
2004-2005	75500	8000
2005-2006	69000	20000
2006-2007	68000	33000
2007-2008	89000	23000
2008-2009	135000	28000
2009-2010	64100	22000
2010-2011	85000	30000
2011-2012	68960	37870
2012-2013	80000	23000
2013-2014	75000	15000
2014-2015	65000	13600
2015-2016	58000	12800
2016-2017	42000	1500

R & R details

The Project has submitted that no R&R issues involved.

Court Case, No and its present status

Undertaking by Project Proponent w.r.t court case

PP has submitted an affidavit in Rs. 100 non judicial stamp (DR 120414) dated 27.04.2024 stating that SRCL is a party in two cases as stated above.

Affidavit as per Ministry's OM dated 30.05.2018

PP has submitted an affidavit on Rs. 100 non judicial stamp (DR 120414) dated 27.04.2024 in accordance with Ministry's OM dated 30.05.2018.

Undertaking by Project Proponent in EIA/EMP report	PP has submitted an undertaking dated 27.04.2024 stating that in case any deviation in data found in any of the documents, the authorized signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of amendment in EC.	
Undertaking by Consultant in EIA/EMP report	The consultant has submitted an undertaking in its letter head dated 27.04.2024 stating that contents in the form of information and data of the EIA Report has been prepared by them and are factually correct and not copied from any other EIA Reports.	
Plagiarism Certificate	PP has submitted Plagiarism certificate (Plagiarism Checker-X-Report) dated 25.04.2024.	
Sl. No.	Description	Estimated cost
Activities	Capital Cost (Crores)	Recurring Cost (Lakhs/Annunum)
Air Pollution Control Measures	0.60	3.0
Water Pollution Control Measures	0.32	10.0
Noise Pollution Control Measures	-	3.0
Greenbelt Development	1.0395	4.0
Rain Water Harvesting	0.05	1.0
Fire Fighting and Safety measures	0.03	24.0
Total	2.0395	45
Total EMP Budget	248.95 Lakhs	
Particulars	(Rs. In Crore)	
Total cost of EMP (Capital Cost of EMP + capital cost of Public hearing)	2.4895	
Project Cost	3.0	
Employment (No.s)	600 persons	

3.6.3. Deliberations by the committee in previous meetings

3.6.4. Deliberations by the EAC in current meetings

The instant proposal is for Environmental Clearance under violation category as per Ministry's Notification vide S.O. 804 (E) dated 14.03.2017. The project Proponent has informed to the Committee that the mining activity was suspended since 10.01.2017.

The EAC noted that the baseline data submitted by PP is from March to May, 2021. EAC was of the opinion that the presented dataset is not good enough to represent the current scenario, accordingly, EAC requested to project proponent to collect fresh baseline data over a period of one month to validate the existing data. The EAC also enquired about the availability of the SEIAA approved DSR for the minor mineral Dunite. PP stated that they are not aware at present and they will submit the same. EAC also asked the PP regarding the status of consent to operate. PP informed that their consent was valid till 31.03.2014. EAC enquired whether any action has been taken by SPCB since the PP operated the mine without consent till 10.01.2017. PP informed that no action has been taken by SPCB with regard to the operation of mine after the expiry of CTO.

Further, while appraising the remediation plan, CRAP and NRAP, the EAC noted that PP has not taken a holistic approach to assess the damages caused by it to the environment. EAC also noted that the PP has incorporated certain aspects of public hearing into its community resource augmentation plan (viz sports facility, employment, skill development etc), accordingly, EAC advised the PP to rectify the same. EAC also mentioned that PP should include the damages caused due to point/line sources and its effect on the existing fauna/environment (land, water, air) in its remediation plan. EAC also reiterated that PP should specifically define the parameters in its remediation plan, CRAP and NRAP. With regard to the EMP presented by PP, EAC observed that recurring cost has not been included. EAC also observed that the budget of proposed plantation is inadequate and asked the PP to put forward a realistic and practical budget for implementation of the same. The EAC opined that the PP, while revising the damage assessment shall include the parameter of damages with respect to the receptors. The EAC was of the opinion, that PP shall revise the above said items and come up with a tangible action plan that can be monitored by the Regional office of the Ministry. Based on the above, the EAC **deferred** the proposal for the want of following information: -

- i. The Project Proponent needs to collect fresh One-Month Baseline data (Preferably non-monsoon) to validate the existing dataset.
- ii. The Project Proponent needs to submit the SEIAA approved DSR for Dunite.
- iii. PP shall submit the Chronology of Mine lease from the inception of Mine.
- iv. PP needs to submit the detailed transportation plan including the route that it proposes to use for transportation. PP shall show the proposed route on KML.
- v. PP shall explore the possibility of using conveyor belt transportation system upto the nearest Railway siding.
- vi. PP needs to record the drone video of the complete Mine lease area showing the Mine pit, overburden, and plantation and existing transportation.
- vii. PP shall submit the revised remediation plan, CRAP and NRAP taking into consideration of all the factors as pointed out by EAC.
- viii. PP should also include the cost of damage due to transportation of mineral within the violation period due to mineral transportation upon the existing tree and road.
- ix. PP should recalculate and submit the revised EMP cost and Public Hearing Cost after associating the activities from Remediation Plan, NRAP and CRAP.
- x. PP needs to submit the detailed breakup of the health facilities that shall be provided to mine worker and local villagers
- xi. PP shall submit the revised budget for plantation.
- xii. PP needs to submit the detail management plan for mineral rejects and inter-burden.
- xiii. The Project Proponent needs to submit water withdrawal permission from CGWA.

PP should not carry out secondary blasting, instead possibility of introducing rock breaker should be explored to break oversized boulders.

3.6.5. Recommendation of EAC

Deferred for ADS

Day 2 -10/05/2024

3.1. Agenda Item No 1:

3.1.1. Details of the proposal

Validity Extension of Environment Clearance Letter no. J-11015/243/2008-IA.II (M) for Petnikota Limestone Mine (ML Area 912.797 ha) with Existing Limestone Production Capacity of 4.0 Million TPA located at Village: Petnikota, Mandal: Kolimigundla, District: Nandyal, Andhra Pradesh. by KOYYA REDDY located at NANDYAL, ANDHRA PRADESH			
Proposal For		Application for Validity Extension of EC- Form-6	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/AP/MIN/467299/2024	J- 11015/243/2008-IA.II (M)	27/03/2024	Mining of minerals (1(a))

3.1.2. Project Salient Features

2.7.1 The proposal for extension of validity of EC and its amendment vide dated 14.11.2009 & 20.11.2023 for Petnikota Limestone Mine with production capacity of 4.0 MTPA in the ML area of 912.797 ha by M/s. UltraTech Cement Ltd. located at Village Petnikota, Mandal Kolimigundla, District Nandyal, Andhra Pradesh was submitted on Parivesh portal on 27.03.2024.

2.7.2 The details of the project as ascertained from the document submitted by the Project Proponent as given under: -

- i. The Project Proponent has requested to extend the validity of EC from 26.04.2024 till Mine Lease Validity i.e., 26.04.2054 of Environmental Clearance (EC) vide letter No J-11015/243/2008-IA. II (M) dated 14.11.2009 & 20.11.2023 as per MoEF&CC Notification S.O. 1807(E) dated 12.04.2022 of Petnikota Limestone Mine (ML Area 912.797 ha) with Existing Limestone Production Capacity of 4.0 MTPA located at Village Petnikota, Mandal Kolimigundla, District Nandyal, Andhra Pradesh.
- ii. The Project Proponent vide letter dated 11.09.2023 requested to the state government of Andhra Pradesh for extending the lease period from 26.04.2024 to 26.04.2054 under section 8A (5) of MMDR Act 1957.
- iii. MoEF&CC Notification S.O. 1807(E) dated 12.04.2022 Para IV mentioned that, "The prior Environmental Clearance granted for mining projects shall be valid for the project life as laid down in the mining plan approved and renewed by competent authority, from time to time, subject to a maximum of thirty years, whichever is earlier".
- iv. The Project Proponent has submitted Mining Plan with Progressive Mine Closure Plan has been approved over an area of 912.797 ha by IBM on 19.12.2023 for the period of 2024-25 to 2028-29.
- v. Details of Mine Lease:

S. No.	Prospecting License/Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/Minor)	Period of Grant	Granted by	Mine lease area in Ha
1.	PL was granted vide no. G.O.Ms. No, 252 to M/s. Grasim Industries	03.05.2000	Limestone	2 years	Govt. of Andhra	1357.088

	Limited				Pradesh	
2.	The Mining Lease was Granted vide order no. G.O.MS.No.222 in favour of M/s. Grasim Industries Limited	22.07.2003	Limestone	20 years	Govt. of Andhra Pradesh	951.848 ha
3.	Revised extent vide Order G.O.Ms. No. 88 in favour of M/s. Grasim Industries Limited	27.12.2022	Limestone	-	Govt. of Andhra Pradesh	912.797 ha
4.	Transfer of ML in the Name of UltraTech Cement Limited vide order G.O.Ms.No.89	27.12.2022	Limestone	-	Govt. of Andhra Pradesh	912.797 ha
5.	Transfer deed Registered & Executed	23.01.2023	Limestone	-	Govt. of Andhra Pradesh	912.797 ha

S. No.	Details of grant of Mine Lease deed execution	Period of Grant		Name of the Mineral	Mine lease area in Ha
		From	To		
1.	Mine lease has been executed and registered on 27.04.2004 for 20 years	27.04.2004	26.04.2024	Limestone	951.848 ha
2.	Revised extent vide Order G.O.Ms. No. 88 in favour of M/s. Grasim Industries Limited	27.12.2022	26.04.2024	Limestone	912.797 ha
3.	Transfer of ML in the Name of UltraTech Cement Limited vide order G.O.Ms.No.89	27.12.2022	26.04.2024	Limestone	912.797 ha
4.	Transfer deed Registered & Executed	23.01.2023	26.04.2024	Limestone	912.797 ha

vi. Details of CTE/CTO, Certified Compliance Report, Certified Production Details from the inception of the mine:

Particulars	Details of Letter along with date of grant and validity
Consent to Establish	Consent For Establishment for 4.0 Million TPA Limestone has been obtained from Andhra Pradesh Pollution Control board vide Consent Order No. 14 1/PCB/CFE/RO-KNL/HO/2009-570 dated 31.05.2010.
Consent to Operate	Consent for Operations for 4.0 Million TPA Limestone has been obtained from Andhra Pradesh Pollution Control board vide Consent Order No. PPCB/KNL/KNL17406/CFO/HO/ 2014-338 dated 25.04.2014. Consent for Operations Consent Order No. 322614/APP/KNL/KNL17406/CFO/HO/2022 Dated 23.11.2022 valid upto 31.03.2024. CFO Renewal a

	Application was submitted to APPCB before expire of the existing CFO validity.
Certified Compliance Report and Inspection date	Compliance Report Certified by RO Vijayawada on 17.10.2023 & date of inspection 11.10.2023.
Certified Production Details from the inception of the mine (in tabular form against the EC capacity)	DMG Certified production figures from the inception of mine has been submitted by the Project Proponent.

3.1.3. Deliberations by the committee in previous meetings

N/A

3.1.4. Deliberations by the EAC in current meetings

<p>2.7.3 The Committee after detail deliberations noted that the instant proposal is extension of validity of EC from 26.04.2024 to 26.04.2054. Earlier, the EC was issued on 20.11.2023 for validity upto 26.04.2024. The PP has requested to the Director of Mines and Geology, Andhra Pradesh for extending the lease period upto 26.04.2054, while the Director of Mines and Geology, Andhra Pradesh stated that the deemed extension of mining lease is under active consideration and orders will be issued. Therefore, the Committee emphasized to submit a certificate from the State government stating the validity of ML extended upto 26.04.2054.</p> <p>In view of the above, the Committee deferred the proposal for submission of following requisite information:</p> <ol style="list-style-type: none"> The PP needs to submit a certificate from the State government stating the validity of ML extended upto 26.04.2054. The PP needs to submit the activity-wise detail expenditure status of Public Hearing.
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3.1.5. Recommendation of EAC

Deferred for ADS

3.2. Agenda Item No 2:

3.2.1. Details of the proposal

"Brishyrnot Limestone Deposit-II" with proposed maximum production capacity of 3.2 MTPA (3.0 MTPA limestone & 0.2 MTPA shale) by Star Cement Meghalaya Limited. by STAR CEMENT MEGHALAYA LIMITED located at EAST JAINTIA HILLS,MEGHALAYA			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/ML/MIN/456863/2023	IA-J-11015/17/2019-IA-II(N	30/12/2023	Mining of minerals (1(a))

	CM)		
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3.2.2. Project Salient Features

The instant proposal is for Terms of Reference for Brishyrnot Limestone Deposit-II of M/s Star Cement Meghalaya Limited with proposed maximum production capacity of 3.2 MTPA (Limestone: 3.0 MTPA & Shale: 0.2 MTPA), 0.38 MTPA of Waste/OB including Soil (Total excavation: 3.58 MTPA) in the mine lease area of 65 ha, located at Village: Brishyrnot, Tehsil: Khliehriat, District: East Jaintia Hills, Meghalaya.

2 The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under:

- i. The project activity is listed at schedule no. 1(a) Mining of Minerals. The instant proposal attracts the general conditions as Narpuh Wildlife Sanctuary boundary is located at a distance of 1342 m, SE direction and it's ESZ boundary at a distance of 25.29 m, SE to the project site and falls under Category "A" of the schedule of the EIA Notification, 2006 and appraised at the Central level.
- ii. The mine lease area is located between Latitude: 25°09'51.010"N to 25°10' 18.600" N and Longitude:92°25' 09.717 "E to 92°25' 55.894"E. The mine lease area falls under the Survey of India Toposheet No: 83C/8 (Restricted)and falls in Seismic Zone – V.

iii. Details of Mine Lease:

S.No	Prospecting License/ Letter of Intent (Lo I)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1	Prospecting License- MG.8/2023/36	Granted on 12/04/2023/and executed on 08/05/2023	Limestone & Shale (Major)	3 years	Mining & Geology Department, Government of Meghalaya	65 ha.
2	Letter of Intent/authorization order- MG.8/2023/376	22.09.2023	Limestone & Shale (Major)	3 years	Mining & Geology Department, Government of Meghalaya	65 ha.

iv. Land Use/Land Cover of the Mine Lease Area:

Private land	65 ha.
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Government land	Nil
Forest land	Nil
Total Mining lease area (MLA), ha	65 ha.
Private land for crusher, workshop & other infrastructure outside the MLA	NA

v. Mining plan details:

Mining Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	MCDR-MPCP0CaFl/11/2023-GU H-IBM_RO_GUH
	Date	05.02.2024
	Mineral (Major/Minor)	Major
	Mine Lease Area, Ha	65
	Validity	5 year from the date of execution of mining lease
Mining Parameters	Quantitative Description	
Method of Mining	Opencast mechanized mining using HEMM	
Drilling/Blasting	Deep hole drilling & blasting.	
Geological Reserves	138.15 million tons of Limestone and 0.861 million tons of shale	
Mineable Reserves	111.20 million tons of Limestone and 0.698 million tons of shale	
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/Waste, MTPA)	3.58 MTPA (including 3.0 MTPA of limestone, 0.2 MTPA of shale, 0.38 MTPA of waste/OB including soil).	
Life of mine	The life of mine is estimated at about 38 years considering the mineable reserves based on present exploration.	
Mine Bench Height & Bench Width	The height of the bench will be 9 m and a minimum working width of the benches in minerals will be 20 m for sa	

	fe operation of mining machinery.
No. of Mine Benches	24
Existing Depth, m bgl	NA, as it is a green field project
Ultimate Depth of Mining, m RL	70
Ground Water Table, m RL	55
Details of ground water intersection	Water table will not be intersected as it is at 55 mRL and mining will be done up to 70 mRL.
Individual bench slope	85° from horizontal
Overall pit slope	<45°
Details of existing/ proposed Crusher	No crushing and screening plant is proposed in the mine. Limestone & shale will be transported to cement plant crusher of 1200 TPH capacity.
Mineral Beneficiation	NA
RoM output size	-1000 mm
Transportation details including capacity of dumper/tipper, mode of transport and distance.	The material after blasting will be loaded by hydraulic excavators of about 2.6 m ³ bucket capacity into tippers of 25 tons carrying capacity for its transportation to crusher and waste dump yards.
Generation of Topsoil/OB & its Management during plan period & conceptual period	Max. 0.28 MTPA of waste & 0.1 MTPA of soil will be generated. Waste/OB will be dumped at earmarked places. The soil generated will be used extensively for plantation. About 3.332 million tons of Waste and 0.245 million tons of soil will be generated upto the life of mine. Waste will be stacked separately in the temporary dump. The entire waste will be used in the cement plant as blending material after taking the permission from the government.
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	There will be no rejection from the mine.

vi. Water requirement

Total water requirement	45 KLD	Fresh water	05 KLD
		Treated water	40 KLD
Source	Total water requirement for the proposed mine will be around 45 KLD which will be sourced through water tankers from the company's cement plant.		
Permission	Vide Letter No. AID (J) 223 / 2008-09/971 dated 16th June 2009.		
Additional information(if any)	Total water requirement for the proposed mine will be around 45 KLD, out of which 40 KLD will be STP treated water and 5 KLD will be fresh water for domestic purposes.		

vii. Nearest village / town/ highway/railway station / water bodies

Particulars	Particular's Name	Distance & Directions
Village	Brishyrot	0.16 Km South
Town	Khliehriat	21.20 Km N
Highway	NH-6	2.53 km WNW
Interstate Boundary	Meghalaya-Assam State Boundary	8.15 km SE
	India-Bangladesh International Boundary	12.50 Km SW
Railway station	Hilara railway station	70 km (by road)
Water bodies	Um lunar	0.07 Km East
	Lukha River	1.23 Km SE
	Lubha River	1.23 Km SE
	Um Talang	3.60 km SW
	Um Sangat	4.46 Km N
	Um Ronsong	4.48 Km ESE
	Um Badoh	5.74 Km WNW
	DongtangleNala	6.13 Km N
	KukhaNala	6.57 Km NNW
	PongkoloNadi	7.07 Km ESE
	AphaNala	7.72 Km SSE
	ThangpyrshaidNala	7.81 Km NW
	KhunngoiNala	8.46 Km ESE
	Sakha Nala	8.61 Km NW

	Singlei River RaphingdungNala LunthangtangNala Who ThaniangNala	8.98 Km ESE 9.33 Km NE 9.86 Km SSE 9.93 Km NNW
Forest	Narpuh Reserve Forest Block I	8.82 km SW

viii. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest land within the minimum lease area and (if yes) status of Forest Clearance	No	Not Applicable
National Park	No	Not Applicable
Wildlife Sanctuary	Yes	Narpuh Wildlife Sanctuary - 1342 m SE
Eco-Sensitive Zone(ESZ) / Eco-Sensitive Area(ESA)	Yes	Narpuh Wildlife Sanctuary ESZ -25.29 m SE
Coastal Regulation Zone (CRZ)	No	Not Applicable
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	Yes	There are ten Schedule I Species found in the buffer zone are given below: Hoolockhoolock (Western hoolock gibbon), Nycticebus bengalensis (Slow loris), Prionailurus bengalensis (Leopard Cat), Python molurus (Indian Rock Python), Neofelis nebulosa (Clouded Leopard), Buceros bicornis (Great Pied Hornbill), Canis lupus pallipes (Indian Wolf), Manis pentadactyla (Pangolin), Melursus ursinus (Sloth bear) and Capricornis sumatraensis (Himalayan serow).
Wildlife Conservation Plan	Yes	The Chief Wildlife warden had a meeting with Industries and Government departments for preparation of Regional Conservation plan for the East Jaintia Hills

		district under the supervision and guidance of CWL W, Meghalaya and the cost for preparation and implementation of the Regional Conservation Plan may be shared by various project proponents on a proportionate basis keeping in view the likely impacts of each project on the wild life and their habitat. Project proponent also confirmed that they shall be part of the regional conservation plan and will pay the fee as determined for project.
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ix. Green belt/plantation details:

Proposed area for green belt/plantation	At the end of life of mine, out of the total 65 ha area, 52.52 ha mined out benches will be rehabilitated by plantation/grassification, 2.71 ha. along the 7.5 m wide peripheral boundary and 0.36 ha undisturbed area will be developed to green belt.
Budget for green plant & plantation till the end of life of mine.	Rs 2.91 Cr
Budget for nursery	NA
Details of existing plantation and its survival rate	NA as it is greenfield project
No. of tree cuts in the mine lease area and compensatory afforestation	150 trees will be cut in the mine lease. Total about 96959 trees will be planted upto conceptual period.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	2.71 Ha

x. Baseline detail:

Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/others)	
Period of baseline data collection	March to May 2023
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Summer Season
Predominant Wind direction (From)	Towards East

Ambient Air Quality (no. of locations) and results

No. of locations- 06

Results- Core zone: The mean value of PM10 ranges from (59.27 - 61.11 $\mu\text{g}/\text{m}^3$) & PM2.5 ranges from (26.51 - 27.33 $\mu\text{g}/\text{m}^3$), SO2 ranges from (5.28 - 5.44 $\mu\text{g}/\text{m}^3$), NO2 ranges from (14.82 - 15.28 $\mu\text{g}/\text{m}^3$) & CO ranges from (0.26 - 0.27 mg/m^3) which are within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB, the air quality of the core zone is found to be Satisfactory in the Summer season.

Buffer zone: The mean value of PM10 ranges from (64.77 - 75.53 $\mu\text{g}/\text{m}^3$), PM2.5 ranges from (28.97 - 34.17 $\mu\text{g}/\text{m}^3$), SO2 ranges from (5.77 - 7.19 $\mu\text{g}/\text{m}^3$), NO2 ranges from (16.19 - 19.24 $\mu\text{g}/\text{m}^3$) & CO ranges from (0.29 - 0.34 mg/m^3) which are within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB the air quality of the buffer zone is found to be Satisfactory during the sampling campaign.

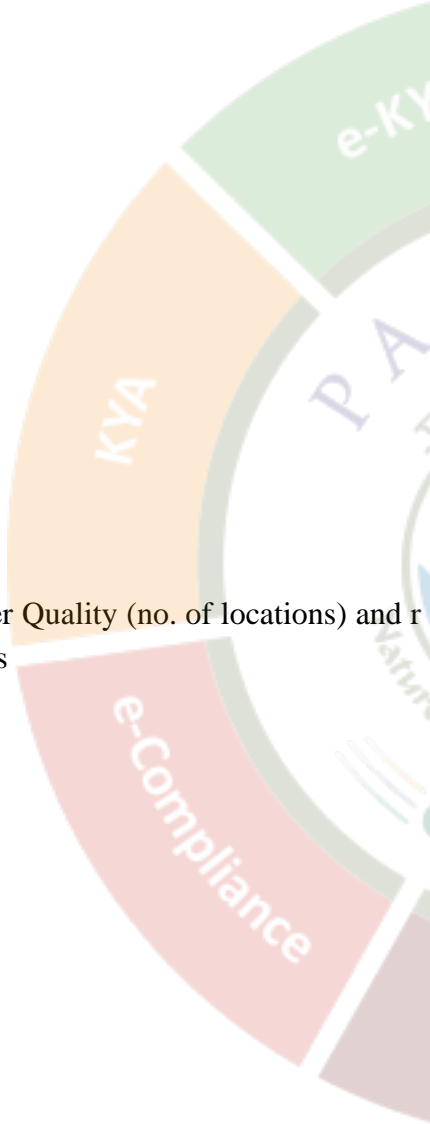
Noise level (no. of locations) and results

No. of locations- 08

Results- Core Zone (Industrial Area): N1 & N2: The ambient noise level during day time at the proposed project site varies from 52.60 dB (A) to 53.20 dB (A) which are within the standard limit of Industrial area ~ 75 dB (A). During night the noise level at the project site ranges from 44.40 dB (A) to 45.10 dB (A) which are within the standard limit of Industrial area 70.0 dB (A).

Buffer Zone: Residential Area: N4, N5, N7 & N8:-The ambient noise level during day time at the proposed project site varies from 52.10 dB (A) - 54.60 dB (A) which are within the standard limit of Residential area ~55 dB (A). During night the noise level at the project site ranges from 43.90 dB (A) to 47.20 dB (A) which is slightly higher noise level compared to the standard limit of Residential area 45 dB (A). It may be regarded as the residential and other local activities occurring within the village.

Commercial Area: N3 & N6: The ambient noise level in commercial area i.e. Approach Road & NH-6 is 53.40 dB (A) to 62.80 dB (A) during day time which is within the standard limit of commercial area of ~ 65 dB (A) and 44.80 dB (A) to 57.90 dB (A) during

	<p>night time which is slightly higher noise level compared to the standard limit of commercial area ~ 55 dB (A).</p>
<p>Water Quality (no. of locations) and results</p> 	<p>No. of GW locations- 07 No. of SW locations- 04 Results of GW-</p> <p>The Total Dissolved Solids (TDS) of the all (W1 to W7) sampling locations ranges from 68 mg/l to 182 mg/l which are within the drinking water standard (IS:10500) i.e. 500 mg/l.</p> <p>The Total Hardness of the sampling locations ranges from 18 mg/l to 70 mg/l which are within the drinking water standard (IS:10500) i.e. 200 mg/l.</p> <p>The Alkalinity of the sampling locations ranges from 22 mg/l to 52 mg/l which are within the drinking water standard (IS:10500) i.e. 200 mg/l.</p> <p>The Fluoride content in the sampling locations ranges from <0.1 mg/l to 0.64 mg/l which are within the drinking water standard (IS:10500) i.e. 1.0 mg/l.</p> <p>The Calcium Concentration of sampling locations ranges from 5.4 mg/l to 26 mg/l. Calcium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 75 mg/l.</p> <p>The Magnesium Concentration of sampling locations ranges from 0.48 mg/l to 7.20 mg/l. Magnesium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 30 mg/l.</p> <p>The Chloride Concentration of all the sampling locations ranges from 6 mg/l to 42 mg/l. Chloride levels of all the sampling locations are within the drinking water standards (IS:10500) i.e. 250 mg/l.</p> <p>Results of Surface Water-</p> <p>Surface water samples were derived from 4 locations in different surface water bodies within study area, analysis results of the same revealed that pH values amongst all samples varied in the range of 7.33 - 7.70, Total Hardness concentration varied in the range of 92 mg/l to 172 mg/l &, TDS concentration varied in the range of 162 to 218 mg/l. Electrical Conductivity was found to be ranging in between 352 to 412 mS/cm.</p> <p>The surface water samples are falls under class C, D & E as per CPCB surface water criteria i.e. Drinking</p>

	water source after conventional treatment and disinfection, Water is suitable for Propagation of Wildlife and Fisheries & Irrigation, Industrial Cooling, Controlled Waste disposal.
Soil Quality (no. of locations) and results	No. of locations- 08 Results- Soil samples at location S1 - S8 shows that the soil texture class is Clay, Clay Loam, Colour is 5/3 dull reddish, brown (3/4), (5/3) dark brown, (5/3) dull reddish, pH range is 6.87 - 7.70. Amount of primary nutrients like Organic matter range is (0.35 - 2.12) %, the available nitrogen range is (82.40 - 122.60) mg/kg is Low and available Potassium range is (12.20 - 41.20) mg/kg is Low while the available Phosphorus range is (8.60 - 19.10) mg/kg is Medium to high. Thus it can be concluded that soil is average fertile.
Traffic study (no. of locations) and results	2 Locations, LOS of both locations -“A”.
xi. Rehabilitation & Resettlement:	
R & R details	There is no habitation on the said land, hence, R&R is not applicable.
xii. Court case details:	
Court Case, No and its present status	The Project Proponent reported that there is no litigation pending against the project and/or land in which the project is proposed to be set up.
Undertaking by Project Proponent w.r.t court case	
xiii. Affidavit/Undertaking details:	
Affidavit as per Ministry's OM dated 30.05.2018	The Project Proponent has submitted the Affidavit in a nonjudicial stamp paper of Rs 10 dated 26.12.2023 stating that the company undertakes by affidavit that they commit to comply with the order of the Hon'ble Supreme Court order dated 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India &Ors.

xiv. ADS details: The Proposal was earlier considered in the 26th EAC (Non-Coal Mining) meeting held during 31st January & 1st February, 2024 wherein the Committee has deferred the proposal for the submission of requisite information. The Project Proponent has submitted their reply vide letter dated 13.03.2024 are as follows:

S.No	Observation of EAC	Reply by project proponent
1	<p>The EAC opined that the Ministry may seek comments from the Eco-Sensitive Zone (ESZ) Division in the Ministry stating whether the instant mine lease area falls under Eco-Sensitive Zone or not.</p>	<p>Eco-Sensitive Zone (ESZ) Division of the Ministry referred to the Hon'ble Supreme Court of India orders dated 26.04.2023 and further clarification issued on 28.04.2023 by the Hon'ble Supreme Court in I.A No. 131377 of 2022 in W.P (C) 202 of 1995: T.N. Godavarnan Thirumulpad Vs UoI&Ors., mining not only within ESZ, but also even if ESZ is less than 1.0 km, is strictly prohibited.</p> <p>In the absence of kml/shape file of the ESZ boundary and the Protected Area, vis-à-vis the mine location co-ordinates, it is difficult to assess specifically the distance of nearest mining activity from the nearest ESZ boundary.</p>
2.	<p>The EAC also asked the Project Proponent to submit a letter from the State Forest Dept. clearly stating that the mine lease area falls under Eco-Sensitive Zone or not.</p>	<p>After physical verification by the DFO (T) Division, it is certified that the said area of limestone mining of 65 ha is a non-forest land and is also not a part of any Reserve Forest/ Protected Forest/Community Reserve/Wildlife Corridor/ Biodiversity Heritage site/ Catchment area/sacred grooves and it is also outside the Narpuh Wildlife Sanctuary and its Eco Sensitive Zone. The letter dated 24.01.2023 has been submitted by the Project Proponent.</p>




Based on the site inspection report of the DFO, Conservator of Forest (T), Office of the Principal Chief Conservator of Forest (HoFF), Department of Forests and Environment, Government of Meghalaya has also issued a letter dated 14.02.2023, clearly stating that the proposed site is not part of any forest land and does not fall within the Eco Sensitive Zone or WL Sanctuary. Letter dated 14.02.2023 has been submitted by the Project Proponent. The Project Proponent has obtained the Non-Forest Certificate issued by the Chief Conservator of Forest, Office of the Principal Chief Conservator of Forest (HoFF), Department of Forests and Environment, Government of Meghalaya on 30.03.2023 and same letter has been submitted by the Project Proponent. As per the discussion held during the 26th EAC dated 31.01.2024, the Project Proponent has again applied to the Additional Principal Chief Conservator of Forest (T) for issuing clarification that the project land is outside the boundary of the notified Eco Sensitive Zone of Narpuh Wildlife Sanctuary vide letter no. SCML-65 ha/PCCF/2023-24, dated 01.02.2024. GIS Lab of the Office of the Principal Chief Conservator of Forest (HoFF), Department of Forests and Environment, Government of Meghalaya, Shillong has generated the



map on the GPS Co-ordinates pertaining to the plot of 65 ha and has also certified that the said plot is outside the boundary of the notified Eco Sensitive Zone of Narpuh Wildlife Sanctuary. The Project Proponent has received information from the Conservator of Forests (T), Office of the Principal Chief Conservator of Forest (HoFF), Department of Forests and Environment, Government of Meghalaya vide letter no. MFG.16/50/CMCL/Vol-II I/16,676 dated 08.02.2024 which states that:

“As per the map and the report of Divisional Forest Officer, Jaintia (T) Division, Jowai depicting the same dated 24.01.2023, the boundary of limestone mining lease and prospecting license of 65 Ha at Brichyrot village, ElakaNarpuh, East Jaintia Hills District as applied by M/s Star Cement Meghalaya Limited is located outside the boundary of the notified Eco-Sensitive Zone of Narpuh Wildlife Sanctuary.”

Thus, on the basis of above information the Project Proponent informed that the land is at a distance of approx. 25.29 mtr from the Eco Sensitive Zone of Narpuh Wildlife Sanctuary and 1.342 km from the boundary of Narpuh Wildlife Sanctuary which is more than 1 km as per the Order of the Hon'ble Supreme Court of India. The Project Proponent has requested to DFO for issuance of

		<p>certificate confirming that the mining lease area measuring 65 ha land falls outside the notified Eco Sensitive Zone (ESZ) of Narpuh Wildlife Sanctuary vide letter no. SCML-65ha/DFO/2023-24 dated 01.02.2024.</p> <p>DFO, Jaintia Hills Wildlife Division Jowai has issued a letter no. MWL/JH/299/Mining Plan/2022-23/2135 dated 1st March, 2024 supported by map mentioning that mining area of 65 ha is located at distance of 25.29m away from the boundary of the ESZ of Narpuh Wildlife Sanctuary and 1.342 km away from the boundary of Narpuh Wildlife sanctuary.</p> <p>The Project Proponent informed that as per the kml file available on the Parivesh portal the status of this plot of land shows that:</p> <ul style="list-style-type: none"> • The project is outside the ESZ boundary of the Narpuh Wildlife Sanctuary. • The Forest Clearance and Wildlife Clearance do not apply to this project which implies that the project is outside of the ESZ boundary.
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xv. Details of project cost and employment:

Particulars	(Rs. In Lakhs)
Project Cost	Rs 33.96 crores
Employment	94

3.2.3. Deliberations by the committee in previous meetings

Date of EAC 1 : 31/01/2024

Deliberations of EAC 1 :

The Project Proponent/EIA Consultant presented the KML file to indicate the site features in the study area of 10 km radius. The Project Proponent showed the boundary of the mine lease area and informed the EAC that a river is located adjacent to the mine lease area at a distance of 0.07 km on north eastern side. The instant proposal attracts the general conditions as Narpuh Wildlife Sanctuary boundary is located at a distance of 1342 m, SE direction and its ESZ boundary at a distance of 25.29 m, SE to the project site. The EAC noted that the mine lease area is located in the hilly terrain and asked the Project Proponent to show the distance of the Narpuh Wildlife Sanctuary. The Project Proponent presented the map authenticated by the Divisional Forest Officer, Jaintia Hills Wildlife Division, Jowai showing the distance of Narpuh Wildlife Sanctuary located at a distance of 1342 m, SE and ESZ of Narpuh Wildlife Sanctuary located at a distance of 25.29 m, SE from the mine lease area on South Eastern side. The EAC noted that the State Forest Dept. letter dated 23.02.2023 clearly does not indicate that the mine lease area is outside the ESZ. The EAC observed that as per Final Notification declaring Eco Sensitive Zone around Narpuh Wildlife Sanctuary vide S.O.2942(E) dated 06.09.2017, Village Brichyrnot is partly falling within the Eco-sensitive Zone of Narpuh Wildlife Sanctuary. The Project Proponent informed the EAC that the instant mine lease is not falling within the Eco-Sensitive Zone of Narpuh Wildlife Sanctuary. The EAC was of the view that there is no any supporting document submitted by the Project Proponent in this regard. The EAC asked the EIA Consultant that whether they visited the site or not. The EIA Consultant informed the EAC that being a green field project, site visit was not undertaken. The EAC was of the view that the EIA Consultant who visited the site should present the technical presentation before the EAC.

The Project Proponent also presented the conceptual plan. Nearest habitation is Brishyrnot at a distance of 160m on southern side. The EAC asked about the elevation of the habitation. The Project Proponent informed the EAC that elevation ranges from 391 mRL – 346 mRL and the instant mine lease is at 295 mRL. The material after blasting will be transported to crusher located at a cement plant at a distance of 1.85km by road. The Office of the Principal Chief Conservator of Forests (HoFF) vide letter dated 30.03.2023 certifying that plot of land measuring 65 ha is non-forest land as per definition of forest in Section 3 (10) of Meghalaya Forest Regulation, 1973 as amended vide Meghalaya Forest Regulation (Amendment) Act, 2012. India – Bangladesh boundary is located at a distance of 12.5 km from the mine lease area. A requisition letter has been submitted to the State Govt. for obtaining NOC from Ministry of Defence and is under process. Ultimate level of excavation will be 70 mRL. No groundwater intersection is involved. At the conceptual stage, the excavated area will be 61.93 ha, out of which 52.52 ha mined out benches will be rehabilitated by plantation, 9.41 ha will be converted into a water reservoir & 0.36 ha undisturbed area will be covered under plantation. No R&R is involved in this proposal. The EAC asked the Project Proponent whether the mineral Shale is mentioned in mine lease document or not. The Project Proponent informed the EAC that the mining lease granted for both minerals such as Limestone and Shale and accordingly mining plan was prepared and submitted to Indian Bureau of Mines (IBM) on 07.11.2023 for approval.

After detailed deliberations made by the Project Proponent and the EIA Consultant, the EAC was of the view that it is mandatory to know whether the mine lease area falls under Eco-Sensitive Zone or not. The EAC opined that the Ministry may seek comments from the Eco-Sensitive Zone (ESZ) Division in the Ministry in this regard. The EAC also asked the Project Proponent to submit a letter from the State Forest Dept. clearly stating that the mine lease area falls under Eco-Sensitive Zone or not. Based on the discussions held, the EAC **deferred** the proposal for want of following additional information:-

- i. The EAC opined that the Ministry may seek comments from the Eco-Sensitive Zone (ESZ) Division in the Ministry stating whether the instant mine lease area falls under Eco-Sensitive Zone or not.
- ii. The EAC also asked the Project Proponent to submit a letter from the State Forest Dept. clearly stating that the mine lease area falls under Eco-Sensitive Zone or not.

3.2.4. Deliberations by the EAC in current meetings

The instant proposal attracts the General conditions as the Narpuh Wildlife Sanctuary is located at a distance of 1342 m, SE direction and its ESZ boundary is located at a distance of 25.29 m SE to the project site. The project proponent after explaining the site features on the KML presented the reply of

the ADS points raised during the 26th EAC Meeting held during 31st January & 1st February 2024. The EAC noted the comments of ESZ Division of the Ministry as well as the submission of PP with regard to the distance of the project site from the ESZ boundary based upon the DFO letter dated 24.01.2023 and CF letter dated 14.02.2023. The EAC also noted that the PP has obtained NoC from Ministry of Defence vide letter dated 05.04.2024.

Thereafter EAC enquired about the measures proposed by PP to protect the river flowing adjacent to mine site in the northern direction at located a distance of 0.07 Km. PP informed that they have designated the area upto 50 m towards the side of the river as a no mining zone. The EAC opined that the river should be protected and efforts should be made towards maintaining its originality. The EAC advised the PP to ensure that untreated water/effluent is not disbursed into the river stream at any point of mine operation. Adequate streams protection measures are to be taken by constructing embankment along the ML area near to the river. PP shall ensure that the natural flow of the river is maintained. The EAC also noted that PP intends to mine shale which is a minor mineral, accordingly, EAC asked the PP to submit the SEIAA approved DSR for shale. The EAC also suggested the PP to explore the possibility of installing a mobile crusher within the mine lease area and laying a OLBC to transport the mined ore instead of transporting it through a private road by dumpers/tippers.

Based on the above, EAC recommended the proposal in the 29th EAC meeting held during 9-10th May, 2024 for Terms of Reference for Brishyrnot Limestone Deposit-II with total excavation of 3.58 MTPA (3.0 MTPA of Limestone, 0.2 MTPA of Shale, 0.38 MTPA of Waste/OB including Soil in the ML area of 65 ha by M/s Star Cement Meghalaya Limited located at Village Brishyrnot, Tehsil Khliehriat, District East Jaintia Hills, Meghalaya under provisions of EIA Notification, 2006 and its amendments therein with following specific conditions in addition to the standard conditions applicable for non-coal mining projects:

3.2.5. Recommendation of EAC

Recommended

3.2.6. Details of Terms of Reference

3.2.6.1. Specific

district survey report	
1.	The project proponent needs to submit the SEIAA approved District Survey Report for Shale during submission of EC application.
installing fixed/mobile crusher	
1.	The Project Proponent shall explore the possibility of installing fixed/mobile crusher within the ML Area.
olbc for transportation	
1.	The Project Proponent shall explore the possibility of laying OLBC for transportation of the mined out material.

action plan	
1.	The Project Proponent needs to submit the action plan for year wise backfilling.
year wise excavation	
1.	The Project Proponent needs to submit the details of the year wise excavation and plan for the proposed exploration program.
total excavation in tonnes	
1.	The Project Proponent needs to submit the total excavation in tonnes including mineral, overburden, inter-burden, waste, top soil, rejects etc. to be handled and the management of topsoil and waste needs to be properly addressed in EIA/EMP report. The mineable reserves, blocked reserves need to be mentioned along with the life of mine. Waste to be generated during the entire life of mine and details of the location of dumping/backfilling area need to be submitted.
land use/land pattern	
1.	The Project Proponent needs to submit the Land Use/Land Pattern based on the mineral deposit.
drone survey	
1.	The Project Proponent shall conduct drone survey of the mine lease area and buffer area. The report of the said survey shall be submitted during the appraisal for EC.
ambient air quality	
1.	The Project Proponent needs to monitor the ambient air quality and noise level at the mine lease boundary, nearest village, crusher, predominant downwind direction and at other sensitive receptors. Accordingly, Project Proponent shall propose to install Continuous Ambient Air Quality Monitoring Station within certain timeline.
baseline data	
1.	The Project Proponent shall obtain the baseline data from the nearby existing industries and showcase the comparison between its baseline data with the others.
prepare the emp	
1.	The Project Proponent should prepare the EMP considering the scenario of pollution to be generated for normative and peak total excavation for assessing air and noise pollution.
transport route	
1.	The Project Proponent needs to submit the map showing the transport route of the mineral from the

	mine lease area to the destination, impact of details of habitation at a distance of 100m from the centre on both sides of road, details of no. of trips/day to and fro, capacity of the dumper/tipper to be deployed and the dimensions of the road and the carrying capacity of the road.
assessment of impact	
1.	The Project Proponent shall carry out the assessment of impact due to the proposed project as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP. The project proponent shall conduct hydrological study for projects involving intersection of ground water table as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP.
recycle/re- use of water	
1.	The Project Proponent shall prepare the scheme for mandatory recycle/re- use of water as specified by the Central Ground Water Authority for different category areas seeking NoC for ground water withdrawal and the shall submit as part of EIA/EMP report.
construction of retaining wall	
1.	The Project Proponent needs to submit the engineering design for construction of retaining wall, garland drains, catch drains and siltation ponds along with the timeline.
greenbelt/afforestation development	
1.	The Project Proponent needs to submit the greenbelt/afforestation development plan (2500 plants per ha) for undertaking plantation in the periphery of the mine lease boundary, safety zone etc., The details of the no. of saplings proposed, type of saplings, spacing and the area to be covered including the cost and timeline for completion of plantation needs to be provided in the EIA report.
employment based skill development	
1.	The Project Proponent needs to submit employment based skill development plan for the local people, and thrust should be to provide employment to local people after imparting training.
monitor the water quality	
1.	The Project Proponent shall monitor the water quality in the impact zone such as water reservoir, river water with specific reference to the parameter Langelier Saturation Index which will denote the impact of calcium carbonates on water bodies and these parameters and determine the tendency of water to form calcium carbonate scaling.
specific diesel consumption	
1.	PP should clearly bring out that what is the specific diesel consumption (Liters/Tonne of total excavation & mineral) and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.

cumulative impact assessment	
1.	The Project Proponent needs to carry out the cumulative impact assessment showcasing the impact by considering all peripheral mining activities of the combined mine operation for area towards wildlife sanctuary.
continuous automatic air quality monitoring station (caaqms)	
1.	PP shall prepare a Plan for implementation of Continuous Automatic Air Quality Monitoring Station (CAAQMS) at mine site or its vicinity.
wind rose pattern	
1.	Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.
parameters in surface water	
1.	Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report. Further, detailed mineralogical and chemical composition of the mineral and percentage of free silica in Air quality and other parameters Arsenic, Lead shall also be analyzed in ambient air quality & to be furnished in EIA/EMP report.
monitoring stations & sampling locations	
1.	The PP while carrying out base line monitoring 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 also submit the original Lab reports of air, water, soil and noise quality and NABL/MoEF&CC certificates of the respective laboratory.
air pollution control equipment (apces)	
1.	PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.
lng/cng	
1.	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of Limestone.
action plan for prevention of landslide	
1.	The PP shall submit an action plan for prevention of landslide and rollouts from the surrounding hillocks, inter alia, including plantation, cribs and gabbions, etc.

hydrological regime of the area	
1.	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted.
quantity of surface or ground water	
1.	PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.
implementation of environmental management plan (emp)	
1.	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 person to be engaged for implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.
time bound budget	
1.	PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility needs to be submitted. The capital and recurring expenditure to be incurred needs to be submitted.
glcs values	
1.	The control case and worst-case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants and it should be clearly mentioned. The input parameters used for the modeling also needs to be submitted in the EIA/EMP report.
schedule- i species	
1.	The project proponent needs to carry out the study to identify the species including the Schedule-I species as per Wildlife Act and prepare the wildlife conservation plan for the available Schedule- I species. The wildlife conservation plan should cover the impact of mining.
eia report	
1.	The project proponent needs to carry out the Vibration study and submit the impacts of vibration during blasting in the EIA report. Effective measures should be taken to prevent the damage due to fly rock and its impact on the nearby Lumshnong village. Blasting activity shouldn't cause damage to the nearby villages.
public hearing	

1.	The Project Proponent needs to carry out the Public Hearing as per provisions of EIA Notification, 2006. PP should also submit the time bound action plan on concerns of the public with a timeline for the concerns of the local people in terms of Education, Health-care and Environment.
impact of earthquake	
1.	The impact of earthquake on the mining operation vis-à-vis Safety for the mine be delineated in the EIA report.
court order	
1.	PP should submit an undertaking by way of affidavit as per Ministry's O.M No 3-50/2017-IA. II (M) dated 30.05.2018 to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 passed in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
stream/nallah	
1.	PP should not divert any stream/nallah passing through the ML area or flowing adjacent to the ML area. PP shall ensure the natural flow is not affected and shall undertake upstream/downstream monitoring of flow and quality of water.

3.3. Agenda Item No 3:

3.3.1. Details of the proposal

"Daba Saitthad Limestone Deposit" having mining lease area of 25 Ha by Star Cement Limited. by STAR CEMENT LIMITED located at EAST JAINTIA HILLS,MEGHALAYA			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/ML/MIN/449327/2023	IA-J-11015/39/2023-IA-II(NC M)	19/10/2023	Mining of minerals (1(a))

3.3.2. Project Salient Features

<p>The instant proposal is for Terms of Reference for mining of Limestone in Daba Saitthad Limestone Deposit of M/s Star Cement Ltd with production capacity of 2.51 MTPA of Limestone in the mine lease area of 25 Ha, located at Daba Saitthad (Wahlareng), Village Lumshnong, District East Jaintia Hills, Meghalaya.</p> <p>2. The details of the project as ascertained from the documents submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under:</p> <p>1. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals. The instant proposal attracts</p>

2. The mine lease area is located between Latitude: 25°09'24.78" N to 25°09'39.43" N and Longitude: 92°21'

3. Details of Mine Lease:

S. No	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1	Prospecting License- MG.6/2023/33	01.03.2023	Limestone (Major)	3 years	Mining & Geology Department, Government of Meghalaya	25 ha.
2	Letter of Intent- MG.6/2023/277	28.08.2023	Limestone (Major)	3 years	Mining & Geology Department, Government of Meghalaya	25 ha.
3	Lease Deed	12.02.2024	Limestone (Major)	50 Years	Mining & Geology Department, Government of Meghalaya	25 ha.

S. No	Details of grant of Mine Lease deed execution	Period of Grant		Name of the Mineral	Mine lease area in Ha
		From	To		
1.	Mine Lease Deed	12.02.2024	11.02.2074	Limestone (Major)	25 ha

4. Land Use/Land Cover of the Mine Lease Area:

Private land	25 ha.
Government land	-
Forest land	Nil
Total Mining lease area (MLA), ha	25 h

	a.
Private land for crusher, workshop & other infrastructure outside the MLA	NA

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5. Mining plan details:

Mining Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	MCDR-MPCP0CaFI/10/2023-GUH-IBM_RO_GUH
	Date	11.12.2023
	Mineral (Major/Minor)	Major
	Mine Lease Area, Ha	25
	Validity	5 years from the date of execution of mining lease
Mining Parameters	Quantitative Description	
Method of Mining	Opencast mechanized mining	
Drilling/Blasting	Deep hole drilling & blasting.	
Geological Reserves	52.44 million tons	
Mineable Reserves	40.89 million tons	
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/Waste, MTPA)	2.832 MTPA (including 2.51 MTPA of limestone, 0.322 MTPA of Waste/OB including topsoil).	
Life of mine	50 Years [Max production of Lst (ROM) shall be restricted to 2.51 MTPA. Production from this mine at a later stage of ML may get reduced. Additional exploration shall also be taken up which will increase the reserves.]	
Mine Bench Height & Bench Width	The height of the bench will be 9 m and a minimum working width of the benches in mineral will be 18 m for safe operation of mining machinery.	

No. of Mine Benches	13
Existing Depth, m bgl	NA, as it is a green field project
Ultimate Depth of Mining, m bgl	137
Ground Water Table, m bgl	156
Details of ground water inter section	Water table will not be intersected as it is at 156 m bgl and mining will be done up to 137 m bgl.
Individual bench slope	85° from horizontal
Overall pit slope	<45°
Details of existing/ proposed Crusher	There is no crusher proposed within the mining lease area. Limestone will be transported to the cement plant crusher.
Mineral Beneficiation	NA
RoM output size	-1000 mm
Transportation details including capacity of dumper/tipper, mode of transport and distance	The material after blasting will be loaded by hydraulic excavators of about 2.6 m ³ bucket capacity into tippers of 25 tons carrying capacity for its transportation to crusher at a distance of 4.6 km and temporary waste dump inside mining lease.
Generation of Topsoil/OB & its Management during plan period & conceptual period	Max. 322,524.25 TPA of Waste/OB including topsoil will be generated. Waste/OB will be dumped temporarily at earmarked places. Later it will be used as blending material after taking permission from the Government. The topsoil generated will be used extensively for plantation.
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	There will be no reject from the mine.

6. Water requirement

Total water requirement	40 KLD	Fresh water	05 KLD
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		Treated water	35 KLD
Source	Total water requirement for the proposed mine will be around 40 KLD which will be sourced through water tankers from the company's cement plant.		
Permission	Vide Letter No. AGRO/IRRI-110/96/2004-05/80 dated Shillong, 15th Sep 2004		
Additional information(if any)	Total water requirement for the proposed mine will be around 40 KLD, out of which 35 KLD will be STP treated water and 5 KLD will be fresh water for domestic purposes.		

7. Nearest village / town/ highway/railway station / water bodies

Particulars	Particular's Name	Distance & Directions
Village	Lumshnong	1.95 Km NE
Town	Khliehriat	21.70 Km N
Highway	NH-6	0.57 km SE
Interstate Boundary	<ul style="list-style-type: none"> ● India-Bangladesh International Boundary ● Meghalaya-Assam State Boundary 	9.08 km SSW 12.88 Km SE
Railway station	Hilara railway station	65 km (by road)
Water bodies	Um Badoh Stream Lubha River Seshympa River WahLukha River ThangpyrshaidNala Sakha Nala KukhaNala KhaddumPieltleng Falls DongtangleNala Prang River RumplungNala Natural swimming Pool AphaNala Cher Fall	0.85 Km WNW 3.71 km SE 4.87 Km WSW 6.36 Km ENE 6.60 Km N 7.79 Km N 7.99 Km NE 8.37 Km ENE 8.74 Km NNE 9.16 Km WSW 9.27 Km SW 9.28 Km NE 9.56 Km S 9.69 Km NE

	LarungNala SharaiNala	9.76 Km SW 10.29 Km SW
Forest	Narpuh Reserve Forest	4.13 km SSW

8. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest land within the minimum lease area and (if yes) status of Forest Clearance	No	Not Applicable
National Park	No	Not Applicable
Wildlife Sanctuary	Yes	Narpuh Wildlife Sanctuary - 3.90 km SE
Eco-Sensitive Zone(ESZ) / Eco-Sensitive Area(ESA)	Yes	Narpuh Wildlife Sanctuary ESZ - 2.70 km SE
Coastal Regulation Zone (CRZ)	No	Not Applicable
Schedule-I species (Nos and name of schedule-I species with authenticated letter)	Yes	There are ten Schedule I Species found in the buffer zone are given below: <i>Hoolockhoolock</i> (Western hoolock gibbon), <i>Nycticebus bengalensis</i> (Slow loris), <i>Prionailurus bengalensis</i> (Leopard Cat), <i>Python molurus</i> (Indian Rock Python), <i>Neofelis nebulosa</i> (Clouded Leopard), <i>Buceros bicornis</i> (Great Pied Hornbill), <i>Canis lupus pallipes</i> (Indian Wolf), <i>Manis pentadactyla</i> (Pangolin), and <i>Melursus ursinus</i> (Sloth bear), <i>Capricornis sumatraensis</i> (Himalayan serow).
Wildlife Conservation Plan	Yes	The Chief Wildlife warden had a meeting with Industries and Government departments for preparation of Regional Conservation plan for the East Jaintia Hills district under the supervision and guidance of CWLW, Meghalaya and the cost for preparation and impl

		<p>ementation of the Regional Conservation Plan may be shared by various project proponents on a proportionate basis keeping in view the likely impacts of each project on the wild life and their habitat. Project proponent also confirmed that they shall be part of the regional conservation plan and will pay the fee as determined for project.</p>
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9. Green belt/plantation details:

Proposed area for green belt/plantation	At the end of life of mine, out of the total 25 ha area, 20.12 ha will be used for Bench Plantation/ Grassification, 1.46 ha. along the 7.5 m wide peripheral boundary will be developed to green belt.
Budget for green plant & plantation till the end of life of mine.	Rs 1.03 Cr
Budget for nursery	NA
Details of existing plantation and its survival rate	NA as it is greenfield project
No. of tree cuts in the mine lease area and compensatory afforestation	215 trees will be cut in the mine lease. Total about 37854 trees will be planted upto conceptual period.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	1.46 Ha

10. Baseline detail:

Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/others)	
Period of baseline data collection	March to May 2023
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Summer Season

Predominant Wind direction (From)	Towards East
Ambient Air Quality (no. of locations) and results	<p>No. of locations- 06</p> <p>Results-Core zone: The mean value of PM10 ranges from (64.55 - 66.49 $\mu\text{g}/\text{m}^3$) & PM2.5 ranges from (29.20 - 30.08 $\mu\text{g}/\text{m}^3$), SO2 ranges from (6.15 - 6.33 $\mu\text{g}/\text{m}^3$), NO2 ranges from (16.45 - 16.94 $\mu\text{g}/\text{m}^3$) & CO ranges from (0.29 - 0.30 mg/m^3) which are within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB, the air quality of the core zone is found to be Satisfactory in the Summer season.</p> <p>Buffer zone: The mean value of PM10 ranges from (69.07 - 75.53 $\mu\text{g}/\text{m}^3$), PM2.5 ranges from (31.25 - 34.17 $\mu\text{g}/\text{m}^3$), SO2 ranges from (6.57 - 7.19 $\mu\text{g}/\text{m}^3$), NO2 ranges from (17.60 - 19.24 $\mu\text{g}/\text{m}^3$) & CO ranges from (0.31 - 0.34 mg/m^3) which are within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB the air quality of the buffer zone is found to be Satisfactory during the sampling campaign.</p>
Noise level (no. of locations) and results	<p>No. of locations- 08</p> <p>Results- Core Zone (Industrial Area): N1 & N2: The ambient noise level during day time at the proposed project site varies from 57.4 dB (A) to 57.6 dB (A) which are within the standard limit of Industrial area ~ 75 dB (A). During night the noise level at the project site ranges from 44.7 dB (A) to 44.8 dB (A) which are within the standard limit of Industrial area 70.0 dB (A).</p> <p>Buffer Zone: Residential Area: N5 to N8-The ambient noise level in residential areas ranges from 53.1 dB (A) - 56.6 dB (A) during day time and from 43.9 dB (A) to 47.2 dB (A) during night time. The slightly higher noise level compared to standard limit may be regarded to the residential and other local activities occurring within the village.</p> <p>Commercial Area:N3- Approach Road, N4- NH - 6 The ambient noise level in commercial area i.e. Approach Road & NH-6 is 57.4 dB (A) to 62.8 dB (A) during day time which is within the standard limit of commercial area of ~ 65 dB (A) and 46.7 dB (A) to 57.9 dB (A) during night time which is slightly hi</p>

gher than the standard limit of commercial area ~ 55 dB (A).

Water Quality (no. of locations) and results

No. of GW locations- 08

No. of SW locations- 04

Results of GW-

The Total Dissolved Solids (TDS) of the sampling locations W1, W2, W3, W4, W5, W6, W7, W8 ranges from 68 mg/l to 182 mg/l which are within the drinking water standard (IS:10500) i.e. 500 mg/l.

The Total Hardness of the sampling locations ranges from 18 mg/l to 70 mg/l which are within the drinking water standard (IS:10500) i.e. 200 mg/l.

The Alkalinity of the sampling locations ranges from 13.80 mg/l to 61.60 mg/l which are within the drinking water standard (IS:10500) i.e. 200 mg/l.

The Fluoride content in the sampling locations ranges from <0.1 mg/l to 0.64 mg/l which are within the drinking water standard (IS:10500) i.e. 1.0 mg/l.

The Calcium Concentration of sampling locations ranges from 5.4 mg/l to 26 mg/l. Calcium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 75 mg/l.

The Magnesium Concentration of sampling locations ranges from 0.48 mg/l to 7.20 mg/l.

Magnesium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 30 mg/l.

The Chloride Concentration of all the sampling locations ranges from 6.80 mg/l to 31 mg/l. Chloride levels of all the sampling locations are within the drinking water standards (IS:10500) i.e. 250 mg/l.

Results of Surface Water-

Surface water samples were derived from 4 locations in different surface water bodies within study area, analysis results of the same revealed that pH values amongst all samples varied in the range of 7.40 - 7.78, Total Hardness concentration varied in the range of 118 mg/l to 172 mg/l &, TDS concentration varied in the range of 201 to 252 mg/l. Electrical Conductivity was found to be ranging in between 352 to 432 mS/cm.

The surface water samples falls under class D & E as per CPCB surface water criteria i.e. Water is suitable for Propagation of Wildlife and Fisheries

Soil Quality (no. of locations) and results	No. of locations- 08 Results- Soil samples at location S1 - S8 shows that the soil texture class is Clay, Clay Loam, Colour is 5/3 Dull reddish brown, Brown (3/4), 5/3 Dull brown, pH range is (6.90 - 7.70). Amount of primary nutrients like Organic matter range is (0.35 - 2.31) %, the available nitrogen range is (62.40 - 106.40) mg/kg is Low and available Potassium range is (12.20 - 43.70) mg/kg is Low while the available Phosphorus range is (7.20 - 14.10) mg/kg is medium to high. Thus it can be concluded that soil is average fertile.
Hydro geological study and results	Not conducted
Traffic study (no. of locations) and results	2 Locations, LOS of both locations - "A".

11. Rehabilitation & Resettlement:

R & R details	The Project Proponent has submitted that the R&R is not involved in this project.
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12. Court case details:

Court Case, No and its present status	The Project Proponent has submitted that there is no litigation pending against the project and/or land in which the project is proposed to be set up
Undertaking by Project Proponent w.r.t court case	

13. Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018	The Project Proponent has submitted the Affidavit dated 17.10.2023 stating that they commit to comply with order of the Hon'ble Supreme Court order dated 2 nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ors.
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xiv. ADS details: The proposal was considered in the 22nd EAC (Non-Coal Mining) meeting held during 14-15 November, 2023 wherein the Committee deferred the proposal for additional information. The Project Proponent vide letter dated 13.03.2024 submitted the information on Parivesh which is given as under:

S.	ADS Point	Reply by project proponent
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No		
i	The Project Proponent needs to submit the NOC from the Ministry of Defence.	The Project Proponent has submitted the NOC from the Ministry of Defence dated 05.04.2024.
ii	The Project Proponent needs to submit the width of the public road.	The existing road is an approach for broom garden & a hamlet. After appraisal project proponent has changed the alignment of the road which is now passing through private land and having agreement with the owners for transportation of Limestone. The Project Proponent has submitted the Plan.
iii	The Project Proponent needs to submit the hardness of Limestone tested by a reputed Institute.	<p>As advised, Limestone samples from Daba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited were sent to Indian Institute of Technology (Indian School of Mines), Dhanbad for determination of Moh's hardness along with Compressive strength, Tensile strength. Their recommendation are as under:</p> <p>“The results of Moh's hardness ranges from 3 to 5. In general, the Moh's hardness is an indirect measure of the tool consumption of the cutting machine, again this is indicative of high tool consumption that may result into more downtime of the surface miner machine on account of tool change if deployed. Therefore, based on the test results it is recommended to avoid deployment of surface miner.”</p> <p>“It is observed from the test results of UCS of rock samples of Dabba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited, that the compressive strength has an average value of 47.48 ± 16.2 (/2) which is considered a high value for deployment of Continuous Miner as far as production capacity is considered (Kramadibrata, 1996). At this value the surface miner will be producing at a very low and uneconomical rate.”</p> <p>“Considering the test results of the tensile strength of the rock samples of Daba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited, the average value is 25.95 ± 3.78 MPa. At this value of tensile strength, the deployment of Surface miner is ruled out (Figure 2). As can be seen that the deployment of surface miner is practically unsuitable beyond 6 MPa of tensile strength of rock.”</p> <p>The project proponent has requested EAC to refer page n</p>

		<p>o. ii & iii- Executive summary of report from Indian Institute of Technology (Indian School of Mines), Dhanbad submitted to MoEF&CC.</p> <p>The Project Proponent had procured Dozer with Ripper attachment for mining but it could not be used as Limestone is very hard & massive in nature. Thus equipment has not been utilized.</p>
iv	<p>The Project Proponent needs to explore the possibility of installing a fixed/mobile crusher within the lease area.</p>	<p>The Project Proponent has examined the possibility of installing fixed/mobile crusher within the lease area & reply is as under:</p> <p>Mining lease area is only 25 Hectare, so as to conserve the mineral resource Crusher is located outside the mining lease area in the Cement plant premises.</p> <p>Common crushers will be operated at Cement plant for Limestone, received from other mining areas as well. The crushers will cater the requirement of Limestone from Lumsnhong Limestone Mine (66.98 Ha ML area), Khub I- 4.96 ha ML & Khub II-4.70 ha ML, Wah-Pynkon Limestone Mine- II having 13.58 Ha ML area and DabaSaitthad Limestone Deposit having 25 Ha ML area. These crushers will cater the need of SCL cement plants. It also facilitates avoiding emissions at multiple locations.</p>

15. Details of project cost and employment:

Particulars	(Rs. In Lakhs)
Project Cost	Rs 37.30 crores
Employment	99

3.3.3. Deliberations by the committee in previous meetings

Date of EAC 1 :14/11/2023

Deliberations of EAC 1 :

The Project Proponent/Consultant presented the KML file to indicate the site features in the study area. The entire mine lease area of 25 Ha is a Pvt. land. The instant proposal attracts the General conditions as the Narpuh Wildlife Sanctuary is located at a distance of 3.9 km, SE direction and its ESZ boundary is located at a distance of 2.7 km SE to the project site. The EAC asked about the status of the Mining Plan. The Project Proponent has informed the EAC that the Mining Plan was submitted to Indian Bureau of Mines (IBM) for approval on 06.10.2023. The scrutiny comments have been received from the IBM and Mining Plan is yet to be approved. NH-6 is located at a distance of about 1.0 km on Southern side and Lumshnong Village is located at a distance of about 3km on NE side. General drainage direction is towards west. Lubha River is located on the South Eastern side. The EAC asked about the distance of the International Boundary from the mine lease area. The Project proponent has informed the EAC that India – Bangladesh International Boundary is located at a distance of about 9.0 km from the mine lease area on SSW side.

The EAC asked about the mineral transportation route. The Project Proponent has informed the EAC that the mineral will be transported by road through NH6 to reach crusher. About 0.8km of company's own road and 0.6 km of public road will be used to reach NH6. Total distance to reach Crusher will be about 4.5 km. The EAC asked about the distance of the width of the public road. The Project Proponent has informed the EAC that the width of the public road is about 7-8m. The EAC asked the Project Proponent to physically verify the width of the public road. Further, the Project Proponent has informed the EAC that the crusher is located at the Cement Plant. The EAC also asked the Project Proponent whether there is any possibility of putting up crusher inside the mine lease area to avoid transportation by road from the view point of environment and safety. The Project Proponent has informed the EAC that the entire mine lease area is mineralized zone and crusher at cement plant is also utilized by other mines which leads to put up a another crusher at cement plant. The EAC suggested the Project Proponent to explore the possibility of utilizing mobile crusher at within the mine lease area. The EAC asked about the possibility of transporting the ore through Over Land Belt Conveyor (OLBC). The Project Proponent has informed the EAC that there are elevation issues to lay OLBC and will be explored in future. The EAC noted that a number of mines are going to come up in the study area, the EAC asked the Project Proponent to submit the future year wise production plan to assess the production requirement. The EAC also opined that the Project Proponent needs to explore the possibility of utilizing surface Ripper-Dozer combination along with the hardness of Limestone tested by reputed Institute.

The Project Proponent also informed the EAC that a letter has been obtained from the Office of the Principal Chief Conservator of Forests (HoFF), Meghalaya vide letter dated 1st Feb, 2023 stating that plot of land of 25 ha is non-forest land as per definition of forest in Section 3 (10) of Meghalaya Forest Regulation, 1973 as amended vide Meghalaya Forest Regulation (Amendment) Act, 2012. The Project Proponent has informed the EAC that exploration level is G1. The EAC asked the Project Proponent to relook the life of the mine. The Project Proponent has informed the EAC that maximum elevation is 406 mRL and minimum is 336 mRL. The ultimate level of excavation will be 269 mRL. The depth of the mining will be 137 m bgl from the surface. The EAC opined that the Project Proponent needs to undertake a slope stability study and shall submit the same in the EIA/EMP report. Maximum production capacity of 2.51 MTPA of Limestone will be achieved in the 5th year of 1st five year plan period. At the conceptual stage, 23.54 ha will be under mining area and out of which 3.02 ha will be converted into water reservoir, 20.12 ha will be under bench plantation and 0.40 ha area under roads. The EAC opined that even though Project Proponent is a part of the Regional Conservation Plan, the Project Proponent needs to submit the Wildlife Conservation Plan for conservation of wildlife.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC noted that the India – Bangladesh International Boundary is located at a distance of about 9.0 km from the mine lease area on SSW side. The EAC reiterated the Ministry of Defence letter dated 08.05.2023 regarding security considerations for construction activities/other activities in Border areas/other areas wherein it has been mentioned that *“all activities connected with mining within 20kms from all the borders including seaboard frontier should be planned in consultation with Ministry of Defence”*. The EAC was of the view that border area is falling within 20 km radius and hence the EAC opined that the NOC from the Ministry of Defence is prerequisite for grant of Terms of Reference (ToR). Based on the discussions held, the EAC **deferred** the proposal for want of following additional information: -

- i. The Project Proponent needs to submit the NOC from the Ministry of Defence.
- ii. The Project Proponent needs to submit the width of the public road.
- iii. The Project Proponent needs to submit the hardness of Limestone tested by reputed Institute.
- iv. The Project Proponent needs to explore possibility of installing fixed/ mobile crusher within the lease area.

3.3.4. Deliberations by the EAC in current meetings

The instant proposal attracts the General conditions as the Narpuh Wildlife Sanctuary is located at a distance of 3.9 km, SE direction and its ESZ boundary is located at a distance of 2.7 km SE to the project site. The project proponent after explaining the site features on the KML presented the reply of the ADS

points raised during the 22nd EAC Meeting held during 14-15 November 2023. PP stated that they have obtained the NoC from Ministry of Defence vide letter dated 05.04.2024. Further with regard to the use of surface miner PP stated that as advised by the EAC earlier they sent their limestone sample to Indian Institute of Technology (Indian School of Mines), Dhanbad for determination of Moh's hardness along with Compressive strength, Tensile strength. The recommendation of study is given as under:-

- The results of Moh's hardness ranges from 3 to 5. In general, the Moh's hardness is an indirect measure of the tool consumption of the cutting machine, again this is indicative of high tool consumption that may result into more downtime of the surface miner machine on account of tool change if deployed. Therefore, based on the test results it is recommended to avoid deployment of surface miner.”
- It is observed from the test results of UCS of rock samples of Dabba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited, that the compressive strength has an average value of 47.48 ± 16.2 (/2) which is considered a high value for deployment of Continuous Miner as far as production capacity is considered (Kramadibrata, 1996). At this value the surface miner will be producing at a very low and uneconomical rate.”
- Considering the test results of the tensile strength of the rock samples of Daba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited, the average value is 25.95 ± 3.78 MPa. At this value of tensile strength, the deployment of Surface miner is ruled out. As can be seen that the deployment of surface miner is practically unsuitable beyond 6 MPa of tensile strength of rock.”

Based on the aforesaid recommendation of Indian School of Mines Dhanbad, PP requested EAC to allow deep hole drilling & blasting. Further with regard to the possibility of installing fixed/mobile crusher PP stated that Mining lease area is only 25 Hectare, so as to conserve the mineral resource Crusher is located outside the mining lease area in the Cement plant premises. Common crushers will be operated at Cement plant for Limestone, received from other mining areas as well. The crushers will cater the requirement of Limestone from Lumshnong Limestone Mine (66.98 Ha ML area), Khub I- 4.96 ha ML & Khub II-4.70 ha ML, Wah-Pynkon Limestone Mine- II having 13.58 Ha ML area and Daba Saitthad Limestone Deposit having 25 Ha ML area.

In view of the foregoing submission of PP, the EAC asked the PP about the possibility of transporting the ore through OLBC upto the highway, PP informed that they have approached the village head and community members for their consent for making an alternate road for transportation of mineral to completely avoid the village/public road. PP also presented the alternate route to the EAC

Based on the above, EAC recommended the proposal in the 29th EAC meeting held during 9-10th May, 2024 for Terms of Reference for Mining of Daba Saitthad Limestone Deposit with production capacity of 2.51 MTPA of Limestone in the mine lease area of 25 Ha by M/s Star Cement Ltd located at Daba Saitthad (wahlareng), Village Lumshnong, District East Jaintia Hills, Meghalaya under provisions of EIA Notification, 2006 and its amendments therein with following specific conditions in addition to the standard ToR conditions applicable for the non-coal mining projects-

3.3.5. Recommendation of EAC

Recommended

3.3.6. Details of Terms of Reference

3.3.6.1. Specific

action plan	
1.	The Project Proponent needs to submit the action plan for year wise backfilling.
year wise excavation	
1.	The Project Proponent needs to submit the details of the year wise excavation and plan for the proposed exploration program.
total excavation	
1.	The Project Proponent needs to submit the total excavation in tonnes including mineral, overburden, inter-burden, waste, top soil, rejects etc. to be handled and the management of topsoil and waste needs to be properly addressed in EIA/EMP report. The mineable reserves, blocked reserves need to be mentioned along with the life of mine. Waste to be generated during the entire life of mine and details of the location of dumping/backfilling area need to be submitted.
land use/land pattern	
1.	The Project Proponent needs to submit the Land Use/Land Pattern based on the mineral deposit.
drone survey	
1.	The Project Proponent shall conduct drone survey of the mine lease area and buffer area. The report of the said survey shall be submitted during the appraisal for EC.
monitor the ambient air quality	
1.	The Project Proponent needs to monitor the ambient air quality and noise level at the mine lease boundary, nearest village, predominant downwind direction and at other sensitive receptors. Accordingly, Project Proponent shall propose to install Continuous Ambient Air Quality Monitoring Station within certain timeline.
prepare the emp	
1.	The Project Proponent should prepare the EMP considering the scenario of pollution to be generated for normative and peak total excavation for assessing air and noise pollution.
submit the map	
1.	The Project Proponent needs to submit the map showing the transport route of the mineral from the mine lease area to the destination, impact of details of habitation at a distance of 100m from the centre on both sides of road, details of no. of trips/day to and fro, capacity of the dumper/tipper to be deployed and the dimensions of the road and the carrying capacity of the road.
assessment of impact	

1.	The Project Proponent shall carry out the assessment of impact due to the proposed project as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP. The project proponent shall conduct hydrological study for projects involving intersection of ground water table as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP.
recycle/re- use of water	
1.	The Project Proponent shall prepare the scheme for mandatory recycle/re- use of water as specified by the Central Ground Water Authority for different category areas seeking NoC for ground water withdrawal and the shall submit as part of EIA/EMP report.
construction of retaining wall	
1.	The Project Proponent needs to submit the engineering design for construction of retaining wall, garland drains, catch drains and siltation ponds along with the timeline.
greenbelt/afforestation development plan	
1.	The Project Proponent needs to submit the greenbelt/afforestation development plan (2500 plants per ha) for undertaking plantation in the periphery of the mine lease boundary, safety zone etc., The details of the no. of saplings proposed, type of saplings, spacing and the area to be covered including the cost and timeline for completion of plantation needs to be provided in the EIA report.
specific diesel consumption	
1.	PP should clearly bring out that what is the specific diesel consumption (Liters/Tonne of total excavation & mineral) and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
skill development	
1.	The Project Proponent needs to submit employment based skill development plan for the local people, and thrust should be to provide employment to local people after imparting training.
monitor the water quality	
1.	The Project Proponent shall monitor the water quality in the impact zone such as water reservoir, river water with specific reference to the parameter Langelier Saturation Index which will denote the impact of calcium carbonates on water bodies and these parameters and determine the tendency of water to form calcium carbonate scaling.
cumulative impact assessment	
1.	The Project Proponent needs to carry out the cumulative impact assessment showcasing the impact by considering all peripheral mining activities of the combined mine operation for area towards wildlife sanctuary.

continuous automatic air quality monitoring station (caaqms)	
1.	PP shall prepare a Plan for implementation of Continuous Automatic Air Quality Monitoring Station (CAAQMS) at mine site or its vicinity.
location of aaqms	
1.	Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.
parameters in surface water quality	
1.	Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report. Further, detailed mineralogical and chemical composition of the mineral and percentage of free silica in Air quality and other parameters Arsenic, Lead shall also be analyzed in ambient air quality & to be furnished in EIA/EMP report.
photograph of monitoring stations	
1.	The PP while carrying out base line monitoring 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 also submit the original Lab reports of air, water, soil and noise quality and NABL/MoEF&CC certificates of the respective laboratory.
air pollution control equipment (apces)	
1.	PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.
lng/cng based mining machineries	
1.	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of Limestone.
action plan for prevention of landslide	
1.	The PP shall submit an action plan for prevention of landslide and rollouts from the surrounding hillocks, inter alia, including plantation, cribs and gabbions, etc.
hydrological regime of the area	
1.	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted.
quantity of surface or ground water	

1.	PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.
environmental management plan (emp)	
1.	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 person to be engaged for implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.
nabl/moef&cc accredited laboratory	
1.	PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
modeling	
1.	The control case and worst-case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants and it should be clearly mentioned. The input parameters used for the modeling also needs to be submitted in the EIA/EMP report.
schedule-i species	
1.	The project proponent needs to carry out the study to identify the species including the Schedule-I species as per Wildlife Act 2022 and prepare the wildlife conservation plan for the available Schedule- I species. The wildlife conservation plan should cover the impact of mining.
impacts of vibration	
1.	The project proponent needs to carry out the Vibration study and submit the impacts of vibration during blasting in the EIA report. Effective measures should be taken to prevent the damage due to fly rock and its impact on the nearby Lumshnong village. Blasting activity shouldn't cause damage to the nearby villages.
public hearing	
1.	The Project Proponent needs to carry out the Public Hearing as per provisions of EIA Notification, 2006. PP should also submit the time bound action plan on concerns of the public with a timeline for the concerns of the local people in terms of Education, Health-care and Environment.
safety of the school	
1.	The Project Proponent mentioned a school is at the distance of 1.5 Km from the mine lease area. Therefore, the PP shall ensure safety of the school and also mention for betterment of schools and to

	facilitate the online education system by providing Wi-Fi connectivity, smart classrooms and desktops/tablets, infrastructure, and environment protection.
impact of earthquake	
1.	The impact of earthquake on the mining operation vis-à-vis Safety for the mine be delineated in the EIA report.
the hydro-geological study	
1.	Since the mine is on the slope, the hydro-geological study including water & its impact of stream on mine & vice versa to be included in the EIA report.
court order	
1.	PP should submit an undertaking by way of affidavit as per Ministry's O.M No 3-50/2017-IA. II(M) dated 30.05.2018 to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 passed in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

3.4. Agenda Item No 4:

3.4.1. Details of the proposal

Lakhpat & Punharajpur Lignite Block by GMDC LAKHPAT & PUNHARAJPUR LIGNITE BLOCK located at KACHCHH, GUJARAT			
Proposal For		Fresh ToR	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/GJ/MIN/445103/2023	IA-J-11015/29/2023-IA-II(NC M)	21/09/2023	Mining of minerals (1(a))

3.4.2. Project Salient Features

<p>The instant proposal is for Terms of Reference for mining of Lignite and Limestone in Lakhpat & Punharajpur Lignite Block and Limestone mine for production capacity of 4.5 MTPA of Lignite and 29.81 MTPA of Limestone in the mine lease area of 2959.6715 ha by M/s Gujarat Mineral Development Corporation Limited located at Villages Lakhpat, Kaner & Punharajpur, Tehsil Lakhpat, District Kutch, Gujarat.</p> <p>2. The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under:</p> <p>i. The mine lease area is located between Latitude: 23°44'40.429"N to 23°49'19.872"N and Longitude: 68°43'22.983" E to 68°47'30.417" E. The mine lease area falls under the Survey of India Toposheet No: 41 A/9, 41 A/10, 41 A/13 & 41 A/14 and falls in Seismic Zone-V.</p> <p>ii. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals and falls under Category "A" as the mine lease area is greater than 250 ha and appraised at the Central level.</p> <p>iii. The Project Proponent has submitted that the Terms of Reference (ToR) was obtained on 22.06.2022 for</p>
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Lakhpat & Punharajpur Lignite Block with production capacity 3.0/4.5 MTPA Lignite (Normative/Peak) & 29.81 MTPA Limestone in project area of 2959.6715 Ha. One of the specific condition (i) is that “as per the MoEF&CC’s OM dated 24.12.2010, PP to apply the TOR separately for operation of Limestone mine to respective sector under the provisions of EIA, Notification for preparation of common EIA-EMP report”. In view of the above, a fresh proposal has been submitted to obtain the Terms of Reference (ToR) for mining of Limestone.

iv. Details of Mine Lease:

S.no	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1.	Order No. MC R-102015-406-CHH1 (Part File) Sachivalaya, Gandhinagar,	25.10.2021	Major Mineral (Limestone & Lignite)	30 Year	Industries and Mines Department	2959.6715

v. Land Use/Land Cover of the Mine Lease Area:

Private land	224.9142
Government land	2734.7573
Forest land	Not Applicable
Total Mining lease area (MLA), ha	2959.6715
Private land for crusher, workshop & other infrastructure outside the MLA	Nil

vi. Details of Mining plan:

Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	Limestone: MCDR - MPCP0CaFI/7/ 2023-GNR-IBM_RO_GNR Lignite: 55026-3-2020-MPS
	Date	Limestone: 09.08.2023 Lignite: 05.10.2020
	Mineral & (Major/Minor)	Major
	Mine Lease Area, Ha	2959.6715
	Validity	5 Year for Limestone.
Mining Parameters	Quantitative Description	
Methods of Mining	Mechanized Opencast (The limestone bearing overburden will be mined through Surface Miner while Lignite and other waste	

	will be mined through shovel dumper combination.)
Drilling/Blasting	Drilling and blasting will be rarely phenomenon in the whole mining process throughout the life of the mine. Occasional drilling and blasting may require to excavate the hard limestone strata which has been reported in the Geological report. In case of drilling and blasting, spacing and burdens will be limited to 5 meter each. Deep hole blasting with SMS will be adopted. Blasting will be done in the suitable time of the day after proper intimation.
Geological Reserves	Total Geological Reserve: Gross Geological Reserve - 161.59 Million Tonne and Net geological reserve - 145.43 Million Tonne for lignite Total Geological Reserve: 736.58 Million Tonne of Limestone
Mineable Reserves	Lignite: 105.52 Million Tonnes Limestone: 562.55 Million Tonnes
Breakup of Total Excavation (Top soil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	Limestone - 29.81 MTPA Lignite – 3 MTPA Top soil – 0.52 MTPA OB – 118.7672 MTPA
Life of mine	39 years (for Limestone 35 years and for Lignite 39 years) including one year of Pre-mining developmental works.
Mine Bench Height & Bench Width	Height of bench: 5m (max) Width of bench: 10m (min)
No. of Mine Benches	21
Existing Depth, m bgl	-
Ultimate Depth of Mining, m bgl	Min: 21.92 m, Max: 115.31 m (Limestone) Min: 59 m, Max: 125 m (Lignite)
Ground Water Table, m bgl	Core zone: The post-monsoon water level varies from 1.5 m to 5 m below ground level. In the pre-monsoon period, it varies from 3 m to 9 m below ground level. Seasonal fluctuation in water level in these bore wells in the core zone varies from 1.3 m to 3.8 m. Buffer zone: The Post-monsoon water level varies from 1.5 m to 6 m below ground level. In the pre-monsoon period, it varies from 3 m to 9 m below ground level. Seasonal fluctuation in water level in these bore wells in the core zone varies from 1.3 m to 3.8 m.
Details of ground water intersection	The mining operation will be restricted to 100m depth from the surface level (RL). Depth of water table varies from 452 m to 651 m from surface level (RL). Hence, there will be intersection

	<p>of ground water aquifer during mining operation. The detail hydrogeological study does not envisage any impact due to puncturing the aquifer in this mine. The ground water inflow has been estimated in a tune of 283 MLD. This again will be mitigated through groundwater recharge. Thus net impact of Ground water depletion leading to unavailability of the ground water is not envisaged.</p>		
Individual bench slope	80°		
Overall pit slope	26°		
Details of existing/ proposed Crusher	Proposed Primary Crushing – Jaw Crusher of 6000 TPH capacity		
Mineral Beneficiation	Not Applicable		
RoM output size	-200 mm		
Transportation details including capacity of dumper/tipper, mode of transport and distance	<p>No. of Dumper of capacity 40 Ton -128 and No. of Dumper of capacity 35 Ton – 51 Mode of transport – Road Distance – around 10 Km from project site Transportation of Limestone is presumed in the vicinity of 10 Km from the Mine, based on the response of Limited RFP (Request for Proposal). Initially mineral will be transport through dumper via road. Dumper Capacity for Limestone is 40 Ton. Depending on the potential customers within the 10 Km range, conveyor belt transportation will be planned.</p>		
Generation of Topsoil/OB & its Management during plan period & conceptual period	<p>About 1249.34 M.cum of OB and 12.65 M.cum of Topsoil will be generated. Backfilling will be done over 1675.72 Ha out of which 717.93 Ha will be converted to agricultural land and 957.79 Ha will be utilized for plantation. The overburden, excluding the limestone, generated during the mining process shall be utilized for backfilling of the mined-out voids. Topsoil generated during the mining process will be spread over the backfilled areas to make the dumping ground suitable for plantation and agricultural ground.</p>		
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	<p>A mineral rejects yard will be created in the south-western corner of the Block to stack the sub-graded limestone for future usage. The overburden, excluding the limestone, generated during the mining process shall be utilized for backfilling of the mined-out voids. Topsoil generated during the mining process will be spread over the backfilled areas to make the dumping ground suitable for plantation and agricultural ground.</p>		
Total water requirement	1325 KLD	Fresh water	50 M ³ /day

		Treated water	32 M ³ /day
Source	<p>Groundwater 50M³/day, Dewatering water 814 M³/day & Mine pit rain water collection 461 M³/day.</p> <p>Deep tube wells will be installed at site for drinking water with necessary treatment plant. Potability of water will be analyzed in quarterly basis. In the initial years, water for dust suppression, plantation use and workshop uses will be catered from the mine pit water of nearby GMDC mines. With progress of the mine, accumulated pit water will be stored and utilized for the Plantation, Dust Suppression and workshop usage.</p>		
Permission for withdrawal/ intercession along with details of grant and its validity	Requisite approvals from CGWA will be obtained before commencement of mining operation.		
Particulars	Particular's Name	Distance & Directions	
Village	Lakhpat	0.5 Km in N direction	
Town	Nakhatrana	70 km in SW direction	
Highway	SH 42	Passing through the block	
Interstate Boundary	None within 10 km radius	-	
Railway Station/Railway line	Naliya & Bhuj Railway Station	61 Km in southern direction 110 km in southeastern direction	
Water Bodies	<ul style="list-style-type: none"> ●P1, Eastern side of Punharajpur village Check dam for Villagers. ●P2 Northern side of Punharajpur village Pond with in the lease area. ●P3 NW side of Punharajpur village Pond within the lease area ●One Seasonal nallah (Tributary of Kali River) is passing within the lease area. It will be left undisturbed during the mining operation. ●Kali Nadi ●Kori Creek ●Korawadi Nadi ●Kapurasi Nadi 	<p>Within Core Zone</p> <p>Within Core Zone</p> <p>Within Core Zone</p> <p>0.3 Km in W</p> <p>3.3 Km in N</p> <p>6.3 Km in SE</p> <p>9.7 Km in WSW</p>	
Forest	<ul style="list-style-type: none"> ●Pranpar Rakhhal RF ●Akri RF 	<p>1.9 Km in ESE</p> <p>6.7 Km in SE</p>	

	<ul style="list-style-type: none"> ● Ukher RF ● Khanot RF ● Mudhvay RF ● Gaduli RF 	<p>7.1 Km in E 8.5 Km in SSE 8.9 Km in SW 9.8 Km in ESE</p>
Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	No	No Forest land involved in the mine lease area.
National Park	No	Narayan Sarovar Wildlife Sanctuary approx. 8.8 km in SSW direction from the Mine lease area.
Wildlife Sanctuary	No	Narayan Sarovar Wildlife Sanctuary approx. 8.8 km in SSW direction from the Mine lease area.
Elephant/Tiger Reserve	No	-
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area (ESA)	No	Eco- Sensitive Zone approx. 8.2 km from the Mine Lease area.
Coastal Regulation Zone (CRZ)	Yes	0.605 km from the block
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	No	There is one wildlife sanctuary at a distance of 8.8 km in the southern direction from the block boundary. Site Specific Wildlife Conservation Plan has been prepared and submitted to concern authority.
Wildlife Conservation Plan	No	Site Specific Wildlife Conservation Plan has been prepared and submitted to competent authority.
Proposed area for green belt/plantation and no. of saplings proposed	Area: 1377.9 ha. No. of Saplings: 34,44,750	
Budget for green plant & plantation till the end of life of mine.	45 Lakhs for first five year	
Budget for nursery		
Details of existing plantation and its survival rate	Survival Rate: 80%	
No. of tree cuts in the mine lease area and compensatory afforestation	Detailed tree enumeration will be provided in EIA. CA not applicable.	

Particulars for Green belt/plantation		Area covered (in Ha)
7.5 m barrier & non-mineralized zone		11.9 ha
Greenbelt created in ha: 1377.9 ha., the bifurcation is 957.79 ha on backfilling, , 98.62 ha on stacks/ dumps, 308.19 ha on virgin land and lastly near utility services 13.30 ha including peripheral greenbelt. 717.93 ha will be developed for agriculture activities.		
Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)		
Period of baseline data collection		March to May 2024
Season (Summer / Pre-monsoon / Post-monsoon / Winter)		Summer Season
R & R details	There is no homestead PAF within the Block. However, there are 196 PAF and 798 PAP within the Block. Compensation in accordance with the prevailing Norm of State R & R Policy will be undertaken and implemented by M/s GMDC for the land losers.	
Court Case, No and its present status		No court case is pending against the project.
S. No	ADS Point	Reply by Project Proponent
1.	The Site visit report of the sub-committee	The Site visit report of the sub-committee has been submitted by the Project Proponent.
2.	Since the mine site is located within 20 km from seaboard frontier, Project Proponent shall submit No Objection Certificate from Ministry of Defence for consideration of the instant project for Terms of Reference (ToR).	Project Proponent had approached to Ministry of Defence, New Delhi for obtaining a No Objection Certificate. As per the Project Proponent's interaction with ASO (Policy & Planning), Ministry of Defence (MoD) (IAST: Raksha Mantralaya), New Delhi. This proposal must be directly moved by MoEF&CC, New Delhi to MoD (IAST: Raksha Mantralaya), New Delhi being confidential in nature. In this regard, Project Proponent has submitted a request letter to MoEF&CC on dated 19.12.2023.
3.	The Project Proponent needs to clearly justify the water balance and also to explain that how the requirements of freshwater will be met.	The water requirement was initially 1940 KLD which has been reduced to 1325 KLD (reduction of 32% or 615 KLD) after carrying out comprehensive hydrogeological survey, ground water modelling and re-visiting the water balance. Water balance diagram has been submitted by the Project Proponent. As per the diagram the total water requirement is 1325 KLD which includes Ground water requirement (50m3/day), dewatering quantity (814 m3/day) and Mine pit rainwater collection 461

m³/day.

The Project Proponent has submitted the following point-wise reply w.r.t. the observations of site visit report of the sub-committee:

S.No.	Observation of the Sub-Committee	Reply by Project Proponent
1.	The PP shall submit the comprehensive material balance with regard to the annual production of the both minerals, overburden/waste, top soil generated, depth of mining, transportation of minerals mined out yearly, quantity to be stocked for the first five years. The excavation data should match when compared with the mining plan for both minerals i.e. Lignite as well as Limestone.	<ul style="list-style-type: none">PP has provided comprehensive material balance with regard to the annual production of the both minerals, overburden/waste, top soil generated, depth of mining, transportation of minerals mined out yearly, quantity to be stocked for the first five years. The excavation data has been matched with mining plan for both the minerals. A detail of the same is has been submitted.Lignite: All mined out Lignite will be dispatched to the consumers for commercial use.Limestone: Initially, all the mined out Limestone will be stacked for the first five years. In the meantime, GMDC has invited EOI (Expression of Interest), to understand the interest of cement companies to utilize the limestone in the vicinity of the mine. Based on the response GMDC has rolled out Limited RFP (Request for Proposal) for the interested parties for their participation in Long-term Supply Agreement (LSA) for limestone.
2.	The PP informed that they will by using SH 06 for transportation purpose along with NH 41, accordingly, PP shall submit the detailed transportation route for the proposed transportation of mined out minerals.	<ul style="list-style-type: none">As mentioned above, mined out Lignite will be dispatched to the consumers for commercial use.Transportation of Limestone is presumed in the vicinity of 10 Km from the Mine, based on the response of Limited RFP (Request for Proposal).Depending on the potential customers within the 10 Km range, conveyor belt transportation will be planned.
3.	PP shall also undertake the carrying capacity study of the existing road to indicate its viability along with its pollution potential.	Details of the Carrying Capacity to be incorporated in the EIA Report, post finalization of the Long-term Supply A

		<p>greement (LSA) with potential consumers.</p>																		
<p>4.</p>	<p>The PP shall submit the detailed timeline for shifting the pond outside the mine lease area. The capacity of the existing pond and the proposed pond along with its location needs to be provided by the PP.</p>	<ul style="list-style-type: none"> • There are three pond within lease area i.e. P1, P2, P3. Pond P1 Catchment area of 281250 m² will be used after 25th year during the mining operation and that will be a part of 410.19 ha water body at the end of life of mine. • Project proponent will not disturb P2 & P3 Pond during the mining operation. • As part of its CSR Activities, GMDC has initiated Development and rejuvenation of check dam at Baiyavo village under the Mission Amrit Sarovar with total administrative approval of Rs. 43,40,000/-. • The deepening of the Sanavala check dam on Khali river at Baiyavo village holds significant potential for enhancing the water needs of the residents in Baiyavo and Punrajpur villages. The check dam work is executed by the Office of Deputy Executive Engineer, Nakhatrana, Kutch. • The CSR project's execution promises to alleviate water scarcity in the region and ensure sustained socio-economic well-being for Baiyavo and Punrajpur villages in the Lakhpat Block. 																		
<p>5.</p>	<p>PP shall undertake green belt plantation alongside the lease boundary and virgin area plantation.</p>	<p>Project proponent will develop green belt alongside the lease boundary and virgin area. Around 30,000 plants will be planted in first five years during the mining operation. Details is given below:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Green belt location</th> <th>Area proposed to be covered (Ha)</th> <th>Number of plants proposed</th> <th>Expense to be incurred (%)</th> <th>Estimated Expenditure</th> </tr> </thead> <tbody> <tr> <td>1st</td> <td>Safety Zone</td> <td>2.4</td> <td>6000</td> <td>80%</td> <td>900000</td> </tr> <tr> <td>2nd</td> <td>Safety Zone</td> <td>2.4</td> <td>6000</td> <td>80%</td> <td>900000</td> </tr> </tbody> </table>	Year	Green belt location	Area proposed to be covered (Ha)	Number of plants proposed	Expense to be incurred (%)	Estimated Expenditure	1st	Safety Zone	2.4	6000	80%	900000	2nd	Safety Zone	2.4	6000	80%	900000
Year	Green belt location	Area proposed to be covered (Ha)	Number of plants proposed	Expense to be incurred (%)	Estimated Expenditure															
1st	Safety Zone	2.4	6000	80%	900000															
2nd	Safety Zone	2.4	6000	80%	900000															

		<table border="1"> <tr> <td></td> <td>y Zone</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3rd</td> <td>Safet y Zone</td> <td>2.4</td> <td>6000</td> <td>80%</td> <td>900000</td> </tr> <tr> <td>4th</td> <td>Safet y Zone</td> <td>2.4</td> <td>6000</td> <td>80%</td> <td>900000</td> </tr> <tr> <td>5th</td> <td>Safet y Zone</td> <td>2.3</td> <td>6000</td> <td>80%</td> <td>900000</td> </tr> <tr> <td colspan="2">Total</td> <td>11.6</td> <td>30000</td> <td></td> <td>450000</td> </tr> </table>		y Zone					3rd	Safet y Zone	2.4	6000	80%	900000	4th	Safet y Zone	2.4	6000	80%	900000	5th	Safet y Zone	2.3	6000	80%	900000	Total		11.6	30000		450000
	y Zone																															
3rd	Safet y Zone	2.4	6000	80%	900000																											
4th	Safet y Zone	2.4	6000	80%	900000																											
5th	Safet y Zone	2.3	6000	80%	900000																											
Total		11.6	30000		450000																											
6.	PP shall also submit its action plan for mineral use in case it is unable to set up its Cement plant within next 5 years.	Based on the response, GMDC has rolled out Limited RFP (Request for Proposal) for the interested parties for their participation in Long-term Supply Agreement (LSA) for limestone.																														
7.	PP informed that mining activity will intersect ground water, accordingly PP shall undertake hydrological study to determine whether any sea-water ingress will occur or not.	<ul style="list-style-type: none"> PP had appointed CGWA accredited consultant Vardan Environet (Certificate No. CGWA/RGI/003) to undertake a Comprehensive Hydrogeological Report with ground water modelling. The detail Hydrogeological Modelling Study report concludes that possibility of sea water ingress is ruled out. Detailed Hydrogeological Study report has been submitted by the Project Proponent. 																														
8.	PP shall obtain necessary permission/NoC from Archaeological Department for mining in the northern side of lease boundary that is in close vicinity to Lakhpat Fort.	GMDC shall obtain the necessary permission/NoC from Archaeological Department for mining in the northern side of lease boundary that is in close vicinity to Lakhpat Fort. The application process is initiated. Project proponent will submit the necessary permission/NOC at the time of submission of EIA Report.																														

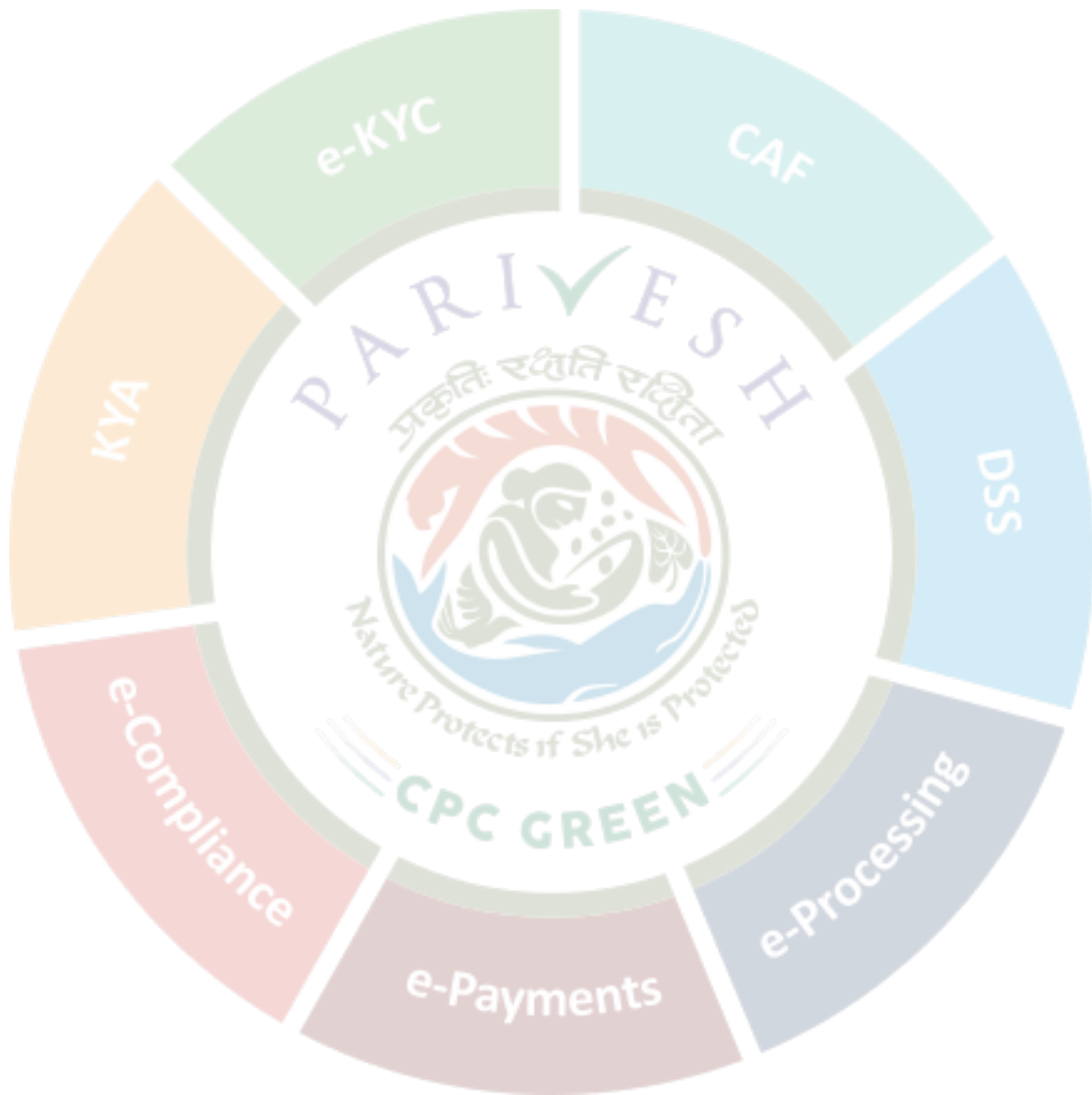
xv. Change of Environmental Consultant: The Project Proponent vide letter dated 11.03.2024 requested to the MoEF&CC for change of Environmental Consultant from M/s Centre for Envotech and Management Consultancy Pvt. Ltd. to M/s Vardan Environet.

xvi. Details of project cost and employment:

Particulars	(Rs. In Crore)
Project Cost	Rs. 1037.436 Crores
Employment (No.s)	1000

3.4.3. Deliberations by the committee in previous meetings

Date of EAC 1 :18/10/2023



Deliberations of EAC 1 :

The Project Proponent/Consultant has presented the KML file to indicate the site features in the study area of 10 km radius. The Project Proponent has informed the EAC that the initially mining lease was granted over an area of 2973 ha and then the State Govt has reduced the 14 ha of forest land and granted the Letter of Intent (LoI) over an area of 2959.6715 ha. A State Highway is passing within and adjacent to the mine lease area. No Villages located within the mine lease area. Nala is located about 200m on the western side. Kori Creek is situated at a distance of 1 km towards Northern side. This region receives an annual rainfall of about 200–300 mm. The project site does not fall under CRZ area. Lakphat Fort is located at a distance of about 200m from the mine lease area on the northern direction. The instant mine lease area is located at a distance of 8.8 km from Narayan Sarovar Wildlife sanctuary and 8.2 km from Eco Sensitive zone of Narayan Sarovar Wildlife sanctuary which is outside the Eco Sensitive zone. No forest land is involved in the mine lease area. India-Pakistan International Boundary is located about at a distance of 40 km towards NW. The EAC observed that on viewing the KML file, CRZ area is found to be on northern side of the mine lease area. The Project Proponent has informed the EAC that CRZ area is outside the mine lease area. The EAC reiterated the Ministry of Defence letter dated 08.05.2023 regarding security considerations for construction activities/other activities in Border areas/other areas wherein it has been mentioned that “*all activities connected with mining within 20kms from all the borders including seaboard frontier should be planned in consultation with Ministry of Defence*”. The EAC opined that the NOC from the Ministry of Defence is prerequisite for grant of Terms of Reference (ToR).

The Project Proponent has informed the EAC that the instant proposal is for mining of Lignite and Limestone. Terms of Reference (ToR) have been already obtained from the Coal Mining Sector for Lignite mining on 22.06.2022. One of the specific condition (i) of the ToR is that “*as per the MoEF&CC’s OM dated 24.12.2010, PP to apply the TOR separately for operation of Limestone mine to respective sector under the provisions of EIA, Notification for preparation of common EIA-EMP report*”. In this regard, a fresh proposal has been submitted to obtain the Terms of Reference (ToR) for mining of Limestone. This Limestone has been occurring as an over burden and has to be excavated out. Maximum proposed production capacity of Limestone is 29.81 MTPA. Expression of Interest (EoI) has been published for putting up cement plants. The EAC asked about the plan for transportation. The Project Proponent has informed the EAC that they are exploring the options to put the Cement Plant close to the Limestone mine and will also explore the possibilities of transporting through conveyor belt and if not possible proper mitigation plans will be devised to minimize the impact due to road transportation. The Cement Plant will commence between during the year 2026-2029. The feasibility of transportation will be covered in the EIA/EMP report since the EoI is in 2nd Stage of tendering.

The EAC asked the Project Proponent that when will the Lignite production will commence. The Project Proponent has informed the EAC that the Lignite production will commence in the year 2025. The EAC asked the Project Proponent that whether huge area is available to accommodate the Limestone. The Project Proponent has informed the EAC that during the first five-year plan, the maximum production of Limestone will be 14.80 MTPA. The EAC asked the Project Proponent to explore the possibility of the reduction of the requirement of water consumption. The EAC also asked the Project Proponent to submit the action plan for exploration program in the EIA report.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC opined that there are other mines also present in the study area. The EAC observed that the Lakphat Fort is located at a distance of about 200m from the mine lease area on the northern direction. The proposed capacity of Limestone is huge quantity. The EAC noted that the maximum proposed production capacity of Limestone of 29.81 MTPA will be achieved in the 12th year as per the then approved mining plan. The Project Proponent did not finalize the mode of transportation. The EAC was of the view that rainfall in the region is very minimal and there will be intersection of ground water aquifer during mining operation. The area is already starved of freshwater. The EAC opined that this will create further complications. The EAC observed that since there will be no overburden, backfilling the void and the closure of mine remains a challenging task. The EAC noted that a Nala is located about 200m on the

Western side and Kori Creek is situated at a distance of 1 km towards Northern side and there will likely chance of sea ingress. The EAC also noted that the mine lease area is located in Seismic Zone-V. Thus the EAC was of the view that there is a need to ascertain the ground reality w.r.t water bodies in the vicinity of the mine lease area, Lakpat Fort (200m, N), handling, management and transportation of Limestone, traffic congestion, water balance and source of water, plan for final closure of mine, sea ingress, cumulative impact and hazard management. The EAC was of the view that a site visit needs to be conducted by a sub-committee comprising of EAC Members and officers from MoEF&CC. The EAC opined that the Ministry may constitute a sub-committee and submit its report to enable the committee to take a decision on the proposal. Therefore, the EAC **deferred** the proposal and was of the view that the instant proposal may be considered only after submission of the following additional information: -

- i. The Site visit report of the sub-committee.
- ii. Since the mine site is located within 20 km from seaboard frontier, Project Proponent shall submit No Objection Certificate from Ministry of Defence for consideration of the instant project for Terms of Reference (ToR).
- iii. The Project Proponent needs to clearly justify the water balance and also to explain that how the requirements of freshwater will be met.

3.4.4. Deliberations by the EAC in current meetings

The project proponent after explaining the site features on the KML presented the reply of the ADS points raised during the 21st EAC Meeting held during 18-20 October 2023. PP also provided the point wise compliance of the site visit report of the sub-committee. Upon submission of the reply by PP, the EAC asked the PP whether they have finalized the transportation route for the mined out mineral. PP stated that transportation of Limestone is presumed in the vicinity of 10 Km from the Mine, based on the response of Limited RFP (Request for Proposal). EAC was of the opinion that PP should atleast include the most probable route that it may follow for transportation in the EIA/EMP along with the carrying capacity study.

Further, EAC observed that plantation proposed by the PP was inadequate and accordingly, the committee advised the PP to revisit their plantation programme by incorporating plantation of 2500 plants per hectare. EAC also noted that Lakpat Fort is located near to the mine site and opined that PP shall seek no objection certificate from ASI in this regard. The EAC again reiterated that the mine lease is located within 20km from the seaboard frontier and as such PP needs to obtain the NoC from Ministry of Defence.

Based on the above, EAC **recommended** the proposal in the 29th EAC meeting held during 9-10th May, 2024 for Terms of Reference for Mining of Limestone in Lakpat & Punharajpur Lignite Block and Limestone mine for production capacity of 29.81 MTPA of Limestone in the ML area of 2959.6715 ha by M/s Gujarat Mineral Development Corporation Limited located at Villages Lakpat, Kaner & Punharajpur, Tehsil Lakpat, District Kutch, Gujarat under provisions of EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:

3.4.5. Recommendation of EAC

Recommended

3.4.6. Details of Terms of Reference

3.4.6.1. Specific

year wise excavation	
1.	The Project Proponent needs to submit the details of the year wise excavation and plan for the proposed exploration program.
total excavation	
1.	The Project Proponent needs to submit the total excavation in tonnes including mineral, overburden, inter-burden, waste, top soil, rejects etc. to be handled and the management of topsoil and waste needs to be properly addressed in EIA/EMP report. The mineable reserves, blocked reserves need to be mentioned along with the life of mine. Waste to be generated during the entire life of mine and details of the location of dumping/backfilling area need to be submitted
land use/land pattern	
1.	The Project Proponent needs to submit the Land Use/Land Pattern based on the mineral deposit.
survey of the mine lease area	
1.	The Project Proponent shall conduct drone survey of the mine lease area and buffer area. The report of the said survey shall be submitted during the appraisal for EC.
ambient air quality and noise level	
1.	The Project Proponent needs to monitor the ambient air quality and noise level at the mine lease boundary, nearest village, crusher, predominant downwind direction and at other sensitive receptors. Accordingly, Project Proponent shall propose to install Continuous Ambient Air Quality Monitoring Station within certain timeline.
emp considering the scenario of pollution	
1.	The Project Proponent should prepare the EMP considering the scenario of pollution to be generated for normative and peak total excavation for assessing air and noise pollution.
transport route	
1.	The Project Proponent needs to submit the map showing the transport route of the mineral from the mine lease area to the destination, impact of details of habitation at a distance of 100m from the centre on both sides of road, details of no. of trips/day to and fro, capacity of the dumper/tipper to be deployed and the dimensions of the road and the carrying capacity of the road.
central ground water authority	
1.	The Project Proponent shall carry out the assessment of impact due to the proposed project as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP. The project proponent shall conduct hydrological study for projects involving intersection of ground water table as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP.
recycle/re- use of water	
1.	The Project Proponent shall prepare the scheme for mandatory recycle/re- use of water as specified

	by the Central Ground Water Authority for different category areas seeking NoC for ground water withdrawal and the shall submit as part of EIA/EMP report.
engineering design	
1.	The Project Proponent needs to submit the engineering design for construction of retaining wall, garland drains, catch drains and siltation ponds along with the timeline.
greenbelt/afforestation development	
1.	The Project Proponent needs to submit the greenbelt/afforestation development plan (2500 plants per ha) for undertaking plantation in the periphery of the mine lease boundary, safety zone etc., The details of the no. of saplings proposed, type of saplings, spacing and the area to be covered including the cost and timeline for completion of plantation needs to be provided in the EIA report.
project affected families (paf)/project displaced families (pdf)	
1.	The Project Proponent needs to submit the detailed R&R plan covering all the components viz. number of Project Affected Families (PAF)/Project Displaced Families (PDF) and details of the land owned by them, break up of total compensation to be paid including method of calculation including the sources/references adopted and mode of payment etc. PP need to submit the plan for Socio economic development of the neighbourhood habitats based on the need based survey along with the time bound action plan. PP also needs to submit the possession certificate and timeline for acquiring the land. Further, PP needs to submit the map demarcating the purchased land and non-purchased land if any at the time of appraisal of EC.
skill development plan	
1.	The Project Proponent needs to submit employment based skill development plan for the local people, and thrust should be to provide employment to local people after imparting training.
langelier saturation index	
1.	The Project Proponent shall monitor the water quality in the impact zone such as water reservoir, river water with specific reference to the parameter Langelier Saturation Index which will denote the impact of calcium carbonates on water bodies and these parameters and determine the tendency of water to form calcium carbonate scaling.
no objection certificate for mining from asi	
1.	PP shall submit no objection certificate for mining from ASI with regard to the Lakhpat Fort which is located at a distance of 200 m from the mine lease area in the northern direction.
public hearing	
1.	PP shall undertake the public hearing for Common EIA-EMP reports on both operations i.e lignite mine and limestone and submit the final EIA-EMP report to respective sectors simultaneously for their appraisal in accordance with the MoEF&CC OM dated 24.12.2010. Public Consultation,

	clearly indicating both the minerals Lignite as well as Limestone shall be conducted through the concerned SPCB as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal. All the issues should be incorporated in EIA along with its time bound action plan and budgetary provision. Also the issue raised in public hearing held earlier should also be addressed with time line action plan and budgetary provision in EIA/EMP report.
continuous automatic air quality monitoring station (caaqms)	
1.	PP shall prepare a Plan for implementation of Continuous Automatic Air Quality Monitoring Station (CAAQMS) at mine site or its vicinity.
air quality data	
1.	Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.
hydrological regime	
1.	Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted.
boundary of the mine	
1.	The impact of mine operation on the river bodies flowing within the boundary of the mine with its mitigation measures adopted should be clearly spell in the EIA/EMP report with flood plain protection measures.
lng/cng	
1.	PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of Limestone.
environmental cost benefit analysis	
1.	Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
compensatory afforestation plan	
1.	The Project Proponent needs to undertake the enumeration of the plant species within the mine lease area before cutting. The Project Proponent also needs to submit the compensatory afforestation plan for the no. of trees to be cut in the mine lease area and also to explore the possibility of tree transplantation.
ecology restoration plan	

1.	The Project Proponent needs to submit the ecology restoration plan for mined out pits for using as Water reservoir/ Pisciculture as well as the plan for the backfilled area.
mining technology/methodology	
1.	PP shall provide the details of mining technology/methodology proposed to be adopted for Non-coal mining operations and its associated environmental benefits of using from Climate Change perspective.
elephants and tiger corridors.	
1.	PP shall submit letter from Principal Chief Conservator of Forest, State Government that the area does not falls under any authorized Elephants and Tiger corridors.
study on flora and fauna	
1.	The Project Proponent needs to submit the detailed scientific study on flora and fauna and also highlight the endangered species. The Project Proponent needs to verify the list as per the latest Wildlife Protection Amendment Act, 2022.
court cases	
1.	PP to submit the status of any pending court cases or disposed of cases pending before different adjudicating authority related to the present project/ mine site.
wildlife conservation plan	
1.	PP shall prepare a wildlife conservation plan in consultation with the local forest department focusing on the marine eco-system present at the mine site.
demarcation of the boundary	
1.	The Project Proponent needs to submit the proof of the demarcation of the boundary pillars fixed on the ground.
plastic waste management	
1.	PP shall submit the action plan to adhere the Plastic Waste Management Rules 2016 and to adhere Ministry's OM dated 18/07/2022.
no objection certificate	
1.	The ToR shall be granted upon the submission of the No Objection Certificate from Ministry of Defence.
action plan	
1.	The Project Proponent needs to submit the action plan for year wise backfilling.

3.5. Agenda Item No 5:

3.5.1. Details of the proposal

Regularization of existing EC under the provision of EIA Notification 2006 and in compliance of MoEF&CC Notification S.O.1530(E) dated 6th April 2018 for Mothala Balachod Bauxite Mining Project in the Mine Lease Area – 280.7686 Ha with the Production Capacity 42000 TPA of M/s Gujarat Mineral Development Corporation Limited located at Village –Balachod, Mothala, Khandai, Tehsil Abdasa, District - Kutch, Gujarat by GUJARAT MINERAL DEVELOPMENT CORPORATION LIMITED located at KACHCHH,GUJARAT			
Proposal For		Fresh EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/GJ/MIN/448536/2023	IA-J-11015/150/2018-IA-II(NCM)	10/01/2024	Mining of minerals (1(a))

3.5.2. Project Salient Features

The instant proposal is for Environmental Clearance under the provision of MoEF&CC Notification S.O. 1530 (E) dated 6th April 2018 for Mothala Balachod Bauxite Mining Project with the Production Capacity of 42,000 TPA in the mine lease area of 280.7686 Ha by M/s Gujarat Mineral Development Corporation Limited, located at Villages Balachod, Mothala, Khandai, Tehsil Abdasa, District Kutch, Gujarat.

2. The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under: -

- i. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals and falls under Category “A” as the mining lease area is greater than 250ha and appraised at the Central level.
- ii. The mine lease area is located between Latitude: 23°13'17"N - 23°15' 58” N and Longitude: 69°07'24"E - 69°10' 41"E. The mine lease area falls under the Survey of India Toposheet No: 41 E/4 and falls in Seismic Zone – V as per IS-1893 (Part-1)-2002.
- iii. Details of previous Environmental Clearance (EC): -
 - a. The Project Proponent obtained Environmental Clearance (EC) vide Lr no. J-11015/131/2005-IA II(M) dated 08.12.2005 for production capacity of 42,000 TPA of Bauxite over an area of 299.40 ha under the EIA Notification, 1994.
- iv. Details of Terms of Reference (ToR):
 - a. The Project Proponent obtained Terms of Reference (ToR) vide Lr.No: IA-J-11015/150/2018-IA-II(NCM) dated 18.04.2022 for Mothala Balachod Bauxite Mining Project for the Production Capacity of 42,000 TPA of Bauxite in the mine lease area of 280.7686 Ha under MoEF&CC Notification S.O.1530(E) dated 6th April 2018.
- v. Details of Mine Lease:
 - a. The Project Proponent submitted that initially mining lease was granted by the Industries and Mines Dept., Govt. of Gujarat vide order no: MCR/1591/G58/703/CHH dated 12.01.2006 for mineral Bauxite over an area of 299.40.05 ha for the period of 30 years.
 - b. Then, the Industries and Mines Dept., Govt. of Gujarat vide order no: MCR/1591/G-58/703/CHH dated 02.02.2007 revised and the granted the mine lease area for 280.76.86 ha. The lease agreement was thereof executed on 07.03.2007.
 - c. Further, the Industries and Mines Dept., Govt. of Gujarat vide order no: MCR/1591/G-58/703/CHH have extended the lease period up to 06.03.2057.
- vi. Details of Land Use/Land Cover of the Mine Lease Area:

Private land	-
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Government land	280.7686 Ha	
Total Mining lease area (MLA)	280.7686 Ha (Government Waste Land)	
Review and updation of Mining Plan along with Progressive Mine Closure Plan approved by Indian Bureau of Mines (IBM) Gandhinagar.	Letter No.	Approved from IBM Gandhinagar vide letter no. 684(4)(1)(MP-345(117)/2021-22 GNR/1339
	Date	13/08/2021
	Validity	31/03/2026.
Mining Parameters	Quantitative Description	
Bench Height	3 m	
Bench Width	3 m	
Method of Mining	Semi Mechanized Open Cast Mining	
Individual bench slope	70 ⁰ from the vertical	
Overall pit slope	37 ⁰	
Drilling/Blasting		
RoM output size	9600 MT	
Life of mine	49 Years	
Transportation details	Dumpers	
Dumpers capacity	17tonnes	
Mineable Reserves	20,62,589 Tonnes (as on 01.04.2021)	
Individual bench slope	70° from the vertical	
Ultimate depth of mining	5 mbgl	
Groundwater level	15-20m bgl	
Groundwater intersection	No groundwater intersection	
Overall pit slope	37°	
Details of existing and proposed	There is no proposal to install crusher within the mining lease area.	

Mineral beneficiation	There will be no mineral beneficiation activities within the mine lease area.
Transportation details	The graded bauxite ore is being transported from Mothala - Balachod Bauxite Mine to Gujarat Credo Mineral Industries Ltd and allied industries through thereby SH-49
Dumpers capacity	17tonnes
Generation of Topsoil/OB & its Management during plan period & conceptual period	There will be no generation of Overburden & Mineral rejects during the plan period (2021-22 to 2025- 26).
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	Topsoil generation in current plan period (2021-22 to 2025-26) is 16173 cum and shall be disposed of by means of stacking or by backfilling in mine voids & use in development of green belt respectively.

viii. Nearest village / town/ highway/railway station / water bodies

Particulars	Particular's Name	Distance & Directions
Nearest Village/Town	Balachod Nani	0.5 km in East direction
Nearest Highway	SH 49	6.47 Km/ S
Railway Station	Bhuj	53.90 Km/ E
Nearest Air Port	Bhuj	51.88 Km/ E
Nearest Reserved/Protected forests	1. Open Mixed Jungle 2. Wamoti Reserve Forest 3. Mothala Reserve Forest 4. Naranpar Reserve Forest	Adjacent/W 5.17 Km, /N 7.15 Km/ SSW 6.34 Km/E

ix. Water requirement

Total water requirement	32 KLD	Fresh water	32 KLD
		Treated water	-
Source	Existing water supplier through mobile tankers.		
Permission	NA		
Additional information (if any)	No additional water requirement envisaged in this project. Moreover, rain water accumulated in pits, if any, is being used for dust suppression and this will be continued as such in future also.		

x. Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area /Environmental Sensitive	Yes/No	Details of Certificate /letter/Remarks

Activity Zone		
Forest Land	No	The Project Proponent submitted the letter from the Forests & Environment Department, Government of Gujarat vide letter dated 27.12.2023 stating that the site is adjoining to forest area. Applicant is required to do mining by keeping 50-meter distance from forest area as per Chief Conservator of Forest, Wildlife, Gujarat State, Gandhinagar's letter WPS/32/B/ 117 55- 62/99-2000 Date:30/12/1999.
National Park	No	
Wildlife Sanctuary	No	
Eco-Sensitive Zone (ESZ)	No	Project Proponent reported that there is No National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve, within the 10 km radius study area. The nearest wildlife sanctuary is Great Indian Bustard Sanctuary is about 44.50 km in West direction from project site.
Coastal Regulation Zone (CRZ)	No	Not Applicable
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	Yes	Project Proponent submitted that the Deputy Conservator of Forest, Kutch West Division vide Lr.No: B/LAND/T-11/435 5/2023-24 dated 13.12.2023 mentioned that following Schedule - I species are observed in a study area of 10 km radius such as Peafowl (<i>Pavo cristatus</i>), Chinkara (<i>Gazella bennettii</i>), Indian Monitor Lizard (<i>Varanus benghalensis</i>), Leopard (<i>Panthera pardus</i>), Striped Hyena (<i>Hyaena hyaena</i>), Jungle Cat (<i>Felis chaus</i>), Honey Badger (<i>Mellivora capensis</i>) and India crocodile (<i>Crocodylus palustris</i>).
Wildlife Conservation Plan	Yes	Site Specific Biodiversity Conservation Plan submitted to the PCCF & Chief Wildlife Warden, Gandhinagar vide Letter No. GMDC/ENV/140/2023-24 dated 18.11.2023 for approval.

xi. Greenbelt/plantation Details

Proposed area for green belt/plantation	Existing: 3.94 Ha (4,310 no. of saplings) Proposed 2.5Ha (3,000 no. of saplings during Plan Period) Total: 6.44Ha during end of plan period Total Green Belt at the end of life of mine will be 10.00Ha.
Budget for green plant & plantation till the end of life of mine.	4.0 Lakhs
Budget for nursery	-

xii. Baseline detail

Baseline Data (Air / Water / Noise / Soil / Ground water table/ others)	
Period of baseline data collection	Baseline Monitoring studies is being already carried out during Winter Season: Period (1 st Dec. 2019 to 29 th Feb. 2020) and Additional one month baseline monitoring 1 st May 2022 to 31 st May 2022) - Summer Season

Season (Summer / Pre-monsoon / Post-monsoon / Winter)	n).
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Details of Baseline data (1st Dec. 2019 to 29th Feb. 2020-Winter Season) and revalidation of baseline data (1st May, 2022 to 31st May, 2022- Summer Season) as mentioned below:

S r. N o.	Location			PM ₁₀	PM _{2.5}	SO ₂	NO ₂	CO	Ozone	NH ₃
				g/m ³	g/m ³	g/m ³	g/m ³	mg/m ³	µg/m ³	µg/m ³
1	Project Site, Block-I	Dec, 2019 – Feb, 2020	Min-Max	58.0 – 75.5	18.5-26.3	11.7-17.6	17.9-25.3	0.351 – 0.475	8.3 – 12.2	7.6 – 11.5
			98 th h	74.9	26.0	17.4	24.8	0.469	12.0	11.3
		May, 2022	Min-Max	58.5-72.4	21.4-27.4	10.1-15.3	14.9-19.2	0.323-0.401	7.9-10.4	6.7-9.2
			98 th h	67.5	27.2	15.2	19.1	0.399	10.3	9.1
2	Project Site, Block-II	Dec, 2019 – Feb, 2020	Min-Max	61.9-78.2	19.7-34.0	10.2-16.1	16.2-23.0	0.241-0.520	6.7-13.0	7.7-14.2
			98 th h	77.0	33.4	15.7	23.0	0.514	12.9	13.8
		May, 2022	Min-Max	58.5-72.4	22.3-31.4	9.5-13.4	14.2-19.7	0.264-0.348	7.4-9.5	6.6-9.6
			98 th h	71.6	31	13.3	19.5	0.346	9.5	9.6
3	Khanpar	Dec, 2019 – Feb, 2020	Min-Max	49.4-68.9	16.8-22.9	9.4-15.1	8.9-13.9	0.242-0.308	7.5-12.4	5.9-8.5
			98 th h	67.8	22.8	14.8	13.6	0.306	12.0	8.4

		May, 2022	Min-Max	50.6-65.9	16.4-23.6	7.7-10.7	12.2-16.9	0.237-0.301	6.1-8.8	6.1-7.8
			98 th	65.9	23.6	10.7	16.9	0.301	8.8	7.8
			98 th	65.0	23.4	10.6	16.8	0.300	8.8	7.8
4	BalachodNani	Dec, 2019 – Feb, 2020	Min-Max	57.7-76.6	19.3-26.1	6.1-9.7	16.6-23.4	0.178-0.269	7.5-14.1	4.9-9.2
			98 th	75.5	25.9	9.4	23.0	0.263	14.0	9.0
		May, 2022	Min-Max	48.1-71.1	18.1-26.3	6.8-9.7	15.4-20.6	0.254-0.312	7.6-12.1	7.3-9.6
			98 th	70.7	26.2	9.6	20.4	0.309	12	9.6
5	Mothala	Dec, 2019 – Feb, 2020	Min-Max	61.2-85.1	17.3-26.6	6.6-9.5	11.4-17.2	0.246-0.371	8.8-15.8	6.1-11.6
			98 th	82.2	25.7	9.2	17.0	0.358	15.6	11.2
		May, 2022	Min-Max	63.8-72.4	22.8-33.4	11.5-17.1	16.4-21.6	0.274-0.572	9.6-13.4	7.9-11.5
			98 th	72.2	33.2	17.0	21.5	0.563	13.2	11.5
6	Bhawonipur	Dec, 2019 – Feb, 2020	Min-Max	53.3-67.5	16.7-23.6	7.3-10.9	12.6-17.5	0.240-0.313	8.1-12.1	4.7-7.8
			98 th	67.0	23.3	10.6	17.0	0.308	11.9	7.4
		May, 2022	Min-M	51.7-67.7	20.3-26.2	8.3-11.2	12.4-15.3	0.213-0.321	6.9-9.5	6.4-8.5

			ax							
			98 th	67.4	26.1	11.1	15.2	0.316	9.5	8.4
7	WamotiMoti	Dec, 2019 – Feb, 2020	Min-Max	59.0-80.4	20.3-28.3	9.0-13.1	10.8-17.2	0.260-0.336	6.7-9.7	5.4-8.5
			98 th	79.3	27.7	13.1	16.8	0.330	9.6	8.5
		May, 2022	Min-Max	58.7-71.9	23.6-30.2	10.8-16.1	13.5-20.8	0.324-0.373	8.4-12.8	8.2-10.3
			98 th	71.7	29.9	15.9	20.5	0.371	12.7	10.2
8	Bhimpar	Dec, 2019 – Feb, 2020	Min-Max	41.8-66.3	14.8-22.4	9.5-14.2	13.9-19.6	0.299-0.359	7.5-11.4	6.4-10.3
			98 th	65.6	22.4	14.2	19.3	0.353	11.3	9.9
		May, 2022	Min-Max	52.3-66.1	18.7-24.5	9.3-12.2	13.5-17.4	0.238-0.311	6.8-9.2	5.4-7.7
			98 th	65.4	24.4	12.1	17.4	0.311	9.1	7.7
		CPCB Standards	100 (24hr)	60 (24hr)	80 (24hr)	80 (24hr)	2 (8hr)	100 (8hr)	400 (24hr)	

B. Noise Levels: Details of Ambient Noise Levels for the Period from 1st December 2019 to 29th February 2020) are as mentioned below:

Sr. No.	Monitoring Locations	Equivalent Noise Level	
		LeqDay	LeqNight
Residential Area			
•	Balachod Nani	52.4	42.9

•	Mothala	54.5	37.8
CPCB Standards dB(A)		55.0	45.0
Commercial Area			
•	Khanpar	62.5	49.5
•	Nr. SumrasarTalav	55.2	40.6
•	Bhimpar	58.9	47.9
CPCB Standards dB(A)		65.0	55.0
Silence Zone			
•	Balachod Moti	47.1	36.4
CPCB Standards dB(A)		50.0	40.0
Industrial Area			
•	Project Site (Block- I)	68.5	42.0
•	Project Site (Block- II)	66.8	43.1
CPCB Standards dB(A)		75.0	70.0
(Period – 1st May 2022 to 31st May 2022)			
Sr. No.	Monitoring Locations	Equivalent Noise Level	
		LeqDay	LeqNight
Residential Area			
•	Balachod Nani	51.4	40.8
•	Mothala	53.3	42.5
CPCB Standards dB(A)		55.0	45.0
Commercial Area			

•	Khanpar	63.1	52.4
•	Nr. Sumrasar Talav	57.5	41.7
•	Bhimpar	57.2	46.5
CPCB Standards dB(A)		65.0	55.0
Silence Zone			
•	Balachod Moti	48.3	37.1
CPCB Standards dB(A)		50.0	40.0
Industrial Area			
•	Project Site (Block- I)	64.2	41.4
•	Project Site (Block- II)	63.7	42.1
CPCB Standards dB(A)		75.0	70.0

C. Water Environment: Summary of Surface Water Quality recorded for period from 1st December 2019 to 29th February 2020 and for period from 1st May, 2022 to 31st May, 2022 are as follows:

Parameters	Unit	Baseline Monitoring Period (1 st Dec, 2019 – 29 th Feb, 2020)	Additional 1 Month Baseline Monitoring (1 st May, 2022 – 31 st May, 2022)	IS 2296:1992; Class C (Drinking water source after conventional treatment and disinfection)
		Range	Range	
pH	-	6.57 – 7.73	6.95 – 7.92	No relaxation (6.0 to 9.0)
EC	µ/cm	716 – 1879.70	936.25 – 2130.66	-
TDS	mg/l	442 – 1100	535 – 1246	1500
Total hardness	mg/l	123.22 – 197.96	182.46 – 266.21	-
DO	mg/l	6.0 – 6.3	5.2 – 5.9	4.0
BOD	mg/l	3.6 – 7.1	4.81 – 8.25	3.0
COD	mg/l	11.7 – 22.4	17.35 – 42.51	-

Chloride	mg/l	63.59 – 148.61	73.13 – 170.90	600
Sulphate	mg/l	7.68 – 48.61	11.14 – 70.48	400
Nitrate	mg/l	4.83 – 19.23	6.57 – 15.27	50
Fluoride	mg/l	0.28 – 0.73	0.35 – 0.91	1.5
Iron	mg/l	0.01– 0.28	0.05 – 0.21	0.5
Cadmium	mg/l	BDL (DL - 0.001)	BDL (DL - 0.001)	0.01
Arsenic	mg/l	BDL (DL - 0.01)	BDL (DL - 0.01)	0.2
Zinc	mg/l	BDL (DL - 0.01)	BDL (DL - 0.01)	15
Lead	mg/l	BDL (DL - 0.001)	BDL (DL - 0.001)	0.1
Chromium	mg/l	BDL (DL - 0.03)	BDL (DL - 0.03)	0.05
Total Coliform	MPN/100 ml	Present	76 – 240	5,000
Parameters	Unit	Baseline Monitoring Period (1 st Dec, 2019 – 29 th Feb, 2020)	Additional 1 Month Baseline Monitoring (1 st May, 2022 – 31 st May, 2022)	Permissible Limit
		Range	Range	
pH	-	7.11 - 7.88	7.29 – 8.22	No relaxation (6.5 to 8.5)
EC	µ/cm	1380 – 3300	1371.04 – 3036.25	-
TDS	mg/l	760 – 1818	897 – 1735	2000
Total hardness	mg/l	366.30 – 777.0	446.13 – 772.46	600
Chloride	mg/l	136.97 – 557.69	160.25 – 492.50	1000
Sulphate	mg/l	18.14 – 104.95	27.57 – 148.15	400
Nitrate	mg/l	BDL (DL -2)– 18.33	3.65 – 21.48	No relaxation (45)
Fluoride	mg/l	0.31 – 1.66	0.36 – 1.91	1.5
Iron	mg/l	BDL (DL - 0.01)– 0.03	0.14 – 0.31	No relaxation (1.0)

Parameters	Unit	Baseline Monitoring Period (1 st Dec, 2019 – 29 th Feb, 2020)	Additional 1 Month Baseline Monitoring (1 st May, 2022 – 31 st May, 2022)	Permissible Limit
		Range	Range	
Cadmium	mg/l	BDL (DL - 0.001)	BDL (DL - 0.001)	No relaxation (0.003)
Arsenic	mg/l	BDL (DL - 0.01)	BDL (DL - 0.01)	No relaxation (0.01)
Zinc	mg/l	BDL (DL - 0.01)	0.11 – 0.18	15
Lead	mg/l	BDL (DL - 0.001)	BDL (DL - 0.001)	No relaxation (0.01)
Chromium	mg/l	BDL (DL - 0.03)	BDL (DL - 0.03)	No relaxation (0.05)
Physico-Chemical Characteristics				
Parameters	Unit	Baseline Period from 1 st Dec, 2019 to 29 th Feb, 2020	Additional Study Period From 1 st May, 2022 to 31 st May, 2022	
pH	-	6.9 – 8.4	7.28 – 8.72	
EC	µ/cm	140 – 300	175.59 – 370.96	
Infiltration Rate	mm/hr	17.11 – 20.15	7.86 – 26.48	
Bulk Density	g/cm ³	1.521 – 1.788	1.474 – 1.725	
Water Holding Capacity	%	19.17 – 25.42	29.14 – 38.64	
Organic Carbon	%	0.25 – 0.68	0.28 – 0.76	
Macro Nutrients				
Nitrogen	Kg/hect	77.90 – 120.46	107.5 – 164.32	
Phosphorus	Kg/hect	4.36 – 25.76	28.12 – 45.43	
Potassium	Kg/hect	370.40 – 680.10	240.76 – 351.20	
Micro Nutrients				

Iron	mg/kg	1.300 – 1.320	1.454 – 2.508
Manganese	mg/kg	2.32– 2.35	4.710 – 6.589
Zinc	mg/kg	0.18 – 0.19	0.147 – 0.216
Copper	mg/kg	Absent – 0.232	0.194 – 0.322
Nickel	mg/kg	Absent	Absent
Cadmium	mg/kg	Absent	Absent
Lead	mg/kg	5.05 – 5.11	1.112 – 2.329

xiii. Details of Public Hearing (PH): The Project Proponent has published the public notice for inviting comments upon present mining operations and their redressal as it is the case of revalidation of existing EC as follows:

Advertisement for PH with date	Accordingly, an Advertisement/Public Notice was published in English newspaper in “The Times of India” on 03/03/2023 and in Gujarat in “Kutch Mitra” on 03/03/2023 for information of the stakeholders to invite comments about present mining operations and their redressal on the above project.
Date of PH	
Venue	
Chaired by	
Main issues raised during PH	
Budget proposed for addressing issues raised during PH	
Additional information (if any)	
Court Case	The Project Proponent submitted that there is no litigation pending against the project and/or land in which the project is proposed to be set up.
R & R details	The Project Proponent reported that no private land within the mine lease will be acquired for mining or any other project related activity and hence no rehabilitation and re settlement is involved under the present proposal.
Affidavit as per Ministry’s OM dated 30.05.2018	The Project Proponent submitted the Affidavit dated 14.03.2019 stating that the company undertakes by affidavit that it will comply with all the statutory requirement & judgment of Hon’ble Supreme Court dated 2nd August 2017 in writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ors before grant of ToR/EC.
Undertaking of Project Proponent dated 16.10.2023	The Project Proponent submitted an undertaking to the effect that ToR issued by Ministry vide letter dated 18.04.2022 for Mothala Balachod Bauxite mine of M/s Gujarat Mineral Development Corporation Ltd has been complied with and the data submitted is factually correct. The Project Proponent also

	mentioned that they take the ownership of the content of this EIA report.
Undertaking of EIA Consultant dated 18.12.2023	The EIA Consultant submitted a declaration stating that no unethical practice like 'copy and paste' and used external data/text without proper acknowledgement, while preparing this EIA report. The consultant organization shall be fully accountable for any misleading information mentioned in this statement.

xvii. Details of CTE/CTO, Certified Compliance Report, Certified Production Details from the inception of the mine:

Particulars	Letter no. and date																																																																								
Consent to Establish/ Consent to Operate																																																																									
Certified EC compliance report	<ul style="list-style-type: none"> • Certified EC Compliance of EC dated 08.12.2005 obtained from RO, MoEFCC, Gandhinagar on dated. 13th Nov. 2023. Site visit was conducted by RO on 09.05.2023. Project Proponent submitted the action taken report to the RO, MoEFCC, Gandhinagar on 28.11.2023. • The action plan for green belt development along with budgetary expenditure and timeline was submitted to the IRO, MOEFCC – Gandhinagar in line with observation made in EC compliance. • The closure report from IRO, MoEFCC – Gandhinagar received on 27.02.2024 																																																																								
Certified past production	<p>Year-wise certified past production details from Geologist, Geology and Mining Dept., Govt. of Gujarat, District – Kutch are given below:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Plant grade & non plant grade production (mt.)</th> <th>Dust & sub grade (mt.)</th> <th>Total (mt.)</th> </tr> </thead> <tbody> <tr><td>2006-07</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>2007-08</td><td>2323</td><td>0</td><td>2323</td></tr> <tr><td>2008-09</td><td>41933</td><td>5000</td><td>46933</td></tr> <tr><td>2009-10</td><td>12846</td><td>1285</td><td>14131</td></tr> <tr><td>2010-11</td><td>36928</td><td>5007</td><td>41935</td></tr> <tr><td>2011-12</td><td>28184</td><td>2792</td><td>30976</td></tr> <tr><td>2012-13</td><td>39096</td><td>3802</td><td>42898</td></tr> <tr><td>2013-14</td><td>32047</td><td>3205</td><td>35252</td></tr> <tr><td>2014-15</td><td>2075</td><td>264</td><td>2339</td></tr> <tr><td>2015-16</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>2016-17</td><td>36422</td><td>3652</td><td>40074</td></tr> <tr><td>2017-18</td><td>10045</td><td>200</td><td>10245</td></tr> <tr><td>2018-19</td><td>28796</td><td>1269</td><td>30065</td></tr> <tr><td>2019-20</td><td>19205.196</td><td>791.25</td><td>19996.45</td></tr> <tr><td>2020-21</td><td>11896.804</td><td>456.20</td><td>12353.01</td></tr> <tr><td>2021-22</td><td>23097.388</td><td></td><td>23097.388</td></tr> <tr><td>2022-23</td><td>2080.268</td><td></td><td>2080.268</td></tr> </tbody> </table>	Year	Plant grade & non plant grade production (mt.)	Dust & sub grade (mt.)	Total (mt.)	2006-07	0	0	0	2007-08	2323	0	2323	2008-09	41933	5000	46933	2009-10	12846	1285	14131	2010-11	36928	5007	41935	2011-12	28184	2792	30976	2012-13	39096	3802	42898	2013-14	32047	3205	35252	2014-15	2075	264	2339	2015-16	0	0	0	2016-17	36422	3652	40074	2017-18	10045	200	10245	2018-19	28796	1269	30065	2019-20	19205.196	791.25	19996.45	2020-21	11896.804	456.20	12353.01	2021-22	23097.388		23097.388	2022-23	2080.268		2080.268
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xviii. ADS details:

The Proposal was earlier considered in 26th EAC (Non-Coal Mining) meeting held during 31st January & 1st February, 2024 wherein the Committee has considered and deferred the proposal and requested to submit the additional information. The PP has submitted the reply on 06.04.2024 are as follows:

Sl. No.	ADS Point	Response by Project Proponent														
1.	The Project Proponent needs to justify that why amendment in EC not obtained for change in reduction of mine lease area from 299.40 ha to 280.76.86 ha.	<p># Due to oversight it has been missed to seek amendment in this regard. However, lease neither has been increased nor any mining activity carried out beyond the area of lease dead.</p> <p># approved Mine Plan is for 280.7686 only and the same was share to EAC (Non-Coal) during ToR Application as well as EC Appraisal Application and subsequent presentations.</p> <p># ToR Application submitted for the Regularization of existing EC, under the purview of EIA Notification 2006 in the year 2018, was for 280.7686 Ha only and after detailed discussion, Honourable EAC (Non-Coal) was granted the ToR vide F. No-IA-J-11015/150/2018-IA-11(M) 18 April 2022 for 280.7686 ha only.</p> <p># Certified Compliance Report (CCR) from the Regional Office of MOEFCC has been issued twice vide Dated 26/03/2019 and dated 13/11/2023 and during every site visit, area of mine lease was submitted as 280.7686 ha only.</p> <p>Therefore, looking to the above, Honourable EAC (Non-Coal) is kindly requested to consider EC Appraisal Application for the Regularization of existing EC for an area 280.7686 ha only.</p>														
2.	The Project Proponent needs to submit the current practice of method of mining in line with the approved mining plan. Accordingly, the Project Proponent needs to devise the site specific mitigation measures for environment attributes.	<p>Mining method is submitted hereunder in line with existing approved mining plan for the current period of 2021-22 to 2025-26.</p> <p>The opencast method of mining shall be continued with rock breaker and excavator-tipper combination. The Broad parameters of mining operation will be as below:</p> <table border="1"> <tbody> <tr> <td>Number of working days</td> <td>300 days/year</td> </tr> <tr> <td>Working shift/day</td> <td>1 day shift</td> </tr> <tr> <td>Working benches</td> <td>3 no.</td> </tr> <tr> <td>Bench Height</td> <td>3.0m (max.)</td> </tr> <tr> <td>Width</td> <td>For running bench 10m For ultimate bench 2.75m max.</td> </tr> <tr> <td>Bench slope</td> <td>>55°</td> </tr> <tr> <td>Ultimate Pit slope</td> <td>45°</td> </tr> </tbody> </table>	Number of working days	300 days/year	Working shift/day	1 day shift	Working benches	3 no.	Bench Height	3.0m (max.)	Width	For running bench 10m For ultimate bench 2.75m max.	Bench slope	>55°	Ultimate Pit slope	45°
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Bench slope	>55°															
Ultimate Pit slope	45°															

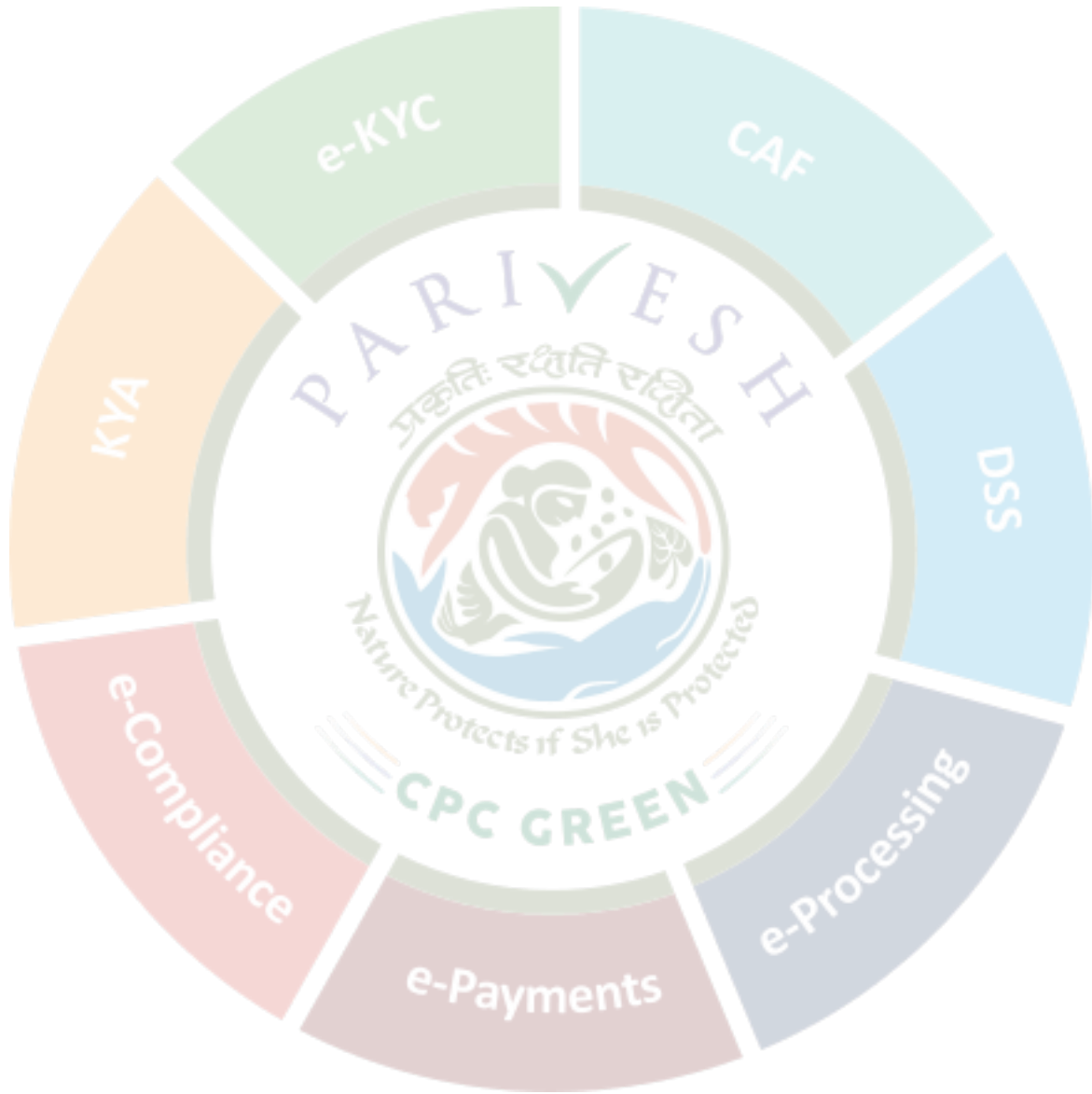
Sl. No.	ADS Point	Response by Project Proponent			
		<p>Drilling and Blasting shall be practiced very rarely as and when hard strata will be encountered, however since the year 2014, no blasting has been done. Detail of Blasting Pattern, as per the approved mine plan has been submitted.</p> <p>The site specific mitigation measures of environment attributes are provided in EIA report.</p>			
3.	The Project Proponent needs to specifically define the area developed under greenbelt, along roads and in non-mineralized area, no. of saplings planted under each area and their survival rate and budget spent towards the same with supporting documents.	<p>The detailed plantation under greenbelt development along roads and in non-mineralized area, no. of saplings planted under each area and their survival rate and budget spent towards the same with supporting documents has been submitted. Further, GMDC will make all necessary efforts to develop green belt more efficiently with good survival rate.</p>			
4.	The Project Proponent needs to submit the closure report w.r.t. greenbelt issued by the Regional Office, MoEF&CC.	<p>Project proponent had submitted the action plan for green belt development along with budgetary expenditure and timeline to the IRO, MOEFCC – Gandhinagar.</p> <p>The closure report from IRO, MoEFCC – Gandhinagar received on 27th February 2024 and has been submitted.</p>			
5.	The Project Proponent needs to submit the more precise, actionable and monitorable plan for activities proposed under community development along with timeline.	<p>The precise, actionable and monitorable plan for the activities proposed under community development in year 2024-25 has been submitted.</p>			
6.	The Project Proponent needs to submit the letter from the State Forest Dept. regarding the location of National Park, Wildlife Sanctuary, ESZ/ESA, Tiger/Elephant Reserves, Corridors etc., within 10 km radius of the study area.	<p>The letter from the office of Deputy Conservator of Forests (DCF), Kutch West Forest Dept. (State Forest Dept. – Bhuj received on 05/03/2024 vide letter no. C/JMN/Te.11/530/23-24. It is informed that there is no National Park, Wildlife Sanctuary, ESZ/ESA, Tiger/Elephant Reserves, Corridors etc., within 10 km radius of the Mothala Balachod Bauxite Mining Project. However, the nearest Eco Sensitive Zone (ESZ) of Kutch Bustard Sanctuary is at 8.5 Kms from the project site. The letter has been submitted.</p>			
Sr. No.	Description	Existing Recurring Cost Per Annum (Rs. In Lacs)	Proposed Cost (Rs. In Lacs)		Justification for Additional Cost
			Capital	Recurring	
1	Air pollution Control	3.00	10.00	0.50	Additional installation of water sprinklers

Sr. No.	Description	Existing Recurring Cost Per Annum (Rs. In Lacs)	Proposed Cost (Rs. In Lacs)		Justification for Additional Cost
			Capital	Recurring	
2	Water Pollution Control	0.50	5.00	1.00	Garland drain, Retaining wall & Siltation tank
3	Environment Monitoring and Management	1.00	30.00 (considering online AAQMS)	10.00	Installation of weather station; Noise meter & 1 pair of RDS & FPS & its annual maintenance and regular Environmental Monitoring
4	Wired Fencing	1.50	-	-	NA
5	Noise Pollution Control	0.50	-	-	
6	Occupational Health	1.00	2.00	0.70	Implementation of Covid 19 as per the directive of Govt. of India for Employees
7	Green Belt	4.00	6.00	4.00	Plantation
8	Drinking Water	1.50	0.50	0.20	Additional water filtration system.
	Total	13.00	53.50	16.40	
	Grand Total	-	53.50	29.40	Total Recurring cost represent existing and proposed
9	Cost For CSR Activity: Project Proponent will spend amount of 2% of their gross income for CSR (Corporate Social Responsibilities).				
Particulars			(Rs. In Lakhs)		
Capital Cost for Environment Protection			Capital Cost 53.50 Lakhs Recurring Cost 29.40 Lakhs		
Budget for addressing the Public Hearing issues			The precise, actionable and monitorable plan for the activities proposed under community development in year 2024-25 is of Rs. 1845000		
Total Cost for EMP			Rs. 71.95 Lakhs (Capital cost of Env. Protection and Need based Socio-economic survey)		
Recurring Cost for EMP			29.40 lakhs		

Project Cost	60 Lakhs
Employment	34 nos.

3.5.3. Deliberations by the committee in previous meetings

Date of EAC 1 :31/01/2024



Deliberations of EAC 1 :

The Project Proponent/EIA Consultant informed the EAC that the instant proposal is for grant of Environmental Clearance under MoEF&CC Notification S.O.1530(E) dated 6th April 2018. Initially, the Environment Clearance obtained on 08.12.2005 for production capacity of 42,000 TPA of Bauxite over an area of 299.40 ha under the EIA Notification, 1994. The total mine lease area is 280.7686 ha and comprises of two blocks namely Block-1 and Block-2. The mine lease area is an arid land. The EAC noted that blocks are not contiguous. The EAC observed that after grant of EC dated 08.12.2005, the mine lease was revised and granted over an area of 280.76.86 ha. The EAC also observed that the Project Proponent did not obtained the amendment in EC for change in reduction of mine lease area from 299.40 ha to 280.76.86 ha. The EAC asked about the distance of the coastal area. The Project Proponent informed the EAC that the coastal area is more than 65 km from the mine lease area. The EAC on viewing the KML file noted that a pond is located in the vicinity of the mine lease area. The Project Proponent informed the EAC that water in the pond is rainwater and pond is located in a higher elevated area. Then, the Project Proponent explained the point wise compliance of Terms of Reference.

The EAC asked the Project Proponent that why the production is very less. The Project Proponent informed the EAC that the production is very less because of the less demand. The Project Proponent informed the EAC that public consultation was carried out as per Ministry's OM dated 16.02.2021. An Advertisement/Public Notice was published in English newspaper in "The Times of India" on 03/03/2023 and in Gujarat in "Kutch Mitra" on 03/03/2023 for information of the stakeholders to invite comments about present mining operations and their redressal on the instant project. Then, the public consultation proceedings issued by the Gujarat Pollution Control Board (GPCB) vide letter dated 12.04.2023 stating that with the public notice published for a period of 30 days, no comments or representations were received either by written, oral, personnel or through any other media by this office within the stipulated period/time for the projects as mentioned in the advertisement. A budget of Rs 39.64 Lakhs has been earmarked w.r.t need based socio-economic survey. The EAC noted that the activities proposed under community development is very generic. The EAC opined that the proposed activities should be more precise, actionable and in monitorable manner. The Project Proponent informed the EAC that the Scientific study for installation of Continuous Ambient Air Quality Monitoring Station (CAAQMS) submitted to Central Pollution Control Board (CPCB) on 21.09.2023 and is under process. Ore breaking is done by rock breaker. The EAC noted that under mitigation measures for noise environment, the Project Proponent informed that Drilling is being carried out with sharp drill bits which helps in reducing noise. Further, the Project Proponent informed the EAC that from the year 2014, no blasting is carried out and only at exceptional case where hard strata found blasting activity is involved. The EAC asked the Project Proponent to submit the current practice of method of mining in line with the approved mining plan. Accordingly, the Project Proponent needs to devise the site specific mitigation measures for environment attributes.

The Project Proponent informed the EAC that as per EC dated 08.12.2005, it was directed to develop greenbelt of 10 ha around ML area, along roads and in non-mineralized area by planting suitable native species. The density should of trees should be around 1000 plants per ha. As on date, an area of 3.94 ha (4,310 no.s) developed around the ML area, roads, periphery of voids etc., The EAC was of the view that the Project Proponent needs to specifically define the area developed under greenbelt, along roads and in non-mineralized area, no. of saplings planted under each area and their survival rate and budget spent towards the same with supporting documents. The EAC noted that the Project Proponent has not submitted the closure report w.r.t. greenbelt issued by the Regional Office, MoEF&CC. The EAC also noted that the Project Proponent has not submitted the letter from the State Forest Dept. regarding the location of National Park, Wildlife Sanctuary, ESZ/ESA, etc., within 10 km radius of the study area. The EAC advised the Project Proponent/EIA Consultant that the technical presentation to be prepared in a such a way that the all the information and data related to the project shall be readily available. Based on the discussions held, the EAC **deferred** the proposal for want of following additional information: -

1. The Project Proponent needs to justify that why amendment in EC not obtained for change in reduction of mine lease area from 299.40 ha to 280.76.86 ha.
2. The Project Proponent needs to submit the current practice of method of mining in line with the approved mining plan. Accordingly, the Project Proponent needs to devise the site specific mitigation measures for environment attributes.
3. The Project Proponent needs to specifically define the area developed under greenbelt, along roads and in non-mineralized area, no. of saplings planted under each area and their survival rate and budget spent towards the same with supporting documents.
4. The Project Proponent needs to submit the closure report w.r.t. greenbelt issued by the Regional Office, MoEF&CC.
5. The Project Proponent needs to submit the more precise, actionable and monitorable plan for activities proposed under community development along with timeline.
6. The Project Proponent needs to submit the letter from the State Forest Dept. regarding the location of National Park,

Wildlife Sanctuary, ESZ/ESA, Tiger/Elephant Reserves, Corridors etc., within 10 km radius of the study area.

3.5.4. Deliberations by the EAC in current meetings

The instant proposal is for Environmental Clearance under MoEF&CC Notification S.O.1530 (E) dated 6th April 2018. The Project Proponent was granted Terms of Reference (ToR) on 18.04.2022. The PP presented the reply of the ADS points that were raised vide minutes of the 26th EAC meeting held during 31st January 2024- 1st February 2024 and stated that earlier LoI was issued for mineral bauxite over an area of 299.4005 vide EC dated 08.12.2005. However, as per corrigendum vide letter dated 02.02.2007 issued by Industries & Mines Department, Govt of Gujarat, the mining lease area was amended from 299.40 to 280.7686 ha at the time of lease deed. The EAC also enquired about the current practice of mining, the PP replied that they are undertaking opencast method of mining with rock breaker and excavator-tipper combination. PP also informed that drilling and blasting shall be practiced very rarely as and when hard strata will be encountered, PP further mentioned that they have not undertaken any blasting since the year 2014. With regard to the ADS point on plantation, PP submitted the detailed plantation under greenbelt development along roads and in non-mineralized area. PP committed that they will make all necessary efforts to develop green belt more efficiently with good survival rate.

The EAC noted the plantation report submitted by PP and asked the reason for the poor survival of the plants. PP informed that poor survival rate has been observed due to harsh climatic conditions, erratic rainfall, poor soil quality and poor land topography. PP mentioned that as on dated total 4530 No of plants have survived covering an area of 4.34 ha. Species planted includes Melai Azadiracta, Prosopis cineraria, Acacia Senegal, Magnifera indica, Guava etc. The EAC asked the PP to engage institute of national repute having expertise in plantation in arid climate to enhance the survival of the planted species. With regard to presence of Bustard, PP informed that as per DCF letter dated 5.03.2024, there are no national park, wildlife sanctuary, ESA/ESA present within 10 km radius of the Mothala Balachod Bauxite Mine. However, the nearest ESZ of Kutch Bustard Sanctuary is at a distance of 8.5 kms from the project site. The EAC advised the Project Proponent to adopt and implement protection and mitigation measures for conservation of Great Indian Bustard. The EAC also asked the PP to increase the plantation of short grasses which are suitable for the hard ground available near to the Project area and simultaneously local species needs to be increased within/outside the ML area. The EAC also noted that PP has submitted the closure report dated 27.02.2024 from Regional Office of the Ministry located in Gandhinagar.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC in its 29th EAC (Non-Coal Mining) meeting held during 9-10th May, 2024 **recommended** the proposal under MoEF&CC Notification vide S.O. 1530(E) dated 6th April 2018 and as per the provisions of EIA Notification, 2006 and its subsequent amendments for grant of Environmental Clearance for Mothala Balachod Bauxite Mining Project with the Production Capacity of 42,000 TPA in the mine lease area of 280.7686 Ha by M/s Gujarat Mineral Development Corporation Limited, located at Villages Balachod, Mothala, Khandai, Tehsil Abdasa, District Kutch, Gujarat subject to the following specific conditions in addition to the standard EC conditions applicable for non-coal mining projects: -

3.5.5. Recommendation of EAC

Recommended

3.5.6. Details of Environment Conditions

3.5.6.1. Specific

continuous ambient air quality monitoring stations

1.	The Project Proponent should install the Continuous Ambient Air Quality Monitoring Stations in such numbers as per the scientific study and in consultation with CPCB.
real time data	
1.	The real time data generated by continuous ambient air quality monitoring stations (CAAQMS) should be displayed digitally at entry and exit gate of mine lease area for public display and shall be linked to server of CPCB/SPCB.
transportation of mineral	
1.	The Project Proponent should implement the budget of Rs 53.5 Lakhs as Capital cost and Rs. 29.40 Lakhs as recurring cost towards Environment Management Plan (EMP) within 3 years. The Project Proponent needs to submit the six-monthly report upon the progressive status of transportation of mineral through Rail and Road.
movement of wildlife	
1.	The Project Proponent shall strictly adhere to the action plan to monitor the movement of wildlife in the vicinity of the mine lease area.
camera traps	
1.	The Project Proponent needs to use modern equipment's such as Camera Traps for ensuring presence and movement of wild animals in the study area in consultation with Wildlife Wing of Forest Department. Appropriate interventions shall be taken to minimise stress conditions for wild animals and to avoid Man Animal conflict.
annual compliance	
1.	The Project Proponent needs to submit the annual compliance of the effectiveness of the Wildlife Conservation Plan from the Forest Department and submit it to the Regional Office of the Ministry.
monitoring on surface water	
1.	Regular monitoring on surface water flow, turbidity & water quality shall be carried out and report shall be submitted quarterly to the Ministry's Integrated Regional Office.
monitor the air quality	
1.	The Project Proponent shall monitor the air quality, noise level, water quality, water level and ground vibration during drilling and blasting at the edge of the mine, near the village, and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Integrated Regional Office.
garland drains	
1.	Garland drains and catch drains shall be regularly desilted and maintained periodically at regular intervals.
periodically monitor	
1.	The Project Proponent should periodically monitor and maintain the health records of the mine

	workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance on occupational health shall be carried out every year for mine workers. PP shall also organize medical camp for the benefit of the local people and also the monitor the health impacts due to mining activity.
water sprinklers	
1.	The Project Proponent needs to install the permanent water sprinklers along the haul road and the approach road. Further, 10 nos. of fog canon/mist sprayer of at least 40 m throw shall be installed at various locations in the mine area.
electric vehicles/cng/solar	
1.	The Project Proponent shall explore the possibility of using atleast 20% of Electric vehicles/CNG/Solar instead of diesel operation within three years.
third party audit	
1.	The Project Proponent shall conduct third party audit of compliance of EC condition at an interval one year and its report shall be submitted to IRO, MoEF&CC.
gap plantation	
1.	The Project Proponent shall ensure the survival rate of 95% for planting the gap plantation and new plantation. The Project Proponent shall make the actual count on the saplings planted and its survival rate and in case of failure of achievement of 95% survival rate, action plan for achieving the target survival rate shall be submitted to the Ministry's Regional Office. Project proponent shall use saplings of 10 ft height for plantation. PP shall make provision for drip irrigation to conserve the water.
ro drinking water	
1.	The Project Proponent needs to provide the RO drinking water supply and also by laying network of pipelines to the local people at free of cost.
rainwater harvesting structure	
1.	The Project Proponent shall provide the rainwater harvesting structure at mine office and quarters to recharge the ground water.
monitor and maintain the health records	
1.	The Project Proponent should periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance shall be carried through regular occupational health check-up every year for mine workers. PP shall also organize medical camp for the benefit of the local people and also the monitor the health impacts due to mining activity.
2.	The Project Proponent should periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance on Silicosis shall be carried through regular occupational health check-up every year for mine workers.

cgwa/sgwa	
1.	Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable.
clearances/permissions	
1.	Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.
protection and management	
1.	The Project Proponent shall ensure that the protection and management of the water bodies should include provision of utilizing available water to the villagers by installing solar pumps as well as project proponent shall explore the possibility for installing floating solar panels for generation of electricity and distribution of power supply to the villagers.
monitoring station	
1.	The Project Proponent shall install the adequate number of monitoring station to undertake air quality and water quality monitoring in the vicinity of 5 km of the mine and water bodies and the six monthly data should be submitted to the Ministry.
environment laboratory	
1.	The Project Proponent should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any non-compliance or infringement should be reported to the concerned authority.
water treatment	
1.	The Project Proponent needs established water treatment facility for the drinking purposes within the ML area and submission of six-monthly report including the relevant photographs.
ground water	
1.	The Project Proponent needs to conduct the study w.r.t. the impact of mining upon Ground water for identifying status of PH and other parameters of ground water and submit a report to the RO, MoEF&CC within six-month.
employment-based apprenticeship	
1.	The Project Proponent shall also organize employment-based apprenticeship/ internship training program every year with appropriate stipend for the youth and other programs to enhance the skill of the local people. The data should be maintained for the training imparted to the persons and the outcome of the training, for the assessment of the training program should be analyzed periodically and improved accordingly.
clean energy	

1.	The Project Proponent should explore the possibility for shifting to clean energy using electric equipment for cleaner production options to reduce the emission generated from various machineries.
mitigation measures	
1.	All the mitigation measures committed / envisaged in the EIA/EMP report and subsequent submission shall be implemented.
single use plastic (sup)	
1.	The Project Proponent shall create awareness among the local people working within the project area as well as its surrounding area on the ban of Single Use Plastic (SUP) in order to ensure the compliance of Notification published by MoEF&CC on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report
regrassing the mining area	
1.	The mining lease holders shall, after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The implementation report of the above said condition shall be submitted to the Ministry's Regional Office.

3.6. Agenda Item No 6:

3.6.1. Details of the proposal

Proposed Hanamaneri Limestone Mine Block (Area: 445.37 Ha) with Limestone Production Capacity: 4.0 Million TPA, Intercalated Waste: 1.0 Million TPA, Top Soil: 0.19 Million TPA, Over Burden: 0.94 Million TPA (Total Excavation: 6.13 Million TPA) along with installation of Crusher & Screening Capacity:1300 TPH and OLBC Capacity : 1200 TPH with 14 km length at Villages: Hanamaneri, Lokapur, Jalikatti B.K. & Jalikatti K.D., Taluka: Badami & Mudhol, District: Bagalkot, State: Karnataka by J K CEMENT LIMITED located at BAGALKOTE, KARNATAKA			
Proposal For		Fresh EC	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/KA/MIN/453560/2023	IA-J-11015/39/2022-IA-II(NCM)	26/03/2024	Mining of minerals (1(a))

3.6.2. Project Salient Features

<p>The Proposal for Environmental Clearance for Hanamaneri Limestone Mine Block with total excavation of 6.13 MTPA (4.0 MTPA of Limestone, 1.0 MTPA of Intercalated Waste, 0.19 MTPA of Top Soil, 0.94 MTPA of Over Burden) along with installation of Crusher with screening capacity of 1300 TPH and OLBC Capacity of 1200 TPH of 14 km length in the ML area of 445.37 ha by M/s J K Cement Limited located at Villages Hanamaneri, Lokapur, Jalikatti B.K. & Jalikatti K.D., Taluka Badami & Mudhol, District Bagalkot, Karnataka.</p> <p>2.5.2 The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under: -</p> <p>i. The instant project activity is listed at schedule no. 1(a) Mining of Minerals, the project falls under Category</p>
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“A” i.e. ML area greater than 250ha as per EIA Notification dated 14th September, 2006 as amended from time to time.

ii. The mine lease area is located between Latitude 16° 08' 21.96"N to 16° 09' 57.63" N and Longitude 75° 23' 35.31" E to 75° 26' 02.58" E. The mine lease area falls under the Survey of India Toposheet No. for Core zone E43V7 and Buffer zone E43V7, E43V8 & E43V12 and falls in Seismic Zone-II as per IS:1893 (Part - I): 2002.

iii. Details of Terms of Reference (ToR): The Project Proponent has obtained ToR on 23.12.2022 for Hanamaneri Limestone Mine Block (Area: 445.37 Ha) with Proposed Limestone Production Capacity: 4.0 MTPA, Intercalated Waste: 1.0 MTPA, Top Soil: 0.19 MTPA, Over Burden: 0.94 MTPA (Total Excavation: 6.13 MTPA) in the ML area of 445.37 ha by M/s JK Cement Limited along with installation of Crusher & Screening 1300 TPH and OLBC 1200 TPH with 14 km length located at Villages Hanamaneri, Lokapur, Jalikatti B.K. & Jalikatti K.D., Taluka Badami & Mudhol, District Bagalkot, State Karnataka.

iv. Details of Mine Lease:

S. No.	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1.	Letter of Intent for grant of mining lease vide letter No. DMG-17012/20/2021/2021-22/9171 in pursuance to Rule 10 (2) of the Mineral (Auction) Rules, 2015	31.12.2021	Limestone	Letter of Intent is valid for a period of 3 years from the date of its issuance	Govt. of Karnataka	430 ha
2.	Corrigendum to LoI vide letter no. 17012/20/2021/2021-22/9321 w.r.t the extent of the Hanamaneri Block was mentioned as 430 ha and it stands corrected as 445.37 ha	05.01.2022	Limestone	Letter of Intent is valid for a period of 3 years from the date of its issuance	Govt. of Karnataka	445.37 ha
Private land				419.83		
Government land				25.54		
Forest Land				-		
Total Mining lease area (MLA), Ha				445.37		
Private land for crusher, workshop & other infrastructure outside the MLA		No infrastructure is proposed outside the ML area except an OLBC of Capacity 1200 TPH with 14 km length from the Mine to Plant				
Mining Plan including		Letter No.				

g Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Date	21.06.2022	
	Mineral & (Major/Minor)	Major	
	Mine Lease Area, Ha	445.37	
	Validity	5 years	
Mining Parameters	Quantitative Description		
Method of Mining	Opencast Mechanized Limestone Mine		
Drilling/Blasting	Drilling & Blasting Parameters		
	S. No.	Particular	Details
		Dia of Hole	115 mm
		Burden	3.5 M
		Spacing	4 M
		Depth of the Hole	6 to 8.5 Mts
		Yield/Mtr.	84 to 112 Mtr
	6.	Powder Factor	9.5 Tonne/Kg
Geological Reserves	147.35 Million Tonnes		
Mineable Reserves	69.37 Million Tonnes		
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	Ø Limestone: 4.0 Million TPA Ø Top Soil: 0.19 Million TPA Ø Intercalated waste: 1.0 Million TPA Ø Overburden: 0.94 Million TPA Total Excavation: 6.13 Million TPA		
Life of mine	~21 years		
Mine Bench Height & Bench Width	Bench height: 8 m Bench Width: 25 to 30 m		
No. of Mine Benches	07		
Plan period m bgl	533 m AMSL (36 m bgl)		
Ultimate Depth of Mining, m bgl	519 m AMSL (50m bgl)		
Ground Water Table, m bgl	Pre-Monsoon: 16.3-36.8m bgl (531.2 to 559.7m AMSL), Post-Monsoon: 15.2 to 35.8 m bgl (532.2 to 560.8m AMSL)		
Details of ground water intersection	Groundwater will be intersected in 5 th year of mining operation and permission will be obtained from KGWA before intersection		
Individual bench slo	70°		

pe			
Overall pit slope	45°		
Details of existing/ proposed Crusher	Installation of Crusher & Screening Plant: 1300 TPH Capacity		
Mineral Beneficiation	Nil		
RoM output size	40 to 85 mm		
Transportation details including capacity of dumper/tipper, mode of transport and distance	Initially, crushed limestone will be transported to its existing cement plant located at 15.5km distance by covered trucks/tippers via road & after 4 th year crushed limestone will be transported via 14 km length of OLBC.		
Generation of Topsoil/OB & its Management during plan period & conceptual period.	<p><u>Top Soil:</u></p> <p>Ø During the Plan Period 0.574 Million Tonnes (0.441 Million CuM) of top soil will be generated out of which 0.370 Million Tonnes (0.284 Million CuM) of top soil will be utilized for greenbelt/plantation & 0.204 Million Tonnes (0.156 Million CuM) of top soil will be stored & later on same will be utilized for greenbelt/plantation.</p> <p>Ø At conceptual stage, 2.16 Million Tonnes (1.66 Million CuM) of top soil will be generated & same will be utilized for greenbelt/plantation and for levelling of backfilling, formation of the bund along the safety zone of road, nallah & strengthening of haul roads.</p> <p><u>Over Burden/Intercalated Waste:</u></p> <p>Ø During the plan period 5.12 Million Tonnes of waste will be generated; out of which 3.47 Million Tonnes will be OB and 1.65 Million Tonnes will be Intercalated waste which will be temporarily dumped systematically by retreating manner covering an area of 14.69 ha.</p> <p>Ø At Conceptual Stage 19.75 Million Tonnes of overburden/intercalated waste will be generated & same will be used for backfilling & formation of the bund along the safety zone of road, nallah, HT line & strengthening of haul roads.</p>		
Total water requirement	150 KLD	Domestic	10 KLD
		Dust Suppression/Greenbelt	105 KLD
		Greenbelt/Plantation	25 KLD
		Workshop	10 KLD
Source	Water will be sourced from ground water or abstraction structure		

Permission for withdrawal/ intersection along with details of grant and its validity	The Project Proponent has obtained the permission for withdrawal of Ground water for 150 KLD from the Karnataka Ground Water Authority vide NOC No. KGWAN1302760125, dated 11.12.2023 and valid for 2 years from the Date of its issuance.	
Particulars	Particular's Name	Directions
Nearest Village	Kadarakoppa	~1.5 km in South direction
Nearest Town	Bagalkot	~20 km in East direction
Nearest State/National Highway	SH - 44	0.13 km in NNW direction
	SH -20	~ 2.5 km in West direction
	SH-34	~3.0 km in WSW direction
Railway Station/Railway line	Bagalkot Railway Station	~28 km in NNE direction
Water Bodies		--
		--
		~ 1.5 km in ENE direction
	Lokapur Halla	2.5 km in NE direction
	Ghatprabha River	6.5 km in NW direction
	Kalaskoppa Lale	~ 8.0 km in ESE direction
	Hire Halla	~8.5 km in ENE direction
Gondimada Halla	~9.5 km in ENE direction	
Forest	Reserved Forest: Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest	Ø ~1.0 km in WSW direction Ø ~1.75 km in NWN direction Ø ~2.5 km in North direction

	<p>Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest Ø Reserved Forest</p>	<p>Ø ~3.5 km in NNW direction Ø ~3.5 km in West direction Ø ~4.0 km in WSW direction Ø ~4.0 km in East direction Ø ~5.5 km in SE direction Ø ~6.0 km in SE direction Ø ~6.5 km in SE direction Ø ~6.5 km in ESE direction Ø ~8.5 km in SE direction Ø ~9.0 km in ENE direction Ø ~9.5 km in SE direction Ø ~9.5 km in SE direction</p>
Forest Land / Protected Area / Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	No	The Project Proponent has stated that no forest land involved in the proposed project area as per the letter issued by State DFO, Karnataka vide letter no. PCCF/WL/D/CR-01/2022-23, dated 16.11.2023.
National Park	No	
Wildlife Sanctuary	No	
Elephant/Tiger Reserve	No	
Eco-Sensitive Zone (ESZ) /Eco-Sensitive Area (ESA)	No	
Coastal Regulation Zone (CRZ)	No	-
Schedule-I species (Nos and name of schedule-I species with authenticated letter)	Yes	09 Schedule I species viz. 04 Mammals (<i>Canis aureus</i>) Jackal, (<i>Canis lupus</i>) Indian Wolf, (<i>Hystrix indica</i>) Indian Porcupine, (<i>Macaca radiata</i>) Bonnet macaque; 03 Reptiles (<i>Daboia russelii</i>) Russell's viper, (<i>Naja naja</i>) Spectacled cobra, (<i>Varanus bengalensis</i>) Indian Monitor Lizard; and 02 Avifaunal (Milvus

Wildlife Conservation Plan	Yes	migrans) Black kite, (<i>Pavo cristatus</i>) Indian Peafowl. Wildlife Conservation Plan has been prepared and recommended by the DFO Vide letter no. B2/GFL/JKCement/CR/2023-24/1948 on dated 06.01.2024. Further, the Conservation plan has been recommended by the CCF, Belgaum and forwarded to PCCF, Bangalore for further approval on 07.02.2024. Budget proposed for conservation Plan is Rs. 45 Lakh.
Proposed area for green belt/plantation and no. of saplings proposed	131.18 ha	
Budget for green plant & plantation till the end of life of mine.	Rs. 655.90 Lakh	
Budget for nursery	The company is already having well established 02 no (s). of nurseries in its Existing Integrated Cement Plant & Colony located at approx. 15.5 km distance from the Proposed Limestone Mine Block. The saplings proposed for Greenbelt/ plantation will be sourced from these nurseries.	
Details of existing plantation and its survival rate	Not Applicable as this is a proposed project	
No. of tree cuts in the mine lease area and compensatory afforestation	Approx. 70 no. of trees will be cut due to the Proposed mining proposal. The company is proposing to plant 140 additional no. of saplings as Compensatory plantation.	
Particulars for Green belt/plantation	Area covered (in Ha)	
7.5 m barrier & Non mineralized areas	8.52 Ha	
50 m safety zone of nallah, roads, electric lines	At conceptual stage, Greenbelt & plantation will be developed will be carried out on 131.18 ha. Break-up given as follows: 1) Safety zone along ML boundary: 8.52 ha, 2) Safety zone along Canal, Nallah & HT line: 44.43 ha, 3) Plantation on Overburden: 20 ha, 4) Bench Plantation: 20.39 ha, 5) Plantation on Soil dump: 32.50 ha, 6) Plantation along Infrastructure: 5.34 ha	
Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)		
Period of baseline data collection		October to December 2022
Season (Summer / Pre-monsoon / Post-monsoon / Winter)		Post Monsoon Season

Predominant Wind direction (From)	East
Ambient Air Quality (no. of locations) and results	8
Noise level (no. of locations) and results	8
Water Quality (no. of locations) and results	8
Soil Quality (no. of locations) and results	8
Hydro geological study and results	Done
Traffic study (no. of locations) and results	Done
Advertisement for PH with date (name of major national daily and one regional vernacular daily newspaper)	“Deccan Herald” & “Hosa Digantha” in English & Local language on 17.09.2023 “Sanje Darshan” & “Vijay Karnataka” in daily Kannada Newspaper respectively on 20.09.2023 & 23.09.2023
Date of PH	04.10.2023 at 11:00 AM
Venue	Project Site, Sy. No. 68/2, Lokapur, Lokapur-Bagalkot Road (SH-44), Near Viraktamath Petroleums, Mudhol-Taluk, Bagalkot-District
Chaired by	Smt. Janaki K.M., I.A.S. Deputy Commissioner and Chairman, Environmental Public Hearing Committee, Bagalkote, Karnataka
Main issues raised during PH	Education, Employment, Environment, Health care, Community welfare and Development
Budget proposed for addressing issues raised during PH over 3 years	Capital Cost: 186 Lakhs

The Project Proponent has submitted the following action plan with item wise break up of Public Hearing budget as follows:

Particular	Proposed Physical Activities to be done	Unit of Measurement						Budget (Rs. In Lakh)
		1 st Year		2 nd Year		3 rd Year		
		Location / Area	Budget (Rs. In Lakh)	Location / Area	Budget (Rs. In Lakh)	Location / Area	Budget (Rs. In Lakh)	
Education & Sports Facilities	Providing infrastructure to Govt. Schools like study tables (40), Benches (40), Chairs (80), White boards (22), Smart Class boards (9) & projectors (6) and c	Hanamaneri/ Lokapur	8	Jalikatti B.K./ Jalikatti K.D.	6	Kadarkoppa/ Venkatapur/ Hebhal	6	20

	omputers (26) in each Govt. School with wi-fi connectivity (07), Facility of Girl's toilets (06)							
	Construction of library for preparation Competitive Exam (04)	Hanamaneri/ Lokapur	4	Jalikkatti B.K./ Jalikkatti K.D.	4	Kadarkoppa/ Venkatapur/ Hebhal	2	10
	Distribution of Sports kit to children (60), vending machine of Sanitary napkins (6)	Hanamaneri/ Lokapur	5	Jalikkatti B.K.	5	Jalikkatti K.D.	5	15
Health & Care Facilities	Organizing Medical Camp in nearby villages (24) (Medical, Eye, Dental etc.) Asha Health Worker support (124) Awareness Programme for Pregnant & Adolescent Women (07) One ambulance facility at Lokapur (Rs. 25 Lakh)	Hanamaneri/ Lokapur	7	Jalikkatti B.K./ Jalikkatti K.D.	7	Arlikatti/ Kajadoni	7	21
Skill Development	Setting up of skill training centre (04)	Hanamaneri/ Lokapur	5	Jalikkatti B.K./ Jalikkatti K.D.	4	Kadarakoppa	3	12
	Supporting surrounding Villages women Empowerment through Self Help Groups (40)	Hanamaneri/ Lokapur	5	Jalikkatti B.K./ Jalikkatti K.D.	5	Kadarakoppa	5	15
	Training of farmers or farmers groups in different agricultural methods (MODERN METHODS), Training to farmers to grow the Cash crops to enhance agricultural growth, Dairy farming/ Poultry farming/ Goatary (30)	Lokapur	5	Lokapur	5	Lokapur	5	15
Community Welfare	Infrastructure Development near plants surrounding villages like CC Roads (17000 SQ.ft), Community Halls (02), Construction of Toilets in association with Govt. Schemes, Developing Sports grounds etc.	Hanamaneri/ Lokapur	10	Jalikkatti B.K./ Jalikkatti K.D.	10	Kadarakoppa / Kajadoni	15	35
	02 Community Centre at Lokapur and Jalikkatti K.D.	Lokapur	14	Jalikkatti K.D.	-	-	-	14
	Support for Farmers by providing modern equipment (06)	Hanamaneri/ Lokapur	5	Jalikkatti B.K./ Jalikkatti K.D.	5	Varchagal/ Chitranukot	5	15
Environment	Construction of Water Check Dam / Anikat in nearby Villages for increased ground water level (01)	Hanamaneri/ Lokapur	2	Jalikkatti B.K./ Jalikkatti K.D.	2	Kadarakoppa	2	6

	Provide Water Filter Plant facility in nearby villages as per the requirement (06)	Hanamaneri/Lokapur	2	Jalikatti B.K./ Jalikatti K.D.	2	Kadarakoppa	2	6
	Free distribution of 10000 Plants (2500 at each village), plantation of trees at prominent public places in nearby villages	Hanamaneri/Lokapur	1	Jalikatti B.K./ Jalikatti K.D.	0.5	Chaudapur/Venkatapur	0.5	2
Total			73		55.5		57.5	186
R & R details	<p>The Project Proponent has submitted that ML area 445.37 ha falls in 4 villages namely Hanamaneri, Lokapur, Jalikatti B.K. & Jalikatti K.D. Out of the total mining area 445.37 ha, 419.83 ha is Private Land & 25.54 ha is Govt. Land.</p> <p>The Project Proponent informed that 306.682 ha has been proposed to purchase out of 419.83 ha (private land). Out of 306.682 ha, 289.952 ha mining area and 16.73 ha non-mining area for future exploration.</p> <p>It was also submitted that 60.82 ha has been purchased (44.09 ha mining area and 16.73 ha non-mining area for future exploration).</p> <p>The Project Proponent has submitted that the Resettlement & Rehabilitation (R&R) cost of remaining land Rs. 121.23 Crore.</p>							
Court Case, No and its present status	<p>The Project Proponent has stated that one litigation pending against the Hanamaneri Limestone Mine Block in the High Court of Karnataka, Bengaluru vide Writ Petition No. 22125 of 2023 (GM-RES) filed on 03.10.2023 between Sri. Vittal Pandappa Harijan @ Madar & others and State of Karnataka & others.</p> <p><u>Chronology and Implication of the Case</u></p> <ul style="list-style-type: none"> • From the High Court's website, it is evident that the petition was filed on 3.10.2023 and listed on 4.10.2023. However, due to time constraints, the matter was rescheduled for 6.10.2023. • On 6.10.2023, despite being listed for the second time with office compliance items (8 in total), the petitioner's advocate requested an additional week to address office objections. • Regrettably, to date, no action has been taken to rectify these objections or to carry out the necessary amendments to the petition. <p>ü Consequently, the matter has not been listed again till date before court apparently on account of non-removal of objections.</p> <p>ü Looking into above, the company would like to reiterate that the company has not been served with a copy of the petition till date despite undertaking by the Petitioner's counsel, before court on 06.10.2023, to supply copy of petition to respondent's counsel and as the company have not been provided with a copy of the petition leading to filing of the petition or any implications thereof, the chronology of events after 06.10.2023 is not available with us.</p> <p>Furthermore, as the petitioner has failed to address these objections even after a lapse of five months it appears Petitioners are not interested in pursuing the present petition.</p>							
Undertaking by Project Proponent w.r.t court	<p>The project Proponent has submitted an undertaking vide letter dated 14.02.2024 and stated that only one litigation is pending against the PP and apart from</p>							

rt case	From the pending litigation no other notices has been received by the Project Proponent under section 5 of the Environment Protection Act, 1986.		
Affidavit as per Ministry's OM dated 30.05.2018	The Project Proponent has submitted an affidavit vide non-judicial stamp paper of Rs. 50 vide dated 07.11.2022 and certificate no. IN-KA77150483416555U in accordance with the statutory requirement & judgement of Hon'ble Supreme Court dated 2 nd August 2017 in writ Petition (civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ores.		
Undertaking by Project Proponent in EIA/EMP report	The Project Proponent has submitted an undertaking vide letter dated 13.02.2024 in Final EIA/EMP Report.		
Undertaking by Consultant in EIA/EMP report	The Consultant (J.M. Environet Pvt. Ltd) has submitted an undertaking vide letter dated 12.02.2024.		
Plagiarism Certificate	The Project Proponent has submitted a Plagiarism Certificate dated 12.02.2024 in Final EIA/EMP Report.		
S. No.	Activities	Capital Cost	Recurring Cost
A. Mitigative Measures			
1.	Permanent water sprinkling arrangements for main haulage road	100	5.0
2.	7 nos. of Bag-filter for crusher system (OLBC transfer points-6 +1 crusher)	175	4.0
3.	Installation of Crusher	130	3.0
4.	Acoustic enclosure for OLBC	200	2.0
5.	Spill control guarding for OLBC	120	2.0
6.	Canopy along Dry-fog system of 5 transfer points	100	1.0
7.	10 nos. of fog canon/mist sprayer of at least 40 m throw shall be installed at various locations in the mine area	30.0	2.0
8.	Greenbelt/Plantation on 131.18 ha area with 3,27,950 nos of saplings @ 2500		
	A. Green belt around 7.5 m periphery covering an area of 8.52 ha within initial 2 years (No. of saplings: 21300) (Considering Rs. 42.60 Lakh)	42.60	1.0
	B. Plantation along the safety barrier of canal 30.72 ha within initial 5 years (No. of saplings: 76,800) (Considering Rs. 153.60 Lakh)	153.60	0.30

	C. Plantation along the nallah 10.27 ha, within initial 5 years (Nos of saplings 25,675) (Considering Rs. 51.35 Lakh)	51.35	0.30
	D. Plantation along the HT line 3.44 ha, within initial 5 years (Nos of saplings 8600) (Considering Rs. 17.20 Lakh)	17.20	0.30
	E. Plantation/Regrassing 20 ha on backfilled area (No. of saplings: 50,000) (Considering Rs. 100 Lakh) (11 th to 20 th year)	-	10
	F. Plantation on top soil stacking 32.50 ha on waste dump (No. of saplings: 81,250) (Considering Rs. 162.50 Lakh) (16 th to 20 th year)	162.50	0.30
	G. Plantation on top bench of water reservoir 20.39 ha on waste dump (No. of saplings: 50,975) (Considering Rs. 101.95 Lakh) (16 th to 20 th year)	101.95	0.30
	H. Plantation on Mineral Storage: 1.20 ha, Statutory building: 0.20 ha, Mineral separation plant: 2.0 ha (No. of saplings: 13,350) (Considering Rs. 26.70 Lakh) (At the end of life of mine)	26.70	0.30
9.	Modular STP	50	3.0
10.	Washing Ramp with Oil-water Separator	32	0.20
11.	Rain Water Harvesting Plan	60	5.0
12.	Garland drain shall be made along the nallah (L*W*D = 16m x 1.2m x 0.6m)	4.27	0.20
13.	Construction of retaining walls within the mine area	6.34	0.20
14.	Protection for Plantation (Fencing around area)	20	0.50
15.	Construction of 02 nos Settling Tank	2.0	0.30
16.	Construction of Protective Bunds (L*W = 1.0m x 1.1m)	22.49	0.20
Sub Total		1608	41.40
B. Monitoring			
17.	03 nos. of Continuous Ambient Air Quality Monitoring Station at Mine Site for the measurement of air quality for PM10, PM2.5, SO2, NO2 and CO and real time data connectivity with CPCB/SPCB Server	300	10
18.	Fugitive dust emission monitoring (05 locations * monthly)	10.0	2.0
19.	Installation of 01 nos of piezometer in ML area	6.0	0.30
20.	Ground water quality analysis (Pre and Post-monsoon)	6.0	0.50

21.	Surface Water Quality Analysis (Nallah & Canal: Pre & Post-monsoon)	3.0	0.20
22.	Procurement of the Blast Vibration Measuring Instrument & Noise level meter	5.0	0.5
23.	Controlled blasting for minimizing ground vibration, fly rock, air pressure/ noise, etc. by Using Nonel and Exel	-	7.0
24.	Ambient Noise Monitoring (05 locations * quarterly frequency)	4.0	0.4
25.	Work Place Noise Level Monitoring (05 locations * quarterly frequency)	4.0	0.2
26.	Providing Ear muffs/plugs to workers working in high noise area & PPEs	4.0	1.0
27.	Digital Mapping of entire mine area once in 5 years (Rs. 4.5 Lakh once in 5 years)	-	1.5
Sub Total		342	23.6
Total		1950	65
Particulars		Budget (Rs. in Crores)	
Total Cost for EMP (Capital Cost of EMP + Capital cost of public hearing + Budget Proposed for WLCP)		Capital Cost: Rs. 21.81 Crores/- Recurring Cost: Rs. 65 Lakh/ annum	
Project Cost		Rs. 373 Crores	
Employment		123 persons	

3.6.3. Deliberations by the committee in previous meetings

N/A

3.6.4. Deliberations by the EAC in current meetings

EAC after deliberations noted that the instant proposal falls under green field project for mining of Limestone (auctioned block). The Project Proponent informed that there is no forest land involved in the mine lease area. The Committee noted that the project proponent has conducted the Public hearing after obtaining the Terms of Reference (ToR). Two Canals and a seasonal Nallah flowing through the ML area which should not be disturbed. On either side of the Canal and Nallah a 50 m safety distance has to be maintained. The crushed limestone will be transported to interlinked cement plant via road till 3rd year and from the 4th year via covered conveyor belt system. The Committee emphasised to submit the detail timeline in form of CPM/PERT chart and submit detailed work related to Civil, Electrical and Mechanical in form of percentage. The Committee emphasised that the PP should submit one final feasible route out of two proposed route for transportation of Limestone through conveyor belt system. Subsequently, The Committee noted that the Project Proponent has submitted the revised Socio-economic development plan to address the issues raised during the Public Hearing with a Budget expenditure of Rs. 408.2 Lakhs and Revised Wildlife Conservation Plan submitted to the Forest

Department with Budgetary provision of Rs. 110 Lakhs/-. The Committee asked the PP to submit the activity-wise detail of the Socio-economic development plan addressing the issues raised during the Public Hearing and also submit the activity-wise detail of Revised Wildlife Conservation Plan. Accordingly, the PP needs to submit the revised budget of EMP and total project cost (which should include the cost of conveyor belt system separately).

In view of the above, the Committee **deferred** the proposal for the submission of following requisite information:

- i. The project proponent needs to submit the NOC from Indian Railways.
- ii. The Project Proponent shall submit the measures taken for strengthening of mine pit and protection of railway line which is running parallelly along the mine lease.
- iii. As the drilling & blasting activity is proposed and the railway line is passing parallelly the lease boundary, Project Proponent should carry out the scientific study from CIMFR or any other recognized institution of repute which is approved for carrying out such studies. The study should be clearly demonstrated that whether there are any adverse impacts and it can be controlled by adopting mitigative measures or not?
- iv. The Project Proponent should revisit the data submitted on noise level monitoring. The average data should be taken for every 15 minutes interval in view of the sensitivity of the railway line passing parallelly the lease boundary
- v. The PP needs to submit the detail timeline in the form of CPM/PERT chart considering all parameters involved for implementation of mechanized system (conveyor belt) and submit detailed work related to Civil, Electrical and Mechanical in form of percentage.
- vi. The PP should submit one final feasible route out of two proposed route for transportation of Limestone through conveyor belt system.
- vii. The PP needs to submit the updated list of Schedule-I species as per the wildlife Protection amendment act, 2022 and accordingly submit the revised wildlife conservation plan.
- viii. The PP needs to submit the update outcomes of the pending court case.
- ix. The PP needs to submit the revised Public Hearing cost w.r.t. addressing the issues raised during the Public Hearing.
- x. The PP needs to submit the detail backfilling and reclamation plan.

3.6.5. Recommendation of EAC

Deferred for ADS

3.7. Agenda Item No 7:

3.7.1. Details of the proposal

Expansion of production capacity from 0.13 MTPA to 0.3 MTPA of Sukurangi Chromite Ore Mining Project [M L Area 382.709 Hal located at village (s) Sukurangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, Teshil - Sukinda, District-Jajpur, Odisha by MIs Odisha Mining Corporation Ltd. by ODISHA MINING CORPORATION LIMITED located at JAJAPUR,ODISHA

Proposal For		Application for Corrigendum	
Proposal No	File No	Submission Date	Activity (Schedule Item)
IA/OR/MIN/468292/2024	J-11015/348/2015-IA.II(NC M)	03/04/2024	Mining of minerals (1(a))

3.7.2. Project Salient Features

2.6.1 The proposal is for Corrigendum in EC dated 30.07.2020 of 0.3 MTPA in the ML area of 382.709 ha by M/s Orissa Corporation Ltd located at village(s) Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, TeshilSukinda, District-Jaipur, Odisha.

2.6.2 The details of the project as ascertained from the document submitted by the Project Proponent as given under: -

- i. The PP has obtained the EC vide letter dated 30.07.2020 for mining of chromite of 0.3 MTPA in the ML area of 382.709 ha by M/s Orissa Corporation Ltd located at village(s) Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, TeshilSukinda, District-Jaipur, Odisha.
- ii. The SPCB, Odisha has issued CTO vide letter dated 28.03.2024 for Production capacity of 0.3 MTPA for Chromite ore.
- iii. The PP vide letter dated 03.04.2024 requested MoEF&CC for Corrigendum in EC accorded by MoEF&CC vide dated 30.07.2020 to resolve the following issues:
 - a. Specific Condition No.14 on Page No. 10 of 23 needs to be deleted, as the specified locations mentioned in the said Condition (Kannappakunta and Kamalapuram) is in the State of Andhra Pradesh and not within Odisha. Also, the similar specific condition pertaining to the site-specific location already exists as Specific Condition No. 5.
 - b. Specific Condition No.15 on Page No. 10 of 23 needs to be deleted as this condition is not in line with the project specific EMP propositions and is over and above the specific condition no.6 (which had been recommended by EAC during the 17th EAC Meeting).
 - c. Specific Condition No. 17 on Page No. 11 of 23 needs to be deleted, as this condition is not in line with the project specific EMP propositions and is over and above the specific condition no.7 (which had been recommended by EAC during the 17th EAC Meeting).

3.7.3. Deliberations by the committee in previous meetings

N/A

3.7.4. Deliberations by the EAC in current meetings

The EAC after deliberations noted that the instant proposal is for Corrigendum due to typographically error in EC issued by MoEF&CC vide dated 30.07.2020 wherein the existing specific EC condition no. 14, 15 and 17 to be replaced as per earlier EAC minutes dated 28-29 may & 1 June, 2020, which is given below:

Specific condition no. 14: Budget proposed for Corporate Environment Responsibility (CER) shall be ₹ 32.02 Lakhs, which includes a) ₹ 2.5 Lakhs for Employment to locals (₹ 0.5 Lakh from 2019-20 to 2023-24) , b) ₹ 2.50 Lakhs for Skill development for local SHGs (₹ 0.5 Lakh from 2019-20 to 2023-24), c) ₹ 2.50 Lakhs for Computer training, Scholarships (₹ 0.5 Lakh from 2019- 20 to 2023-24), d) ₹ 4.50 Lakhs for Creation of employment opportunity (₹ 1.0 Lakh from 2019-20 to 2022-23 & ₹ 0.5 Lakh for 2023-24) , e) ₹ 5.0 Lakhs for Health care services Medical camps, ambulance (₹ 1.0 Lakh from 2019-20 to 2023-24), f) ₹ 2.50 Lakhs for Pollution Control (₹ 0.5 Lakh from 2019-20 to 2023-24), g) ₹ 2.50 Lakhs for Plantation (₹ 0.5 Lakh from 2019-20 to 2023-24), h) ₹ 2.50 Lakhs for Solar Street lighting, distribution of LED, bulbs to villagers (₹ 0.5 Lakh from 2019-20 to 2023- 24), i) ₹ 2.50 for Drinking Water & sanitation (₹ 0.5 Lakh from 2019-20 to 2023-24), and j) ₹ 5.02 for Peripheral development (₹ 1.0 Lakh from 2019-20 to 2022-23 & ₹ 1.02 Lakh for 2023-24). The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

Specific condition no. 15: Budget proposed under Environmental Management Plan (EMP) shall be

₹ 2130 Lakh (Capital) & ₹ 190 Lakh (recurring/annum) which includes i) Rs 25.0 Lakh (Capital) & Rs 30.0 Lakh (recurring) for Surface drainage (garland drains, settling its, retaining wall etc.) & dust suppression system (timeline 1st year), ii) Rs 7.0 Lakh (recurring) for Environment Monitoring, iii) Rs 4 Lakh (Capital) (time line 1 year) & Rs 3 Lakh (recurring) for Occupational safety which includes Procurement of safety appliances, iv) Rs 4 Lakh (recurring) for Green Belt Development, v) Rs 1794 (Capital) for Net Present Value (NPV) Payment, vi) Rs 153.0 Lakh (Capital) for Compensatory Afforestation, vii) Rs 154.0 Lakh (capital) (timeline 10 years) Wildlife Conservation Plan, and viii) Rs 146.0 Lakh (Recurring cost) for Socio-economic welfare measures in nearby village which is likely to be revised every year. The amount (except occupational health) proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

Specific condition no. 17: Budget earmarked under Occupational Health plan is Rs 4.0 (Capital) & Rs 3 Lakh (Recurring) which includes Procurement of safety appliances. The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

In view of the above, the EAC **recommended** the proposal for Corrigendum in EC dated 30.07.2020 for mining of chromite with enhancement in the production of chromite from of 0.3 MTPA in the ML area of 382.709 ha by M/s Orissa Corporation Ltd located at village(s) Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, TeshilSukinda, District-Jaipur, Odisha as per the EIA Notification, 2006 and its subsequent amendments.

3.7.5. Recommendation of EAC

Recommended

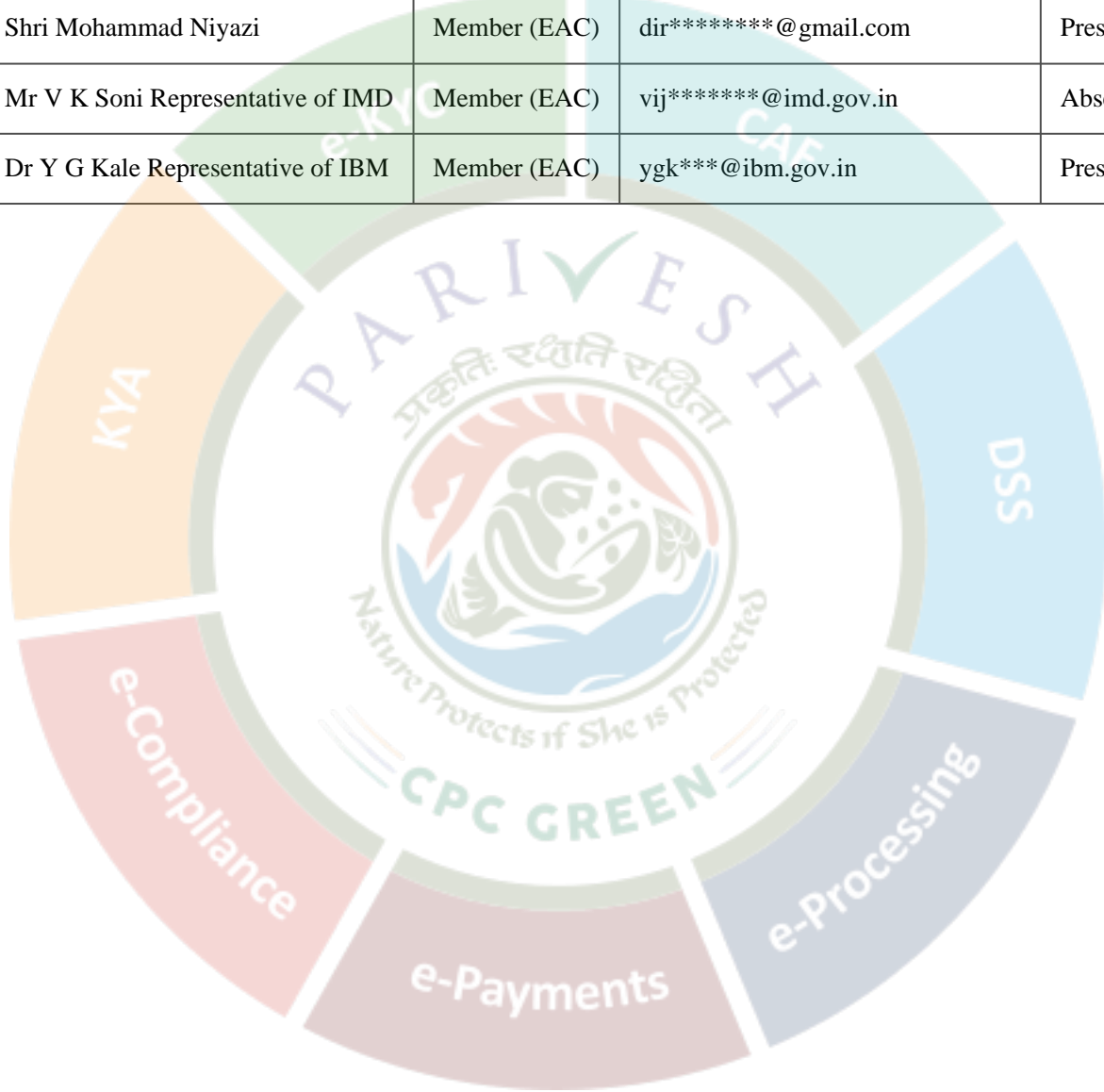
4. Any Other Item(s)

N/A

5. List of Attendees

Sr. No.	Name	Designation	Email ID	Remarks
1	Mr Pankaj Verma	Scientist E	pan*****@nic.in	Present
2	Dr Dinesh Misra	IFS (Retired)	dmi*****@gmail.com	Present
3	Sh Niranjana Kumar Vasu	Member (EAC)	vas*****@gmail.com	Present
4	Dr Asha Rajvanshi	Member (EAC)	ash*****@gmail.com	Present
5	Shri Avijit Gosh	Member (EAC)	avi*****@gmail.com	Present

6	Shri Bandi Ramchandra Reddy	Member (EAC)	red*****@gmail.com	Present
7	Prof Pramod Kumar	Member (EAC)	nit*****@yahoo.com	Absent
8	Prof Devesh Walia	Member (EAC)	dev*****@gmail.com	Present
9	Dr Suresh Tiwari	Member (EAC)	smb*****@gmail.com	Present
10	Dr K G Asha Manjari	Member (EAC)	kim*****@gmail.com	Present
11	Prof Dev Dutt Sharma	Member (EAC)	dds***@gmail.com	Absent
12	Shri Mohammad Niyazi	Member (EAC)	dir*****@gmail.com	Present
13	Mr V K Soni Representative of IMD	Member (EAC)	vij*****@imd.gov.in	Absent
14	Dr Y G Kale Representative of IBM	Member (EAC)	ygk***@ibm.gov.in	Present



GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IMPACT ASSESSMENT DIVISION)
NON-COAL MINING SECTOR

SUMMARY RECORD OF 29th MEETING OF THE COMMITTEE OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF NON-COAL MINING PROJECTS CONSTITUTED UNDER THE EIA NOTIFICATION, 2006.

The 29th meeting of the Re-Constituted Expert Appraisal Committee (EAC) for Environmental Appraisal of Mining Projects (Non-Coal) of the Ministry of Environment, Forest and Climate Change was held during 9-10th May, 2024 through video conference. The list of participants is annexed herewith. After login of the Committee Members through video conference link provided by NIC discussion on each of the Agenda Items was taken up ad-seriatim.

(1.0) Deliberation & Circulation on the Minutes of 28th EAC (Non-Coal Mining) meeting held during 14th March, 2024 & 15th March, 2024.

The minutes of the 28th Meeting of the EAC (Non-Coal) held during 14th March, 2024 & 15th March, 2024 were placed before the members of the EAC and confirmed by the Chairman.

Day 1: 9th May, 2024 (Thursday)

1.1 Chettichavadi Jaghir Magnesite and Dunite Mine with total excavation of 1.4 MTPA (including Magnesite of 0.06 MTPA, Dunite of 0.12 MTPA and others such as waste, O.B, Inter Burden, Top Soil of 1.22 MTPA) in the mine lease area of 449.364 ha of M/s. Dalmia Bharat Sugar and Industries Limited located at Chettichavadi Village, Salem Taluk, Salem District, Tamil Nadu - [Online proposal no. IA/TN/MIN/241375/2018; File No. 23-227/2018-IA.III(V), Consultant –M/s Aadhi Boomi Mining & Enviro Tech (P) Ltd] – Environmental Clearance (Violation category under Ministry's Notification dated S.O. 804(E) dated 14.03.2017) reg.

The instant proposal is for grant of Environmental Clearance (Violation category under Ministry's Notification dated S.O. 804(E) dated 14.03.2017) for Chettichavadi Jaghir Magnesite and Dunite Mine with total excavation of 1.4 MTPA (including Magnesite of 0.06 MTPA, Dunite of 0.12 MTPA and others such as waste, O.B, Inter Burden, Top Soil of 1.22 MTPA) in the mine lease area of 449.364 ha of M/s. Dalmia Bharat Sugar and Industries Limited located at Chettichavadi Village, Salem Taluk, Salem District, Tamil Nadu.

2. The details of the project as ascertained from the document submitted by the Project Proponent and as revealed from the discussions held during the meeting are given as under:

- i. The mine lease area is located between Latitude: 11°43'09.71" N to 11°44'36.233" N and Longitude: 78°07'23.268" E to 78°09'13.068" E. The mine lease area falls under the Survey of India Toposheet No: 58 I/2 and falls in Seismic Zone-III.
- ii. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals and falls under Category "A" as the mine lease area is greater than 250 ha and appraised at the Central level.
- iii. The Project Proponent obtained Terms of Reference (ToR) vide ToR Lr. No: 23-227/2018-IA.III(V) dated 05.02.2021 for mining of Magnesite and Dunite in Chettichavadi Jaghir Magnesite and Dunite Mine for Total Excavation of 1.4 MTPA (including 0.06 million tons of Magnesite, 0.12 million tons of Dunite, Waste, O.B, Inter Burden, Top Soil etc. in the mine lease area of 449.364 ha under Ministry's Notification dated S.O 804(E) dated 14.03.2017.
- iv. The proposal was earlier considered in the 43rdEAC (Non-Coal Mining) meeting held during 14 -16th December, 2021 wherein the EAC deferred the proposal. The Project Proponent submitted the information on 11.03.2022 on Parivesh. But the Project Proponent did not comply to the observation of EAC and in view of the above additional details sought by the Ministry on 27.04.2022, 22.08.2022, 12.09.2022, 04.10.2022 and 22.11.2022 to provide the valid mine lease document and thereafter the Project Proponent submitted the information on 21.12.2022 on Parivesh. The proposal was again reconsidered in the 9th EAC (Non-Coal Mining) meeting held during 17-18th January, 2023 wherein the EAC deferred the proposal for want of requisite information, further the PP submitted the required information on 01.09.2023 in Parivesh Portal. The proposal was reconsidered in the 20th EAC (Non Coal Mining) meeting held during 21-22nd September, 2023 wherein the Committee asked the Project Proponent to submit the proof of payment of Rs. 18.69 crore as per Dept. of Geology and Mining, Guindy letter dated 09.12.2022 for further consideration of the instant proposal before the EAC. PP submitted the requisite information vide its letter dated 19.02.2024 and the, EAC considered the proposal in the 28th EAC meeting held during 14-15th March, 2024 wherein the EAC deferred the proposal and requested that PP to submit the copy of the reply of the show cause notice that it submitted to the Department of Mines and Geology along with the present status report in the matter from DMG Tamil Nadu.
- v. PP submitted the requisite information on 03.04.2024 in Parivesh Portal. Based upon the information submitted by the PP, the EAC considered the proposal in 29th EAC meeting held during 9-10th May, 2024. The reply submitted by PP is given as under:

S. No.	Observation of EAC in its meeting held during 14-15 th March, 2024	Reply by Project Proponent
1.	PP needs to submit copy of the reply to show cause notice that it submitted to the Department of Geology & Mining, Tamil Nadu.	<p>Hon'ble High Court of Madras vide order 15.02.2024 directed that demand memos shall be construed as show cause notice and directed PP to file reply to the same. The PP has submitted the following information:</p> <ul style="list-style-type: none"> Hon'ble High court Order dated 15.02.2024 has been submitted by the Project Proponent. Demand Memo dated 18.06.2019 w.r.t. demand of INR 11.44 Cr has been submitted by the Project Proponent. Reply dated 11.03.2024 w.r.t. INR 11.44 Cr has been submitted. Demand Memo dated 08.07.2020 w.r.t. demand of INR 7.44 Cr. has been submitted by Project Proponent.
2.	PP needs to submit the present status report in the matter from Department of Geology & Mining, Tamil Nadu	The Project Proponent has submitted their replies before Collector (Dept. of Mining & Geology) Salem and the matter is pending for adjudication.
3.	PP needs to submit the Chronology of the existing court cases along with replies filed by it and the State Authorities.	The Chronology of the existing court cases is given here under.

ADS Point No. - 3: PP needs to submit the Chronology of the existing court cases along with replies filed by it and the State Authorities.

Reply by PP: The Chronology of the existing court cases - DBSIL

S.No.	Case Reference	Facts	Present Status
1.	As per Supreme Court order dated 2 nd August 2017 in W.P. (Civil) No. 114 of 2014, District Collector raised Demand memo dated 18.06.2019 directing Dalmia Bharat Sugar	The said demand was challenged by DBSIL before honorable Madras High Court in W.P. 889/2020. The said W.P. along with	W.A. 834/2020 and W.P. No. 32057 have now been allowed by way of remand and the demands of INR

	and Industries Ltd (DBSIL) to pay INR 11.44 Crores on the quantity of Dunite mined without EC for the period from 1 st April 2000 to 31 st March 2018.	batch of others writs was dismissed by Hon'ble Madras High Court vide order dated 12.06.2020. The order dated 12.06.2020 was challenged by DBSIL vide W.A. No. 834 of 2020	11.44 Crore and 7.24 have been set aside by Madras High Court orders dated 15.02.2024 in W.A. 671/2020 and batch.
2.	District Collector also raised another demand memo in 08.07.2019 directing DBSIL to pay 7.24 Crores on the quantity of Magnesite mined without EC for the period from 1 st April 2000 to 31 st March 2018.	This demand was challenged by W.P. No. 32057 of 2023 before Madras High Court.	
3.	The District Collector raised the demand memo in respect of surface compensation under Rule 72 of MCR for an amount of Rs. 79,88,39,062 for the period from 20.08.1966 till 31.10.2017	The Project Proponent has filed W.P. No. 2517 of 2018 before Madras High Court. Later on, vide orders dated 28.02.2022, the writ has been tagged with W.A. 757/2020. The W.A. also pertains to said demand U/R 72. The said demand is stayed till date.	Pending. The stay order is still in force. The stay order has been submitted by the Project Proponent.
4.	W.P. 22888/2023-DBSIL Vs Secretary, MoEF&CC.	Writ Petition filed before Madras High Court Praying amongst others that MoEF&CC should not insist on pre-payment of INR 11.44 Crore and INR 7.24 Crore for grant of EC	The Madras High Court in its Judgement dated 03.04.2024 in W.P. 22888/2023 directed MoEF&CC to consider EC application in

		(Compensation demanded by State Geology and Mining Department for mining without EC in light of Supreme Court order in Common Cause Judgement dated 02.08.2017 in W.P. (Civil) No. 114 of 2014).	accordance with law without insisting for payment towards alleged liability that arise out of the previous order.
5.	Credible Action taken by TNPCBd. CC No. 388/2023 has been filed by TNPCBd in Salem Court, TN.	CC. No. 388/2023 has been filed in Salem Judicial Magistrate Court No. – IV and the matter is listed for hearing on 02.04.2024.	The matter is pending for adjudication.

vi. SEIAA/SEAC has approved the DSR for the Mineral Dunite and details has been mentioned below:

Date of application	Proposal No/ File No	Consideration by SEAA/SEAC	Details of EC	Date of accord
31 st Jan 2023/ 23 rd Feb 2023	-	597 th Meeting of SEIAA dated 27th Feb 2023	-	-
	File No. C.No. 6013/2023	361 st SEAC meeting dated 10 th March 2023	-	
		379 th SEAC meeting dated 12 th May 2023		
		380 th SEAC meeting dated 17 th May 2023		
	C: No 6011/ 2013	627 th SEIAA meeting dated 6 th June 2023	Approved the DSR for Dunite	6 th June 2023

vii. **Details of Mine Lease in chronological manner:**

S. No	Details of grant of Mine Lease deed execution	Period of Grant		Name of the Mineral	Mine lease area in Ha
		From	To		
1	G.O.Ms.No.903 dt.25.02.1966.	1966	1986	Magnesite	574.46 Ha

2	G. O.Ms.No.801 dt. 26.06.1976.	1976	1986	Dunite	574.46 Ha
3	G.O.Ms.No.74 dt. 11.03.1997.	1986	2006	Magnesite & Dunite	531.98 Ha
4	Application No: SL: GO:55200(1) 11-07-2005.	-	-	Magnesite & Dunite	449.364 Ha.
5	Letter from Dept of Geology and Mining vide Lr.No.TN RC No: 1355/MM9/2006 dated 09.12.2022 for validity of lease (till 31.03.2030), as per Sec 8(A)(5) of MMDR(Amendment) Act-2015.	-	31.03.2030	Magnesite & Dunite	449.364 Ha.

viii. Land Use/Land Cover of the Mine Lease Area:

Private land	-
Government land	449.364 Ha, Unassessed Dry Waste Land Belonging to Government.
Forest land	-
Total Mining lease area (MLA), ha	449.364 Ha
Private land for crusher, workshop & other infrastructure outside the MLA	Nil

ix. Mining plan details:

Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	TN/SLM/ MG& DU/ ROMP- 1646-MDS.
	Date	30.03.2021
	Mineral & (Major/Minor)	Major – Magnesite Minor –Dunite
	Mine Lease Area	449.364 Ha.
	Mining Plan Validity	2021-2022 to 2025-2026.
Mining Parameters	Quantitative Description	
Method of Mining	Open Cast Semi Mechanized Mining	
Drilling/Blasting	Deep Hole Drilling 100-104 mm Dia & Small Dia 25 mm Dia Holes.	
Geological Reserves	Magnesite 11.015979 Million Tonnes, Dunite 32.165161 Million Tonnes.	
Mineable Reserves	Magnesite 11.015979 Million Tonnes, Dunite 32.165161 Million Tonnes.	

Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/Waste, MTPA)	Magnesite 61913 T/yr (0.06 MTPA) Dunite 141436 T/yr (0.14 MTPA) Waste 1211009 T/yr (1.2 MTPA) Total ROM/Excavation: 1414358 T/yr (1.4 MTPA)
Life of mine	100 Years
Mine Bench Height & Bench Width	7.5 Mtr Height, 15- 20Mtr Width
No. of Mine Benches	4-5 Average.
Existing Depth, m bgl	20m
Ultimate Depth of Mining, m bgl	320m RL above MSL
Ground Water Table, m bgl	325m & 335mRLaboveMSL.
Details of ground water intersection	Not applicable
Individual bench slope	60° from Horizontal.
Overall pit slope	45°
Details of existing/ proposed Crusher	Nil
Mineral Beneficiation	Not in Mine lease area, but done in Factory.
RoM output size	14,00,000Tonnes.
Transportation details including capacity of dumper/tipper, mode of transport and distance	ROM by Dumpers& Mineral by 10 Tonners.
Generation of Topsoil/OB & its Management during plan period & conceptual period	No Top Soil Generation. OB is stored in spoil dumps for future use.
Generation of Mineral Rejects/Waste & its Management during plan period & conceptual period	Mineral rejects are stacked separately and sold as per market demand.

x. Water requirement:

Total water requirement	70 KLD	Fresh water	70 KLD
		Treated water	
Source	BORE WELL		
Permission for withdrawal/ intersection along with details of grant and its validity	OT8/AG-2/33/2023/Renewal-NOC/SLM/2023 dated 20.02.2023 valid upto 17-Nov-2025.		

xi. Nearest village/town/ highway/interstate boundary/railway station/water bodies/monument/ forest

Particulars	Particular's Name	Distance & Directions
Village	Chettichavadi	850m (E)

Town	Salem		10 Km	
Highway	NH 7 - Salem – Bengaluru. SH 188 – Salem – Yercaud. Muthanaickanpatti Road (Salem)		5.0 km – SW. 3.12km – SE MDR 696. 6.0km - SW.	
Interstate Boundary	N/A		N/A	
Railway Station/Railway line	Salem Junction Railway Station		6 km (S)	
Water Bodies	S.No	Water Body	Direction	Distance
	1	Kannankurichi Lake	SE	4.7
	2	KannankurichiPuthueri	SE	4.64
	3	Thathampatti lake	SE	7.97
	4	Mariamman temple tank	SE	8.75
	5	Selathampattiyeri	SW	7.05
	6	Lake near Vellakalpatti	SW	1.12
	7	Lake near NH 7	SW	2.9
	8	Lake near Indiranagar	SW	3.14
	9	Pallapatti Lake	S	6.50
	10	Arisipalayam lake	S	7.07
	11	Kumaragiri lake	S	8.5
	12	Lake near Muthunaickenpatti	W	10
	13	Lake near Anaigoundampatty Kottagoundampatty Road	W	7.7
	14	Samuthiram Lake	W	4.40
	15	Lake near Pagalpatti	W	6.21
	16	Lake near RC.Chettipatti	NW	8.1
	17	Lake near Kottaimettupatti	NW	7.64
	18	Lake near Kamalapuram	NW	7.72
19	Lake near Vattakkadu	N	4.40	
Forest	Nagarmalai RF		Nagarmalai RF	

xii. Presence of Environmentally Sensitive areas in the study area:

Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
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Forest Land within the mine lease area and (if yes) status of Forest Clearance	NO	The Project Proponent has submitted & informed that No national park, Sancturies, Biosphere reserve, Wildlife Corridors, Ramsar Site, Tiger/Elephant reserves or protected areas within 10km of the ML area vide letter submitted by Tamil Nadu Forest Department vide letter no. C.NO. 2378/2021.D1 dated 04.10.2021.																																	
National Park	NO																																		
Wildlife Sanctuary	NO																																		
Elephant/Tiger Reserve	NO																																		
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area (ESA)	NO	--																																	
Coastal Regulation Zone (CRZ)	NO	--																																	
Schedule-I species (Nos and name of schedule-I species with authenticated letter)	Yes	<p>Revised letter from the Forest Range Officer, TN Forest Department was obtained mentioning the type of Schedule I Species in the study area of 10 Km Radius vide Letter No. C.No.228/2021 dated 13th Feb 2023.</p> <p>As per the list 18 nos. of Schedule-1 Sp. are reported:</p> <table border="1"> <thead> <tr> <th>Sn</th> <th>Common Name</th> <th>Zoological Name</th> </tr> </thead> <tbody> <tr> <td></td> <td>Mammals</td> <td></td> </tr> <tr> <td>1.</td> <td>Gaur</td> <td>Bos Gaurus.</td> </tr> <tr> <td>2.</td> <td>Jungle Cat</td> <td>Felis Chaus</td> </tr> <tr> <td>3.</td> <td>Mouse Deer</td> <td>Tragulus Meminna.</td> </tr> <tr> <td>4.</td> <td>Spotted Deer</td> <td>Axis Axis.</td> </tr> <tr> <td>5.</td> <td>Jackal</td> <td>Canis Aureus</td> </tr> <tr> <td>6.</td> <td>Bonnet-Monkey</td> <td>Macaca Radiada</td> </tr> <tr> <td>7.</td> <td>Devangloris</td> <td>Slender Loris (Loris Lydekkerianus)</td> </tr> <tr> <td>8.</td> <td>Pangolin</td> <td>Manis crassicaudata</td> </tr> <tr> <td>9.</td> <td>Palmcivet</td> <td>Paradoxurus hermaphrodites</td> </tr> </tbody> </table>	Sn	Common Name	Zoological Name		Mammals		1.	Gaur	Bos Gaurus.	2.	Jungle Cat	Felis Chaus	3.	Mouse Deer	Tragulus Meminna.	4.	Spotted Deer	Axis Axis.	5.	Jackal	Canis Aureus	6.	Bonnet-Monkey	Macaca Radiada	7.	Devangloris	Slender Loris (Loris Lydekkerianus)	8.	Pangolin	Manis crassicaudata	9.	Palmcivet	Paradoxurus hermaphrodites
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		10.	Porcupine	Hyxtrix Indica
			Birds	
		11.	Common Peafowl	Pavo Cristatus
		12.	Crested Serpent Eagle	Spilansis Cheela
		13.	Laggar Falcon	Falco Biarmicusjugger
		14.	Harriers Circus	Circus Aerunginosus
		15.	White Scavanger Vulture	Neophron Percnopterus
		16.	White Eyed Buzzard	Butastur Teesa
			Reptiles	
		17.	Python	Python Molurus.
18.	Russel Viper	Vipera (Daboia) russelli		
Wildlife Conservation Plan	Yes	Wildlife Conservation Plan along with the budgetary Provisions with timeline for implementation has been prepared and submitted to DFO, TN, Forest Department, Salem vide Letter SL:MM: 26150. PP has obtained acknowledgement vide letter dated 09.03.2023.		

xiii. Green belt/plantation details:

Proposed area for green belt/plantation and no. of saplings proposed	13.2 Ha/ 19800 saplings
Budget for green plant & plantation till the end of life of mine.	Rs.13,50,000/-
Budget for nursery	Rs.2,00,000 per Annum
Details of existing plantation and its survival rate	67674 with Survival rate of 60-70% as on February 2024.
No. of tree cuts in the mine lease area and compensatory afforestation	N.A.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	15 Ha
50 m safety zone of nallah, roads, electric lines	1.5 Ha

500 m safety zones of nearest habitation villages	5 Ha
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xiv. Baseline detail:

Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)										
Period of baseline data collection	December 1 st , 2020 to February 28 th 2021									
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Winter Season									
Predominant Wind direction (From)	From SW, S and SE									
Ambient Air Quality (no. of locations) and results	6 locations, PM10 – 39µg/m ³ to 60µg/m ³ PM2.5 – 19µg/m ³ to 33 µg/m ³ SOx – 4µg/m ³ to 13µg/m ³ NOx – 8µg/m ³ to 19µg/m ³									
Noise level (no. of locations) and results	5 locations 40.8 to 46.2 dBA for the day time and 34.1 to 41.8 dBA for the Night time									
Water Quality (no. of locations) and results	6 locations pH 7.43-9.48, TDS334 mg/l to 906 mg/l, Total Hardness 190 mg/l to 280 mg/l, Chlorides 22 mg/l to 58 mg/l, Heavy metals Fe - 0 To 0.12 mg/l									
Soil Quality (no. of locations) and results	6 locations pH – 7.46 to 8.64 moisture – 5.46% to 6.56% bulk density – 1.21g/cc to 1.47mg/l organic matter – 0.31% to 0.76% Water holding capacity – 47% to 56%									
Hydro geological study and results	The detailed Hydro geological study is given in Page No 130(i) to 130(xxxviii) of Final EIA report (Volume I)									
Traffic study (no. of locations) and results	a. Traffic study has been conducted at Single lane village hard road which passes into the lease area.									
	b. Transportation of raw material, fuel & finished product will be done 80% by road.									
Traffic study (no. of locations) and results	c. Existing PCU is 68 PCU/day on Single lane village hard road and existing level of service (LOS) is:									
	<table border="1"> <thead> <tr> <th>Road</th> <th>V (Volume In PCU/day)</th> <th>C (Capacity In PCU/ day.)</th> <th>Existing V/C Ratio</th> <th>LOS</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Road	V (Volume In PCU/day)	C (Capacity In PCU/ day.)	Existing V/C Ratio	LOS				
Road	V (Volume In PCU/day)	C (Capacity In PCU/ day.)	Existing V/C Ratio	LOS						

Single lane village hard road	68	2500	0.0272	2.72
d. PCU load after proposed project will be 68 (Existing) +45(Additional) = 113 PCU/hr and level of service (LOS) will be:				
Road	V (Volume In PCU/Day)	C (Capacity In PCU/day)	Proposed V/C Ratio	LOS
Single lane village hard road	113	2500	0.0452	4.52
*Note: Capacity as per IRC73:1980 Guideline for Capacity for roads.				
Conclusion: The level of service will be 4.52 after including additional traffic due to proposed project.				

xv. Public Hearing (PH) Details:

Advertisement for PH with date (name of major national daily and one regional vernacular daily newspaper)	01.08.2021
Date of PH	03.09.2021
Venue	Dalmia Old Colony Canteen Building. Opp. Wiegh Bridge. Chettichavadi Village, Salem West Taluk, Salem District, TAMIL NADU-636012.
Chaired by	Dist. Collector & District Environmental Engineer, TNPCBD.
Main issues raised during PH	Employment for the local villages.
Budget proposed for addressing issues raised during PH over 3 years	Rs.39.14 Lakhs.

xvi. Details of CTE/CTO, Certified Compliance Report, Certified Production Details from the inception of the mine:

Particulars	Details of Letter along with date of grant and validity
Certified Production Details from the inception of the mine (in tabular form against the EC capacity)	The Duly Authenticated Production Details from 1979-80 to 2018-19 as per the Certificate issued by Department of Geology and Mining Salem vide letter ROC.45/2018/Mines-A dated 11.12.2018 is submitted in Final EIA/EMP Report, Table format of

	certified production against EC has been submitted as per standard format.
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xvii. Rehabilitation & Resettlement (R&R):

R & R details	The Project Proponent has informed that no R&R involved in the instant proposal.
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xvii. Court case details:

Court Case, No and its present status	<p>Detail of total 9 court cases are mentioned below:</p> <ol style="list-style-type: none"> 1. W.P.25518/2006 Madras HC 2. Writ Petition No.29275 of 2016 Madras HC 3. Writ Petition (Civil) No. 114 of 2014 of Supreme Court 4. District Collector, Salem has also raised another demand vide order dated 8thJuly, 2020 directing project proponent to pay sum of INR 7.24 Crore on the quantity of Magnesite mined without EC for the period 1stApril, 2000 to 31stAugust, 2018. 5. District Collector's demand of surface compensation of Rs.79,88,39,062 from 20.08.19 66 till 31.10.2017. 6. Show cause vide Proceeding Letter No. SLM0006/DEE/TNPCC/S LM/RL/2014, dated 03.06.2014 by Tamil Nadu State Pollution Control Board U/s 19 of Environment Protection Act. 7. Show Cause vide Proceeding Letter No. FEF/TNPCC/SLM/F/006/20 by Tamil Nadu State Pollution Control Board U/s 19 of Environment Protection Act dated 4th May, 2020. 8. Show cause Notice dated 5thFebruary, 2013 under Water Act. Show cause Notice dated 5th February, 2013 under Air Act. 9. Environmental Activist Mr.S.Sakthivel filed a petition before the Hon'ble NGT (SZ) raising certain Environmental issues against 6 respondents.
Undertaking by Project Proponent w.r.t court case.	Affidavit Sworn on 22.04.2023 in a non-judicial stamp of Rs 100 bearing No. CZ – 744433 dated 21.04.2023.

A. The PP filed a separate W.P. 22888 of 2023 praying that Ministry should consider there EC proposal without insisting on pre-payment of INR 11.44 crore and INR 7.24 crore in light of Hon'ble Supreme Court order dated 02.08.2017 passed in WP(C) no 114 of 2014 (Common Cause vs. Union of India). Hon'ble Madras High Court passed an order dated 03.04.2024 directing-

"2. The petitioner's application for grant of Environmental Clearance shall be considered by the 1st respondent and the 1st respondent is directed to consider the

petitioner's application in accordance with law without insisting any payment towards the alleged liability that arise out of the previous order passed by the 3rd respondent demanding huge sum by way of damages for mining without Environmental Clearance on the basis of judgment of Hon'ble Supreme Court, subject to filing of an affidavit of undertaking from the petitioner that the petitioner would pay whatever amount that is finally determined by way of compensation for previous mining operation without Environmental Clearance. This interim order is without prejudice to the contentions of parties in the main writ petition.

(3) The 1st respondent (MoEF&CC) is directed to pass orders on or before 15.06.2024.

(4) It is needless to state that the petitioner Company is required to comply with all statutory norms and satisfy all regulations and other conditions. If there is any difficulty that may arises for the 1st respondent to consider the application of the petitioner with the available materials, a fair opportunity to the petitioner should be given in advance so that the petitioner will satisfy the requirements then and there. It is also open to the 1st respondent to approach this Court for any clarification if they require.”

- B. As per the Ministry's OM dated 30.05.2018, it was mentioned that in order to comply with the directions given by the Hon'ble Supreme Court, it has been decided to include the following additional conditions in TORs/ECs to be issued for mining projects under the provisions of S.O. 804 (E) dated 14.03.2017 and subsequent amendments: -
- a. The project proponent shall give an undertaking by way of affidavit to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors. before grant of ToR/ EC. The undertaking inter-alia include commitment of the PP not to repeat any such violation in future.
 - b. In case of violation of above undertaking, the ToR/Environmental Clearance shall be liable to be terminated forthwith.
 - c. The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 27th August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
 - d. State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

xviii. Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018.	Affidavit Sworn on 22.04.2023 in a non-judicial stamp of Rs 100 bearing No. CZ – 744433 dated 21.04.2023.
Undertaking by Project Proponent in EIA/EMP report	The Project Proponent has submitted an undertaking with regard to Ministry's OM dated 05.10.2021.
Undertaking by Consultant in EIA/EMP report	Undertaking by the Environment consultant has been submitted as per Ministry's OM dated 04.08.2009.

xix. Details of the Environmental Management Plan (EMP):

S.No.	Activities	Capital cost (INR)	Recurring cost (Lakhs/annum)
1	Safety kits for 320 persons @ Rs 1000 per head	Rs. 3,20,000	Rs.2,00,000
2	Water Sprinkling & Spraying	Rs.15,00,000	Rs.8,00,000
3	Afforestation for @ 75 per tree	Rs. 3,00,000	Rs.3,00,000
4	Noise & Vibration	--	Rs.2,50,000
5	Air Quality Monitoring and Water Testing	-	Rs.1,50,000
6	Drainage- Parapet -Retention Wall	Rs. 5,00,000	Rs.3,00,000
	Total	Rs. 26.2 Lakhs	Rs.20.0 Lakhs
S.No.	Description	Estimated cost (Rs.in Lakhs)	
1	Budgetary provisions to implement the commitment based on Public Hearing	Rs. 39.14 Lakhs	
Summary of cost allocated for Remediation plan, NRAP, CRAP			
S.No.	Description	Estimated cost (Rs.in Lakhs)	
1	Remediation Plan	Rs.162.50/-	
2	Natural Resources Augmentation Plan	Rs.236.00/-	
3	Community Resources Augmentation Plan	Rs.208.44/-	
	Total	Rs.606.94	

Detail Budgetary provisions for Natural Resource Augmentation Plan:

Natural Resource Augmentation Plan (Cost in Rs.Lakhs)										
Sl. No.	Component Remediation	Proposed Activity	Description	Locations	Unit Rate in Rs.	Total Qty.	Total Cost	Phasing years		
								Year-I	Year-II	Year-III

1.	Natural Resource Augmentation Plan	Water Management & Ground Water Recharge	Development of Rain Water Harvesting and ground water recharge structure 5 Nos Each in nearby 5 villages	1. Chettichavadi- 10 Nos 2. Velakkalpatti -10 Nos 3. Kondapanayakanpatti -10 Nos 4. Senaigowandanur -10 Nos 5. Karuppur-10 Nos	Rs.57000/one unit	50 nos.	Rs. 28.5	Rs. 9.5	Rs. 9.5	Rs. 9.5	
			Restoration and Cleaning of water bodies like ponds, Nallahs, Streams, etc in and around the lease area	1. Chettichavadi Village 2. Velakkalpatti Village 3. Kondapanayakanpatti Village.	Rs.13,00,000/each village	5 nos.	Rs. 65.00	Rs. 21.66	Rs. 21.66	Rs. 21.66	
2.			Construction of Check Dams of size 4 Mtr Length X 2 Mtr Height X 1 Metre Width in nearby villages	1. Chettichavadi Village 2. Velakkalpatti Village 3. Kondapanayakanpatti Village.	Rs.13,00,000/each village	5 nos.	Rs. 65.00	Rs. 21.66	Rs. 21.66	Rs. 21.66	
3.		Energy Conservation by adapting Green Energy technology	Providing 40 W Solar Street Lighting (including panels, inverters, wiring, structure, connectors, junction boxes, etc.) in nearby villages @ Rs.77, 500 per unit.	1. Chettichavadi Village – 20 Nos 2. Outside area Around ML area – 30 Nos 3. Sides of Public roads connecting ML Boundary gate till factory gate - 50 Nos	Rs.77,500/one unit	100 nos.	Rs. 77.5	Rs. 25.83	Rs. 25.83	Rs. 25.83	
Sub-Total – A (2a+2b+2c)								Rs. 236.00	Rs. 78.65	Rs. 78.65	Rs. 78.7

Detail Budgetary provisions for Community Resource Augmentation Plan:

Community Resource Augmentation Plan (Cost in Rs. Lakhs)										
Sl. No.	Component Remediation	Proposed Activity	Description	Locations	Unit Rate in Rs.	Total Qty.	Total Cost	Phasing years		
								Year- I	Year- II	Year- III
1.	Community Resource Augmentation Plan	Development of infrastructure	Construction / expansion of following as per requirement from local village panchayats or municipality in nearby villages at Rs.50,00,000/- per village Public Toilets / Bath Rooms Overhead Water Storage Tanks	1. Chettichavadi Village 2. Velakkalpatti Village 3. Kondapanaickanpatti Village 4. Karuppur Town Panchayat	Rs.50,00,000/- per village	4 Nos Villages	Rs. 132.00	Rs. 44.00	Rs. 44.00	Rs. 44.00

			Compound Wall around Buildings at nearby Government Schools. Bus stops Public Library Public Children park Primary Health centre							
2.	Supply of Equipment's	Provision of following in nearby government schools, Sports Materials @ Rs.1.5 Lacs Lump Sum cost 1 Nos Water Purifiers @ Rs.0.5 each cost Computers with Network facility facilitating Smart Class @ Rs.3 Lacs Lump Sum cost	1. Chettichavadi Village = 2 Schools 2. Velakalpatti Village = 1 School	Rs.5,00,000/- per School	3 Nos.	Rs. 15.00	Rs. 5.00	Rs. 5.00	Rs. 5.00	
3.	Improving socio-economic & Health conditions	Providing following medical equipment's to nearby Primary Health Centres. 5 Nos Patient Beds with height adjustment @ Rs.0.25 Lac each unit 1 Nos ECG Machine @ Rs.0.5 Lacs Each unit 1 Nos Portable X-Ray Machine @ Rs.1.5 Lacs each unit 5 Nos Vital Monitors @ Rs.1.00 Lac Each 8 Nos SHYCOCAN (Viral Attenuation Device including CoVID 19) @ Rs.0.30 Lacs each	1. Chettichavadi Village 2. Velakalpatti Village 3. Kondapanaickanpatti Village 4. Karuppur Town Panchayat	Rs.10,24,000/- per village	6 Nos	Rs. 61.	Rs. 18.35	Rs. 18.34	Rs. 18.34	
	Sub-Total – C (3a+3b+3c)						Rs. 208.44	Rs. 69.48	Rs. 69.48	Rs. 69.48

Grand Total A +B +C (Rs.)	Rs. 606.94	Rs. 200.63	Rs. 200.63	Rs. 205.68
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xx. Details of project cost and employment:

Particulars	(Rs. In Crore)
Total cost of EMP (Capital Cost of EMP + capital cost of Public hearing)	0.653 crore (0.262 + 0.3914)
Project Cost	19.57 crore
Employment (Nos)	350 Persons.

3. Observation and Recommendation of the Committee:

The instant proposal is for Environmental Clearance under violation category considered in accordance with the Ministry's Notification dated S.O. 804(E) dated 14.03.2017. The Public Hearing for the instant project was conducted on 03.09.2021 after obtaining ToR (under violation category) for mining of Magnesite and Dunite in Chettichavadi Jaghir Magnesite and Dunite Mine.

PP appraised the EAC about the direction passed by the Hon'ble Madras High Court vide their order dated 03.04.2024 passed in W.P. 22888 of 2023. The order in verbatim is given as under:

"2. The petitioner's application for grant of Environmental Clearance shall be considered by the 1st respondent and the 1st respondent is directed to consider the petitioner's application in accordance with law without insisting any payment towards the alleged liability that arise out of the previous order passed by the 3rd respondent demanding huge sum by way of damages for mining without Environmental Clearance on the basis of judgment of Hon'ble Supreme Court, subject to filing of an affidavit of undertaking from the petitioner that the petitioner would pay whatever amount that is finally determined by way of compensation for previous mining operation without Environmental Clearance. This interim order is without prejudice to the contentions of parties in the main writ petition.

(3) The 1st respondent (MoEF&CC) is directed to pass orders on or before 15.06.2024.

(4) It is needless to state that the petitioner Company is required to comply with all statutory norms and satisfy all regulations and other conditions. If there is any difficulty that may arises for the 1st respondent to consider the application of the petitioner with the available materials, a fair opportunity to the petitioner should be given in advance so that the petitioner will satisfy the requirements then and there. It is also open to the 1st respondent to approach this Court for any clarification if they require."

The Project Proponent presented the reply of ADS points raised on 14.03.2024 before the EAC. The Project Proponent informed the Committee that they have filed their reply and the matter with regard to the construed show cause notice is pending before the District Collector and the Deputy Director, Department of Geology and Mining, Salem.

The EAC noted that the PP has submitted an affidavit dated 08.04.2024 on Rs 100 non judicial stamp (DR 283734) in compliance of the direction passed by the Hon'ble Madras High Court dated 03.04.2024 in W.P. 22888 of 2023. Vide aforesaid affidavit, PP has stated that they will pay whatever amount that would be finally determined by way of compensation for previous mining operation without Environmental Clearance.

Based on the above, EAC **recommended** the proposal in the 29th EAC meeting held during 9-10th May, 2024 for Environmental Clearance (Violation category considered under Ministry's Notification dated S.O. 804(E) dated 14.03.2017) for Chettichavadi Jaghir Magnesite and Dunite Mine with total excavation of 1.4 MTPA (including Magnesite of 0.06 MTPA, Dunite of 0.12 MTPA and others such as waste, O.B, Inter Burden, Top Soil of 1.22 MTPA) in the mine lease area of 449.364 ha of M/s. Dalmia Bharat Sugar and Industries Limited located at Chettichavadi Village, Salem Taluk, Salem District, Tamil Nadu under provisions of EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed:

Specific conditions:

- i. The Environmental Clearance will be valid till the validity of Mine lease i.e. 31.03.2030.
- ii. The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- iii. State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- iv. EAC recommended for an amount of Rs.606.94 Lakhs /- towards Remediation plan and Natural and Community Resource Augmentation plan to be spent within a span of three years. The details of Remediation plan, Natural resource Augmentation plan and Community Resource Augmentation plan with budgetary provisions are mentioned below:

Budget allocated for Remediation plan, NRAP, CRAP		
S.No.	Description	Estimated cost (Rs.in Lakhs)
1	Remediation Plan	Rs.162.50/-

2	Natural Resources Augmentation Plan	Rs.236.00/-
3	Community Resources Augmentation Plan	Rs.208.44/-
	Total	Rs.606.94

Detail Budgetary provisions for Natural Resource Augmentation Plan:

Natural Resource Augmentation Plan (Cost in Rs. Lakhs)										
Sl. No.	Component Remediation	Proposed Activity	Description	Locations	Unit Rate in Rs.	Total Qty.	Total Cost	Phasing years		
								Year-I	Year-II	Year-III
1.	Natural Resource Augmentation Plan	Water Management & Ground Water Recharge	Development of Rain Water Harvesting and ground water recharge structure 5 Nos Each in nearby 5 villages	1. Chettichavadi- 10 Nos 2. Velakkalpatti -10 Nos 3. Kondapanayakanpatti -10 Nos 4. Senaigowandanur -10 Nos 5. Karuppur-10 Nos	Rs. 57000/one unit	50 nos.	Rs. 28.5	Rs. 9.5	Rs. 9.5	Rs. 9.5
			Restoration and Cleaning of water bodies like ponds, Nallahs, Streams, etc in and around the lease area	1. Chettichavadi Village 2. Velakkalpatti Village 3. Kondapanayakanpatti Village.	Rs.13,00,000/each village	5 nos.	Rs. 65.00	Rs. 21.66	Rs. 21.66	Rs. 21.66
2.			Construction of Check Dams of size 4 Mtr Length X 2 Mtr Height X 1 Metre Width in nearby villages	1. Chettichavadi Village 2. Velakkalpatti Village 3. Kondapanayakanpatti Village.	Rs.13,00,000/each village	5 nos.	Rs. 65.00	Rs. 21.66	Rs. 21.66	Rs. 21.66
3.		Energy Conservation by adapting Green Energy technology	Providing 40 W Solar Street Lighting (including panels, inverters, wiring, structure, connectors, junction boxes, etc.) in nearby villages @ Rs.77, 500 per unit.	1. Chettichavadi Village – 20 Nos 2. Outside area Around ML area – 30 Nos 3. Sides of Public roads connecting ML Boundary gate till factory gate - 50 Nos	Rs.77,500/one unit	100 nos.	Rs. 77.5	Rs. 25.83	Rs. 25.83	Rs. 25.83
Sub-Total – A (2a+2b+2c)							Rs. 236.00	Rs. 78.65	Rs. 78.65	Rs. 78.7

Detail Budgetary provisions for Community Resource Augmentation Plan:

Community Resource Augmentation Plan (Cost in Rs. Lakhs)										
Sl. No.	Component Remediation	Proposed Activity	Description	Locations	Unit Rate in Rs.	Total Qty.	Total Cost	Phasing years		
								Year-I	Year-II	Year-III

1.	Community Resource Augmentation Plan	Development of infrastructure	Construction / expansion of following as per requirement from local village panchayats or municipality in nearby villages at Rs.50,00,000/- per village Public Toilets / Bath Rooms Overhead Water Storage Tanks Compound Wall around Buildings at nearby Government Schools. Bus stops Public Library Public Children park Primary Health centre	1. Chettichavadi Village 2. Velakkalpatti Village 3. Kondapanaickanpatti Village 4. Karuppur Town Panchayat	Rs.50,00,000/- per village	4 Nos Villages	Rs. 132.00	Rs. 44.00	Rs. 44.00	Rs. 44.00
2.		Supply of Equipment's	Provision of following in nearby government schools, Sports Materials @ Rs.1.5 Lacs Lump Sum cost 1 Nos Water Purifiers @ Rs.0.5 each cost Computers with Network facility facilitating Smart Class @ Rs.3 Lacs Lump Sum cost	1. Chettichavadi Village = 2 Schools 2. Velakkalpatti Village = 1 School	Rs.5,00,000/- per School	3 Nos.	Rs. 15.00	Rs. 5.00	Rs. 5.00	Rs. 5.00
3.		Improving socio-economic & Health conditions	Providing following medical equipment's to nearby Primary Health Centres. 5 Nos Patient Beds with height adjustment @Rs.0.25 Lac each unit 1 Nos ECG Machine @ Rs.0.5 Lacs Each unit 1 Nos Portable X-Ray Machine	1. Chettichavadi Village 2. Velakkalpatti Village 3. Kondapanaickanpatti Village 4. Karuppur Town Panchayat	Rs.10,24,000/- per village	6 Nos	Rs. 61.	Rs. 18.35	Rs. 18.34	Rs. 18.34

			@ Rs.1.5 Lacs each unit 5 Nos Vital Monitors @ Rs.1.00 Lac Each 8 Nos SHYCOCAN (Viral Attenuation Device including CoVID 19) @ Rs.0.30 Lacs each							
Sub-Total – C (3a+3b+3c)							Rs. 208.44	Rs. 69.48	Rs. 69.48	Rs. 69.48
Grand Total A +B +C (Rs.)							Rs. 606.94	Rs. 200.63	Rs. 200.63	Rs. 205.68

- v. Total budgetary provision with respect to Remediation plan and Natural & Community Resource Augmentation plan is Rs. 606.94/- Lakhs. Therefore, Project Proponent shall be required to submit a bank guarantee of an amount of Rs. 606.94/- Lakhs towards Remediation plan and Natural and Community Resource Augmentation plan with the SPCB prior to the grant of EC.
- vi. Remediation plan shall be completed in 3 years whereas bank guarantee shall be for 5 years. The bank guarantee will be released after successful implementation of the remediation plan and Natural and Community Resource Augmentation Plan, and after the recommendation by regional office of the Ministry, Expert Appraisal Committee and approval of the Regulatory Authority.
- vii. The Project Proponent needs to submit the action taken report on plantation, damage recovery, Natural Resource Augmentation Plan (NRAP), Community Resource Augmentation Plan (CRAP) annually to the Ministry's Regional Office which should be monitorable and verifiable. The period of addressing these issues is restricted to a period of 3 years.
- viii. The Project Proponent shall continue to monitor the air quality, noise level, water quality, water level and ground vibration during drilling and blasting at lease boundary of the mine, near the village, and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Integrated Regional Office.
- ix. The Project Proponent should install the one Continuous Ambient Air Quality Monitoring Stations (CAAQMS) as per the scientific study and in consultation with CPCB/SPCB. The real time data so generated should be displayed digitally at entry and exit gate of mine lease area for public display and shall be linked to server of CPCB/SPCB.
- x. The Project Proponent needs to use modern equipment's such as Camera Traps for ensuring presence and movement of wild animals in the study area in consultation with Wildlife Wing of Forest Department. Appropriate interventions shall be taken to minimise stress conditions for wild animals and to avoid Man-Animal conflict.

- xi. The Project Proponent should follow-up the status of implementation on Wildlife Conservation Plan from the Forest Officials and the same shall be submitted to the Ministry's Regional Office in the six monthly compliance report.
- xii. The Project Proponent needs to install the permanent water sprinklers instead of water tankers along the haul road and the approach road. Further, 10 nos. of fog canon/mist sprayer of atleast 40 m throw shall be installed at various locations in the mine area. Effective dust suppression system shall also be adopted at other parts of the mining lease to arrest the fugitive dust emission.
- xiii. The Project Proponent shall explore the possibility of using atleast 20% of Electric vehicles/CNG/Solar instead of diesel operation within three years.
- xiv. The air pollution control equipment's like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed near the areas that are prone to air pollution. PP shall take necessary measures to avoid generation of fugitive dust emissions.
- xv. The Project Proponent should adopt the proper mitigation measures as proposed under EMP with budgetary provision of Rs. 0.262 Crores (capital cost) and Rs. 0.20 Crores (Recurring cost). The adoption of mitigation measures and monitoring of the same as proposed in the EMP shall be done under the supervision of the qualified environmental personnel. The implementation status of the same shall be submitted to the Ministry's Regional Office. The details of EMP with budgetary provisions are mentioned below:

S.No.	Activities	Capital cost (INR)	Recurring cost (Lakhs/annum)
1	Safety kits for 320 persons @ Rs 1000 per head	Rs. 3,20,000	Rs.2,00,000
2	Water Sprinkling & Spraying	Rs.15,00,000	Rs.8,00,000
3	Afforestation for @ 75 per tree	Rs. 3,00,000	Rs.3,00,000
4	Noise & Vibration	--	Rs.2,50,000
5	Air Quality Monitoring and Water Testing	-	Rs.1,50,000
6	Drainage- Parapet -Retention Wall	Rs. 5,00,000	Rs.3,00,000
	Total	Rs. 26.2 Lakhs	Rs. 20.0 Lakhs

- xvi. The Project Proponent should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any non-compliance or infringement should be reported to the concerned authority.
- xvii. The Project Proponent shall conduct third party audit of compliance of EC condition at an interval one year and its report shall be submitted to IRO, MoEF&CC.

- xviii. The Project Proponent shall ensure the survival rate of 95% for planting the peripheral, safety barrier plantation and gap plantation. The project Proponent should plant quality sapling of appropriate height of native and fruit bearing species. In case of tall transplants (seedlings) the seedlings should have proper trained root stock with root biomass commensurate with seedling height to ensure good growth after out planting. The Project Proponent shall implement the practice of drip irrigation for plantation. Plantation shall be undertaken in consultation with the State Forest Department. The entire peripheral plantation safety barrier plantation and gap plantation needs to be completed within 3 years from the start of mining operations. Project proponent shall use saplings of 10 ft height for plantation.
- xix. The budget of Rs. 0.3914 crore to address the concerns raised by the public in the public hearing to be completed within 3 years from the date of start of mining operations. PP shall comply with all action plans made for public hearing concerns and make regular maintenance and record the progressive activity outcomes. The Project proponent shall ensure that the activities proposed under the public hearing is different from the CSR activities.
- xx. The Project Proponent needs to provide the RO drinking water supply and also by laying network of pipelines to the local people at free of cost.
- xxi. The Project Proponent shall provide the rainwater harvesting structure at mine office and quarters to recharge the ground water.
- xxii. The Project Proponent shall also organize employment-based apprenticeship/ internship training program every year with appropriate stipend for the youth and other programs to enhance the skill of the local people. The data should be maintained for the training imparted to the persons and the outcome of the training, for the assessment of the training program should be analyzed periodically and improved accordingly.
- xxiii. The Project Proponent should periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance shall be carried through regular occupational health check-up every year for mine workers. PP shall also organize medical camp for the benefit of the local people and also the monitor the health impacts due to mining activity.
- xxiv. The mining lease holders shall, after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The implementation report of the above said condition shall be submitted to the Ministry's Integrated Regional Office.
- xxv. Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable.
- xxvi. Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.

- xxvii. The Project Proponent shall ensure that the protection and management of the water bodies should include provision of utilizing available water to the villagers by installing solar pumps as well as project proponent shall explore the possibility for installing floating solar panels for generation of electricity and distribution of power supply to the villagers.
- xxviii. Mist spray arrangement shall be made at all the transfer points. PP should also provide duct hoods at all dust generating points including transfer points along with Bag filter.
- xxix. The Project Proponent needs established water treatment facility for the drinking purposes within the ML area and submission of six-monthly report including the relevant photographs.
- xxx. The Project Proponent needs to conduct the study w.r.t. the impact of mining upon Ground water for identifying status of PH and other parameters of ground water and submit a report to the IRO, MoEF&CC within six-month.
- xxxi. The Project Proponent shall create awareness among the local people working within the project area as well as its surrounding area on the ban of Single Use Plastic (SUP) in order to ensure the compliance of Notification published by MoEF&CC on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report.

1.2. Magnesite and Dunite mining with the Production Capacity of 26,43,936 MTPA ROM (which includes 115071 TPA Magnesite and 67104 TPA Dunite) in the ML area of 622.29 Ha of M/s SAIL Refractory Company Limited located at Village Thathaiyanagarpatti, Moongilpadi, Karuppur, Vellakkapatti, Mallamoopanpatti Taluk Omalur & Salem, District Salem, Tamil Nadu – [Online Proposal No. IA/TN/MIN/465426/2024, File No. 23-166/2018-IA.III (V), EIA Consultant - VARDAN ENVIRONET] - Environmental Clearance (Violation category under Ministry's Notification dated S.O. 804(E) dated 14.03.2017) reg.

The instant proposal is for grant of Environmental Clearance (Violation category under Ministry's Notification dated S.O. 804(E) dated 14.03.2017) for Magnesite and Dunite mining with the Production Capacity of 26,43,936 MTPA ROM (which includes 115071 TPA Magnesite and 67104 TPA Dunite) in the ML area of 622.29 Ha of M/s SAIL Refractory Company Limited located at Village Thathaiyanagarpatti, Moongilpadi, Karuppur, Vellakkapatti, Mallamoopanpatti Taluk Omalur & Salem, District Salem, Tamil Nadu.

2. The details of the project as ascertained from the document submitted by the Project Proponent and as revealed from the discussions held during the meeting are given as under:

- i. The mine lease area is located between Latitude: 11⁰41'19.86645" N to 11⁰44'55.08940" N and Longitude: 78⁰05' 10.30542" E to 78⁰08'51.75760" E. The

mine lease area falls under the Survey of India Toposheet No: 58-I/02 and falls in Seismic Zone-III.

ii. Details of ToR:

Date of application	Proposal No/ File No	Details of ToR	Date of accord
31.01.2017	IA/TN/MIN/62144/2017 F.No.23-166/2018-IA. III(V)	Terms of References (ToR) was issued vide F.No.23-166/2018-IA.III(V) dated 17.09.2021.	17.09.2021

iii. Details of Mine Lease:

S.No	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of Grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1.	The Mining Lease was granted to M/s Burn Standard Company Ltd. (BSCL, A Govt. of India Undertaking) Salem-636005, Tamil Nadu for a period of 20 years vide G.O. No. 853 dated 05.06.1979, over an extent of 622.69 Ha and the lease deed was executed on 21.04.1980 for a period of 20 years and expires on 20.04.2000.	05.06.1979	Magnesite	20 Years	State Govt. of Tamil Nadu	622.69
2.	Supplementary Lease Deed was executed on 20.03.1989 for exploitation of	20.03.1989	Magnesite & Dunite	--	State Govt. of Tamil Nadu	622.69

S.No	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of Grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
	Dunite in addition to magnesite.					
3.	Ministry of Heavy Industries & Public Enterprises, Gol, vide memo dated 17.11.2011 transferred the Refractory unit of M/s BSCL at Salem with all assets, and liabilities to M/s Steel Authority of the India Limited (SAIL). Accordingly, M/s Steel Authority of the India Limited (SAIL) owned the entire lease and Refractory Plant and named the unit as SAIL Refractory Company Limited (SRCL) w.e.f. 16.12.2011. After taking over SRCL also continued mining with valid Consent to Operate from Tamil Nadu Pollution Control Board.	17.11.2011	Magnesite &Dunite	20 Years	Ministry of Heavy Industries & Public Enterprises	622.69

S.No	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of Grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
4.	Industries, Investment Promotion and Commerce (MMA.1) Department, Secretariat, Chennai - 600009, Tamil Nadu vide their letter No 10839/MMA.1/2019-2 Dated: 02.11.2022 issued Letter of Intent to SAIL Refractory Company Limited in respect of the mining lease granted in G.O No.853, dated 05.06.1979.	02.11.2022	Magnesite & Dunite	Lease valid up to 20.04.2029	State Govt. of Tamil Nadu	622.67 hectares

Additional information as provided by the Project Proponent is given as under:-

- The application for renewal of mining lease was made by M/s Burn Standard Company Ltd. as per norms on 14.04.1999, i.e. one year before the expiry of mining lease and mining was continued under deemed condition with valid Consent to Operate (CTO) from Tamil Nadu Pollution Control Board.
- During the process of Transfer of lease in name of SRCL from BSCL, Government of Tamil Nadu sought for a payment of EC violation amount of Rs. 36.76 Crores in respect for G.O. No. 853. Subsequently, SRCL has paid EC violation amount of Rs. 36.76 Crores on 11.01.2022.

Details of grant of Mine Lease deed execution:

S. No	Details of grant of Mine Lease deed execution	Period of Grant		Name of the Mineral	ML area (Ha)
		From	To		
1.	Industries, Investment Promotion and Commerce (MMA.1) Department, Secretariat, Chennai - 600009, Tamil Nadu vide their letter No 10839/MMA.1/2019-2 dated 02.11.2022 issued Letter of Intent to SAIL Refractory Company Limited in respect of the mining lease granted in G.O No. 853, dated 05.06.1979.	02.11.2022	20.04.2029	Magnesite &Dunite	622.69

iv. Land Use/Land Cover of the Mine Lease Area:

Private land	Nil
Government land	622.69
Forest land	Not Applicable
Total Mining lease area (MLA), ha	622.69
Private land for crusher, workshop & other infrastructure outside the MLA	Not Applicable

v. Mining Plan details:

Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	TN/SLM/MG&DU/ROMP-1589.MDS
	Date	03.08.2020
	Mineral & (Major/Minor)	Magnesite: Major Dunite: Major
	Mine Lease Area, Ha	622.69 Ha
	Validity	5 years
Mining Parameters	Quantitative Description	
Method of Mining	Other than Fully Mechanized Opencast Mining method	
Drilling/Blasting	6 m	
Geological Reserves	Magnesite: 23.95 Million Tonnes Dunite:16.423 Million Tonnes	
Mineable Reserves	Magnesite: 0.745 Million Tonnes Dunite:0.654 Million Tonnes	

Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	2643936 MTPA ROM
Life of mine	About 10 years (Based on detailed exploration life of mine can change)
Mine Bench Height & Bench Width	6/6m
No. of Mine Benches	NA
Existing Depth, m bgl	NA
Ultimate Depth of Mining, m bgl	Block II: 48m
Ground Water Table, m bgl	Pre-Monsoon: On the basis of depth of water level of the study area, the pre monsoonal depth to water level varies from less than 25.78 to 61.12 m bgl in the study area. Post-Monsoon: On the basis of depth of water level of the study area, the post monsoonal depth to water level varies from less than 20.00 to 59.14 m bgl in the study area.
Details of ground water intersection	The Water table is found at a depth of 55m during summer and 52m (285 to 290 m RL) during rainy season. The depth of water table fluctuation is verified by observing the water levels in the above seasons in the nearby wells. <ul style="list-style-type: none"> • Maximum Depth of Working: 349m RL in Red Hills (Block-I) • Maximum Depth of Working: 330m RL in Block-II From above it is clear that working will not intersect ground water table.
Individual bench slope	60 ⁰
Overall pit slope	45 ⁰
Details of existing/ proposed Crusher	Not Applicable
Mineral Beneficiation	Not Applicable
RoM output size	2643936 MTPA ROM
Transportation details including capacity of dumper/tipper, mode of transport and distance	Within Lease After drilling blasting excavated ROM will be shifted to spoil banks by using Excavator & 15 tonne tipper combination Outside Lease

	The magnesite and dunite minerals from spoil bank will be transported to SRCL factory using hired trucks of 10 tonnes capacity.
Generation of Topsoil/OB & its Management during plan period & conceptual period	There is no generation of Top soil from the mine. Entire Overburden/waste generated from the mine has been planned to be dumped inside the existing mine lease area.
Generation of Mineral Rejects/Waste & its Management during plan period & conceptual period	Entire Overburden/waste generated from the mine has been planned to be dumped inside the existing mine lease area.

vi. Water requirement:

Total water requirement	90 KLD	Fresh water	90 KLD
		Treated water	--
Source	This water will be supplied from the available bore holes present in the mining lease area.		
Permission for withdrawal/intersection along with details of grant and its validity	PP has submitted the application to Water Resource Department, Chennai for ground water withdrawal.		

vii. Nearest village/ town/ highway/ interstate boundary/railway station/water bodies/monument/ forest

Particulars	Particular's Name	Distance & Directions	
Village	Karuppur	1.22 Km in WSW	
Town	Salem - Block (Block 1-3) (Block 4)	10 km in SE 6 Km in SE	
Highway	NH 7/NH 44	Block	Distance & Direction
		Block- (1-3)	2 Km, SW
		Block 4	800 m, NE
Interstate Boundary	None within 10 km radius	-	
Railway Station/Railway line	Salem Railway station	3 Km	
Water Bodies	SarbangaNadiTirumanaimuttar River	7 Km in W 2.5 in E	
Forest	Nagarmalai RF Kumubalpatti RF Kanjeri RF	1.1K in E 100 m in NE 6.7Km in N	

Pannikaradu RF	3.2Km in N
Kanjamali RF	6.8 Km in SW
Kapputu RF	4.8 km in E
Maryland RF	9.6 in NE
Sanyasi Malai	9.0 in NE
AtturGhat Extension	9.2 Km in N
AtturGhat	9.2 Km in N
Kanjeri Extension	9.3 Km in N

viii. Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	No	None within 10 km radius
National Park	No	None within 10 km radius
Wildlife Sanctuary	No	None within 10 km radius
Elephant/Tiger Reserve	No	None within 10 km radius
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area (ESA)	No	None within 10 km radius
Coastal Regulation Zone (CRZ)	No	None within 10 km radius
Schedule-I Species (No.s and name of schedule-I Species with authenticated letter)	Yes	<ol style="list-style-type: none"> 1. Gaur (Bosgaurus), 2. Bonnet macaque (Macacaradiata) 3. Jungle cat (Felischauskelaarti) 4. Small Indian civet (Viverriculaindica) 5. Sambar (Rusa unicolor) 6. Golden jackal (Canis aureus) 7. Sloth bear (Melursusursinus) 8. Honey badger (Mellivoracapensis) 9. Indian Porcupine (Hystrixindica) 10. South-Eastern langur (Semnopithecuspriam) 11. Indian chevrotain (Moschiolaindica) 12. Rusty-spotted cat (Prionailurusrubiginosus)

		13. Asian palm civet (Paradoxurus hermaphroditus) 14. Bengal fox (Vulpes bengalensis) 15. Indian Pangolin (Manis crassicaudata) 16. Indian muntjak (Muntiacus muntjak) 17. Gray slender loris (Loris lydekkerianus) 18. Indian Peafowl (Pavocristatus) 19. Crested Serpent Eagle (Spilornis cheela) 20. Russell's viper (Daboia russelii) 21. Indian Python (Python molurus) 22. Common krait (Bungarus caeruleus)
Wildlife Conservation Plan	Yes	Schedule-I Species are present in the study area, for which a Conservation Plan for an amount of Rs 43.30 Lakhs has been prepared. The Conservation Plan has been approved by O/o PCCF, Chennai vide letter Ref No. WL5/21661/2023 dated 09.08.2023.

ix. Green belt/plantation details:

Proposed area for green belt/plantation and no. of saplings proposed	Area: 16.63 Ha. No. of Saplings: 41581
Budget for green plant & plantation till the end of life of mine.	153 Lakhs
Details of existing plantation and its survival rate	Area for Green belt: 58.26 Ha Survival Rate: 95%
No. of tree cuts in the mine lease area and compensatory afforestation	Not Applicable

x. Baseline detail:

Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)	
Period of baseline data collection	March to May 2021
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Pre-Monsoon
Predominant Wind direction (From)	Northeast (NE)
Ambient Air Quality (8) and results	PM ₁₀ – 74.10 to 80.74 µg/m ³

	<p>PM_{2.5}– 36.76 to 43.97 µg/m³ SO₂– 13.42 µg/m³ to 8.7 µg/m³ NO_x– 23.01 µg/m³ to 16.66 µg/m³ CO – 0.7 to 0.9 mg/m³</p>
Noise level (8 locations) and results	<p>The Leq values at this location for day and night time was observed to be 71.9 and 63.0 dB (A) respectively, which can be attributed to local prevailing environment (Mining, industrial, Railway siding and Highway). However, the recorded noise levels were found to be within the mining zone limits (75 dB (A))</p>
Water Quality (8 locations) and results	<p>Ground Water: All the Parameters Like pH varies from 7.42 to 7.77, Total Hardness varies from 308.45 to 378.46 mg/l., Total Dissolved Solids varies from 562 to 697 mg/l, Chlorides 82.53 to 115.23 mg/L etc. are found within the permissible limits. Bacteriological studies revealed the absence of Total coliform.</p> <p>Surface Water: All the Parameters Like pH varies from 7.47 to 7.8, Total Hardness varies from 641 to 740.82 mg/l, Total Dissolved Solids varies from 818 to 1048 mg/l, Dissolved Oxygen – 5.1 mg/l to 6.5 mg/l etc. are found within the permissible limits. Total Coliform count is measured 900 to 1600 MPN/100ml.</p>
Soil Quality (8 locations) and results	<p>pH- 7.58 to 7.76 Organic matter- 0.31% to 0.7% Electrical Conductance - 0.26 µS/cm to 0.364 mS/cm Available Nitrogen - 126 Kg/ha to 247 Kg/ha Available Phosphorous - 9.86 kg/ha to 18.11 Kg/ha Available Potassium - 107.59 Kg/ha to 225 Kg/ha</p>
Traffic study (one locations) and results	<p>The proposed project will not cause major impacts due to increase in the PCU/Day which is 366 PCU/day. The LOS study shows that the existing traffic scenario is “Good” and the free flow of vehicles is observed during the study period. Due to the mine project the traffic density will</p>

	increase and the value of LOS will not change.
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xi. Public Hearing (PH) Details:

Advertisement for PH with date (name of major national daily and one regional vernacular daily newspaper)	The Indian Express Dated: 19.05.2023 DhinaThanthi Dated: 19.05.2023
Date of PH	04.07.2023
Venue	M/s Rajam Thirumana Mandapam, Indhira Nagar, near Rajam Hospital, Karuppur Village, Omalur Taluk, Salem District
Chaired by	Shree S. Karmegam, I.A.S, District Collector, Salem
Main issues raised during PH	<ul style="list-style-type: none"> • Employment opportunities for locals • Health facilities to be provided • Massive afforestation • Mining will be done as per statutory norms
Budget proposed for addressing issues raised during PH over 3 years	5 Lakhs for a period of five year

xii. Details of CTE/CTO, Certified Compliance Report, Certified Production Details from the inception of the mine:

Particulars	Details of Letter along with date of grant and validity
Consent to Operate	<p>Last renewal of consent under Air Act was obtained vide order no.4103 dated 29.05.2013 valid till 31.03.2014</p> <p>Last renewal of consent under Water Act was obtained vide order no.6484 dated 29.05.2013 valid till 31.03.2014.</p> <p>PP have informed that Order no 4103 dated 29.05.2013 was revoked vide Proc. No T7/TNPCB/F-0950/RL/SLM/2013 Dated 19.07.2017</p>
Certified Production Details from the inception of the mine (in tabular form against the EC capacity)	The project has violated the EIA notification as the mine has been operating without Environmental Clearance since the inception of mining lease and during renewal of lease in year 2000, which is violation of EIA notification 2006. The mine was operated based on Consent to Operate (CTO) from Tamil Nadu Pollution Control Board since 1991.

The details of past production are authenticated by Department of Geology and Mining, Salem, Tamil Nadu vide letter no Roc.45/2018/ Mines A/Mag-1 on dated 1.11.2018 and Roc.333/2017/ Mines A on dated 08.05.2017.

Annual Production from 1993-94 to 2016-17

Year	Magnesite (TPA)	Dunite (TPA)
1993-1994	62000	13929
1994-1995	61000	7000
1995-1996	46000	14000
1996-1997	50000	7000
1997-1998	58000	5500
1998-1999	57000	5500
1999-2000	48000	4250
2000-2001	39500	9000
2001-2002	35900	9000
2002-2003	32500	11000
2003-2004	61000	16000
2004-2005	75500	8000
2005-2006	69000	20000
2006-2007	68000	33000
2007-2008	89000	23000
2008-2009	135000	28000
2009-2010	64100	22000
2010-2011	85000	30000
2011-2012	68960	37870
2012-2013	80000	23000
2013-2014	75000	15000
2014-2015	65000	13600
2015-2016	58000	12800
2016-2017	42000	1500

xiii. Rehabilitation & Resettlement (R&R):

R & R details	The Project has submitted that no R&R issues involved.
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xiv. Court case details:

Court Case, No and its present status	1. The District Environmental Engineer, Tamil Nadu Pollution Control Board, Salem, filed credible action case against SRCL before the Judicial Magistrate -II, Salem, vide CC/0000196/2024.
	2. Revision application No. 27(01)/2023/RC-II is filed before the Revisional Authority under section 30 of the Mines & Minerals (Development and Regulation) Act, 1957, where the petitioner is SRCL and respondent is Govt. Of Tamil Nadu.
Undertaking by Project Proponent w.r.t court case	PP has submitted an affidavit in Rs. 100 non judicial stamp (DR 120414) dated 27.04.2024 stating that SRCL is a party in two cases as stated above.

xv. Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018	PP has submitted an affidavit on Rs. 100 non judicial stamp (DR 120414) dated 27.04.2024 in accordance with Ministry's OM dated 30.05.2018.
Undertaking by Project Proponent in EIA/EMP report	PP has submitted an undertaking dated 27.04.2024 stating that in case any deviation in data found in any of the documents, the authorized signatory shall be held responsible and furthermore, the above said project shall be rejected for grant of amendment in EC.
Undertaking by Consultant in EIA/EMP report	The consultant has submitted and undertaking in its letterhead dated 27.04.2024 stating that contents in the form of information and data of the EIA Report has been prepared by them and are factually correct and not copied from any other EIA Reports.
Plagiarism Certificate	PP has submitted Plagiarism certificate (Plagiarism Checker-X-Report) dated 25.04.2024.

xvi. Budget for remediation plan, natural resource augmentation plan and community resource augmentation plan

Sl. No.	Description	Estimated cost
1	Remediation Plan	₹ 1,44,50,000.00
2	Natural Resources Augmentation Plan	₹ 1,46,75,000.00
3	Community Resources Augmentation Plan	₹ 1,47,76,000.00

Total	₹ 4,39,01,000.00
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xvii. Details of the Environmental Management Plan (EMP):

Activities	Capital Cost (Crores)	Recurring Cost (Lakhs/Annum)
Air Pollution Control Measures	0.60	3.0
Water Pollution Control Measures	0.32	10.0
Noise Pollution Control Measures	-	3.0
Greenbelt Development	1.0395	4.0
Rain Water Harvesting	0.05	1.0
Fire Fighting and Safety measures	0.03	24.0
Total	2.0395	45
Total EMP Budget	248.95 Lakhs	

xviii. Details of project cost and employment:

Particulars	(Rs. In Crore)
Total cost of EMP (Capital Cost of EMP + capital cost of Public hearing)	2.4895
Project Cost	3.0
Employment (No.s)	600 persons

3. Observation and Recommendation of the Committee:

The instant proposal is for Environmental Clearance under violation category as per Ministry's Notification vide S.O. 804 (E) dated 14.03.2017. The project Proponent has informed to the Committee that the mining activity was suspended since 10.01.2017.

The EAC noted that the baseline data submitted by PP is from March to May, 2021. EAC was of the opinion that the presented dataset is not good enough to represent the current scenario, accordingly, EAC requested to project proponent to collect fresh baseline data over a period of one month to validate the existing data. The EAC also enquired about the availability of the SEIAA approved DSR for the minor mineral Dunite. PP stated that they are not aware at present and they will submit the same. EAC also asked the PP regarding the status of consent to operate. PP informed that their consent was valid till 31.03.2014. EAC enquired whether any action has been taken by SPCB since the PP operated the mine without consent till 10.01.2017. PP informed that no action has been taken by SPCB with regard to the operation of mine after the expiry of CTO.

Further, while appraising the remediation plan, CRAP and NRAP, the EAC noted that PP has not taken a holistic approach to assess the damages caused by it to the environment. EAC also noted that the PP has incorporated certain aspects of public

hearing into its community resource augmentation plan (viz sports facility, employment, skill development etc), accordingly, EAC advised the PP to rectify the same. EAC also mentioned that PP should include the damages caused due to point/line sources and its effect on the existing fauna/environment (land, water, air) in its remediation plan. EAC also reiterated that PP should specifically define the parameters in its remediation plan, CRAP and NRAP. With regard to the EMP presented by PP, EAC observed that recurring cost has not been included. EAC also observed that the budget of proposed plantation is inadequate and asked the PP to put forward a realistic and practical budget for implementation of the same. The EAC opined that the PP, while revising the damage assessment shall include the parameter of damages with respect to the receptors. The EAC was of the opinion, that PP shall revise the above said items and come up with a tangible action plan that can be monitored by the Regional office of the Ministry. Based on the above, the EAC **deferred** the proposal for the want of following information: -

- i. The Project Proponent needs to collect fresh One-Month Baseline data (Preferably non-monsoon) to validate the existing dataset.
- ii. The Project Proponent needs to submit the SEIAA approved DSR for Dunite.
- iii. PP shall submit the Chronology of Mine lease from the inception of Mine.
- iv. PP needs to submit the detailed transportation plan including the route that it proposes to use for transportation. PP shall show the proposed route on KML.
- v. PP shall explore the possibility of using conveyor belt transportation system upto the nearest Railway siding.
- vi. PP needs to record the drone video of the complete Mine lease area showing the Mine pit, overburden, and plantation and existing transportation.
- vii. PP shall submit the revised remediation plan, CRAP and NRAP taking into consideration of all the factors as pointed out by EAC.
- viii. PP should also include the cost of damage due to transportation of mineral within the violation period due to mineral transportation upon the existing tree and road.
- ix. PP should recalculate and submit the revised EMP cost and Public Hearing Cost after associating the activities from Remediation Plan, NRAP and CRAP.
- x. PP needs to submit the detailed breakup of the health facilities that shall be provided to mine worker and local villagers
- xi. PP shall submit the revised budget for plantation.
- xii. PP needs to submit the detail management plan for mineral rejects and interburden.
- xiii. The Project Proponent needs to submit water withdrawal permission from CGWA. PP should not carry out secondary blasting, instead possibility of introducing rock breaker should be explored to break oversized boulders.

1.3 Dhaukan-Dhaurra-Urdaurra Iron Ore Block with total production capacity of 46,90,419.50 TPA of R.O.M. (20,57,516.70 TPA of Iron ore & 26,32,902.80 TPA of

Waste) along with installation of 500 TPH capacity of Jaw Crusher & Cone Crusher in ML area of 153.031 ha by M/s Pacific Iron Manufacturing Ltd located at Village(s) Dhaukan, Dhaurra and Urdaurra, Taluka Prithvipur, District Niwari, State Madhya Pradesh [Online Proposal No. IA/MP/MIN/469536/2024, File No. IA-J-11015/29/2024-IA-II(NCM), EIA Consultant - Gaurang Environmental Solutions Pvt. Ltd.] - For Terms of Reference reg.

The proposal is for Terms of Reference for Dhaukan-Dhaurra-Urdaurra Iron Ore Block with total production capacity of 46,90,419.50 TPA of R.O.M. (20,57,516.70 TPA of Iron ore & 26,32,902.80 TPA of Waste) along with installation of 500 TPH capacity of Jaw Crusher & Cone Crusher in ML area of 153.031 ha by M/s Pacific Iron Manufacturing Ltd located at Village(s) Dhaukan, Dhaurra and Urdaurra, Taluka Prithvipur, District Niwari, State Madhya Pradesh.

2. The details of the project as ascertained from the document submitted by the Project Proponent and as revealed from the discussions held during the meeting are given as under:

- i. The mine lease area is located between Latitude 25°13'12.00"N to 25°13'42.58"N and Longitude 78°36'46.39"E to 78°38'28.49"E. The mine lease area falls under the Survey of India Toposheet No: 54 K/12 and falls in Seismic Zone-II.
- ii. The proposed project activity is listed at schedule no. 1(a) of Mining of Minerals. The project attracts General condition due to the presence of Orchha Wildlife Sanctuary at a distance of 2.26 Km and its Eco Sensitive Zone (ESZ) at a distance of 0.11 km from the mine area.
- iii. The project is at distance of 4.26 km from Uttar Pradesh-Madhya Pradesh Interstate Boundary in the WSW direction from the mine site and falls under Category "A" of the schedule of the EIA Notification, 2006.
- iv. Details of Mine Lease:

S. No.	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1.	LOI	27.07.2022	Iron Ore (Major Mineral)	50 years	Secretary, Govt. of Madhya Pradesh, Mineral Resource Department	153.031

v. Details of Land Use/ Land Cover of the Mine Lease Area:

Land Use/ Land Cover of the Mine Lease Area:		
Private land	:	73.282
Government land	:	79.749
Forest land	:	00
Total Mining lease area (MLA), ha	:	153.031
Private land for crusher, workshop & other infrastructure outside the MLA	:	NA

vi. Details of Land Use/ Land Cover of the Mine Lease Area:

Private land, ha	:	73.282
Government land, ha	:	79.749
Forest land	:	00
Total Mining lease area (MLA), ha	:	153.031
Private land for crusher, workshop & other infrastructure outside the MLA	:	NA

vii. Details of Mining plan:

Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	:	Letter No.	Nil
	:	Date	Submitted on 20.03.2024
	:	Mineral & (Major/ Minor)	Major
	:	Mine Lease Area, Ha	153.031 Ha.
Additional information (if any)	:	Mining Plan along with the PMCP has been submitted to the Office of IBM, Jabalpur on dated 20.03.2024. Approval is in under process.	
Mining Parameters	:	Quantitative Description	
Method of Mining	:	Opencast Mechanized Method	
Drilling/Blasting	:	Drilling: Self-Propelled Hydraulic Drill with Top Hammer Blasting: Controlled blasting will be done under the supervision of competent Mining Engineer following safety precautions as laid down in the Metalliferous Mines Regulation 1961	
Geological Reserves	:	4,27,06,039.86 MT	
Mineable Reserves	:	2,85,50,437.93 MT	
Breakup of Total Excavation (Topsoil/ OB/ SB/ IB/ Mineral Rejects/ Waste, MTPA)	:	46,90,419.50 TPA of ROM. (20,57,516.70 TPA of Iron ore & 26,32,902.80 TPA of Waste)	
Life of mine	:	50 Years	
Mine Bench Height & Bench Width	:	Bench height will be kept 6m and width of the bench will be kept 6m.	

No. of Mine Benches	:	New pit -A=14 no's of benches, New pit -B =8 no's benches as per First five year working proposal and end of conceptual period about dhaukan block =22-25 no's benches and Dhaura Urdaura blocks =18-23 no's benches will be developed.
Existing Depth, m bgl	:	1-6m depth
Ultimate Depth of Mining, m bgl	:	222 mRL
Ground Water Table, m bgl	:	215 mRL
Details of ground water intersection	:	At the end of fifth year, mine working will confined upto 222 mRL which is 36 m below the lowest elevation i.e. 258 mRL and 7m above the ground water table found at 215 mRL. No water table intersection during the plan period.
Individual bench slope	:	88 ⁰
Overall pit slope	:	45 ⁰
Details of existing/ proposed Crusher	:	Proposed Jaw Crusher (500 TPH) & Cone Crusher (500 TPH)
Mineral Beneficiation	:	NA
RoM output size	:	Lumps & Fines
Transportation details including capacity of dumper/tipper, mode of transport and distance	:	Mined mineral will be transported through dumper of capacity 24 T by the road (via NH-539: 4.0 Km, NE direction).
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	:	As per the mining plan, approx. 94,10,794.80 Tonnes of Mineral waste will be generated which, will be temporarily dumped within the mine lease boundary and further will be used for backfilling of some part of excavated area.

viii. Water requirement details:

Total water requirement	:	15 KLD
Source	:	Ground water
Permission for withdrawal/ intersection along with details of grant and its validity	:	NoC from CGWA will be taken and submitted during the final EIA/ EMP report.

ix. Nearest village/ town/ highway/interstate boundary/railway station/water bodies/ monument/ forest

Particulars	Particular's Name	Distance (Km) & Direction
Village	Hamirpur	0.07, SW
Town	Prithvipur	9.63, E
Highway	NH-539	4.0, NE
Interstate Boundary	Uttar Pradesh-Madhya Pradesh Interstate Boundary	4.26, WSW
Railway Station/Railway line	Orchha Railway Station	19.31, North
Water Bodies	Barda Nala	2.0, N
Forest	Tapariyan Hararan P.F.	0.38, N

x. Presence of Environmentally Sensitive areas in the study area:

Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/ letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	No forest land is involved within the Mining Lease area.	Certificate will be submitted at the time of final EC.
National Park	None within 15 Km radius	--
Wildlife Sanctuary	Orchha Wildlife Sanctuary - 2.26 Km, NNW	DCF certificate will be submitted at the time of final EC
Elephant/Tiger Reserve	None within 15 Km radius	--
Eco-Sensitive Zone (ESZ)/ Eco-Sensitive Area (ESA)	Eco Sensitive Zone (ESZ) of Orchha Wildlife Sanctuary - 0.11 km, WNW	DCF certificate will be submitted at the time of final EC
Coastal Regulation Zone (CRZ)	None within 15 Km radius	--
Schedule-I species (Nos and name of schedule-I species with authenticated letter)	The proposal is for obtaining Terms of Reference. The details will be submitted in the final EIA/ EMP Report and also presented during the final EC presentation.	--

Wildlife Conservation Plan	The proposal is for obtaining Terms of Reference. The details will be submitted in the final EIA/ EMP Report and also presented during the final EC presentation.	
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xi. Green belt/plantation details:

Proposed area for green belt/ plantation and no. of saplings proposed	:	Proposed area for green belt: 50.5 Ha. No. of saplings proposed: 1,26,225 saplings
Budget for green plant & plantation till the end of life of mine.	:	The proposal is for obtaining Terms of Reference. The details will be submitted in the final EIA/ EMP Report and also presented during the final EC presentation.
Budget for nursery	:	
Details of existing plantation and its survival rate	:	
No. of tree cuts in the mine lease area and compensatory afforestation	:	
Particulars for Green belt/ plantation	:	Area covered (in Ha)
7.5m barrier & non-mineralized zone	:	50.5

xii. Rehabilitation & Resettlement (R&R):

R & R details	There are approx. 25 no of household within site including human settlements over an area of 2.67 hectare. However, no mining activities will be carried near the settlement and proper safety boundary will be left around the settlement.
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xiii. Court case details:

Court Case, No and its present status	:	No court case pending against the Project Proponent.
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xiv. Details of project cost and employment:

Particulars	(Rs. In Crore)
Project Cost	Rs.10.00 Crore
Employment (No's)	103

3. Observation and Recommendation of the Committee:

The instant proposal is for Terms of Reference considered at central level owing to the applicability of general condition i.e. the presence of Orchha Wildlife Sanctuary at 2.26 Km and ESZ at 0.11 km along with Interstate Boundary of UttarPradesh &Madhya Pradesh which is located at a distance of 4.26 km from the project boundary.

The PP presented the KML file and explained the existing environmental sensitive's to the EAC. The EAC noted that presence of Ken-Betwa river at distance of 4.7 Km from the project boundary and enquired whether the lease area is part of Ken-Betwa Project. The PP informed that they are not aware, the EAC asked the PP to obtain a certificate from the State Govt. stating that proposed mine lease is not a part of Ken-Betwa project. The EAC also enquired about the transportation route, PP informed that they will use the existing national highway (NH-539) to transport the ore to their existing plant. The EAC asked the PP to submit the detailed transportation route. The EAC also asked the PP to explore the possibility of setting up a Conveyor belt system upto the Railway siding. Further PP informed that approximately 25 houses exist within the ML area. Accordingly, the EAC asked the PP to conduct a detail socio-economic study of the inhabitants within the lease area. The project proponent/Consultant has not presented their presentation satisfactorily and therefore cautioned the consultant/PP to improve their presentation skill in the next EAC meeting.

Based on the above observation, the EAC **deferred** the proposal and asked to submit the requisite information:

- i. PP shall submit a certificate from the State Government stating that the lease area is not a part of Ken –Betwa Project.
- ii. PP shall explore the possibility of implementation of Conveyor belt upto the nearest Railway siding and submit the detail plan with date of completion of project.
- iii. PP shall submit the detailed socio-economic study of the inhabitants present within the lease area.
- iv. PP shall submit detail waste management plan.
- v. PP shall install permanent water sprinklers instead of water tanker.
- vi. PP shall submit break up of project cost.

1.4 Mining of Chrome ore with enhancement in production capacity from 0.3 to 0.9 MTPA in the ML area of 382.709 ha by M/s Odisha Mining Corporation Ltd. located at villages Sukurangi, Saruabil, and village limits of Ostapal, Kamarda and Talangi, Tehsil Sukinda, District Jajpur, Odisha [Online Proposal No. IA/OR/MIN/458763/2024, File No. J-11015/348/2015-IA. II(M), EIA Consultant - Mecon Limited] - For Terms of Reference reg.

The proposal is for Mining of Chrome ore with enhancement in production capacity from 0.3 to 0.9 MTPA in the ML area of 382.709 ha by M/s Odisha Mining Corporation

Ltd. located at villages Sukurangi, Saruabil, and village limits of Ostapal, Kamarda and Talangi, Tehsil Sukinda, District Jajpur, Odisha.

2. The details of the project as ascertained from the document submitted by the Project Proponent and as revealed from the discussions held during the meeting are given as under:

- i. The mine lease area is located between Latitude 21°02'32.10822"N to 21°03'46.96573"N and Longitude 85°47'47.57164"E to 85°49'19.86763"E. The mine lease area falls under the Survey of India Toposheet No: F45N16 and falls in Seismic Zone-II.
- ii. The project falls under Category "A" under schedule no. 1(a) of Mining of Minerals of the schedule of the EIA Notification, 2006 and its subsequent amendments.

iii. Detail of ToR:

ToR Proposal No.	IA/OR/MIN/458763/2024
Online application date for Form-I	25 th March 2024
Documents Submitted	Cover letter, CAF, Form 1 (Part A), Form 1 (Part B), kml file of the ML area, Sol Toposheet Map, Lease Deed, Authorization of Applicant, Conceptual Plan, Mining Plan drawings.
Production capacity in million tonnes per annum only	0.9 MTPA (ROM) Chrome Ore
Waste	8.5981 MTPA (Waste Rock)
Total Excavation(with break-up) in million tonnes per annum only	9.4981 MTPA
ROM in million tonnes per annum only	0.9 MTPA
Crusher	1 x 250 tph Primary Crusher and 1 x 250 tph Secondary Crusher will be set up. The Secondary Crusher will process the output of the Primary Crusher. 1 x 250 tph triple deck vibrating screen will be installed to screen crushed ROM to separate out -10 mm material (containing >40% Cr ₂ O ₃) – the final product.
EIA/EMP uploaded on	The instant proposal is for approval of ToR. EIA-EMP report will be prepared based on approved ToR.
Previous EC details	Accorded by MoEFCC vide letter No. J-11015/348/2015-IA.II(M) dated 30.07.2020 for Chrome Ore production capacity : 0.3 MTPA

iv. Details of Mine Lease:

Application for the Mining lease area and Date	25.04.1970
Validity of mine lease	19.09.2030
Chronology of lease extension if any	From 20.09.1980 to 19.09.2000 [Initial] From 20.09.2000 to 19.09.2020 [1st Extension] From 20.09.2020 to 19.09.2030 [2nd Extension]
Additional information (if any)	Sukurangi ML was granted and executed in favour of M/s Sirajuddin & Co. for a period of 20 years from 26.03.1959 to 25.03.1979. After 4 years of operations, it was determined on 05.04.1963 by the State Govt. Odisha Mining Corporation (OMC) was then allowed by the State Govt. vide their letter No. III(G)M, 13/70-5592-MG, dated 20.07.1970 to operate the said lease as an agent of the State Govt. till formal grant of the said lease to OMC in 1971 by expanding the area broken by M/s Sirajuddin & Co. Govt. of Odisha in their erstwhile Mining & Geology Dept. Proceeding No. III(G)-MG-10/78-7924 dated 05.08.1978 and granted a Mining Lease for exploration of chromite in Sukurangi chromite mines over an area of 382.709 ha for a period of 20 years. Lease has been extended up to 19-09-2030.

v. Details of Mining plan:

	Letter No.	MCDR-MiFL0CR/12/2023-BBS-IBM_RO_BBS	
	Date	19.03.2024	
	Validity	2024-25 to 2028-29	
Mining Parameters	Quantitative Description		
Bench Height	6 m		
Bench Width	10 m		
Method of Mining	A-Mechanized, Open Cast Mining		
Individual bench slope	70°		
Overall pit slope	24°-30°		
Drilling/Blasting	HEMM with deep hole drilling & blasting with combination of loaders and tippers.		
RoM output size	Type of crusher	Product size in mm	
	Primary Crusher (Jaw Crusher)	-100	
	Secondary Crusher (Jaw Crusher)	-50	
	Triple Deck Vibrating Screen	-10	
Life of mine	16 years on the basis of Proven Reserves. May be revised on the basis further detailed exploration.		

Transportation details	By trucks to consumers of nearby railway siding(s) at buyers' discretion
Dumpers capacity	35 t

vi. Details of Land Area Breakup (in hectares):

Private land	97.5544 ha
Government land	17.9446 ha
Total Mining lease area (MLA)	382.709 ha
Additional information(if any)	Forest Land (267.210 ha)

vii. Nearest village / town/ highway/railway station / water bodies/monument

Particulars	Particular's Name	Distance & Directions
Nearest railway station	Baghupal on Padapahar Jn.	~21.5 km (E)
Populated areas	Brahamnupal town	~23 km (SE)
Nearest Highway	Daitari- Paradeep Express Highway	~18 km (NE)
Water Bodies	a. Damsal Nala b. Talangi Nala c. Nadibarana Nala d. Pandaral Nala	0 (Damsal Nala flows through ML) 1.4 km (NE) 3.8 km (W) 7.5 km (S)

viii. Water requirement

Total water requirement	Potable: 60 m ³ /day Industrial: 530 m ³ /day	Fresh water	60 m ³ /day
		Treated water	530 m ³ /day
Source	Industrial: Recycled effluents/mine discharge water Potable: Bore-wells		
Permission	NOC obtained from CGWA vide letter No. CGWA/NOC/MIN/REN/2/2022/7118, dated 02.11.2021, valid upto 30.11.2023. Renewal of NOC is under considerations.		
Additional information (if any)	No fresh water is utilized for Industrial purpose.		

ix. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter/Remarks
Forest Land	Yes	Forest Clearance obtained for the entire Forest Land (267.210 ha) within the ML area.
National Park	No	
Wildlife Sanctuary	No	

Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area(ESA)	No	--
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x. Availability of Schedule-I species in study area – Available/ Not Available If available - authenticated list of flora/fauna details

Schedule-1 species	Yes/No	Details of Certificate/letter/Remarks
Schedule-I species	Yes	Schedule-I fauna found in the 10 km study area are Ratel, Leopard, Sloth bear, Indian Elephant, Mouse deer, Pangolin, Wolf, Bengal Monitor Lizard, Python, Peafowl.
Status of Wildlife Conservation Plan Additional information (if any)	Approved	Revised Site-Specific Wildlife Conservation Plan approved by PCCF (WL) & CWLW, Odisha vide memo no. 8426/7WL-FD & WLC-159/2020 dated 16-10-2020.

xi. The status of Forest Clearance/Wildlife Clearance/CRZ/CGWA, if applicable:
The mine lease area comprises of 267.21 ha of Forest Land. Stage – II FC for the entire forest land (267.210 ha) within the ML area has been accorded. Details of FC accorded by MoEFCC are given below:

- a. Stage-II FC over 104.79 ha Forest land within ML area received vide letter no. F. No. 8-104/2000-FC dated 21.07.2011.
- b. Stage-II FC over 162.42 ha (including 24.15 ha for Safety Zone) Forest land within ML area received vide letter no. F. No. 8-22/2016-FC dated 31.07.2023.

xii. Status of CTE/CTO.

- a. Consent to Establish (CTE) for 0.3 MTPA of Chrome ore has been granted by State Pollution Control Board, Odisha vide letter no: 7315/IND-II-CTE-6476 on dated 21.05.2021.
- b. Consent to Operate (CTO) has been granted from the State Pollution Control Board, Odisha vide letter no 4412/IND-I-CON-388 dated 28.03.2024 for 0.3 MTPA of Chrome ore and is valid up to 31.03.2025.

xiii. Green belt/plantation details:

Proposed area for green	Sl. No	Year	Green Belt	Area Proposed to be	Number of Plants	Expected	Estimated Expenditure (INR)

belt/plantation			Location (s)	Covered (Ha)	Proposed	Survival Rate (%)	
	1	2024 - 2025	Existing Dump	0.75	500	>85%	702479
	2	2025 - 2026	Existing Dump	0.75	500	>85%	702479
	3	2026 - 2027	Existing Dump	0.75	500	>85%	702479
	4	2027 - 2028	Existing dump	0.75	500	85%	702479
	5	2028 - 2029	Existing Dump	0.75	500	85%	702479

Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m wide all along ML area (except common boundary between adjoining South Kaliapani ML of OMC)	6.35
50m on either side of Damsal nala	18.00
10 m on either side of the road	1.9

xiv. Court case details:

Court Case	No
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xv. Rehabilitation & Resettlement:

R & R details	No R&R
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xvi. Affidavit/Undertaking details:

Affidavit/Undertaking	OMC has submitted an undertaking by way of notarized Affidavit dated 03.04.2024 in compliance of the Ministry's OM no. 3-50/2017-IA.III(Pt.) dated 30.05.2018.
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xvii. Details of project cost and employment:

Particulars	(Rs. In Crore)
Project Cost	Total Cost Rs. 296.02 Crores [Existing Cost – 32.02 Crores; Expansion Cost – 264 Crores]

Employment	628
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xviii. Additional information submitted by Project Proponent:

Violation of EIA Notification-1994/2006 for producing minerals without prior EC from Sukurangi Chromite mines during 1993-94 to 2008-09. Demand Notice for depositing Rs. 3,90,64,416 (Rs. Three crore ninety lakh sixty-four thousand four hundred sixteen only) was issued by the office of Dy. Director of Mines, Jajpur Road Circle, Jajpur Road vide letter no. 547 dated 10.04.2018. OMC paid the entire penalty amount towards the demand raised.

3. Observation and Recommendation of the Committee:

The Instant proposal is for Terms of Reference for enhancement in production capacity from 0.3 to 0.9 MTPA without change in ML area for Sukurangi Chromite Mines. As per the kml file shown during the presentation, the EAC noted the presence of Nallah passing through the ML area. In order to manage the same, the Project Proponent was asked to prepare the conservation plan for Nallah. The EAC advised the Project Proponent to incorporate the advance technology by incorporating the latest machinery having the least carbon emission rate and having higher capacity. The EAC also asked the Project Proponent to submit the report on existing carbon emission rate and in which year the carbon emission will be neutralised.

Subsequently, the EAC emphasised that PP should submit a dump management plan incorporating the garland drain and plantation. The EAC made an observation that the PP needs to be cautious while dumping the Overburden, they should avoid dumping the overburden in the mineralised area and the forest area. The EAC also advised the PP to prepare progressive backfilling plan in order to reduce the dump accumulation.

Based on the above, EAC **recommended** the proposal in the 29th EAC meeting held during 9-10th May, 2024 for Terms of Reference for Mining of Chrome ore with enhancement in production capacity from 0.3 to 0.9 MTPA in the ML area of 382.709 ha by M/s Odisha Mining Corporation Ltd. located at villages Sukurangi, Saruabil, and village limits of Ostapal, Kamarda and Talangi, Tehsil Sukinda, District Jajpur, Odisha under provisions of EIA Notification, 2006 and its amendments therein with following additional specific conditions:

Specific Condition:

- i. The Project Proponent to prepare the conservation and protection plan for Nallah passing through the Mining Lease area.
- ii. The Project Proponent should submit the detail in terms of incorporation of machinery equipped with advance technology and having least carbon emission rate.

- iii. The Project Proponent needs submit the carbon foot prints and carbon sequestration study w.r.t. instant project.
- iv. The Project Proponent shall submit the status of plantation which will ensure carbon sequestration lost due to deforestation and other fossil fuel based activities.
- v. The Project Proponent needs to prepare dump management plan by incorporating the garland drain and dump plantation.
- vi. The Project Proponent needs to submit the detail plan for progressive backfilling in order to reduce the dump accumulation.
- vii. The project proponent needs to submit the total excavation which includes ROM, OB, IB etc during the submission of EC proposal.
- viii. The Project Proponent needs to submit the year wise sequence of mining operation and plan for backfilling considering the site features such as habitations, school, water bodies, road, etc., and their impacts and mitigation.
- ix. The Project Proponent needs to submit the ecology restoration plan for the area to be backfilled and reclaimed by plantation along with re-grassing and an area which will be converted into water reservoir.
- x. The Project Proponent needs to submit the efficacy and operational data of the EMP measures undertaken in the past.
- xi. Being an expansion proposal, the Project Proponent needs to submit the real time data monitored for ambient air quality, noise level, ground vibration, water quality, soil quality at the mine site, predominant downwind direction, nearest village, crusher and at other sensitive receptors. The Project Proponent should prepare the EMP considering the scenario of pollution to be generated for normative and peak total excavation for assessing air pollution, noise level and ground vibration.
- xii. The Project Proponent needs to submit the letter from the State Forest Department regarding whether the dumping allowed upon the forest area for which forest clearance has been obtained for non-forestry purposes.
- xiii. The Project Proponent needs to submit authenticated list of flora and fauna as per the latest Wildlife Protection Amendment Act, 2022 and the involvement of National Park, Wildlife Sanctuary, ESA/ESZ within 10km radius of the study area.
- xiv. The Project Proponent needs to carry out the Public Hearing as per provisions of EIA Notification, 2006. PP should also submit the time bound action plan on concerns of the public through a separate budget with capital expenditure with a timeline of 3 years. The Project proponent shall ensure that the activities proposed under the public hearing shall be different from the CSR activities. The Project Proponent also needs to submit the implementation status of the earlier public hearing concerns.
- xv. The Project Proponent needs to undertake the enumeration of the plant species within the mine lease area before cutting them. The Project Proponent also needs to submit the compensatory afforestation plan for the no. of trees to be cut in the mine lease area and also to explore the possibility of tree transplantation.

- xvi. The Project Proponent needs to submit the action plan for carrying out plantation along the 7.5m barrier, safety zone and gap plantation. PP should also submit the details of no of saplings planted and to be planted, type of saplings existing and proposed, existing species wise survival rate and the area covered and to be covered under greenbelt/plantation, density of plantation along with the timeline and budget. The Project proponent also needs to submit the successful rate in compliance to the earlier EC.
- xvii. The Project Proponent needs to submit the certified past production details from the inception of the mine till the time for submission of EC proposal.
- xviii. The Project Proponent shall carry out the assessment of impact due to the proposed project as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP. The project proponent shall conduct hydrological study for projects involving intersection of ground water table as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP.
- xix. The Project Proponent shall explore the possibility of reduction of specific water requirement by optimization / technology up gradation, etc. The efforts shall be delineated in the EIA/EMP.
- xx. The Project Proponent shall prepare the scheme for mandatory recycle/re-use of water as specified by the Central Ground Water Authority for different category areas seeking NoC for ground water withdrawal and the shall submit as part of EIA/EMP report.
- xxi. The Project Proponent needs to submit the possession certificate for already acquired land and also the timeline for acquiring the remaining land at the time of submission of EC proposal. The Project Proponent also needs to submit the implementation status of R&R and data on socio economic that how the mining activity improved the quantity and quality of the local people.
- xxii. The Project Proponent needs to submit the latest Certified Compliance Report (CCR) by the Ministry's Regional Office as per Ministry's OM dated 08.06.2022 at the time of appraisal of EC.
- xxiii. The Project Proponent shall conduct drone survey of the mine lease area which includes the mine pit area, dumping area, plantation and transportation route during the appraisal for EC.
- xxiv. The Project Proponent needs to submit the map showing the transport route of the mineral from the mine lease area to the destination, impact of details of habitation at a distance of 100m from the center on both sides of road, details of no. of trips/day to and fro, capacity of the dumper/tipper to be deployed and the dimensions of the road and the carrying capacity of the road. Project Proponent needs to submit SOP for transportation

1.5 Surve Larung Lumshnong Limestone Deposit with total excavation capacity of 1366475.2 TPA (654577 TPA of limestone and 711898.2 TPA of waste including topsoil) in ML area of 44.58 Ha by M/s. Green Valliey Industries Limited located at Village Lumshnong, Tehsil Khliehriat, District East Jaintia Hills, State Meghalaya[Online Proposal No. IA/ML/MIN/457835/2024, File No. IA-J-11015/25/2024-IA-II(NCM), EIA Consultant - Perfact Enviro Solutions Pvt. Ltd.] – For Terms of Reference reg.

The proposal is for Terms of Reference (ToR) for Surve Larung Lumshnong Limestone Deposit with total excavation capacity of 1366475.2 TPA (654577 TPA of Limestone and 711898.2 TPA of Waste including Topsoil) in ML area of 44.58 Ha by M/s. Green Valliey Industries Limited located at Village Lumshnong, District East Jaintia Hills, Meghalaya.

2. The details of the project as ascertained from the document submitted by the Project Proponent and as revealed from the discussions held during the meeting are given as under:

- i. The mine lease area is located between Latitude: 25°11'02.49" N to 25°11' 21.32" N and Longitude: 92° 23' 38.79" E to 92° 24' 23.78" E. The mine lease area falls under the Survey of India Toposheet No: 83C/8 and falls in Seismic Zone-V.
- ii. The project activity listed at schedule no. 1(a) of Mining of Minerals. The instant project attracts General condition due to the presence of Eco-Sensitive Zone of the Narpuh Wildlife Sanctuary at 3.47 km and Narpuh Wildlife Sanctuary at 4.62 km in SE direction in SE to the project site and falls under Category "A" of the schedule of the EIA Notification, 2006.

iii. Details of Mine Lease in a chronological manner:

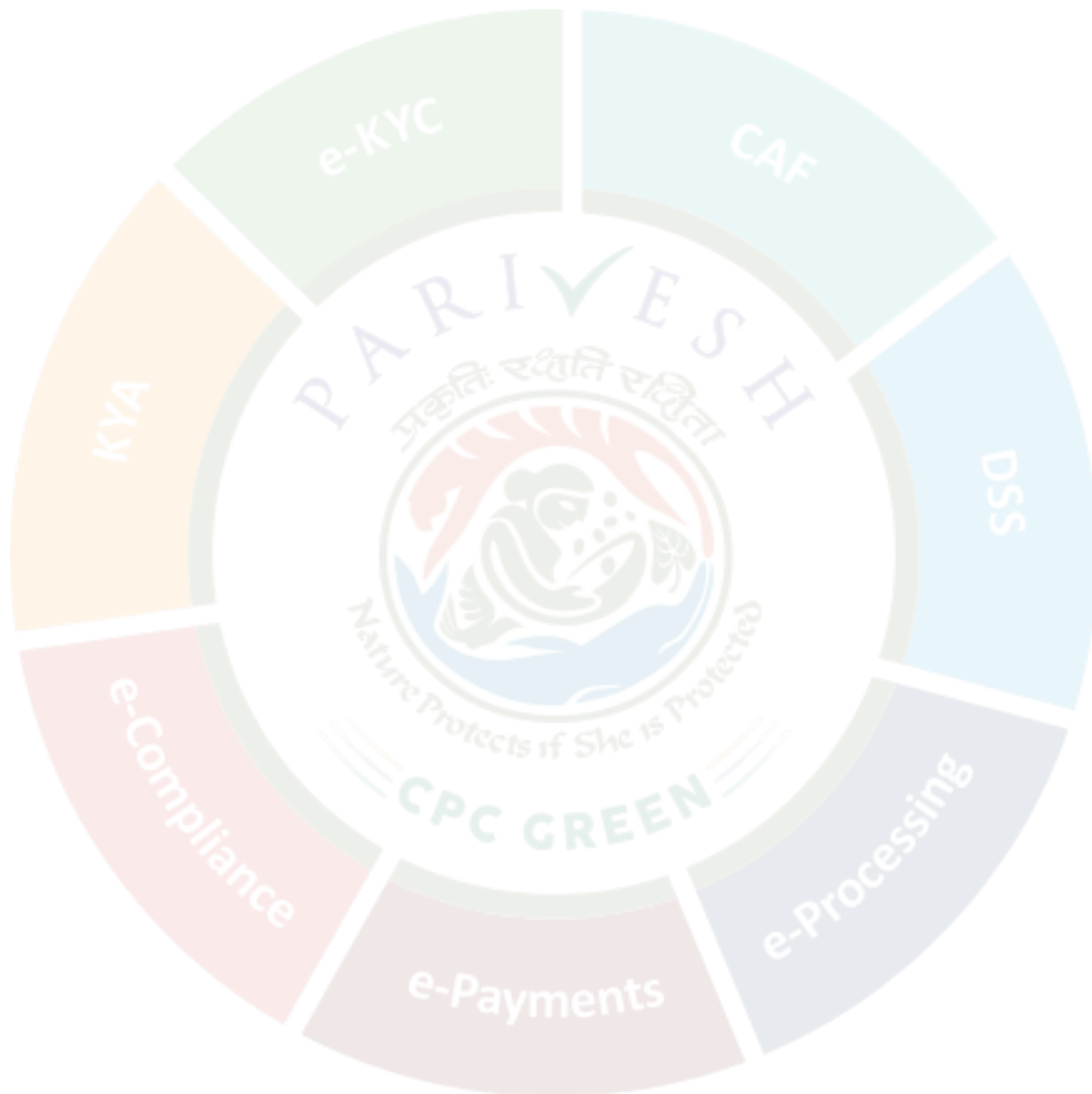
S.No.	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1	Letter of Intent/ authorization order- MG.75/2022/220	28.09.2022	Limestone	–	Mining & Geology Department, Government of Meghalaya	44.58 ha.

iv. Land Use/Land Cover of the Mine Lease Area:

Private land	Nil
Government land	Nil
Forest land	44.58 ha.

Total Mining lease area (MLA), ha	44.58 ha.
Private land for crusher, workshop & other infrastructure outside the MLA	NA

v. Mining plan details:



Mining Plan(approved by Indian Bureau of Mines/DMG)	Letter No.	MCDR-MPCP0CaF1/7/2023-GUH-IBM_RO_GUH
	Date	03.10.2023.
	Mineral (Major/Minor)	Major
	Mine Lease Area, Ha	44.58
	Validity	5 years
Mining Parameters	Quantitative Description	
Method of Mining	Opencast mechanized mining using HEMM	
Drilling/Blasting	Deep hole drilling & blasting.	
Geological Reserves	33.82 million tons of Limestone	
Mineable Reserves	21.36 million ton of Limestone	
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/Waste, MTPA)	1366475.2 TPA (654577 TPA of limestone and 711898.2 TPA of Overburden/waste including topsoil).	
Life of mine	The life of mine is estimated at about 34 years considering the mineable reserves based on present exploration.	
Mine Bench Height & Bench Width	The width of the benches in mineral will be 9 m for safe operation of mining machinery. The height of the bench will be 6 m.	
No. of Mine Benches	23	
Existing Depth, m bgl	NA, as it is a green field project	
Ultimate Depth of Mining, m RL	448	
Ground Water Table, m RL	447.643	
Details of groundwater intersection	The water table will not be intersected as it is at 447.643 mRL and mining will be done up to 448 mRL.	
Individual bench slope	80°	
Overall pit slope	About 34°	
Details of existing/ proposed Crusher	No crushing and screening plant is proposed in the mine.	
Mineral Beneficiation	NA	
RoM output size	-1000 mm	
Transportation details including capacity of dumper/tipper, mode of transport and distance	The material after blasting will be loaded by hydraulic excavators of about 0.90 m ³ bucket capacity into dumpers/tippers of 25 tons carrying capacity for its transportation to crusher and waste dump yards.	

Generation of Topsoil/OB & its Management during plan period & conceptual period	<p>Max. 711898.2 TPA of overburden/waste including topsoil will be generated in any one year. Waste/OB will be dumped at earmarked places. The topsoil generated will be used extensively for plantation.</p> <p>About 10.04 million tons of waste and 0.10 million tons of soil will be generated upto the life of mine. Waste will be stacked separately in the temporary dump. The entire waste will be backfilled.</p>
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	There will be no rejection from the mine.

vi. Water requirement:

Total water requirement	50 KLD	Freshwater	40 KLD
		Treated water	10 KLD
Source	The total water requirement for the proposed mine will be around 50 KLD which will be sourced through water tankers from the company's cement plant.		
Permission	NOC Obtained from Village Council on 16.08.2008		
Additional information(if any)	The total water requirement for the proposed mine will be around 50 KLD, Out of this, 40 KLD will be sourced from the villages and the rest 10 KLD will be ETP-treated water.		

vii. Nearest village/town/ highway/railway station/water bodies

Particulars	Particular's Name	Distance & Directions
Village	Lumshnong	1.66 Km - WSW
Town	Khliehriat	18.93 km - NW
Highway	NH-6	0.57 km - SE
Interstate Boundary	• Meghalaya-Assam State Boundary	11.37 Km SE
	• India-Bangladesh International Boundary	13.13 Km SSW
Railway station	Hilara railway station	33.45 km - SE
Water bodies	• Um Badoh (Ephemeral Nala)	1.88 Km - WNW
	• Um Lunar	2.33 Km - SE
	• Kukha Nala	3.56 Km - N
	• Khaddum Pieltleng Falls	4.31 Km - SE
	• Thangpyrshaid Nala	4.38 Km - NW
	• Lukha River	4.49 Km - SE
	• Lubha River	4.52 Km - SSE
	• Dongtangle Nala	4.63 Km - NE
	• Um Lutha Drain	5.03 Km - NW
	• Um Lahe	5.49 Km - SSE
	• Um Sangat	5.50 Km - NE
	• Sakha Nala	5.54 Km - NW
	• Seshympa River	7.34 Km - W
	• Um Satein	7.91 Km - SW
	• Wah Thariang Nala	7.99 Km - N
• Dongtongle Nala	8.16 Km - NE	
• Um Thlu	8.25 Km - NE	
• Apha Nala	10.52 Km - SE	
• Um Tharang	11.20 Km - SW	
Forest	Narpuh Reserve Forest	8.42 km SW

viii. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant, and remarks
Forest land within the mine lease area and (if yes) status of Forest Clearance	Yes	The application for Stage-I forest clearance has been submitted on the MoEF&CC portal vide proposal no. FP/ML/MIN/QRY/463287/2024 dated 24.02.2024
National Park	No	Not Applicable
Wildlife Sanctuary	Yes	Narpuh Wildlife Sanctuary - 4.62 km SE
Eco-Sensitive Zone(ESZ) / Eco-Sensitive Area(ESA)	Yes	Narpuh Wildlife Sanctuary ESZ - 3.47 km SE
Coastal Regulation Zone (CRZ)	No	Not Applicable
Schedule-I species (No.s and name of schedule-I species with the authenticated letter)	No	The details will be submitted along with the EIA report.
Wildlife Conservation Plan	No	The conservation plan will be submitted along with the EIA report.

ix. Green belt/plantation details:

Proposed area for green belt/plantation	The mining lease comprised a total of 44.58 ha of land. Out of which, 41.44 ha will be used for mining and 3.14 ha will be the virgin area under the greenbelt. Out of the total mined-out area, 23.86 ha. will be backfilled and afforested and the rest 17.58 Ha will be covered by bench afforestation.
Budget for green plant & plantation till the end of life of mine.	Rs. 87,64,740
No. of tree cuts in the mine lease area and compensatory afforestation	350 trees will be cut in the mine lease. A total of about 97386 trees will be planted up to the conceptual period.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	3.14 Ha.

x. Baseline detail:

Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/others)	
Period of baseline data collection	Dec 2023 to February 2024
Season (Summer / Pre-monsoon / Post- monsoon / Winter)	Winter Season

xi. Details of project cost and employment:

Particulars	(Rs. In Lakhs)
Project Cost	Rs 30.14 crores
Employment	94

3. Observation and Recommendation of the Committee:

The instant proposal is for Terms of Reference for Surve Larung Lumshnong Limestone. The Project attracts General condition due to the presence of Eco-Sensitive Zone of Narpuh Wildlife Sanctuary located at 3.47 km from the project site and falls under Category “A” of the schedule of the EIA Notification, 2006.

The EAC observed that the mine lease area falls near to Wildlife Sanctuary and located in the vicinity of Seismic Zone-V which requires special attention in order to protect local species, habitats during the mining. The EAC noted that the data collected during the month of December 2023 to February, 2024 needs to be relooked by the PP, the EAC was of the opinion that the baseline data collected during the aforesaid period doesn't take into account the hibernation period of the wildlife species prevalent in the mine lease area and its surroundings. The EAC opined that a comprehensive baseline data (at least 15 days) including the impact of mining caused on the local habitat and species should be collected by the PP.

Thereafter, the EAC enquired about the sourcing of water, PP replied that they will be sourcing their fresh water requirement of about 40 KLD for the instant mine from their cement plant which is located at distance of 13.33 km approx. PP informed that a water spring is located adjacent to their cement plant and they have obtained the NoC from the Gram Panchayat to source water from there for use in their proposed mine. EAC opined that presence of spring water establishes the fact that ground water table is not located at much depth. EAC stated that these activities will require movement of large number of water tankers to and fro from the mine lease area causing the rise in emission and traffic. The EAC enquired the ground water level of the mine lease area, PP informed that ground water is located at 447.643 mRL and the water table will not be intersected during the entire period of mining. The EAC advised the PP to provide the ground water level data for pre monsoon and post monsoon period. EAC also asked the PP to submit the impact of mining on the rivers near the mining lease area i.e . Lubha and Luka river.

From the KML presented during the meeting, EAC observed that the lease area is not far away from the ESZ of Narpuh Wildlife Sanctuary and has pristine green belt coverage. Accordingly, the EAC asked the PP about the movement of wildlife within the lease area and its surroundings. PP informed that the lease area is not a part of any wildlife corridor. However, EAC was of the opinion that there must be some movement of wildlife owing to its location and pristine nature. EAC advised the PP to conduct a study with regard to the movement of wildlife within and surrounding of mine lease area.

While discussing the transportation route from the mine lease area to the national highway 6, PP informed that they will construct a haul road of 2.3 km length to connect the mine lease area with the national highway. EAC was of the opinion that PP may explore the feasibility of laying a over belt conveyer upto the highway instead of cutting trees and making a haul road to ensure barrier free movement of wildlife. PP informed that they will explore the feasibility of the same.

The EAC further noted that PP has not proposed the use of crusher within the mine lease area. PP informed that they will be directly transporting the mined out mineral to their cement plant where they have already established a crusher. EAC was of the opinion that the PP should include the provision of installing one mobile crusher within the lease area, so that the mined ore is crushed before transportation through OLBC to the nearest highway (NH 6).

During the discussions, EAC pointed out that waste generation is more than the actual Mineral being generated and accordingly asked the PP to compute the cost-benefit analysis keeping in mind the waste generation from the mining.

In view of the above discussions, the EAC concluded that the mine lease area is located in the vicinity of the ecologically sensitive and fragile area. Thus, the EAC opined that it is necessary to ascertain the ground reality on the proposed methodology of mining, habitation, afforestation, transportation, situation of ground water and existing spring water and nearby river. The EAC was of the view that a site visit needs to be conducted by a sub committee comprising of EAC Members and officers from MoEF&CC. The EAC advised the Ministry to constitute a sub-committee for site visit.

Based on the above observation, the EAC **deferred** the proposal and asked to submit the requisite information:

- i. The Project Proponent needs to submit the comprehensive baseline data (15 days) considering the impacts of mining upon local habitat and species. PP shall also submit the comparison of the existing baseline data of the industries located within 10 km periphery of the mine lease area.

- ii. PP needs to submit the NOC from Ministry of Defence.
- iii. PP shall explore the feasibility of laying a over belt conveyer upto the highway instead of cutting trees and making a haul road to ensure barrier free movement of wildlife.
- iv. PP shall explore the feasibility of incorporating a mobile crusher within the mine lease area for crushing the mineral before transportation.
- v. The Project Proponent needs to submit the NoC from the Gram Panchayat for withdrawal of water from existing spring water source.
- vi. The Project Proponent needs to submit the pre and post monsoon level of ground water.
- vii. The Project Proponent needs to compute the cost-benefit analysis w.r.t. generation of more waste than minerals and also conduct the scientific study for managing the dump within the ML area.
- viii. PP shall conduct a study and submit the report with regard to the movement of wildlife within and surrounding of mine lease area.
- ix. The project proponent should submit the compliance of the site visit to be conducted by a sub- committee comprising of EAC members and officers from the Ministry.

1.6 Laserda - Pacheri Manganese and Iron Ore mining with production capacity of 1.545 MTPA (ROM) of Iron Ore, 1.182 MTPA of waste (Total Excavation of Iron Ore 2.728 MTPA) and 0.110 MTPA (ROM) of Manganese Ore, 0.355 MTPA of waste (Total Excavation of Manganese Ore 0.465 MTPA) along with Dry screening and crushing using 200 TPH x 2 Primary Crushing, 200 TPH x 2 Secondary Crushing, 200 TPH x 2 Tertiary Crushing, 250 TPH x 2 Vibrating Screen and 150 TPH x 1 Vibrating Screen in the ML area of 131.800 ha by M/s Thriveni Earthmovers Private Limited located at Villages Dhanurjapur, Kanarda and Laserda, Tehsil Barbil, District Keonjhar, Odisha - [Online Proposal No. IA/OR/MIN/446058/2023, File No. IA-J-11015/113/2021-IA-II(NCM), EIA Consultant - M/s Creative Engineers and Consultants] - Reconsideration for Environmental Clearance reg.

The instant proposal is for Environmental Clearance for Laserda - Pacheri Manganese and Iron Ore mining with production capacity of 1.545 MTPA (ROM) of Iron Ore, 1.182 MTPA of waste (Total Excavation of Iron Ore 2.728 MTPA) and 0.110 MTPA (RoM) of Manganese ore, 0.355 MTPA of waste (Total Excavation of Manganese Ore 0.465 MTPA) along with Dry screening and crushing using 200 TPH x 2 Primary Crushing, 200 TPH x 2 Secondary Crushing, 200 TPH x 2 Tertiary Crushing, 250 TPH x 2 Vibrating Screen and 150 TPH x 1 Vibrating Screen in the ML area of 131.800 ha by M/s Thriveni Earthmovers Private Limited located at Villages Dhanurjapur, Kanarda and Laserda, Tehsil Barbil, District Keonjhar, Odisha.

2. The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under: -

- i. The instant project activity is listed at schedule no. 1(a) Mining of Minerals and attracts the general conditions as the Odisha – Jharkhand Interstate Boundary is located at a distance of 3.19 km from the mine lease area and falls under Category 'A'.
- ii. The mine lease area is located between Latitude 22°03'16.60991"N to 22°04'19.18502"N and Longitude 85°17'53.81761" to 85°19'15.99748" E. The mine lease area falls under the Survey of India Toposheet No: F 45H8(73F/8) and falls in Seismic Zone-II.

iii. Details of Terms of Reference (ToR):

Date of application	Proposal No & File No	Consideration by EAC	Details of ToR	Date of accord
10.12.2021	IA/OR/MIN/44 6058/2023 & J- 11015/113/20 21-IA- II(NCM)	28-29 Dec, 2021 & 7-9 Mar, 2022	ToR was issued to M/s Thriveni Earthmovers Private Limited for undertaking detailed EIA/EMP study along with recommendation made by NEERI	28.03.2022

iv. Details of Mine Lease in chronological manner:

S.No	Prospecting License/ Letter of Intent (Lol)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1	Letter of Intent for grant of Composite License No. IV (MISC)SM06/201784 8 /SM, Bhubaneswar	27.01.2017	-	1 year from the date of its issuance	Govt. of Odisha	256.304
2	Composite License vide LrNo.IV (B)SM-100/2007-43 3/ SM,	19.01.2019	Manganese	24.01.2019 to 23.01.2021	Govt. of Odisha	256.304

3	Letter of Intent for grant of mining lease vide No.7731-I V(B)SM-100/2017/SM and Lol valid for a period of 3 years from the date of its issuance	21.09.2021	Manganese and Iron	50 years	Govt. of Odisha	131.889
4	Revised Lease and authenticated DGPS Survey map vide Lr No. MXIII (b) 80/2015/8031/DM/ stating that after conduct of DGPS survey by ORSAC the area now comes to 131.800 hec instead of 131.889 hec	22.01.2021	Manganese and Iron	50 years	Govt. of Odisha	131.800

v. Details of Land Use/Land Cover of the Mine Lease Area:

Private land	35.765
Government land	1.684
Breakup of forest land of 94.351 Ha	
Revenue forest	53.467 Ha
Non forest land recorded as forest as on 25.10.1980	40.884 Ha
Total Forest land	94.351
Total Mining lease area (MLA), ha	131.800
Additional information (if any)	Project Proponent submitted that the mine lease involves Revenue and Sabik forest predominantly characterized with scattered growth of Sal, Mahua, Kendu etc. which is a tropically dry deciduous open forest. The non-forest land consists of agriculture & non-agriculture land as per revenue record. Project Proponent also submitted the letter from the Office of the Tahasildar, Barbil vide No. 4213/ dated 22.11.2021 showing the status of land

	<p>schedule of non-forest land as on 25.10.1980 over 131.800 ha.</p> <p>In-principle approval under Section-2 of the Forest (Conservation) Act, 1980 has been granted by MoEF&CC (Forest Conservation Division) vide Lr. No.8-02/2023-FC dated 21.12.2023 for the use of the entire forest land of 94.351Ha.</p>
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vi. Details of Mining plan:

Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	MP/A/14-ORI/BHU/2021-22
	Date	18.11.2021
	Mineral & (Major/Minor)	Manganese & Iron Ore
	Mine Lease Area, Ha	131.800
	Validity	5 years from the date of lease deed execution
Mining Parameters	Quantitative Description	
Method of Mining	Fully Mechanized (FM) Opencast mining method with drilling and blasting	
Drilling/Blasting	Wet Drilling and Controlled Blasting	
Geological Reserves	Iron – 8.368 Mil. Tonnes Manganese – 7.368 Mil. Tonnes	
Mineable Reserves	Iron – 6.226 Mil. Tonnes Manganese – 6.470 Mil. Tonnes It will be further increase after exploration in future.	
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	Iron – 2.728 Mil.T, (ROM -1.545 MTPA + Waste – 1.183 MTPA)	
	Manganese – 0.465 Mil.Ts (ROM - 0.110 MTPA + Waste – 0.355 MTPA)	
Life of mine	62 years Life of mine may likely to be changed in future depending upon the future changes in cut-off grade, method of working, future resources and market demand.	
Mine Bench Height & Bench Width	Iron - Height -10m, Width-will be equal and more than the height Mn - Height -5m, Width-will be equal and more than the height	
No. of Mine Benches	Will be maintained as per the mining plan	

Existing Depth, m bgl	--			
Ultimate Depth of Mining, m bgl	392m RL			
Ground Water Table, m bgl	490m RL			
Details of ground water intersection	The groundwater table lies at a depth of 490mRL. Ultimate depth of mining will be 392m RL. Hence groundwater intersection is envisaged.			
Individual bench slope	80°			
Overall pit slope	37.5°			
Details of existing/proposed Crusher	Dry screening and crushing using 200 TPH x 2 Primary Crushing, 200 TPH x 2 Secondary Crushing, 200 TPH x 2 Tertiary Crushing, 250 TPH x 2 Vibrating Screen and 150 TPH x 1 Vibrating Screen			
Mineral Beneficiation	Dry screening and crushing using 200 TPH x 2 Primary Crushing, 200 TPH x 2 Secondary Crushing, 200 TPH x 2 Tertiary Crushing, 250 TPH x 2 Vibrating Screen and 150 TPH x 1 Vibrating Screen			
RoM output size	Iron: 5-18mm, Fines - -5mm, -10mm, 10-30mm, Lumps-+30mm Manganese: Lumps: +30mm,10-30mm			
Transportation details including capacity of dumper/tipper, mode of transport and distance	Iron and Manganese ore from the mines will be transported to Barbil and Bolani Railway Siding through Bolani-Kiriburu PWD road.The railway sidings of Bolani & Barbil are located at a distance of 5.6km and 12.0 km (by road) respectively.			
Generation of Topsoil/OB & its Management during plan period & conceptual period	Waste Management	Plan Period (Mil.cum)	Conceptual Period (Mil.cum)	Total (Mil.cum)
	Road Maintenance	0.353	4.546	4.899
	Dumping	0.789	4.201	4.990
	Backfilled in mine void	--	13.983	13.983
	Total	1.142	22.730	23.872

Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	Mineral Reject	Plan Period (Mil.T)	Conceptual Period (Mil.T)	Waste Management												
	Iron Ore	0.995	3.575	Sold Directly or Blended with High Grade												
	Manganese Ore	0.184	4.714													
	Total	1.179	8.289													
<p>The mineral reject will be stacked in 3 places. The temporary mineral reject stack – 1 is for manganese ore. The temporary mineral reject stack – 2 & 3 is for iron ore. The temporary mineral reject stack 1 & 2 is on virgin area and mineral reject stack -3 will be on the top of the already refilled and reclaimed area of Lasarda pit -1.</p> <table border="1"> <thead> <tr> <th>Stack ID</th> <th>Height (m)</th> <th>Total Stack Quantity (m³)</th> </tr> </thead> <tbody> <tr> <td>Temporary MR Stack Yard – 1</td> <td>10</td> <td>73754</td> </tr> <tr> <td>Temporary MR Stack Yard – 2</td> <td>30</td> <td>260091</td> </tr> <tr> <td>Temporary MR Stack Yard – 3</td> <td>15</td> <td>95465</td> </tr> </tbody> </table>					Stack ID	Height (m)	Total Stack Quantity (m ³)	Temporary MR Stack Yard – 1	10	73754	Temporary MR Stack Yard – 2	30	260091	Temporary MR Stack Yard – 3	15	95465
Stack ID	Height (m)	Total Stack Quantity (m ³)														
Temporary MR Stack Yard – 1	10	73754														
Temporary MR Stack Yard – 2	30	260091														
Temporary MR Stack Yard – 3	15	95465														
Additional information(if any)	<p>The Project Proponent submitted the letter from the Directorate of Mines, Odisha vide Lr No. MXIII (b) 36/2021 1197/DM, dated 09.02.2022 stating that the concerned Mining Officer along with the Jr. Mining Officer of Joint Director of Mines, Joda have enquired the matter in the field on 28.12.2021 & 29.12.2021 and it was observed that there are old excavations of low depth in 45 nos of patches of land covering 2.491 ha (approximately) present inside the applied ML area of Lasarda-Pacheri Manganese & Iron Block over an area of 131.800 ha of M/s Thriveni Earthmovers Private Limited. Those excavated areas are filled with thick vegetation growth, as it is evident from the surface map attached during auction of Lasarda-Pacheri Manganese & Iron Block for composite license that many excavated quarry's were previously existed inside the composite license area before the grant of composite license to M/s Thriveni Earthmovers Private Limited. As per the report submitted Jr. Mining Officer of Joint Director of Mines, Joda there is no illegal mining carried out by M/s</p>															

	Thriveni Earthmovers Private Limited within the lease hold area.
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vii. Water requirement:

Total water requirement	983 KLD	Fresh water	911 KLD
		Treated water	72 KLD
Source	Borewell – 95 KLD, Mine Pit Water – 888 KLD		
Permission for withdrawal/ intersection along with details of grant and its validity	No Objection Certificate for Groundwater Abstraction from CGWA vide NOC No. CGWA/NOC/MIN/ORIG/2024/19982 dated 06.03.2024.		
Additional information (if any)	Based on CGWA Recommendation, the quantity will be optimized.		

viii. Nearestvillage/ town/ highway/ interstate boundary/ railway station/ water bodies/monument/ forest

Particulars	Particular's Name	Distance & Directions
Village	Laserda	<300m
Town	Barbil	5.7Km, NE
Highway	NH-520	4.8Km, E
	SH-10B	6.8Km, E
	SH-4	8.4Km, N
Interstate Boundary	Odisha-Jharkhand Interstate Boundary	3.19Km
Railway Station/Railway line	Barbil	6.3Km, NE
Water Bodies	<ul style="list-style-type: none"> • Karo River • Seasonal Stream • Ganse Nala • Topadihi Nala 	<ul style="list-style-type: none"> • Passes through lease • Within lease area • 1.4Km, SE • 5.1Km, S
Forest	<ul style="list-style-type: none"> • Uliburu RF • Karo RF • Siddhamath RF • Lakrghat RF • Karampada RF • Thakurani RF 	<ul style="list-style-type: none"> • 0.2Km, SE • <1Km, NW • 1.4Km, SE • 1.8Km, S • 3.4Km, W • 7.4Km,E

ix. Presenceof Environmentally Sensitive areas in the study area

Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
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Forest Land within the mine lease area and (if yes) status of Forest Clearance	Yes	<p>The Project Proponent submitted that an area of 94.351 Ha is a forest land.</p> <p>The Project Proponent submitted the in principal approved granted by the Ministry vide Lr. No: 8-02/2023-FC dated 21.12.2023 under Section - 2 of the Forest (Conservation) Act, 1980 in favour of M/s Thriveni Earthmovers Private Limited for non-forestry use of 94.351 ha of forest land including 4.261ha of safety zone (3.858 ha along the ML boundary and 0.403 ha along the PWD road) within the granted Lol for ML over 131.800 ha for Laserda Pacheri Manganese & Iron Ore Block in Keonjhar District of Odisha.</p>
National Park	No	Project Proponent reported that there are no National Park, Wildlife Sanctuary, Tiger/Elephant Reserve, Biosphere Reserve, Ramsar site within 10 km radius of the study area.
Wildlife Sanctuary	No	
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area (ESA)	Nil	
Elephant/Tiger Reserve	No	<p>Karo Karampada – 2.31 km.</p> <p>The Project Proponent has submitted the map authenticated by Divisional Forest Officer, Keonjhar Division.</p>
Coastal Regulation Zone (CRZ)	No	
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	Yes	Authenticated list of Flora and Fauna is obtained from Divisional Forest Officer, Keonjhar vide Letter No. 2044 dated 05.03.2024.
Wildlife Conservation Plan	Yes	Wildlife Conservation Plan approved by PCCF(WL) & CWLW, Odisha vide letter no. 10007/ CWLW-FDWC-FD-0024-2022 dated 11.09.2023 with a financial outlay of Rs. 390.402 Lakhs.

x. Green belt/plantation details:

Proposed area for green belt/plantation and no. of saplings proposed	The Project Proponent has proposed to plant 2923 no. of saplings over an area of 2.923 ha along the Mining Lease boundary and 50 m of road safety zone in Laserda side with expected survival rate of 75% with a budget of Rs 5.84 Lakhs. In the post mining stage, overall an area of 127.29 Ha (96.57% of the total lease area) will be covered under vegetation. Plantation will be carried out in places like mined out area, waste dumps, mineral storage, reclaimed infrastructure area, unused and safety zone area etc.
Budget for green plant & plantation till the end of life of mine.	Rs.5.84 Lakhs
No. of tree cuts in the mine lease area and compensatory afforestation	Towards scheme of compensatory afforestation, an area of 91Ha of equal non-forest land and 104Ha of degraded forest land, a total demand of Rs. 5.92 Crores has been raised with the land value of Rs.2.38 Crores additional.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	2.923 Ha in Mine Boundary and 50m safety zone for road.

xi. Baseline detail:

Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)			
Period of baseline data collection	March, 2021 to May, 2021		
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Summer		
Predominant Wind direction (From)	SW & W		
Ambient Air Quality (no. of locations) and results	Locations	Parameters	Results
	10	PM10	38.2 – 78.6 µg/m ³
		PM2.5	18.9 – 48.5 µg/m ³
		SO ₂	4.2 – 13.5 µg/m ³
NO _x		9.6 – 19.2 µg/m ³	
Noise level (no. of locations) and results	Locations	Parameters	Results
	10	Day Eq Leq dB(A)	44.9 – 52.8
		Night Eq Leq dB(A)	37.2 – 43.2
Water Quality (no. of locations) and results	Surface Water Quality		
	Locations	Parameters	Results
	04	pH	7.72 – 7.96
		TDS (mg/l)	136 – 148
		Fluoride (mg/l)	0.12 – 0.2
Chloride (mg/l)		28 – 32	

		Fe (mg/l)	0.4 – 0.48
		Dissolved Oxygen (mg/l)	5.6 – 6.1
		Biochemical Oxygen Demand (mg/l)	2.4 – 2.8
	Ground Water Quality		
	Locations	Parameters	Results
	8	pH	7.68 – 8.2
		TDS (mg/l)	282-346
		Fluoride (mg/l)	0.19 – 0.22
		Chloride (mg/l)	32-38
		Sulphates (mg/l)	7.8 – 9.8
		Iron (mg/l)	0.27 – 0.31
Soil Quality (no. of locations) and results	Locations	Parameters	Results
	9	pH	5.6 – 6.5
		Electrical Conductivity	1.86 – 2.1
		Nitrate %	0.048 – 0.061
		Phosphorous %	0.016 – 0.022
		Potassium %	0.066 – 0.074
Hydro geological study and results	<p>Project Proponent reported that “Comprehensive report on groundwater conditions in both core and buffer zones with groundwater modeling for Laserda-Pacheri Manganese & Iron Ore Block of M/s. Thriveni Earthmovers Pvt. Ltd.’ prepared by Dr. Nallathambi Varadarajan (CGWA Accredited Ground Water Professional). Pumping test was conducted in an existing bore well in the core zone. Based on the pumping test analysis with various methods, the average K value obtained is 3.318m/d which is in conformity with regional aquifer parameters of shallow aquifer. The parameters for deeper bore wells are inferred from the lithology and an estimated value of 0.3318 m.day is used for deeper confined aquifers. The proposed mining activity at Laserda - Pacheri Manganese and Iron ore block requires mine dewatering to an extend of 1348.8 m3/day for safe mining.</p> <p>Existing one bore well will pump for 6 to 8 hours with 5 HP motor and estimated pumping is 100 to 120 m3/day. The proposed 3 more bore wells will supplement the ultimate domestic water demand of 380 m3/day in the project area. The prevailing hydrogeological conditions and predicted drawdown for the withdrawal of ground water in the project area will have localised draw down and more induced recharge from Karo river.</p>		
Traffic study (no. of locations) and results	<p>Project Proponent reported that Iron and Manganese ore from the mines will be transported to Barbil and Bolani Railway Siding through Bolani-Kiriburu PWD road which is 9m width and strengthened earlier for the meant of transportation of minerals but at present there is no such mineral transportation as no mines are operating in the nearby areas apart from SAIL Bolani and SAIL</p>		

	<p>Kiriburu which has own railway sidings inside their lease area. Near Bolani railway siding the road is touching to the Bolani main road (11m width) which is further connected to Barbil siding through Bolani-Barbil Road. This road further connected to Barjamda-Barbil Bhadrasahi SH-10B. Further SH-10B joined to NH-520 (4 lane) at Bhadrasahi.</p> <p>The nearby railway sidings are Bolani & Barbil which are at a distance of 5.6 km and 12.0 Km (by road) respectively. While passing through Kiriburu Bolani Road, there is a bridge over Karo River with dimensions of around 60m length and 7m width and has the strength to sustain loaded trucks/dumpers. Trucks/Volvos of the local villagers usually pass through the bridge to move towards kiriburu or Barbil. Project Proponent will construct a bridge over river Karo having dimension of 60m length and 11m width. Permission has been obtained from PWD Department vide Letter No.5484 dated 13.07.2023. Bridge construction will start after obtaining EC and execution of lease deed. It is observed that 13 trips/hr for Iron ore and 1 Trip per hour for Manganese ore will be dispatched which is a maximum of 14 Trips/Hr. The road will continue to be in LOS 'A'.</p>
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xii. Public Hearing (PH) Details:

Advertisement for PH with date (name of major national daily and one regional vernacular daily newspaper)	30.05.2023 (Odisha), 04.06.2023 (Jharkhand), Regional Newspaper - The Sambad (Odisha), The Prabhatkhabar (Jharkhand), English Newspaper - The Times of India (Odisha), The Hindustan Times (Jharkhand)
Date of PH	04.07.2023
Venue	Mouza-Dhanurjaypur (Khata No.122, Plot No.4/1238)
Chaired by	Additional District Magistrate (Revenue), Keonjhar
Main issues raised during PH	Majority of the comments were related to employment to the locals, proper compensation for PAFs, Infrastructural developments, educational facilities, etc.
Budget proposed for addressing issues raised during PH over 3 years	Rs 9.63 Cr

xiii. Rehabilitation & Resettlement (R&R):

R & R details	The Project Proponent reported that an area of 42.242 Ha of land needs to be acquired. About 25 houses need to be shifted as per the 'Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013' and 'the Odisha Right to Fair Compensation and
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<p>Transparency in Land Acquisition, Rehabilitation and Resettlement Rules, 2016'. The State Government has granted administrative approval under rule (3) of Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2016 (RFCTLAR&R Rules 2016) for land acquisition and leasing out the land for mining purpose till the validity of the lease.</p> <p>Land acquisition process by the State Government for handing over the same to proponent is under progress. However, in line with the guidelines given in the above rules, project proponent has worked out compensation package and a comprehensive R & R study was undertaken by Asian Institute for Sustainable Development (AISD), Ranchi, Jharkhand.</p>	
Rehabilitation Cost	Rs.39.05 Crores
Periphery Development Cost	As decided and determined by the RPDAC
Support Cost for R&R Implementation (Implementation charges; Administration, Management, Monitoring etc.	10% of the total budget (a+b)
<p>Further, the Project Proponent submitted that for effective implementation of R & R plan as well as the Peripheral Development Plan, Project Proponent will constitute a Rehabilitation & Resettlement Cell (R & R Cell) for the project and Corporate Social Responsibility Cell (CSRC). R & R Cell will be responsible for the effective implementation of R & R entitlements while CSRC will take the responsibility of peripheral development. Both will assist RPDAC in monitoring and evaluation.</p>	

xiv. Courtcase details:

Court Case, No and its present status	Project Proponent informed that there is no litigation pending against the project.
Undertaking by Project Proponent w.r.t court case	Submitted

xv. Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018	The Project Proponent submitted the Affidavit in a Non-judicial stamp paper of Rs. 50 bearing no. D 087496 dated 20.12.2021 to comply with all the statutory requirement & judgment of Hon'ble Supreme Court dated 2nd August 2017 in writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ors.
Undertaking by Project Proponent in EIA/EMP report	The Project Proponent submitted a declaration stating that they have entrusted the EIA study to M/s. Creative Engineers & Consultants (CEC), Chennai who have been accredited by the National Accreditation Board for Education & Training (NABET),

	<p>Quality Council of India. The Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) have been prepared as per the generic structure proposed in the EIA notification 2006, ToR issued by MoEF&CC. The prescribed ToR along with compliance is also incorporated in the EIA/EMP Report. This report is prepared based on the information and data obtained from the Mining Plan and technical studies undertaken by various consultants/institutes that have been engaged. The data given in the EIA/EMP report are factually correct to the best of knowledge.</p>
<p>Undertaking by Consultant in EIA/EMP report</p>	<p>The EIA Consultant submitted an undertaking stating that M/s Thriveni Earthmovers Pvt. Ltd. obtained ToR under EIA Notification 2006 from MoEF&CC ToR Lr.No: J-11015/113/2021-IA II(NCM) dated 28.03.2022 for Laserda-Pacheri Manganese and Iron Ore Block for the peak production capacity of 1.545 MTPA (ROM) of Iron ore and 0.11 MTPA (ROM) of Manganese ore over an area of 131.800Ha in Dhanurjapur, Kanarda and Laserda villages, Barbil Tehsil in Keonjhar District in Odisha. The prescribed TOR is complied with and incorporated in the EIA Report. The requirements regarding compliance of ToR has been explained to the project proponent. The present application is being submitted based on directions of the proponent. This report is based on the information and data obtained from approved Mining Plan, site visit & field study carried out by specialized agencies/ experts. The data generated and given in the EIA/EMP Report are factually correct. The sample collection and analyses are carried out by M/s Star Analytical Services, who are an MoEF&CC recognized and NABL accredited Laboratory.</p>
<p>Plagiarism Certificate</p>	<p>The EIA Consultant submitted that the EIA Coordinator (EC) has gone through the report, and the consultant organization shall be fully accountable for any misleading information. It is certified that no unethical practices, plagiarism involved in carrying out the work and external data/ text has not been used without proper acknowledgement while preparing this EIA report.</p>

- xvi. ADS details: Earlier, the proposal was considered in the 26th EAC (Non-Coal Mining) meeting held during 31st January & 1st February, 2024 wherein the Committee has deferred the proposal for submission of additional information. The Project Proponent has submitted their reply vide letter dated 11.03.2024 as mentioned below:

S. No	ADS Point	Reply by Project Proponent
1	The EAC opined that the Ministry may seek comments from the Project Elephant Division in the Ministry in this regard.	<p>Project Elephant Division of the Ministry has given the following Comments:</p> <ol style="list-style-type: none"> i. As per the authentication of the DFO, Keonjhar the nearest elephant corridor i.e. Karo-Karampada is at a distance of 2.31 km from the project site, the user agency and the State Forest Department must undertake measures for the conservation and protection of elephants and their habitats and ensure to avoid the human-elephant conflict. ii. Considering the migratory nature of the elephants, the user agency should take utmost care for prevention of falling of wildlife including the elephants into the mining pits and should take all the necessary steps so that the movement of elephants in the elephant corridor/ elephant habitat is not affected by the operations of the project. iii. Also, while drafting the Integrated Regional Wildlife Conservation Plan, the elephant conservation and management plan should be made part of the same. iv. Considering the conservation of elephants in the landscape and future perspective also, the Oversight Committee should regularly monitor and review the compliance of the conditions stipulated in the approval for above mentioned mines. v. A proposed Bio-diversity Conservation Plan for this entire landscape shall also be prepared at the earliest by the State Govt. at the cost of user agency by including the elephant conservation plan. vi. While consideration of the Environment Clearance, the above comments of the Project Elephant and the compliance of the conditions mentioned in the office memorandum dated 21.12.2023 of Forest

		<p>Conservation Division shall also be considered for the instant proposal and also for the other similar proposals related to the mining in that elephant landscape.</p> <p>Further, Ministry (Project Elephant Division) received the following comments from Chief Wildlife Warden, Odisha upon the ongoing court case matter related to the project:</p> <ol style="list-style-type: none"> i. One elephant corridor (Karo-Karampada which one out of 14 elephant corridors of Odisha) is falling within 10 Km of impact zone of the said lease boundary. ii. Wildlife Society of Odisha, a NGO has filed O.A. no. 129/2016/EZ before Hon'ble NGT, Kolkata bench praying for notification of the said corridor as Eco-Sensitive Zone under EPA, 1986. iii. Hon'ble NGT, Kolkata in their order dated 06.04.2023 have directed the state respondents to notify the elephant corridor in one-month time. iv. State Government have filled W.P. (C) no. 1407 of 2023 before Hon'ble High Court of Odisha against order dated 06.04.2023 of Hon'ble NGT. v. Hon'ble High Court of Odisha in its order dated 04.05.2023 in the said W.P. have stayed further proceedings arising out of O.A. no. 129/2016/EZ. <p>As per the Chief Conservator of Forests (Wildlife-II), State Wildlife Headquarters, Odisha information the matter is sub-judice and still pending before the Hon'ble High Court of Odisha.</p>
2	<p>The Project Proponent needs to submit a letter from the State Forest Dept., w.r.t Karo Karampada Elephant Corridor and also the present status of the court</p>	<p>In this regard, the State Forest Dept. has furnished the letter w.r.t. status of the court cases of Karo-Karampada Corridor.</p>

	<p>case w.r.t Karo Karampada Elephant Corridor in WP (C) No. 14057/2023, 14706/2022 before Hon'ble High Court of Orrisa and O.A No:129/2016/EZ & Executive application no. 03/2022 before Hon'ble NGT, Case no: 115/2013 before Judicial Magistrate of First Class (JMFC) Court, Barbil, Orissa and any court of law.</p>	
3	<p>The EAC noted that there is no reference from the Project Proponent regarding list of flora and fauna authenticated by the State Forest Dept. The EAC asked the Project Proponent to submit the authenticated list of Flora and Fauna as per latest Wildlife (Protection) Amendment Act 2022.</p>	<p>Flora and fauna list has been duly authenticated by DFO, Keonjhar vide Lr.No.2044 dated 05.03.2024.</p>
4	<p>The Project Proponent needs to define the exact quantity w.r.t Suggested Ore Transport Mode (SOTM) as per the Recommendation of CSIRNEERI Report on "Carrying Capacity Study for Environmentally Sustainable Iron and Manganese Ore Mining Activity in Keonjhar, Sundargarh and Mayurbhanj districts of Odisha State.</p>	<p>As per the SOTM recommended by CSIR-NEERI, project proponent informed that proposal comes under SOTM 3 i.e. EC capacity between 1 MTPA <3 MTPA. So, project proponent will dispatch minimum 70% (Max. 1.081 MTPA) by public railway siding and maximum 30% (Max. 0.464MTPA) by road – direct destination or by other public railway siding or above options.</p>

5	The Project Proponent needs to submit the current status of NOC for abstraction of ground water	Project Proponent have obtained No Objection Certificate for Groundwater Abstraction from CGWA vide NOC No. CGWA/NOC/MIN/ORIG/2024/19982 dated 06.03.2024. As per the Recommendation of CGWA, the quantity will be optimized.
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xvii. Details of the Environmental Management Plan (EMP):

Activities	Capital cost (Crores)	Recurring cost (Lakhs/annum)
Mobile Water Sprinkling	60.0	7.20
Fixed Water Sprinkling	20.0	2.70
Wheel Washing Facility	35.0	5.0
Bridge Construction over Karo River	450.0	5.0
Greenbelt and Plantation	15.0	1.5
Vacuum cleaner	60.0	3.0
Dry fog system for crushing and screening plant	27.0	3.0
Continuous ambient air quality monitoring station	60.0	9.0
Parking Plaza for trucks with proper amenities	25.0	2.5
Construction of cement concrete road from mine entrance to exit	60.0	3.0
Effluent Treatment Plant	10.0	1.5
Sewage Treatment Plant	15.0	2.25
Surface Runoff Management Structures – Retaining Wall, Garland Drain, Settling Ponds	110.0	7.0
Rooftop Rainwater Harvesting	5.0	0.75
Piezometers – 2 Nos.	3.0	0.6
Electronic Display Board	3.0	0.3
Environmental Monitoring	8.0	2.4
EMC Manpower	-	23.0
Awareness Programs in nearby villages	-	6.0
ISO Certification	-	3.0
Total	966	88.7

xviii. Details of project cost and employment:

Particulars	(Rs. In Crore)
Total cost of EMP (Capital Cost of EMP + capital cost of Public hearing)	Rs.19.3 Lakhs (9.66 + 9.64) Capital cost Rs.88.7 Lakhs Recurring Cost
Project Cost	Rs.96 Crores

Employment (No.s)	335
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3. Observation and Recommendation of EAC:

The instant proposal is for Environmental Clearance for Laserda- pacheri Manganese mining of Iron and Manganese. The Proposal attracts the general conditions as the Odisha – Jharkhand Interstate Boundary is located at a distance of 3.19 km from the mine lease area and falls under Category ‘A’.

An elephant corridor i.e. Karo-Karampada is located at a distance of 2.31 km from the project site, EAC took note of the replies submitted by the PP to the ADS raised during the 26th EAC meeting held during 31st January 2024- 1st February 2024. The EAC noted the comments received from the Project Elephant Division of the Ministry and asked the PP to take measures for the conservation and protection of elephants and their habitats in order to avoid the human-elephant conflict. EAC also noted that there are multiple court cases going on w.r.t. Elephant Corridor, therefore the Project Proponent should be vigilant enough to take note of those cases and be in the compliance of the outcome of the Hon’ble court’s decision.

Subsequently, the EAC stated that as per the SOTM recommendation by CSIR-NEERI, the proposal comes under SOTM 3 i.e. EC capacity between 1 MTPA & <3 MTPA. Therefore, the Project Proponent should make the transportation plan with minimum 70% (i.e. upto 1.081 MTPA) by public railway siding and maximum 30% (i.e. upto 0.464 MTPA) by road. Further, the EAC advised the PP to protect and conserve the river Karo which is passing through the mine lease area by prohibiting mining activity 50 m away from the river. The EAC also asked PP to implement the budget of Rs 9.63 Cr which has been earmarked to address the concerns raised during public hearing. EAC also took note of the implementing budget of Rs 966 lakhs which has been earmarked as a capital cost towards Environment Management Plan (EMP) and Rs 88.7 Lakhs as a recurring cost.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC in its EAC (Non-Coal Mining) meeting held during 9-10th May, 2024 **recommended** the proposal under the provisions of EIA Notification, 2006 and its subsequent amendments for grant of Environmental Clearance for Laserda - Pacheri Manganese and Iron Ore mining with production capacity of 1.545 MTPA (ROM) of Iron Ore, 1.182 MTPA of waste (Total Excavation of Iron Ore 2.728 MTPA) and 0.110 MTPA (ROM) of Manganese Ore, 0.355 MTPA of waste (Total Excavation of Manganese Ore 0.465 MTPA) along with Dry screening and crushing using 200 TPH x 2 Primary Crushing, 200 TPH x 2 Secondary Crushing, 200 TPH x 2 Tertiary Crushing, 250 TPH x 2 Vibrating Screen and 150 TPH x 1 Vibrating Screen in the ML area of 131.800 ha by M/s Thriveni Earthmovers Private Limited located at Villages Dhanurjaypur, Kanarda and Laserda,

Tehsil Barbil, District Keonjhar, Odisha subject to the following specific conditions in addition to the standard EC conditions applicable for non-coal mining projects: -

Specific conditions:

- i. The Project Proponent shall implement the measures for the conservation and protection of elephant corridor in order to avoid the human-elephant conflict.
- ii. The Project Proponent needs to implement the SOTM recommendation by CSIR-NEERI as the proposal comes under SOTM 3 i.e. EC capacity between 1 MTPA <3 MTPA. Therefore, the Project Proponent should make the transportation plan with minimum 70% (i.e. upto 1.081 MTPA) by public railway siding and maximum 30% (i.e. upto 0.464 MTPA) by road.
- iii. The Project Proponent needs to submit the six-monthly report upon the progressive status of transportation of mineral through Rail and Road.
- iv. The Project Proponent shall strictly adhere to the action plan to monitor the movement of wildlife in the vicinity of the mine lease area.
- v. The Project Proponent needs to use modern equipment's such as Camera Traps for ensuring presence and movement of wild animals in the study area in consultation with Wildlife Wing of Forest Department. Appropriate interventions shall be taken to minimise stress conditions for wild animals and to avoid Man Animal conflict.
- vi. The Project Proponent needs to submit the annual compliance of the effectiveness of the Wildlife Conservation Plan to Ministry's Regional Office.
- vii. The Project Proponent needs to take adequate measures for protection of the river Karo which is passing through the mine lease area. The PP needs to prohibit the mining activity upto 50 m on either side of the river Karo. The natural water bodies and other streams which are flowing in and around the mine lease area should not be disturbed and mining activity shall be prohibited within 50 m from their boundaries.
- viii. Regular monitoring on surface water flow, turbidity & water quality shall be carried out and report shall be submitted quarterly to the Ministry's Integrated Regional Office.
- ix. The Project Proponent should install the continuous ambient air quality monitoring stations (CAAQMS) as per the scientific study and in consultation with CPCB/SPCB. The real time data so generated should be displayed digitally at entry and exit gate of mine lease area for public display and shall be linked to server of CPCB/SPCB.
- x. The Project Proponent shall monitor the air quality, noise level, water quality, water level and ground vibration during drilling and blasting at the lease boundary of the mine, near the village, crusher and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Regional Office.

- xi. The Project Proponent needs to conduct the scientific study for carrying out blasting by the reputed Institute within a period of six months from the start of mining operations. The ground induced blasting vibrations shall be monitored regularly for every blast performed and the values of “peak particle velocity” and “Air Over Pressure” shall be maintained below the permissible value prescribed by the DGMS, from time to time. The data needs to be maintained and submitted along with the six monthly compliance report. The implementation status of the scientific study to be carried out by the reputed Institute shall be submitted to the Ministry’s Regional Office and DGMS.
- xii. The Project Proponent needs to install the permanent water sprinklers along the haul road and the approach road. Further, 10 nos. of fog canon/mist sprayer of at least 40 m throw shall be installed at various locations in the mine area.
- xiii. Garland drains and catch drains shall be regularly desilted and maintained periodically at regular intervals.
- xiv. The Project Proponent needs to explore the possibility of using advanced/ latest mining technologies available so as to minimize the ecological impacts.
- xv. The air pollution control equipment’s like bag filters, vacuum suction hoods, dry fogging system etc. shall be installed at Crushers, and other areas prone to air pollution. All the screens and screening plant should be properly covered and proper arrangement of dust suppression system should be provided for dust control. PP shall take necessary measures to avoid generation of fugitive dust emissions. The dense plantation shall be carried out in the vicinity of the crusher. The Stack emission monitoring of the Crusher/DG set shall be carried out at periodic intervals. Continuous noise monitoring meters shall be established inside and outside of the crusher.
- xvi. The Project Proponent needs to complete the entire 7.5 m peripheral plantation and safety barrier plantation within three years from the start of mining operations. The Project Proponent should plant quality sapling of 10 m height of native and fruit bearing species. In case of tall transplants (seedlings) the seedlings should have proper trained root stock with root biomass commensurate with seedling height to ensure good growth after out planting. Plantation shall be undertaken in consultation with the State Forest Department. The Project Proponent shall make the actual count on the saplings planted and its survival rate and in case of failure of achievement of 95% survival rate, action plan for achieving the target survival rate shall be submitted to the Ministry’s Integrated Regional Office.
- xvii. The budget of Rs 963.8 Lakhs to address the concerns raised by the public in the public hearing to be completed within 3 years from the date of start of mining operations. PP shall comply with all action plans made for public hearing concerns and make regular maintenance and record the progressive activity outcomes. Activity-wise details of Public Hearing Budget are as follows:

S.No.	Particulars	Budget (Rs. In Lakhs)
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1.	Employment	504
2.	Drinking Water	30
3.	Road	50
4.	Electricity/Lighting	10
5.	Education	135.4
6.	Infrastructure	12.4
7.	Health	153
8.	Plantation	3
9.	Self-Employment and SHG support	44
10.	Sports	22
	Total	963.8

- xviii. The Project Proponent should adopt the proper mitigation measures as proposed under EMP with budgetary provision of Rs 966 Lakh as capital cost and 88.7 lakh as recurring cost. The adoption of mitigation measures and monitoring of the same as proposed in the EMP shall be done under the supervision of the qualified environmental personnel. The implementation status of the same shall be submitted to the Ministry's Regional Office. The item-wise details of the Environment Management Plan is as follows:

S.No.	Item	Capital Cost (Rs. in Lakhs)	Recurring Cost (Rs. InLakhs)	Timeframe for Capital Cost
1.	Mobile Water Sprinkling	60.0	7.20	1st year onwards
2.	Fixed Water Sprinkling	20.0	2.70	1st year onwards
3.	Wheel Washing Facility	35.0	5.0	1st year onwards
4.	Bridge Construction over Karo River	450.0	5.0	6 months
5.	Greenbelt and Plantation	15.0	1.5	5 years
6.	Vacuum cleaner	60.0	3.0	1st year onwards
7.	Dry fog system for crushing and screening plant	27.0	3.0	1st year onwards
8.	Continuous ambient air quality monitoring station	60.0	9.0	1st year onwards
9.	Parking Plaza for trucks with proper amenities	25.0	2.5	1st year onwards

10.	Construction of cement concrete road from mine entrance to exit	60.0	3.0	1st year onwards
11.	Effluent Treatment Plant	10.0	1.5	1st year onwards
12.	Sewage Treatment Plant	15.0	2.25	1st year onwards
13.	Surface Runoff Management Structures – Retaining Wall, Garland Drain, Settling Ponds	110.0	7.0	1st year onwards
14.	Rooftop Rainwater Harvesting	5.0	0.75	1st year onwards
15.	Piezometers – 2 Nos.	3.0	0.6	1st year onwards
16.	Electronic Display Board	3.0	0.3	1st year onwards
17.	Environmental Monitoring	8.0	2.4	1st year onwards
18.	EMC Manpower	-	23.0	1st year onwards
19.	Awareness Programs in nearby villages	-	6.0	5 years
20.	ISO Certification	-	3.0	5 years
Total		966	88.7	

- xix. The Project Proponent shall create awareness among the local people working within the project area as well as its surrounding area on the ban of Single Use Plastic (SUP) in order to ensure the compliance of Notification published by MoEF&CC on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report.
- xx. The Project Proponent should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any non-compliance or infringement should be reported to the concerned authority.
- xxi. The Project Proponent shall conduct third party audit of compliance of EC condition at an interval one year and its report shall be submitted to IRO, MoEF&CC.
- xxii. The Project Proponent shall explore the possibility of using atleast 20% of Electric vehicles/CNG/Solar instead of diesel operation within three years.

- xxiii. NoC from the Central Ground Water Authority (CGWA)/ Concerned Local authority, as the case may be, shall be obtained before drawing the ground water for the project activities.
- xxiv. The Project Proponent shall periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance on occupational health shall be carried out every year for mine workers. PP will also organize medical camp for the benefit of the local people and also the monitor the health impacts due to mining activity.
- xxv. Over loading of transport equipment's should be avoided to prevent spillage. Vehicles involved in transporting the material should be covered with tarpaulin to prevent fugitive dust emission.
- xxvi. The mining lease holders will undertake to re-grass the mining area after ceasing of the mining operations and any other area which may have been disturbed due to their mining activities. They shall restore the land to a condition which is fit for cultivation, flora, fauna etc. The implementation report of the above said condition shall be submitted to the Ministry's Regional Office within six month.
- xxvii. The Project Proponent shall adhere to the pollution control measures suggested by the Central Pollution Control Board (CPCB) in the environmental guidelines for crushing/screening activity.
- xxviii. The Project Proponent shall comply with the directions passed in the matters which are sub-judice before the Hon'ble Supreme Court, High Court and NGT with regard to the elephant corridor.

1.7 Bolani Iron Ore Mine with production capacity of 15,000 TPA of Manganese Ore (RoM) in the ML area of 1786.74 ha or 6.9 sq mile of M/s SAIL located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha - [Online Proposal No. IA/OR/MIN/466261/2024, File No. J-11015/396/2008-IA. II (M)] - Amendment in EC letter dated 21.12.2012 under EIA notification 2006 Notification.

The instant proposal is for amendment in EC dated 21.12.2012, 17.02.2014, 30.07.2020, 05.08.2021, 19.09.2022 and 13.09.2023 for Bolani Iron Ore Mine with production capacity of 15,000 TPA of Manganese Ore (RoM) in the ML area of 1786.74 ha or 6.9 sq mile of M/s SAIL located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha.

2. The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under: -

- i. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals and falls under Category "A" of the schedule of the EIA Notification, 2006 as the mining lease area is greater than 250 ha and appraised at Central level.
- ii. The mine lease area is located between Latitude 22°05'11.65848"N - 22°07'46.2869"N and Longitude 85°16'52.81330"E - 85°20'13.85260"E. The mine lease area falls under the Survey of India Toposheet no: 73 F/8 (F45H8) and falls in Seismic Zone-II.
- iii. The Project Proponent has submitted the chronology of the Environmental Clearance (EC) as mentioned below:
 - a. The Project Proponent obtained Environmental Clearance (EC) on 21.12.2012 for Bolani Iron Ore Mine with production capacity of 15,000 TPA of Manganese Ore (RoM) in the ML area of 1786.74 ha or 6.9 sq mile of M/s SAIL located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha.
 - b. The Project Proponent obtained Environmental Clearance (EC) on 21.12.2012 for enhancement of production of iron ore from 5.65 million TPA to 12.0 million TPA (ROM) in Bolani Iron Ore Mine (5.1 Sq. mile) along with installation of a new beneficiation plant of 12 million TPA throughput and pellet plant of 4.0 million TPA capacity of M/s SAIL, located at village Bolani, Tehsil Barbil, District Keonjhar, Odisha.
 - c. Subsequently, the Project Proponent obtained amendment in EC dated 21.12.2012 on 17.02.2014 w.r.t Para 6 (iii) and in addition the following was added to the EC letter "There are two adjacent mining leases in 'Bolani Ore Mines viz Bolani 5.1 Sq. miles lease' 'Bolani 6.9 Sq. miles lease'. Bolani 5.1 Sq. miles lease is the iron ore bearing area whereas Bolani 6.9 Sq. miles lease is manganese ore bearing. Common infrastructure facilities for both the mines viz. railway siding & loading yard township, tailing pond, water intake point etc. are located in 6.9 Sq. miles lease" and that the mine working will be open cast fully mechanized instead of semi-mechanized.
 - d. Thereafter, PP obtained EC on 30th July, 2020 under para 7(ii) of EIA Notification 2006 (as amended) for change in excavation & dispatch pattern by increasing excavation and dispatch of iron ore fines from existing Fines Dumps up to 3.0 MTPA (from present 0.5 MTPA) and Modification of Mining parameters including updating of reserves and waste generation keeping total production within approved EC capacity of 12 MTPA. Bolani Iron Ore Mine (1321.45 ha) is located at Villages Boiani & Balagoda and Karo Reserve Forest (R.F.) in Barbil Tehsil, Champua Subdivision, Keonjhar District of Odisha with one of the specific condition that "This amendment is valid for a period of one year and the same may be extended after the site visit or compliance monitoring by Regional Office, whichever is earlier".
 - e. Further, PP obtained EC vide letter dated 05.08.2021 for amendment/extension of validity of EC dated 30.07.2020 for one year along with permitting dispatch of

8.5 MTPA ROM Iron Ore from mines, 1.5 MTPA from fines dump by SAIL's Bolani Rly. Siding and dispatch of 0.5 MTPA from Iron Ore from Mines and 1.5 MTPA from fines dump by Public Sidings Bolani/Barbil or by Road keeping total production within approved EC Capacity 12 MTPA under Para 7(ii) of the EIA Notification 2006.

- f. Again, the PP obtained amendment in EC on 19.09.2022 for the amendment in EC's dated 30.07.2020 and 05.08.2021 for extension of validity of EC for a further period of one year along with permitting dispatch of 8.5 MTPA ROM Iron Ore from mines, 1.5 MTPA from fines dump by SAIL's Bolani Rly. Siding and dispatch of 0.5 MTPA from Iron Ore from Mines and 1.5 MTPA from fines dump by Public Sidings Bolani/Barbil or by Road keeping total production within approved EC Capacity 12.0 MTPA located at village Boiani, Tehsil Barbil, District Keonjhar, Odisha. This amendment in EC is valid upto 18.09.2023.
- g. Later on, the PP obtained amendment in EC on 13.09.2023 for amendment in EC's dated 30.07.2020, 05.08.2021 & 19.09.2022 of M/s SAIL for extension of validity of Environmental Clearance for further period of 02 (Two) years to liquidate entire stock of old Dump Fines from Bolani Iron Ore Mines by (i) continue excavation of iron ore fines from old Fines Dumps maximum up to 3 MTPA for selling in open market or supplying to external pellet conversion agencies for captive use of converted pellets keeping the total production within EC capacity of 12 MTPA, (ii) continue dispatch of 8.5 MTPA ROM Iron Ore from mines, 1.5 MTPA from fines dump with total dispatch up to 10 MTPA by SAIL's Bolani Rly. Siding and dispatch of 0.5 MTPA from Iron Ore from Mines and 1.5 MTPA from fines dump with total up to 2 MTPA through public roads leading to Public Sidings at Bolani / Barbilor beyond NH 520 within approved EC Capacity 12.0 MTPA, in the mine lease area of 1321.45 ha, located at Village Bolani, Tehsil- Barbil, District Keonjhar, Odisha.
- iv. In the instant proposal, the Project Proponent requested for amendment in EC's letter dated 21.12.2012 for Bolani 6.90 Sq Miles ML (1786.74 ha) allowing liquidation of old iron ore dump fines produced from adjoining Bolani 5.10 Sq Miles ML and stacked in Bolani 6.90 Sq. Miles ML through dispatching for selling in open market or captive use directly or supplying to conversion agents for captive use of converted pellets without any change in approved configuration keeping the excavation and dispatch of dump fines from both mining leases, within 3.0 MTPA, as per the approved EC of Bolani 5.10 Sq. Miles ML under Para 7(ii) of the EIA Notification 2006 at Village Bolani, Balagoda, Limitur etc. Tehsil - Barbil, District Keonjhar, Odisha
- v. The Project Proponent has submitted the following justification for instant proposal for liquidation on the strength of EC of Bolani 5.10 sq miles ML:
 - a. No change in process and/or technology, product mix, handling capacity of the mineral.

- b. The assessed the likely impacts, on the local road infrastructure and air quality of the area, due to the proposed liquidation of dump fines shall remain unchanged.
- c. The baseline environmental data covering air, water, noise etc., in and around Mines, has been carried out and incorporated in the addendum to EIA/EMP Report which shows that the environmental quality in and around was found to be within the permissible limits.
- d. The proposed liquidation of fines will not only result in effective utilization of these low grade minerals, but also eliminates environmental hazards for Bolani 6.90 sq miles ML associated due to storage of fines besides meeting the iron ore demand during scarcity period of the country.
- vi. The Project Proponent has informed that the 4.123 MT of iron ore dump fines stacked inside this ML, which were originally generated from the adjoining 5.10 Sq Mile ML, is proposed to be evacuated in the strength of Amended EC grant Order dated.13.09.2023 of Bolani 5.10 Sq Miles ML.
- vii. The Project Proponent has submitted the following effect on configuration of Bolani 1321.45 ha or 5.10 SQ Miles ML area:

Plant / Equipment / Facility	Existing Configuration as per EC amendment order dated 13.09.2023	Configuration as per Instant Proposal	Remarks, if any
Iron ore excavation from Fines Dumps	3 MTPA Dump Fines from 5.10 sq miles ML	3 MTPA Dump Fines from 5.10 sq miles ML + 6.90 sq Mile ML	No change in handling quantity of dump fines from Bolani Ores Mines complex
Dispatch by SAIL's own siding	Max. up to 1.5 MTPA dump fines from 5.10 sq miles ML	Max. up to 1.5 MTPA dump fines from 5.10 sq miles ML + 6.90 sq Mile ML	Within the earlier approved EC capacity
Dispatch of dump fines by road	Max. up to 1.5 MTPA by Road & Rail or only Road from 5.10 sq miles ML	Max. up to 1.5 MTPA by Road & Rail or only Road from 5.10 sq miles ML + 6.90 sq Mile ML	By road to Bolani Public/Barbil Railway Siding or directly by road to the final destination
Dispatch of fresh Iron Ore on road	Max. up to 0.5 MTPA by Road & Rail or only Road from 5.10 sq Mile ML	No Change	No Change from earlier EC in despatch of max. 2MTPA(0.5MTPA

			fresh Iron Ore& 1.5MTPA dump fines) by road
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1.7.3 Observation and Recommendation of EAC:

The instant proposal is for amendment of EC letter dated 21.12.2012 for liquidation of old iron ore dump fines produced from adjoining Bolani 5.10 Sq Miles ML and stacked in Bolani 6.90 Sq. Miles ML through dispatching for selling in open market or captive use directly or supplying to conversion agents for captive use of converted pellets without any change in approved configuration keeping the excavation and dispatch of dump fines from both mining leases.

The EAC pointed out that the instant application is inconsistent with the judgement passed by the Hon'ble Supreme Court in the matter of Goa foundation vs Union of India WP (C) No. 435/2012 dated 21.04.2014. As per the sub-para (ii) of para no. 71 of the judgement:

“dumping of minerals outside the leased area of the mining lessees is not permissible under the MMDR Act and the Rules made thereunder”.

Therefore, the EAC asked the Project Proponent to submit the certificate from the state government for clarifying the exact duration in year in which the old iron ore dump fines are generated, their exact quantity and location of dump as per the then approved Mining plan. EAC also noted that the ML area as per the EC letter dated 21.12.2012 is 1786.74 ha while as per the documents submitted in the instant EAC meeting the lease area is 1586.36 ha or 6.9 Sq miles. Therefore, PP was advised to submit the Mine lease documents of Bolani iron ore mine of 6.9 Sq. miles along with its chronology.

In view of the above, the Committee **deferred** the proposal and asked to submit the following information:

- i. The Project Proponent needs to justify their proposal w.r.t. judgement dated 21.04.2014 of Hon'ble Supreme Court in the matter of Goa Foundation Vs UOI.
- ii. The Project Proponent needs to submit the certificate from the Department and Mines Geology, Govt. of Odisha clearly stating the source of the dumped iron ore and its generation period (before or after year 2014). The State Govt. shall also mention the year till which the fine iron ores were dumped.
- iii. The Project Proponent needs to submit the year-wise authenticated quantity of old iron ore dump in tabular form.

- iv. The Project Proponent needs to submit the authenticated documents such as Mine plan or any other document showing the dumping location of old iron ore dump.
- v. The Project Proponent needs to submit the Mine lease documents certifying the exact mine lease area of 1786.74 ha or 1586.36 ha or 6.9 Sq miles.

Day 2: 10th May, 2024 (Friday)

2.1 Mothala Balachod Bauxite Mining Project with the Production Capacity of 42,000 TPA in the mine lease area of 280.7686 Ha by M/s Gujarat Mineral Development Corporation Limited, located at Villages Balachod, Mothala, Khandai, Tehsil Abdasa, District Kutch, Gujarat. [Online Proposal No. IA/GJ/MIN/448536/2023, File No. IA-J-11015/150/2018-IA-II(NCM), EIA Consultant - M/s Anacon Laboratories Pvt. Ltd] - Environmental Clearance under MoEF&CC Notification S.O.1530(E) dated 6th April 2018 reg.

The instant proposal is for Environmental Clearance under the provision of MoEF&CC Notification S.O. 1530 (E) dated 6th April 2018 for Mothala Balachod Bauxite Mining Project with the Production Capacity of 42,000 TPA in the mine lease area of 280.7686 Ha by M/s Gujarat Mineral Development Corporation Limited, located at Villages Balachod, Mothala, Khandai, Tehsil Abdasa, District Kutch, Gujarat.

2. The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under: -

- i. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals and falls under Category "A" as the mining lease area is greater than 250ha and appraised at the Central level.
- ii. The mine lease area is located between Latitude: 23°13'17"N - 23°15' 58" N and Longitude: 69°07'24"E - 69°10' 41"E. The mine lease area falls under the Survey of India Toposheet No: 41 E/4 and falls in Seismic Zone – V as per IS-1893 (Part-1)-2002.
- iii. Details of previous Environmental Clearance (EC): -
 - a. The Project Proponent obtained Environmental Clearance (EC) vide Lr no. J-11015/131/2005-IA II(M) dated 08.12.2005 for production capacity of 42,000 TPA of Bauxite over an area of 299.40 ha under the EIA Notification, 1994.
- iv. Details of Terms of Reference (ToR):
 - a. The Project Proponent obtained Terms of Reference (ToR) vide Lr.No: IA-J-11015/150/2018-IA-II(NCM) dated 18.04.2022 for Mothala Balachod Bauxite Mining Project for the Production Capacity of 42,000 TPA of Bauxite in the

mine lease area of 280.7686 Ha under MoEF&CC Notification S.O.1530(E) dated 6th April 2018.

v. Details of Mine Lease:

- a. The Project Proponent submitted that initially mining lease was granted by the Industries and Mines Dept., Govt. of Gujarat vide order no: MCR/1591/G58/703/CHH dated 12.01.2006 for mineral Bauxite over an area of 299.40.05 ha for the period of 30 years.
- b. Then, the Industries and Mines Dept., Govt. of Gujarat vide order no: MCR/1591/G-58/703/CHH dated 02.02.2007 revised and the granted the mine lease area for 280.76.86 ha. The lease agreement was thereof executed on 07.03.2007.
- c. Further, the Industries and Mines Dept., Govt. of Gujarat vide order no: MCR/1591/G-58/703/CHH have extended the lease period up to 06.03.2057.

vi. Details of Land Use/Land Cover of the Mine Lease Area:

Private land	-
Government land	280.7686 Ha
Total Mining lease area (MLA)	280.7686 Ha (Government Waste Land)

vii. Mining plan details:

Review and updation of Mining Plan along with Progressive Mine Closure Plan approved by Indian Bureau of Mines (IBM) Gandhinagar.	Letter No.	Approved from IBM Gandhinagar vide letter no. 684(4)(1)(MP-345(117)/2021-22 GNR/1339
	Date	13/08/2021
	Validity	31/03/2026.
Mining Parameters	Quantitative Description	
Bench Height	3 m	
Bench Width	3 m	
Method of Mining	Semi Mechanized Open Cast Mining	
Individual bench slope	70 ⁰ from the vertical	
Overall pit slope	37 ⁰	
Drilling/Blasting	In order to meet the present requirement of production shallow hole drilling, blasting, mechanized excavation combined with manual sorting and loading and transportation by small to medium size excavator (Bucket capacity around 1 Cum.) and dumper, are in use. During loading ample precautions are being taken to separately load the waste material and thus minimize the subsequently sorting of the ROM.	
RoM output size	9600 MT	
Life of mine	49 Years	
Transportation details	Dumpers	

Dumpers capacity	17tonnes
Mineable Reserves	20,62,589 Tonnes (as on 01.04.2021)
Individual bench slope	70° from the vertical
Ultimate depth of mining	5 mbgl
Groundwater level	15-20m bgl
Groundwater intersection	No groundwater intersection
Overall pit slope	37°
Details of existing and proposed	There is no proposal to install crusher within the mining lease area.
Mineral beneficiation	There will be no mineral beneficiation activities within the mine lease area.
Transportation details	The graded bauxite ore is being transported from Mothala - Balachod Bauxite Mine to Gujarat Credo Mineral Industries Ltd and allied industries through thereby SH-49
Dumpers capacity	17tonnes
Generation of Topsoil/OB & its Management during plan period & conceptual period	There will be no generation of Overburden & Mineral rejects during the plan period (2021-22 to 2025- 26).
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	Topsoil generation in current plan period (2021-22 to 2025-26) is 16173 cumand shall be disposed of by means of stacking or by backfilling in mine voids & use in development of green belt respectively.

viii. Nearest village / town/ highway/railway station / water bodies

Particulars	Particular's Name	Distance & Directions
Nearest Village/Town	Balachod Nani	0.5 km in East direction
Nearest Highway	SH 49	6.47 Km/ S
Railway Station	Bhuj	53.90 Km/ E
Nearest Air Port	Bhuj	51.88 Km/ E
Nearest Reserved/Protected forests	Open Mixed Jungle Wamoti Reserve Forest Mothala Reserve Forest Naranpar Reserve Forest	Adjacent/W 5.17 Km, /N 7.15 Km/ SSW 6.34 Km/E

ix. Water requirement

Total water requirement	32 KLD	Fresh water	32 KLD
		Treated water	-
Source	Existing water supplier through mobile tankers.		

Permission	NA
Additional information (if any)	No additional water requirement envisaged in this project. Moreover, rain water accumulated in pits, if any, is being used for dust suppression and this will be continued as such in future also.

x. Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area /Environmental Sensitivity Zone	Yes/No	Details of Certificate /letter/Remarks
Forest Land	No	The Project Proponent submitted the letter from the Forests & Environment Department, Government of Gujarat vide letter dated 27.12.2023 stating that the site is adjoining to forest area. Applicant is required to do mining by keeping 50-meter distance from forest area as per Chief Conservator of Forest, Wildlife, Gujarat State, Gandhinagar's letter WPS/32/B/ 11755- 62/99-2000 Date:30/12/1999.
National Park	No	
Wildlife Sanctuary	No	
Eco-Sensitive Zone (ESZ)	No	Project Proponent reported that there is No National Park, Wildlife Sanctuary, Biosphere Reserve, Tiger Reserve, within the 10 km radius study area. The nearest wildlife sanctuary is Great Indian Bustard Sanctuary is about 44.50 km in West direction from project site.
Coastal Regulation Zone (CRZ)	No	Not Applicable
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	Yes	Project Proponent submitted that the Deputy Conservator of Forest, Kutch West Division vide Lr.No: B/LAND/T-11/4355/2023-24 dated 13.12.2023 mentioned that following Schedule - I species are observed in a study area of 10 km radius such as Peafowl (<i>Pavo cristatus</i>), Chinkara (<i>Gazella bennettii</i>), Indian Monitor Lizard (<i>Varanus benghalensis</i>), Leopard (<i>Pantherapardus</i>), Striped Hyena (<i>Hyaena hyaena</i>), Jungle Cat (<i>Felis chaus</i>), Honey Badger(<i>Mellivoracapensis</i>) and India crocodile (<i>Crocodyluspalustris</i>).
Wildlife Conservation Plan	Yes	Site Specific Biodiversity Conservation Plan submitted to the PCCF & Chief Wildlife Warden, Gandhinagar vide Letter No. GMDC/ENV/140/2023-24 dated 18.11.2023 for approval.

xi. Greenbelt/plantation Details

Proposed area for green belt/plantation	Existing: 3.94 Ha (4,310 no. of saplings) Proposed 2.5Ha (3,000 no. of saplings during Plan Period) Total: 6.44Ha during end of plan period Total Green Belt at the end of life of mine will be 10.00Ha.
Budget for green plant& plantation till the end of life of mine.	4.0 Lakhs
Budget for nursery	-

xii. Baseline detail

Baseline Data (Air / Water / Noise / Soil / Ground water table/ others)	
Period of baseline data collection	Baseline Monitoring studies is being already carried out during Winter Season: Period (1 st Dec. 2019 to 29 th Feb. 2020) and Additional one month baseline monitoring 1st May 2022 to 31st May 2022) - Summer Season).
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	

Details of Baseline data (1st Dec. 2019 to 29th Feb. 2020-Winter Season) and revalidation of baseline data (1st May, 2022 to 31st May, 2022- Summer Season) as mentioned below:

A. Air Environment: Summary of Ambient Air Quality Results for Period from 1st December 2019 to 29th February 2020 and for period from 1st May, 2022 to 31st May, 2022- Summer Season

Sr. No.	Location			PM ₁₀	PM _{2.5}	SO ₂	NO ₂	CO	Ozone	NH ₃
				µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³
1	Project Site, Block-I	Dec, 2019	Min-	58.0	18.5	11.7	17.9	0.351	8.3	7.6
			Max	75.5	26.3	17.6	25.3	0.475	12.2	11.5
		Feb, 2020	98 th	74.9	26.0	17.4	24.8	0.469	12.0	11.3
			Min-	58.5	21.4	10.1	14.9	0.323	7.9	6.7-9.2
2	Project Site, Block-II	Dec, 2019	Max	78.2	34.0	16.1	23.0	0.520	13.0	14.2
			98 th	77.0	33.4	15.7	23.0	0.514	12.9	13.8
		May, 2022	Max	72.4	31.4	13.4	19.7	0.348	7.4-9.5	6.6-9.6
			98 th	71.6	31	13.3	19.5	0.346	9.5	9.6

3	Khanpar	Dec, 2019 – Feb, 2020	Min-Max	49.4-68.9	16.8-22.9	9.4-15.1	8.9-13.9	0.242-0.308	7.5-12.4	5.9-8.5
			98 th	67.8	22.8	14.8	13.6	0.306	12.0	8.4
		May, 2022	Min-Max	50.6-65.9	16.4-23.6	7.7-10.7	12.2-16.9	0.237-0.301	6.1-8.8	6.1-7.8
			98 th	65.9	23.6	10.7	16.9	0.301	8.8	7.8
4	BalachodNani	Dec, 2019 – Feb, 2020	Min-Max	57.7-76.6	19.3-26.1	6.1-9.7	16.6-23.4	0.178-0.269	7.5-14.1	4.9-9.2
			98 th	75.5	25.9	9.4	23.0	0.263	14.0	9.0
		May, 2022	Min-Max	48.1-71.1	18.1-26.3	6.8-9.7	15.4-20.6	0.254-0.312	7.6-12.1	7.3-9.6
			98 th	70.7	26.2	9.6	20.4	0.309	12	9.6
5	Mothala	Dec, 2019 – Feb, 2020	Min-Max	61.2-85.1	17.3-26.6	6.6-9.5	11.4-17.2	0.246-0.371	8.8-15.8	6.1-11.6
			98 th	82.2	25.7	9.2	17.0	0.358	15.6	11.2
		May, 2022	Min-Max	63.8-72.4	22.8-33.4	11.5-17.1	16.4-21.6	0.274-0.572	9.6-13.4	7.9-11.5
			98 th	72.2	33.2	17.0	21.5	0.563	13.2	11.5
6	Bhawonipur	Dec, 2019 – Feb, 2020	Min-Max	53.3-67.5	16.7-23.6	7.3-10.9	12.6-17.5	0.240-0.313	8.1-12.1	4.7-7.8
			98 th	67.0	23.3	10.6	17.0	0.308	11.9	7.4
		May, 2022	Min-Max	51.7-67.7	20.3-26.2	8.3-11.2	12.4-15.3	0.213-0.321	6.9-9.5	6.4-8.5
			98 th	67.4	26.1	11.1	15.2	0.316	9.5	8.4
7	WamotiMoti	Dec, 2019 – Feb, 2020	Min-Max	59.0-80.4	20.3-28.3	9.0-13.1	10.8-17.2	0.260-0.336	6.7-9.7	5.4-8.5
			98 th	79.3	27.7	13.1	16.8	0.330	9.6	8.5
		May, 2022	Min-Max	58.7-71.9	23.6-30.2	10.8-16.1	13.5-20.8	0.324-0.373	8.4-12.8	8.2-10.3
			98 th	71.7	29.9	15.9	20.5	0.371	12.7	10.2
8	Bhimpar	Dec, 2019	Min-Max	41.8-66.3	14.8-22.4	9.5-14.2	13.9-19.6	0.299-0.359	7.5-11.4	6.4-10.3
			98 th	65.6	22.4	14.2	19.3	0.353	11.3	9.9

		Feb, 2020								
		May, 2022	Min-	52.3-	18.7-	9.3-	13.5-	0.238-	6.8-9.2	5.4-7.7
			Max	66.1	24.5	12.2	17.4	0.311		
			98 th	65.4	24.4	12.1	17.4	0.311	9.1	7.7
		CPCB Standards		100 (24hr)	60 (24hr)	80 (24hr)	80 (24hr)	2 (8hr)	100 (8hr)	400 (24hr)

B. Noise Levels: Details of Ambient Noise Levels for the Period from 1st December 2019 to 29th February 2020) are as mentioned below:

Sr. No.	Monitoring Locations	Equivalent Noise Level	
		LeqDay	LeqNight
Residential Area			
•	Balachod Nani	52.4	42.9
•	Mothala	54.5	37.8
CPCB Standards dB(A)		55.0	45.0
Commercial Area			
•	Khanpar	62.5	49.5
•	Nr. SumrasarTalav	55.2	40.6
•	Bhimpar	58.9	47.9
CPCB Standards dB(A)		65.0	55.0
Silence Zone			
•	Balachod Moti	47.1	36.4
CPCB Standards dB(A)		50.0	40.0
Industrial Area			
•	Project Site (Block- I)	68.5	42.0
•	Project Site (Block- II)	66.8	43.1
CPCB Standards dB(A)		75.0	70.0

(Period – 1st May 2022 to 31st May 2022)

Sr. No.	Monitoring Locations	Equivalent Noise Level	
		LeqDay	LeqNight
Residential Area			
•	Balachod Nani	51.4	40.8
•	Mothala	53.3	42.5
CPCB Standards dB(A)		55.0	45.0
Commercial Area			
•	Khanpar	63.1	52.4

•	Nr. Sumrasar Talav	57.5	41.7
•	Bhimpar	57.2	46.5
CPCB Standards dB(A)		65.0	55.0
Silence Zone			
•	Balachod Moti	48.3	37.1
CPCB Standards dB(A)		50.0	40.0
Industrial Area			
•	Project Site (Block- I)	64.2	41.4
•	Project Site (Block- II)	63.7	42.1
CPCB Standards dB(A)		75.0	70.0

C. Water Environment: Summary of Surface Water Quality recorded for period from 1st December 2019 to 29th February 2020 and for period from 1st May, 2022 to 31st May, 2022 are as follows:

Parameters	Unit	Baseline Monitoring Period (1 st Dec, 2019 – 29 th Feb, 2020)	Additional 1 Month Baseline Monitoring (1 st May, 2022 – 31 st May, 2022)	IS 2296:1992; Class C (Drinking water source after conventional treatment and dis-infection)
		Range	Range	
pH	-	6.57 – 7.73	6.95 – 7.92	No relaxation (6.0 to 9.0)
EC	µs/cm	716 – 1879.70	936.25 – 2130.66	-
TDS	mg/l	442 – 1100	535 – 1246	1500
Total hardness	mg/l	123.22 – 197.96	182.46 – 266.21	-
DO	mg/l	6.0 – 6.3	5.2 – 5.9	4.0
BOD	mg/l	3.6 – 7.1	4.81 – 8.25	3.0
COD	mg/l	11.7 – 22.4	17.35 – 42.51	-
Chloride	mg/l	63.59 – 148.61	73.13 – 170.90	600
Sulphate	mg/l	7.68 – 48.61	11.14 – 70.48	400
Nitrate	mg/l	4.83 – 19.23	6.57 – 15.27	50
Fluoride	mg/l	0.28 – 0.73	0.35 – 0.91	1.5
Iron	mg/l	0.01– 0.28	0.05 – 0.21	0.5
Cadmium	mg/l	BDL (DL - 0.001)	BDL (DL - 0.001)	0.01
Arsenic	mg/l	BDL (DL - 0.01)	BDL (DL - 0.01)	0.2
Zinc	mg/l	BDL (DL - 0.01)	BDL (DL - 0.01)	15

Lead	mg/l	BDL (DL - 0.001)	BDL (DL - 0.001)	0.1
Chromium	mg/l	BDL (DL - 0.03)	BDL (DL - 0.03)	0.05
Total Coliform	MPN/100 ml	Present	76 – 240	5,000

D. **Ground Water Quality:** Summary of Ground Water Quality recorded for period from 1st December 2019 to 29th February 2020 and for period from 1st May, 2022 to 31st May, 2022 are as follows:

Parameters	Unit	Baseline Monitoring Period (1 st Dec, 2019 – 29 th Feb, 2020)	Additional 1 Month Baseline Monitoring (1 st May, 2022 – 31 st May, 2022)	Permissible Limit
		Range	Range	
pH	-	7.11 - 7.88	7.29 – 8.22	No relaxation (6.5 to 8.5)
EC	µs/cm	1380 – 3300	1371.04 – 3036.25	-
TDS	mg/l	760 – 1818	897 – 1735	2000
Total hardness	mg/l	366.30 – 777.0	446.13 – 772.46	600
Chloride	mg/l	136.97 – 557.69	160.25 – 492.50	1000
Sulphate	mg/l	18.14 – 104.95	27.57 – 148.15	400
Nitrate	mg/l	BDL (DL -2)– 18.33	3.65 – 21.48	No relaxation (45)
Fluoride	mg/l	0.31 – 1.66	0.36 – 1.91	1.5
Iron	mg/l	BDL (DL - 0.01)– 0.03	0.14 – 0.31	No relaxation (1.0)
Cadmium	mg/l	BDL (DL - 0.001)	BDL (DL - 0.001)	No relaxation (0.003)
Arsenic	mg/l	BDL (DL - 0.01)	BDL (DL - 0.01)	No relaxation (0.01)
Zinc	mg/l	BDL (DL - 0.01)	0.11 – 0.18	15
Lead	mg/l	BDL (DL - 0.001)	BDL (DL - 0.001)	No relaxation (0.01)
Chromium	mg/l	BDL (DL - 0.03)	BDL (DL - 0.03)	No relaxation (0.05)

E. **Soil Quality:** Summary of Ground Water Quality recorded for period from 1st December 2019 to 29th February 2020 and for period from 1st May, 2022 to 31st May, 2022 are as follows:

Physico-Chemical Characteristics			
Parameters	Unit	Baseline Period from 1 st Dec, 2019 to 29 th Feb, 2020	Additional Study Period From 1 st May, 2022 to 31 st May, 2022
pH	-	6.9 – 8.4	7.28 – 8.72
EC	µs/cm	140 – 300	175.59 – 370.96
Infiltration Rate	mm/hr	17.11 – 20.15	7.86 – 26.48
Bulk Density	g/cm ³	1.521 – 1.788	1.474 – 1.725
Water Holding Capacity	%	19.17 – 25.42	29.14 – 38.64
Organic Carbon	%	0.25 – 0.68	0.28 – 0.76
Macro Nutrients			
Nitrogen	Kg/hect	77.90 – 120.46	107.5 – 164.32
Phosphorus	Kg/hect	4.36 – 25.76	28.12 – 45.43
Potassium	Kg/hect	370.40 – 680.10	240.76 – 351.20
Micro Nutrients			
Iron	mg/kg	1.300 – 1.320	1.454 – 2.508
Manganese	mg/kg	2.32 – 2.35	4.710 – 6.589
Zinc	mg/kg	0.18 – 0.19	0.147 – 0.216
Copper	mg/kg	Absent – 0.232	0.194 – 0.322
Nickel	mg/kg	Absent	Absent
Cadmium	mg/kg	Absent	Absent
Lead	mg/kg	5.05 – 5.11	1.112 – 2.329

- xiii. Details of Public Hearing (PH): The Project Proponent has published the public notice for inviting comments upon present mining operations and their redressal as it is the case of revalidation of existing EC as follows:

Advertisement for PH with date	<p>The Public Hearing was conducted on dtd 11.11.2003 and EC was obtained in 2005. As desired by the EAC (Non - Coal), MoEF&CC, New Delhi and ToR condition for regularization of existing EC. M/s. GMDC submitted EIA-EMP report at GPCB, Kutch (West) to carry out public consultation process as per Ministry's OM dated 16.02.2021.</p> <p>Accordingly, an Advertisement/Public Notice was published in English newspaper in "The Times of India" on 03/03/2023 and in Gujarat</p>
Date of PH	
Venue	
Chaired by	
Main issues raised during PH	
Budget proposed for addressing issues raised during PH	
Additional information (if any)	

	<p>in “Kutch Mitra” on 03/03/2023 for information of the stakeholders to invite comments about present mining operations and their redressal on the above project.</p> <p>In connection with the public notice published for a period of 30 days, no any comments, representations are received either by written, oral, personnel or through any other media by this office within the stipulated period/time for the projects as mentioned in the advertisement.</p>
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xiv. Court case details:

Court Case	The Project Proponent submitted that there is no litigation pending against the project and/or land in which the project is proposed to be set up.
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xv. Rehabilitation & Resettlement:

R & R details	The Project Proponent reported that no private land within the mine lease will be acquired for mining or any other project related activity and hence no rehabilitation and resettlement is involved under the present proposal.
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xvi. Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018	The Project Proponent submitted the Affidavit dated 14.03.2019 stating that the company undertakes by affidavit that it will comply with all the statutory requirement & judgment of Hon'ble Supreme Court dated 2nd August 2017 in writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ors before grant of ToR/EC.
Undertaking of Project Proponent dated 16.10.2023	The Project Proponent submitted an undertaking to the effect that ToR issued by Ministry vide letter dated 18.04.2022 for Mothala Balachod Bauxite mine of M/s Gujarat Mineral Development Corporation Ltd has been complied with and the data submitted is factually correct. The Project Proponent also mentioned that they take the ownership of the content of this EIA report.
Undertaking of EIA Consultant dated 18.12.2023	The EIA Consultant submitted a declaration stating that no unethical practice like 'copy and paste' and used external data/text without proper acknowledgement, while preparing this

	EIA report. The consultant organization shall be fully accountable for any misleading information mentioned in this statement.
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xvii. Details of CTE/CTO, Certified Compliance Report, Certified Production Details from the inception of the mine:

Particulars	Letter no. and date																																																				
Consent to Establish/ Consent to Operate	<ul style="list-style-type: none"> Renewal of Consolidated Consent and Authorization (CC&A) granted by the Gujarat Pollution Control Board (GPCB) vide Consent Order No. AWH-125340 dated 04.04.2023 for mining of raw Bauxite of 42,000 MT/annum over an area of 280.76.86 ha and is valid up to 08.03.2028. 																																																				
Certified EC compliance report	<ul style="list-style-type: none"> Certified EC Compliance of EC dated 08.12.2005 obtained from RO, MoEFCC, Gandhinagar on dated. 13th Nov. 2023. Site visit was conducted by RO on 09.05.2023. Project Proponent submitted the action taken report to the RO, MoEFCC, Gandhinagar on 28.11.2023. The action plan for green belt development along with budgetary expenditure and timeline was submitted to the IRO, MOEFCC – Gandhinagar in line with observation made in EC compliance. The closure report from IRO, MoEFCC – Gandhinagar received on 27.02 2024 																																																				
Certified past production	<p>Year-wise certified past production details from Geologist, Geology and Mining Dept., Govt. of Gujarat, District – Kutch are given below:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Plant grade & non plant grade production (mt.)</th> <th>Dust & sub grade (mt.)</th> <th>Total (mt.)</th> </tr> </thead> <tbody> <tr> <td>2006-07</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>2007-08</td> <td>2323</td> <td>0</td> <td>2323</td> </tr> <tr> <td>2008-09</td> <td>41933</td> <td>5000</td> <td>46933</td> </tr> <tr> <td>2009-10</td> <td>12846</td> <td>1285</td> <td>14131</td> </tr> <tr> <td>2010-11</td> <td>36928</td> <td>5007</td> <td>41935</td> </tr> <tr> <td>2011-12</td> <td>28184</td> <td>2792</td> <td>30976</td> </tr> <tr> <td>2012-13</td> <td>39096</td> <td>3802</td> <td>42898</td> </tr> <tr> <td>2013-14</td> <td>32047</td> <td>3205</td> <td>35252</td> </tr> <tr> <td>2014-15</td> <td>2075</td> <td>264</td> <td>2339</td> </tr> <tr> <td>2015-16</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>2016-17</td> <td>36422</td> <td>3652</td> <td>40074</td> </tr> <tr> <td>2017-18</td> <td>10045</td> <td>200</td> <td>10245</td> </tr> </tbody> </table>	Year	Plant grade & non plant grade production (mt.)	Dust & sub grade (mt.)	Total (mt.)	2006-07	0	0	0	2007-08	2323	0	2323	2008-09	41933	5000	46933	2009-10	12846	1285	14131	2010-11	36928	5007	41935	2011-12	28184	2792	30976	2012-13	39096	3802	42898	2013-14	32047	3205	35252	2014-15	2075	264	2339	2015-16	0	0	0	2016-17	36422	3652	40074	2017-18	10045	200	10245
Year	Plant grade & non plant grade production (mt.)	Dust & sub grade (mt.)	Total (mt.)																																																		
2006-07	0	0	0																																																		
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	2018-19	28796	1269	30065
	2019-20	19205.196	791.25	19996.45
	2020-21	11896.804	456.20	12353.01
	2021-22	23097.388		23097.388
	2022-23	2080.268		2080.268

xviii. ADS details:

The Proposal was earlier considered in 26th EAC (Non-Coal Mining) meeting held during 31st January & 1st February, 2024 wherein the Committee has considered and deferred the proposal and requested to submit the additional information. The PP has submitted the reply on 06.04.2024 are as follows:

Sl. No.	ADS Point	Response by Project Proponent
1.	The Project Proponent needs to justify that why amendment in EC not obtained for change in reduction of mine lease area from 299.40 ha to 280.76.86 ha.	<ul style="list-style-type: none"> • Earlier a LOI was issued for mineral bauxite over 299.4005 ha area for 20 years vide Gujarat State Govt. grant order no. 4/221/95/M-19 dated 18.07.1997 and same was intimated by Dy. Secretary, Industries & Mines Department, Government of Gujarat vide letter reference no. MC/1591/G-58/703/Chh dated 03.09.1997 with direction to obtain approval of mining plan and environmental clearance from respective competent authorities. • The first mining plan for the applied lease area (299.40 ha) was approved by Indian Bureau of Mines vide letter no. 82(23) (291)/99-MCCM(N) UDP dated 14.10.1999. • Environmental Clearance was granted for the Mothala Balachod Bauxite mine having production capacity of 42,000 TPA in 299.40 ha under the purview of EIA notification 1994 vide letter no. J-11015/131/2005-IA II (M) dated 08.12.2005. • However, as per corrigendum vide letter no. MCR/1591/G-58/703/CHH date 02.02.2007 issued by Under Secretary to

Sl. No.	ADS Point	Response by Project Proponent
		<p>Government, Industries & Mines Department, Government of Gujarat. Mining Lease area was amended from 299.40 to 280.7686 Ha at the time of lease deed by mentioning that as Commissioner, Geology and Mining has made mining proposal for some change in the area granted to M/s GMDC at Moti-Balachod from 168.6723 Ha. to 150.0404 Ha. in the said order and hence 299.4005 Ha read as 280.7686 Ha. The remaining terms of condition in existing EC viz. method of mining, production capacity, etc. remains unchanged.</p> <ul style="list-style-type: none"> • Thereafter, the mining lease executed on 07.03.2007 vide reference no. GKK/M/021/2240 for 28.7686 only, which was signed by Collector, Kutch and authorities of GMDC for a period of 30 years from the date of mining Lease execution. • Thus, Honourable EAC (Non-Coal) is requested to consider EC regularization proposal for 280.7686 Ha lease area for the grant of EC considering the following facts: <ul style="list-style-type: none"> # Due to oversight it has been missed to seek amendment in this regard. However, lease neither has been increased nor any mining activity carried out beyond the area of lease dead. # approved Mine Plan is for 280.7686 only and the same was share to EAC (Non-Coal) during ToR Application as well as EC Appraisal Application and subsequent presentations. # ToR Application submitted for the Regularization of existing EC, under the

Sl. No.	ADS Point	Response by Project Proponent												
		<p>purview of EIA Notification 2006 in the year 2018, was for 280.7686 Ha only and after detailed discussion, Honourable EAC (Non-Coal) was granted the ToR vide F. No-IA-J-11015/150/2018-IA-11(M) 18 April 2022 for 280.7686 ha only.</p> <p># Certified Compliance Report (CCR) from the Regional Office of MOEFCC has been issued twice vide Dated 26/03/2019 and dated 13/11/2023 and during every site visit, area of mine lease was submitted as 280.7686 ha only.</p> <p>Therefore, looking to the above, Honourable EAC (Non-Coal) is kindly requested to consider EC Appraisal Application for the Regularization of existing EC for an area 280.7686 ha only.</p>												
2.	<p>The Project Proponent needs to submit the current practice of method of mining in line with the approved mining plan. Accordingly, the Project Proponent needs to devise the site specific mitigation measures for environment attributes.</p>	<p>Mining method is submitted hereunder in line with existing approved mining plan for the current period of 2021-22 to 2025-26. The opencast method of mining shall be continued with rock breaker and excavator-tipper combination. The Broad parameters of mining operation will be as below:</p> <table border="1"> <tbody> <tr> <td>Number of working days</td> <td>300 days/year</td> </tr> <tr> <td>Working shift/day</td> <td>1 day shift</td> </tr> <tr> <td>Working benches</td> <td>3 no.</td> </tr> <tr> <td>Bench Height</td> <td>3.0m (max.)</td> </tr> <tr> <td>Width</td> <td>For running bench 10m For ultimate bench 2.75m max.</td> </tr> <tr> <td>Bench slope</td> <td>>55°</td> </tr> </tbody> </table>	Number of working days	300 days/year	Working shift/day	1 day shift	Working benches	3 no.	Bench Height	3.0m (max.)	Width	For running bench 10m For ultimate bench 2.75m max.	Bench slope	>55°
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Sl. No.	ADS Point	Response by Project Proponent			
		<table border="1"> <tr> <td>Ultimate slope</td> <td>Pit</td> <td>45°</td> </tr> </table> <p>Drilling and Blasting shall be practiced very rarely as and when hard strata will be encountered, however since the year 2014, no blasting has been done. Detail of Blasting Pattern, as per the approved mine plan has been submitted. The site specific mitigation measures of environment attributes are provided in EIA report.</p>	Ultimate slope	Pit	45°
Ultimate slope	Pit	45°			
3.	The Project Proponent needs to specifically define the area developed under greenbelt, along roads and in non-mineralized area, no. of saplings planted under each area and their survival rate and budget spent towards the same with supporting documents.	The detailed plantation under greenbelt development along roads and in non-mineralized area, no. of saplings planted under each area and their survival rate and budget spent towards the same with supporting documents has been submitted. Further, GMDC will make all necessary efforts to develop green belt more efficiently with good survival rate.			
4.	The Project Proponent needs to submit the closure report w.r.t. greenbelt issued by the Regional Office, MoEF&CC.	Project proponent had submitted the action plan for green belt development along with budgetary expenditure and timeline to the IRO, MOEFCC – Gandhinagar. The closure report from IRO, MoEFCC – Gandhinagar received on 27 th February 2024 and has been submitted.			
5.	The Project Proponent needs to submit the more precise, actionable and monitorable plan for activities proposed under community development along with timeline.	The precise, actionable and monitorable plan for the activities proposed under community development in year 2024-25 has been submitted.			
6.	The Project Proponent needs to submit the letter from the State Forest Dept. regarding the location of National Park, Wildlife	The letter from the office of Deputy Conservator of Forests (DCF), Kutch West Forest Dept. (State Forest Dept. – Bhuj received on 05/03/2024 vide letter no.			

Sl. No.	ADS Point	Response by Project Proponent
	Sanctuary, Tiger/Elephant Corridors etc., within 10 km radius of the study area. ESZ/ESA, Reserves,	C/JMN/Te.11/530/23-24. It is informed that there is no National Park, Wildlife Sanctuary, ESZ/ESA, Tiger/Elephant Reserves, Corridors etc., within 10 km radius of the Mothala Balachod Bauxite Mining Project. However, the nearest Eco Sensitive Zone (ESZ) of Kutch Bustard Sanctuary is at 8.5 Kms from the project site. The letter has been submitted.

xix. Details of the Environment Management Plan (EMP):

Sr. No.	Description	Existing Recurring Cost Per Annum (Rs. In Lacs)	Proposed Cost (Rs. In Lacs)		Justification for Additional Cost
			Capital	Recurring	
1	Air pollution Control	3.00	10.00	0.50	Additional installation of water sprinklers
2	Water Pollution Control	0.50	5.00	1.00	Garland drain, Retaining wall & Siltation tank
3	Environment Monitoring and Management	1.00	30.00 (considering online AAQMS)	10.00	Installation of weather station; Noise meter & 1 pair of RDS & FPS & its annual maintenance and regular Environmental Monitoring
4	Wired Fencing	1.50	-	-	NA
5	Noise Pollution Control	0.50	-	-	

Sr. No.	Description	Existing Recurring Cost Per Annum (Rs. In Lacs)	Proposed Cost (Rs. In Lacs)		Justification for Additional Cost
			Capital	Recurring	
6	Occupational Health	1.00	2.00	0.70	Implementation of Covid 19 as per the directive of Govt. of India for Employees
7	Green Belt	4.00	6.00	4.00	Plantation
8	Drinking Water	1.50	0.50	0.20	Additional water filtration system.
	Total	13.00	53.50	16.40	
	Grand Total	-	53.50	29.40	Total Recurring cost represent existing and proposed
9	Cost For CSR Activity: Project Proponent will spend amount of 2% of their gross income for CSR (Corporate Social Responsibilities).				

xx. Details of project cost and employment:

Particulars	(Rs. In Lakhs)
Capital Cost for Environment Protection	Capital Cost 53.50 Lakhs Recurring Cost 29.40 Lakhs
Budget for addressing the Public Hearing issues	The precise, actionable and monitorable plan for the activities proposed under community development in year 2024-25 is of Rs. 1845000
Total Cost for EMP	Rs. 71.95 Lakhs (Capital cost of Env. Protection and Need based Socio-economic survey)
Recurring Cost for EMP	29.40 lakhs
Project Cost	60 Lakhs
Employment	34 os.

3. Observation and Recommendation of the Committee:

The instant proposal is for Environmental Clearance under MoEF&CC Notification S.O.1530 (E) dated 6thApril 2018. The Project Proponent was granted Terms of Reference (ToR) on 18.04.2022. The PP presented the reply of the ADS points that were raised vide minutes of the 26th EAC meeting held during 31st January 2024- 1st February 2024 and stated that earlier Lol was issued for mineral bauxite over an area of 299.4005 vide EC dated 08.12.2005. However, as per corrigendum vide letter dated 02.02.2007 issued by Industries & Mines Department, Govt of Gujarat, the mining lease area was amended from 299.40 to 280.7686 ha at the time of lease deed. The EAC also enquired about the current practice of mining, the PP replied that they are undertaking opencast method of mining with rock breaker and excavator-tipper combination. PP also informed that drilling and blasting shall be practiced very rarely as and when hard strata will be encountered, PP further mentioned that they have not undertaken any blasting since the year 2014. With regard to the ADS point on plantation, PP submitted the detailed plantation under greenbelt development along roads and in non-mineralized area. PP committed that they will make all necessary efforts to develop green belt more efficiently with good survival rate.

The EAC noted the plantation report submitted by PP and asked the reason for the poor survival of the plants. PP informed that poor survival rate has been observed due to harsh climatic conditions, erratic rainfall, poor soil quality and poor land topography. PP mentioned that as on dated total 4530 No of plants have survived covering an area of 4.34 ha. Species planted includes Melai Azadiracta, Prosopis cineraria, Acacia Senegal, Magnifera indica, Guava etc. The EAC asked the PP to engage institute of national repute having expertise in plantation in arid climate to enhance the survival of the planted species. With regard to presence of Bustard, PP informed that as per DCF letter dated 5.03.2024, there are no national park, wildlife sanctuary, ESA/ESA present within 10 km radius of the Mothala Balachod Bauxite Mine. However, the nearest ESZ of Kutch Bustard Sanctuary is at a distance of 8.5 kms from the project site. The EAC advised the Project Proponent to adopt and implement protection and mitigation measures for conservation of Great Indian Bustard. The EAC also asked the PP to increase the plantation of short grasses which are suitable for the hard ground available near to the Project area and simultaneously local species needs to be increased within/outside the ML area. The EAC also noted that PP has submitted the closure report dated 27.02.2024 from Regional Office of the Ministry located in Gandhinagar.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC in its 29th EAC (Non-Coal Mining) meeting held during 9-10th May, 2024 **recommended** the proposal under MoEF&CC Notification vide S.O. 1530(E) dated 6th April 2018 and as per the provisions of EIA Notification, 2006 and its subsequent amendments for grant of Environmental Clearance for Mothala Balachod Bauxite Mining Project with the Production Capacity of 42,000 TPA in the mine lease area of 280.7686

Ha by M/s Gujarat Mineral Development Corporation Limited, located at Villages Balachod, Mothala, Khandai, Tehsil Abdasa, District Kutch, Gujarat subject to the following specific conditions in addition to the standard EC conditions applicable for non-coal mining projects: -

Specific conditions:

- i. The Project Proponent should install the Continuous Ambient Air Quality Monitoring Stations in such numbers as per the scientific study and in consultation with CPCB.
- ii. The real time data generated by continuous ambient air quality monitoring stations (CAAQMS) should be displayed digitally at entry and exit gate of mine lease area for public display and shall be linked to server of CPCB/SPCB.
- iii. The Project Proponent should implement the budget of Rs 53.5 Lakhs as Capital cost and Rs. 29.40 Lakhs as recurring cost towards Environment Management Plan (EMP) within 3 years. The Project Proponent needs to submit the six-monthly report upon the progressive status of transportation of mineral through Rail and Road.
- iv. The Project Proponent shall strictly adhere to the action plan to monitor the movement of wildlife in the vicinity of the mine lease area.
- v. The Project Proponent needs to use modern equipment's such as Camera Traps for ensuring presence and movement of wild animals in the study area in consultation with Wildlife Wing of Forest Department. Appropriate interventions shall be taken to minimise stress conditions for wild animals and to avoid Man Animal conflict.
- vi. The Project Proponent needs to submit the annual compliance of the effectiveness of the Wildlife Conservation Plan from the Forest Department and submit it to the Regional Office of the Ministry.
- vii. Regular monitoring on surface water flow, turbidity & water quality shall be carried out and report shall be submitted quarterly to the Ministry's Integrated Regional Office.
- viii. The Project Proponent shall monitor the air quality, noise level, water quality, water level and ground vibration during drilling and blasting at the edge of the mine, near the village, and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Integrated Regional Office.
- ix. Garland drains and catch drains shall be regularly desilted and maintained periodically at regular intervals.
- x. The Project Proponent should periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance on occupational health shall be carried out every year for mine workers. PP shall also organize medical camp

- for the benefit of the local people and also the monitor the health impacts due to mining activity.
- xi. The Project Proponent needs to install the permanent water sprinklers along the haul road and the approach road. Further, 10 nos. of fog canon/mist sprayer of at least 40 m throw shall be installed at various locations in the mine area.
 - xii. The Project Proponent shall explore the possibility of using atleast 20% of Electric vehicles/CNG/Solar instead of diesel operation within three years.
 - xiii. The Project Proponent shall conduct third party audit of compliance of EC condition at an interval one year and its report shall be submitted to IRO, MoEF&CC.
 - xiv. The Project Proponent shall ensure the survival rate of 95% for planting the gap plantation and new plantation. The Project Proponent shall make the actual count on the saplings planted and its survival rate and in case of failure of achievement of 95% survival rate, action plan for achieving the target survival rate shall be submitted to the Ministry's Regional Office. Project proponent shall use saplings of 10 ft height for plantation. PP shall make provision for drip irrigation to conserve the water.
 - xv. The Project Proponent needs to provide the RO drinking water supply and also by laying network of pipelines to the local people at free of cost.
 - xvi. The Project Proponent shall provide the rainwater harvesting structure at mine office and quarters to recharge the ground water.
 - xvii. The Project Proponent should periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance shall be carried through regular occupational health check-up every year for mine workers. PP shall also organize medical camp for the benefit of the local people and also the monitor the health impacts due to mining activity.
 - xviii. Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable.
 - xix. Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.
 - xx. The Project Proponent shall ensure that the protection and management of the water bodies should include provision of utilizing available water to the villagers by installing solar pumps as well as project proponent shall explore the possibility for installing floating solar panels for generation of electricity and distribution of power supply to the villagers.
 - xxi. The Project Proponent shall install the adequate number of monitoring station to undertake air quality and water quality monitoring in the vicinity of 5 km of the mine and water bodies and the six monthly data should be submitted to the Ministry.
 - xxii. The Project Proponent should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground). A dedicated team to oversee environment

management shall be setup at site which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis instead of engaging environment monitoring laboratories/consultants. Any non-compliance or infringement should be reported to the concerned authority.

- xxiii. The Project Proponent needs established water treatment facility for the drinking purposes within the ML area and submission of six-monthly report including the relevant photographs.
- xxiv. The Project Proponent needs to conduct the study w.r.t. the impact of mining upon Ground water for identifying status of PH and other parameters of ground water and submit a report to the RO, MoEF&CC within six-month.
- xxv. The Project Proponent shall also organize employment-based apprenticeship/ internship training program every year with appropriate stipend for the youth and other programs to enhance the skill of the local people. The data should be maintained for the training imparted to the persons and the outcome of the training, for the assessment of the training program should be analyzed periodically and improved accordingly.
- xxvi. The Project Proponent should explore the possibility for shifting to clean energy using electric equipment for cleaner production options to reduce the emission generated from various machineries.
- xxvii. The Project Proponent should periodically monitor and maintain the health records of the mine workers digitally prior to mining operations, at the time of operation of mine and post mining operations. Regular surveillance on Silicosis shall be carried through regular occupational health check-up every year for mine workers.
- xxviii. All the mitigation measures committed / envisaged in the EIA/EMP report and subsequent submission shall be implemented.
- xxix. The Project Proponent shall create awareness among the local people working within the project area as well as its surrounding area on the ban of Single Use Plastic (SUP) in order to ensure the compliance of Notification published by MoEF&CC on 12/08/2021. A report, along with photographs, on the measures taken shall also be included in the six monthly compliance report
- xxx. The mining lease holders shall, after ceasing mining operations, undertake regrassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. The implementation report of the above said condition shall be submitted to the Ministry's Regional Office.

2.2. Lakhpat & Punharajpur Lignite Block and Limestone mine for production capacity of 4.5 MTPA of Lignite and 29.81 MTPA of Limestone in the ML area of 2959.6715 ha by M/s Gujarat Mineral Development Corporation Limited located at Villages Lakhpat, Kaner & Punharajpur, Tehsil Lakhpat, District Kutch, Gujarat –

[Online Proposal No. IA/GJ/MIN/445103/2023, File No. IA-J-11015/29/2023-IA-II(NCM), EIA Consultant - M/s Centre for Envotech and Management Consultancy Pvt. Ltd.] - Reconsideration for Terms of Reference reg.

The instant proposal is for Terms of Reference for mining of Lignite and Limestone in Lakhpat & Punharajpur Lignite Block and Limestone mine for production capacity of 4.5 MTPA of Lignite and 29.81 MTPA of Limestone in the mine lease area of 2959.6715 ha by M/s Gujarat Mineral Development Corporation Limited located at Villages Lakhpat, Kaner & Punharajpur, Tehsil Lakhpat, District Kutch, Gujarat.

2. The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under:

- i. The mine lease area is located between Latitude: 23°44'40.429"N to 23°49'19.872"N and Longitude: 68°43'22.983" E to 68°47'30.417" E. The mine lease area falls under the Survey of India Toposheet No: 41 A/9, 41 A/10, 41 A/13 & 41 A/14 and falls in Seismic Zone-V.
- ii. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals and falls under Category "A" as the mine lease area is greater than 250 ha and appraised at the Central level.
- iii. The Project Proponent has submitted that the Terms of Reference (ToR) was obtained on 22.06.2022 for Lakhpat & Punharajpur Lignite Block with production capacity 3.0/4.5 MTPA Lignite (Normative/Peak) & 29.81 MTPA Limestone in project area of 2959.6715 Ha. One of the specific condition (i) is that "as per the MoEF&CC's OM dated 24.12.2010, PP to apply the TOR separately for operation of Limestone mine to respective sector under the provisions of EIA, Notification for preparation of common EIA-EMP report". In view of the above, a fresh proposal has been submitted to obtain the Terms of Reference (ToR) for mining of Limestone.
- iv. Details of Mine Lease:

S.no	Prospecting License/ Letter of Intent (Lol)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1.	Order No. MCR-102015-406-CHH1 (Part File)	25.10.2021	Major Mineral (Limestone & Lignite)	30 Year	Industries and Mines Department	2959.6715

	Sachivalaya, Gandhinagar,					
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v. Land Use/Land Cover of the Mine Lease Area:

Private land	224.9142
Government land	2734.7573
Forest land	Not Applicable
Total Mining lease area (MLA), ha	2959.6715
Private land for crusher, workshop & other infrastructure outside the MLA	Nil

vi. Details of Mining plan:

Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	Limestone: MCDR - MPCP0CaFI/7/2023-GNR-IBM_RO_GNR Lignite: 55026-3-2020-MPS
	Date	Limestone: 09.08.2023 Lignite: 05.10.2020
	Mineral & (Major/Minor)	Major
	Mine Lease Area, Ha	2959.6715
	Validity	5 Year for Limestone.
Mining Parameters	Quantitative Description	
Methods of Mining	Mechanized Opencast (The limestone bearing overburden will be mined through Surface Miner while Lignite and other waste will be mined through shovel dumper combination.)	
Drilling/Blasting	Drilling and blasting will be rarely phenomenon in the whole mining process throughout the life of the mine. Occasional drilling and blasting may require to excavate the hard limestone strata which has been reported in the Geological report. In case of drilling and blasting, spacing and burdens will be limited to 5 meter each. Deep hole blasting with SMS will be adopted. Blasting will be done in the suitable time of the day after proper intimation.	
Geological Reserves	Total Geological Reserve: Gross Geological Reserve - 161.59 Million Tonne and Net geological reserve - 145.43 Million Tonne for lignite Total Geological Reserve: 736.58 Million Tonne of Limestone	

Mineable Reserves	Lignite: 105.52 Million Tonnes Limestone: 562.55 Million Tonnes
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	Limestone - 29.81 MTPA Lignite – 3 MTPA Top soil – 0.52 MTPA OB – 118.7672 MTPA
Life of mine	39 years (for Limestone 35 years and for Lignite 39 years) including one year of Pre-mining developmental works.
Mine Bench Height & Bench Width	Height of bench: 5m (max) Width of bench: 10m (min)
No. of Mine Benches	21
Existing Depth, m bgl	-
Ultimate Depth of Mining, m bgl	Min: 21.92 m, Max: 115.31 m (Limestone) Min: 59 m, Max: 125 m (Lignite)
Ground Water Table, m bgl	Core zone: The post-monsoon water level varies from 1.5 m to 5 m below ground level. In the pre-monsoon period, it varies from 3 m to 9 m below ground level. Seasonal fluctuation in water level in these bore wells in the core zone varies from 1.3 m to 3.8 m. Buffer zone: The Post-monsoon water level varies from 1.5 m to 6 m below ground level. In the pre-monsoon period, it varies from 3 m to 9 m below ground level. Seasonal fluctuation in water level in these bore wells in the core zone varies from 1.3 m to 3.8 m.
Details of ground water intersection	The mining operation will be restricted to 100m depth from the surface level (RL). Depth of water table varies from 452 m to 651 m from surface level (RL). Hence, there will be intersection of ground water aquifer during mining operation. The detail hydrogeological study does not envisage any impact due to puncturing the aquifer in this mine. The ground water inflow has been estimated in a tune of 283 MLD. This again will be mitigated through groundwater recharge. Thus net impact of Ground water depletion leading to unavailability of the ground water is not envisaged.
Individual bench slope	80°
Overall pit slope	26°
Details of existing/ proposed Crusher	Proposed Primary Crushing – Jaw Crusher of 6000 TPH capacity
Mineral Beneficiation	Not Applicable

RoM output size	-200 mm
Transportation details including capacity of dumper/tipper, mode of transport and distance	<p>No. of Dumper of capacity 40 Ton -128 and No. of Dumper of capacity 35 Ton – 51 Mode of transport – Road Distance – around 10 Km from project site</p> <p>Transportation of Limestone is presumed in the vicinity of 10 Km from the Mine, based on the response of Limited RFP (Request for Proposal).</p> <p>Initially mineral will be transport through dumper via road. Dumper Capacity for Limestone is 40 Ton. Depending on the potential customers within the 10 Km range, conveyor belt transportation will be planned.</p>
Generation of Topsoil/OB & its Management during plan period & conceptual period	<p>About 1249.34 M.cum of OB and 12.65 M.cum of Topsoil will be generated. Backfilling will be done over 1675.72 Ha out of which 717.93 Ha will be converted to agricultural land and 957.79 Ha will be utilized for plantation.</p> <p>The overburden, excluding the limestone, generated during the mining process shall be utilized for backfilling of the mined-out voids. Topsoil generated during the mining process will be spread over the backfilled areas to make the dumping ground suitable for plantation and agricultural ground.</p>
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	<p>A mineral rejects yard will be created in the south-western corner of the Block to stack the sub-graded limestone for future usage.</p> <p>The overburden, excluding the limestone, generated during the mining process shall be utilized for backfilling of the mined-out voids. Topsoil generated during the mining process will be spread over the backfilled areas to make the dumping ground suitable for plantation and agricultural ground.</p>

vii. Water requirement:

Total water requirement	1325 KLD	Fresh water	50 M ³ /day
		Treated water	32 M ³ /day

Source	Groundwater 50M ³ /day, Dewatering water 814 M ³ /day & Mine pit rain water collection 461 M ³ /day. Deep tube wells will be installed at site for drinking water with necessary treatment plant. Potability of water will be analyzed in quarterly basis. In the initial years, water for dust suppression, plantation use and workshop uses will be catered from the mine pit water of nearby GMDC mines. With progress of the mine, accumulated pit water will be stored and utilized for the Plantation, Dust Suppression and workshop usage.
Permission for withdrawal/ intersection along with details of grant and its validity	Requisite approvals from CGWA will be obtained before commencement of mining operation.

viii. Nearest village /town/ highway/interstate boundary/railway station/water bodies/monument/ forest

Particulars	Particular's Name	Distance & Directions
Village	Lakhpat	0.5 Km in N direction
Town	Nakhatrana	70 km in SW direction
Highway	SH 42	Passing through the block
Interstate Boundary	None within 10 km radius	-
Railway Station/Railway line	Naliya & Bhuj Railway Station	61 Km in southern direction 110 km in southeastern direction
Water Bodies	<ul style="list-style-type: none"> • P1, Eastern side of Punharajpur village Check dam for Villagers. • P2 Northern side of Punharajpur village Pond within the lease area. • P3 NW side of Punharajpur village Pond within the lease area • One Seasonal nallah (Tributary of Kali River) is passing within the 	<p>Within Core Zone</p> <p>Within Core Zone</p> <p>Within Core Zone</p>

	<p>lease area. It will be left undisturbed during the mining operation.</p> <ul style="list-style-type: none"> • Kali Nadi • Kori Creek • Korawadi Nadi • Kapurasi Nadi 	<p>0.3 Km in W 3.3 Km in N 6.3 Km in SE 9.7 Km in WSW</p>
Forest	<ul style="list-style-type: none"> • Pranpar Rakhhal RF • Akri RF • Ukher RF • Khanot RF • Mudhvay RF • Gaduli RF 	<p>1.9 Km in ESE 6.7 Km in SE 7.1 Km in E 8.5 Km in SSE 8.9 Km in SW 9.8 Km in ESE</p>

ix. Presence of Environmentally Sensitive areas in the study area

Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	No	No Forest land involved in the mine lease area.
National Park	No	Narayan Sarovar Wildlife Sanctuary approx. 8.8 km in SSW direction from the Mine lease area.
Wildlife Sanctuary	No	Narayan Sarovar Wildlife Sanctuary approx. 8.8 km in SSW direction from the Mine lease area.
Elephant/Tiger Reserve	No	-
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area (ESA)	No	Eco- Sensitive Zone approx. 8.2 km from the Mine Lease area.
Coastal Regulation Zone (CRZ)	Yes	0.605 km from the block
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	No	There is one wildlife sanctuary at a distance of 8.8 km in the southern direction from the block boundary. Site Specific Wildlife Conservation Plan has been prepared and submitted to concern authority.

Wildlife Conservation Plan	No	Site Specific Wildlife Conservation Plan has been prepared and submitted to competent authority.
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x. Green belt/plantation details:

Proposed area for green belt/plantation and no. of saplings proposed	Area: 1377.9 ha. No. of Saplings: 34,44,750
Budget for green plant & plantation till the end of life of mine.	45 Lakhs for first five year
Budget for nursery	
Details of existing plantation and its survival rate	Survival Rate: 80%
No. of tree cuts in the mine lease area and compensatory afforestation	Detailed tree enumeration will be provided in EIA. CA not applicable.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	11.9 ha
Greenbelt created in ha: 1377.9 ha., the bifurcation is 957.79 ha on backfilling, , 98.62 ha on stacks/ dumps, 308.19 ha on virgin land and lastly near utility services 13.30 ha including peripheral greenbelt. 717.93 ha will be developed for agriculture activities.	

xi. Baseline detail:

Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)	
Period of baseline data collection	March to May 2024
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Summer Season

xii. Rehabilitation & Resettlement (R&R):

R & R details	There is no homestead PAF within the Block. However, there are 196 PAF and 798 PAP within the Block. Compensation in accordance with the prevailing Norm of State R & R Policy will be undertaken and implemented by M/s GMDC for the land losers.
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xiii. Court case details:

Court Case, No and its present status	No court case is pending against the project.
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xiv. ADS details: Earlier, the proposal was considered in the 21st EAC (Non-Coal Mining) meeting held during 18-20th October, 2023 wherein the Committee has deferred the proposal for submitting additional information. The Project Proponent has submitted the following information vide letter dated 28.03.2024:

S. No	ADS Point	Reply by Project Proponent
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1.	The Site visit report of the sub-committee	The Site visit report of the sub-committee has been submitted by the Project Proponent.
2.	Since the mine site is located within 20 km from seaboard frontier, Project Proponent shall submit No Objection Certificate from Ministry of Defence for consideration of the instant project for Terms of Reference (ToR).	<p>Project Proponent had approached to Ministry of Defence, New Delhi for obtaining a No Objection Certificate.</p> <p>As per the Project Proponent's interaction with ASO (Policy & Planning), Ministry of Defence (MoD) (IAST: Raksha Mantralaya), New Delhi. This proposal must be directly moved by MoEF&CC, New Delhi to MoD (IAST: Raksha Mantralaya), New Delhi being confidential in nature.</p> <p>In this regard, Project Proponent has submitted a request letter to MoEF&CC on dated 19.12.2023.</p>
3.	The Project Proponent needs to clearly justify the water balance and also to explain that how the requirements of freshwater will be met.	<p>The water requirement was initially 1940 KLD which has been reduced to 1325 KLD (reduction of 32% or 615 KLD) after carrying out comprehensive hydrogeological survey, ground water modelling and re-visiting the water balance.</p> <p>Water balance diagram has been submitted by the Project Proponent. As per the diagram the total water requirement is 1325 KLD which includes Ground water requirement (50m³/day), dewatering quantity (814 m³/day) and Mine pit rainwater collection 461 m³/day.</p>

The Project Proponent has submitted the following point-wise reply w.r.t. the observations of site visit report of the sub-committee:

S.No.	Observation of the Sub-Committee	Reply by Project Proponent
1.	The PP shall submit the comprehensive material balance with regard to the annual production of the both minerals, overburden/waste, top soil generated, depth of mining,	<ul style="list-style-type: none"> PP has provided comprehensive material balance with regard to the annual production of the both minerals, overburden/waste, top soil generated, depth of mining, transportation of minerals mined out

	<p>transportation of minerals mined out yearly, quantity to be stocked for the first five years. The excavation data should match when compared with the mining plan for both minerals i.e. Lignite as well as Limestone.</p>	<p>yearly, quantity to be stocked for the first five years. The excavation data has been matched with mining plan for both the minerals. A detail of the same is has been submitted.</p> <ul style="list-style-type: none"> Lignite: All mined out Lignite will be dispatched to the consumers for commercial use. <p>Limestone: Initially, all the mined out Limestone will be stocked for the first five years. In the meantime, GMDC has invited EOI (Expression of Interest), to understand the interest of cement companies to utilize the limestone in the vicinity of the mine. Based on the response GMDC has rolled out Limited RFP (Request for Proposal) for the interested parties for their participation in Long-term Supply Agreement (LSA) for limestone.</p>
<p>2.</p>	<p>The PP informed that they will by using SH 06 for transportation purpose along with NH 41, accordingly, PP shall submit the detailed transportation route for the proposed transportation of mined out minerals.</p>	<ul style="list-style-type: none"> As mentioned above, mined out Lignite will be dispatched to the consumers for commercial use. Transportation of Limestone is presumed in the vicinity of 10 Km from the Mine, based on the response of Limited RFP (Request for Proposal). Depending on the potential customers within the 10 Km range, conveyor belt transportation will be planned.
<p>3.</p>	<p>PP shall also undertake the carrying capacity study of the existing road to indicate its viability along with its pollution potential.</p>	<p>Details of the Carrying Capacity to be incorporated in the EIA Report, post finalization of the Long-term Supply Agreement (LSA) with potential consumers.</p>

4.	<p>The PP shall submit the detailed timeline for shifting the pond outside the mine lease area. The capacity of the existing pond and the proposed pond along with its location needs to be provided by the PP.</p>	<ul style="list-style-type: none"> • There are three pond within lease area i.e. P1, P2, P3. Pond P1 Catchment area of 281250 m² will be used after 25th year during the mining operation and that will be a part of 410.19 ha water body at the end of life of mine. • Project proponent will not disturb P2 & P3 Pond during the mining operation. • As part of its CSR Activities, GMDC has initiated Development and rejuvenation of check dam at Baiyavo village under the Mission Amrit Sarovar with total administrative approval of Rs. 43,40,000/-. • The deepening of the Sanavala check dam on Khali river at Baiyavo village holds significant potential for enhancing the water needs of the residents in Baiyavo and Punrajpur villages. The check dam work is executed by the Office of Deputy Executive Engineer, Nakhatrana, Kutch. • The CSR project's execution promises to alleviate water scarcity in the region and ensure sustained socio-economic well-being for Baiyavo and Punrajpur villages in the Lakhpat Block.
5.	<p>PP shall undertake green belt plantation alongside the lease boundary and virgin area plantation.</p>	<p>Project proponent will develop greenbelt alongside the lease boundary and virgin area. Around 30,000 plants will be planted in first five years during the mining operation. Details is given below:</p>

		Year	Green belt location	Area proposed to be covered (Ha)	Number of plants proposed	Expected Survival Rate (%)	Estimated Expenditure
		1st	Safety Zone	2.4	6000	80%	900000
		2nd	Safety Zone	2.4	6000	80%	900000
		3rd	Safety Zone	2.4	6000	80%	900000
		4th	Safety Zone	2.4	6000	80%	900000
		5th	Safety Zone	2.3	6000	80%	900000
		Total		11.6	30000		450000
6.	PP shall also submit its action plan for mineral use in case it is unable to set up its Cement plant within next 5 years.	<ul style="list-style-type: none"> In order to utilize the limestone from Lakhpat- Punharajpur mine, GMDC has invited EOI (Expression of Interest), to understand the interest of cement companies to utilize the limestone in the vicinity of the mine. Based on the response, GMDC has rolled out Limited RFP (Request for Proposal) for the interested parties for their participation in Long- term Supply Agreement (LSA) for limestone. 					
7.	PP informed that mining activity will intersect ground water, accordingly PP shall undertake hydrological	<ul style="list-style-type: none"> PP had appointed CGWA accredited consultant Vardan Environet (Certificate No. CGWAR/GI/003) to undertake a 					

	study to determine whether any sea-water ingress will occur or not.	Comprehensive Hydrogeological Report with ground water modelling. <ul style="list-style-type: none"> The detail Hydrogeological Modelling Study report concludes that possibility of sea water ingress is ruled out. Detailed Hydrogeological Study report has been submitted by the Project Proponent.
8.	PP shall obtain necessary permission/NoC from Archaeological Department for mining in the northern side of lease boundary that is in close vicinity to Lakhpat Fort.	GMDC shall obtain the necessary permission/NoC from Archaeological Department for mining in the northern side of lease boundary that is in close vicinity to Lakhpat Fort. The application process is initiated. Project proponent will submit the necessary permission/NOC at the time of submission of EIA Report.

xv. Change of Environmental Consultant: The Project Proponent vide letter dated 11.03.2024 requested to the MoEF&CC for change of Environmental Consultant from M/s Centre for Envotech and Management Consultancy Pvt. Ltd. to M/s Vardan Environet.

xvi. Details of project cost and employment:

Particulars	(Rs. In Crore)
Project Cost	Rs. 1037.436 Crores
Employment (No.s)	1000

3. Observation and Recommendation of the Committee:

The project proponent after explaining the site features on the KML presented the reply of the ADS points raised during the 21st EAC Meeting held during 18-20 October 2023. PP also provided the point wise compliance of the site visit report of the sub-committee. Upon submission of the reply by PP, the EAC asked the PP whether they have finalized the transportation route for the mined out mineral. PP stated that transportation of Limestone is presumed in the vicinity of 10 Km from the Mine, based on the response of Limited RFP (Request for Proposal). EAC was of the opinion that PP should atleast include the most probable route that it may follow for transportation in the EIA/EMP along with the carrying capacity study.

Further, EAC observed that plantation proposed by the PP was inadequate and accordingly, the committee advised the PP to revisit their plantation programme by incorporating plantation of 2500 plants per hectare. EAC also noted that Lakhpat Fort is located near to the mine site and opined that PP shall seek no objection certificate from ASI in this regard. The EAC again reiterated that the mine lease is located within 20km from the seaboard frontier and as such PP needs to obtain the NoC from Ministry of Defence.

Based on the above, EAC **recommended** the proposal in the 29th EAC meeting held during 9-10th May, 2024 for Terms of Reference for Mining of Limestone in Lakhpat & Punharajpur Lignite Block and Limestone mine for production capacity of 29.81 MTPA of Limestone in the ML area of 2959.6715 ha by M/s Gujarat Mineral Development Corporation Limited located at Villages Lakhpat, Kaner & Punharajpur, Tehsil Lakhpat, District Kutch, Gujarat under provisions of EIA Notification, 2006 and its amendments therein with following additional specific conditions to be followed.

Specific Conditions:

- i. The ToR shall be granted upon the submission of the No Objection Certificate from Ministry of Defence.
- ii. The Project Proponent needs to submit the action plan for year wise backfilling.
- iii. The Project Proponent needs to submit the details of the year wise excavation and plan for the proposed exploration program.
- iv. The Project Proponent needs to submit the total excavation in tonnes including mineral, overburden, inter-burden, waste, top soil, rejects etc. to be handled and the management of topsoil and waste needs to be properly addressed in EIA/EMP report. The mineable reserves, blocked reserves need to be mentioned along with the life of mine. Waste to be generated during the entire life of mine and details of the location of dumping/backfilling area need to be submitted
- v. The Project Proponent needs to submit the Land Use/Land Pattern based on the mineral deposit.
- vi. The Project Proponent shall conduct drone survey of the mine lease area and buffer area. The report of the said survey shall be submitted during the appraisal for EC.
- vii. The Project Proponent needs to monitor the ambient air quality and noise level at the mine lease boundary, nearest village, crusher, predominant downwind direction and at other sensitive receptors. Accordingly, Project Proponent shall propose to install Continuous Ambient Air Quality Monitoring Station within certain timeline.
- viii. The Project Proponent should prepare the EMP considering the scenario of pollution to be generated for normative and peak total excavation for assessing air and noise pollution.

- ix. The Project Proponent needs to submit the map showing the transport route of the mineral from the mine lease area to the destination, impact of details of habitation at a distance of 100m from the centre on both sides of road, details of no. of trips/day to and fro, capacity of the dumper/tipper to be deployed and the dimensions of the road and the carrying capacity of the road.
- x. The Project Proponent shall carry out the assessment of impact due to the proposed project as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP. The project proponent shall conduct hydrological study for projects involving intersection of ground water table as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP.
- xi. The Project Proponent shall prepare the scheme for mandatory recycle/re- use of water as specified by the Central Ground Water Authority for different category areas seeking NoC for ground water withdrawal and the shall submit as part of EIA/EMP report.
- xii. The Project Proponent needs to submit the engineering design for construction of retaining wall, garland drains, catch drains and siltation ponds along with the timeline.
- xiii. The Project Proponent needs to submit the greenbelt/afforestation development plan (2500 plants per ha) for undertaking plantation in the periphery of the mine lease boundary, safety zone etc., The details of the no. of saplings proposed, type of saplings, spacing and the area to be covered including the cost and timeline for completion of plantation needs to be provided in the EIA report.
- xiv. The Project Proponent needs to submit the detailed R&R plan covering all the components viz. number of Project Affected Families (PAF)/Project Displaced Families (PDF) and details of the land owned by them, break up of total compensation to be paid including method of calculation including the sources/references adopted and mode of payment etc. PP need to submit the plan for Socio economic development of the neighbourhood habitats based on the need based survey along with the time bound action plan. PP also needs to submit the possession certificate and timeline for acquiring the land. Further, PP needs to submit the map demarcating the purchased land and non-purchased land if any at the time of appraisal of EC.
- xv. The Project Proponent needs to submit employment based skill development plan for the local people, and thrust should be to provide employment to local people after imparting training.
- xvi. The Project Proponent shall monitor the water quality in the impact zone such as water reservoir, river water with specific reference to the parameter Langelier Saturation Index which will denote the impact of calcium carbonates on water bodies and these parameters and determine the tendency of water to form calcium carbonate scaling.

- xvii. PP shall submit no objection certificate for mining from ASI with regard to the Lakhpat Fort which is located at a distance of 200 m from the mine lease area in the northern direction.
- xviii. PP shall undertake the public hearing for Common EIA-EMP reports on both operations i.e lignite mine and limestone and submit the final EIA-EMP report to respective sectors simultaneously for their appraisal in accordance with the MoEF&CC OM dated 24.12.2010. Public Consultation, clearly indicating both the minerals Lignite as well as Limestone shall be conducted through the concerned SPCB as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal. All the issues should be incorporated in EIA along with its time bound action plan and budgetary provision. Also the issue raised in public hearing held earlier should also be addressed with time line action plan and budgetary provision in EIA/EMP report.
- xix. PP shall prepare a Plan for implementation of Continuous Automatic Air Quality Monitoring Station (CAAQMS) at mine site or its vicinity.
- xx. Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.
- xxi. Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted.
- xxii. The impact of mine operation on the river bodies flowing within the boundary of the mine with its mitigation measures adopted should be clearly spell in the EIA/EMP report with flood plain protection measures.
- xxiii. PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of Limestone.
- xxiv. Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
- xxv. The Project Proponent needs to undertake the enumeration of the plant species within the mine lease area before cutting. The Project Proponent also needs to submit the compensatory afforestation plan for the no. of trees to be cut in the mine lease area and also to explore the possibility of tree transplantation.
- xxvi. The Project Proponent needs to submit the ecology restoration plan for mined out pits for using as Water reservoir/ Pisciculture as well as the plan for the backfilled area.
- xxvii. PP shall provide the details of mining technology/methodology proposed to be adopted for Non-coal mining operations and its associated environmental benefits of using from Climate Change perspective.

- xxviii. PP shall submit letter from Principal Chief Conservator of Forest, State Government that the area does not falls under any authorized Elephants and Tiger corridors.
- xxix. The Project Proponent needs to submit the detailed scientific study on flora and fauna and also highlight the endangered species. The Project Proponent needs to verify the list as per the latest Wildlife Protection Amendment Act, 2022.
- xxx. PP shall submit the action plan to adhere the Plastic Waste Management Rules 2016 and to adhere Ministry's OM dated 18/07/2022.
- xxxi. PP to submit the status of any pending court cases or disposed of cases pending before different adjudicating authority related to the present project/ mine site.
- xxxii. PP shall prepare a wildlife conservation plan in consultation with the local forest department focusing on the marine eco-system present at the mine site.
- xxxiii. The Project Proponent needs to submit the proof of the demarcation of the boundary pillars fixed on the ground.

2.3 DabaSaitthad Limestone Deposit with production capacity of 2.51 MTPA of Limestone in the mine lease area of 25 Ha by M/s Star Cement Ltd located at DabaSaitthad (wahlareng), Village Lumshnong, District East Jaintia Hills, Meghalaya - [Online Proposal No: IA/ML/MIN/449327/2023, File No. IA-J-11015/39/2023-IA. II(NCM), EIA Consultant - M/s Perfact Enviro Solutions Pvt Ltd] – Terms of Reference reg.

The instant proposal is for Terms of Reference for mining of Limestone in Daba Saitthad Limestone Deposit of M/s Star Cement Ltd with production capacity of 2.51 MTPA of Limestone in the mine lease area of 25 Ha, located at Daba Saitthad (Wahlareng), Village Lumshnong, District East Jaintia Hills, Meghalaya.

2. The details of the project as ascertained from the documents submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under:

- i. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals. The instant proposal attracts the General conditions as the Narpuh Wildlife Sanctuary is located at a distance of 3.9 km, SE direction and its ESZ boundary is located at a distance of 2.7 km SE to the project site and hence the proposal falls under Category "A".
- ii. The mine lease area is located between Latitude: 25°09'24.78" N to 25°09'39.43" N and Longitude: 92°21'29.53" E to 92°21'56.03" E. The mine lease area falls under the Survey of India Toposheet No: 83C/8 (Restricted) and falls in Seismic Zone-V.
- iii. Details of Mine Lease:

S.No	Prospecting License/ Letter of Intent (Lol)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1	Prospecting License- MG.6/2023/33	01.03.2023	Limestone (Major)	3 years	Mining & Geology Department, Government of Meghalaya	25 ha.
2	Letter of Intent- MG.6/2023/277	28.08.2023	Limestone (Major)	3 years	Mining & Geology Department, Government of Meghalaya	25 ha.
3	Lease Deed	12.02.2024	Limestone (Major)	50 Years	Mining & Geology Department, Government of Meghalaya	25 ha.

S. No	Details of grant of Mine Lease deed execution	Period of Grant		Name of the Mineral	Mine lease area in Ha
		From	To		
1.	Mine Lease Deed	12.02.2024	11.02.2074	Limestone (Major)	25 ha

iv. Land Use/Land Cover of the Mine Lease Area:

Private land	25 ha.
Government land	-
Forest land	Nil
Total Mining lease area (MLA), ha	25 ha.
Private land for crusher, workshop & other infrastructure outside the MLA	NA

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v. Mining plan details:

Mining Plan(approved by Indian Bureau of Mines/DMG)	Letter No.	MCDR-MPCP0CaFI/10/2023-GUH-IBM_RO_GUH
	Date	11.12.2023
	Mineral (Major/Minor)	Major
	Mine Lease Area, Ha	25
	Validity	5 years from the date of execution of mining lease
Mining Parameters	Quantitative Description	
Method of Mining	Opencast mechanized mining	
Drilling/Blasting	Deep hole drilling & blasting.	
Geological Reserves	52.44 million tons	
Mineable Reserves	40.89 million tons	
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/Waste, MTPA)	2.832 MTPA (including 2.51 MTPA of limestone, 0.322 MTPA of Waste/OB including topsoil).	
Life of mine	50 Years [Max production of Lst (ROM) shall be restricted to 2.51 MTPA. Production from this mine at a later stage of ML may get reduced. Additional exploration shall also be taken up which will increase the reserves.]	
Mine Bench Height & Bench Width	The height of the bench will be 9 m and a minimum working width of the benches in mineral will be 18 m for safe operation of mining machinery.	
No. of Mine Benches	13	
Existing Depth, m bgl	NA, as it is a green field project	
Ultimate Depth of Mining, m bgl	137	
Ground Water Table, m bgl	156	
Details of ground water intersection	Water table will not be intersected as it is at 156 m bgl and mining will be done up to 137 m bgl.	
Individual bench slope	85° from horizontal	
Overall pit slope	<45°	
Details of existing/proposed Crusher	There is no crusher proposed within the mining lease area. Limestone will be transported to the cement plant crusher.	
Mineral Beneficiation	NA	

RoM output size	-1000 mm
Transportation details including capacity of dumper/tipper, mode of transport and distance	The material after blasting will be loaded by hydraulic excavators of about 2.6 m ³ bucket capacity into tippers of 25 tons carrying capacity for its transportation to crusher at a distance of 4.6 km and temporary waste dump inside mining lease.
Generation of Topsoil/OB & its Management during plan period & conceptual period	Max. 322,524.25 TPA of Waste/OB including topsoil will be generated. Waste/OB will be dumped temporarily at earmarked places. Later it will be used as blending material after taking permission from the Government. The topsoil generated will be used extensively for plantation.
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	There will be no reject from the mine.

vi. Water requirement

Total water requirement	40 KLD	Fresh water	05 KLD
		Treated water	35 KLD
Source	Total water requirement for the proposed mine will be around 40 KLD which will be sourced through water tankers from the company's cement plant.		
Permission	Vide Letter No. AGRO/IRRI-110/96/2004-05/80 dated Shillong, 15th Sep 2004		
Additional information(if any)	Total water requirement for the proposed mine will be around 40 KLD, out of which 35 KLD will be STP treated water and 5 KLD will be fresh water for domestic purposes.		

vii. Nearest village / town/ highway/railway station / water bodies

Particulars	Particular's Name	Distance & Directions
Village	Lumshnong	1.95 Km NE
Town	Khliehriat	21.70 Km N
Highway	NH-6	0.57 km SE
Interstate Boundary	• India-Bangladesh International Boundary	9.08 km SSW
	• Meghalaya-Assam State Boundary	12.88 Km SE
Railway station	Hilara railway station	65 km (by road)
Water bodies	Um Badoh Stream	0.85 Km WNW
	Lubha River	3.71 km SE
	Seshympa River	4.87 Km WSW
	WahLukha River	6.36 Km ENE
	ThangpyrshaidNala	6.60 Km N
	Sakha Nala	7.79 Km N
	KukhaNala	7.99 Km NE
	KhaddumPieltleng Falls	8.37 Km ENE
	DongtangleNala	8.74 Km NNE
	Prang River	9.16 Km WSW
	RumplungNala	9.27 Km SW
	Natural swimming Pool	9.28 Km NE
	AphaNala	9.56 Km S
	Cher Fall	9.69 Km NE
LarungNala	9.76 Km SW	
SharaiNala	10.29 Km SW	
Forest	Narpuh Reserve Forest	4.13 km SSW

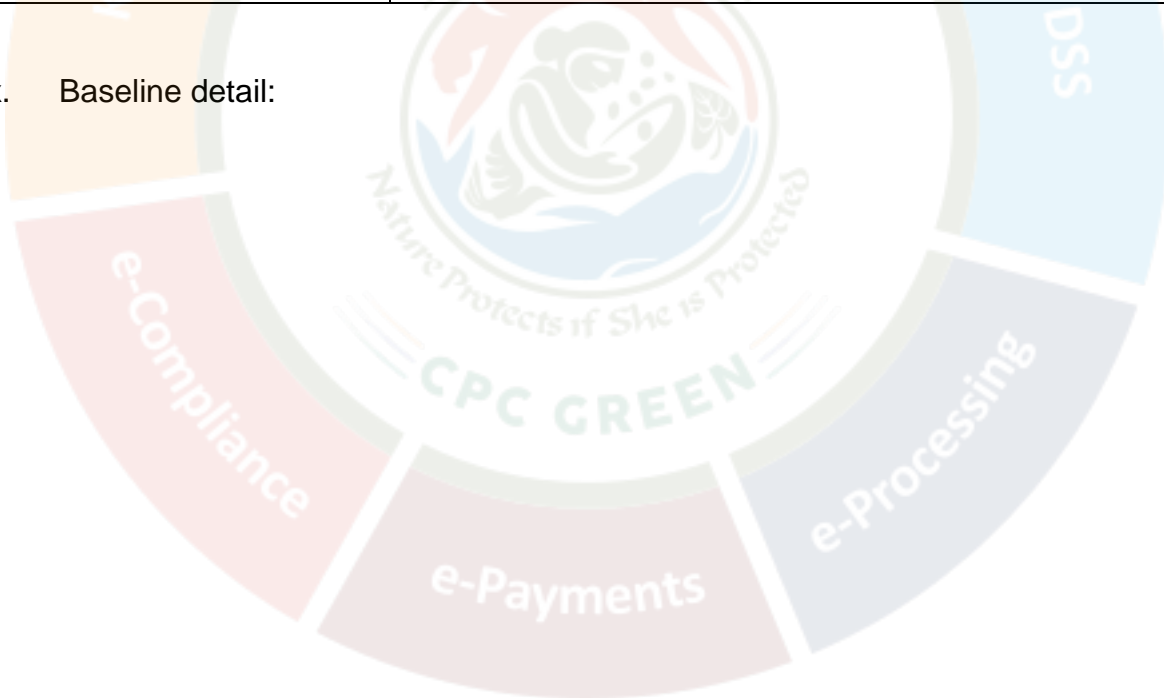
viii. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest land within the mine lease area and (if yes) status of Forest Clearance	No	Not Applicable
National Park	No	Not Applicable
Wildlife Sanctuary	Yes	Narpuh Wildlife Sanctuary - 3.90 km SE
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area(ESA)	Yes	Narpuh Wildlife Sanctuary ESZ - 2.70 km SE
Coastal Regulation Zone (CRZ)	No	Not Applicable
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	Yes	There are ten Schedule I Species found in the buffer zone are given below: <i>Hoolockhoolock</i> (Western hoolock gibbon), <i>Nycticeusbengalensis</i> (Slow loris), <i>Prionailurus bengalensis</i> (Leopard Cat), <i>Python molurus</i> (Indian Rock Python), <i>Neofelis nebulosa</i> (Clouded Leopard), <i>Buceros bicornis</i> (Great Pied Hornbill), <i>Canis lupus pallipes</i> (Indian Wolf), <i>Manis pentadactyla</i> (Pangolin), and <i>Melursus ursinus</i> (Sloth bear), <i>Capricornis sumatraensis</i> (Himalayan serow).
Wildlife Conservation Plan	Yes	The Chief Wildlife warden had a meeting with Industries and Government departments for preparation of Regional Conservation plan for the East Jaintia Hills district under the supervision and guidance of CWLW, Meghalaya and the cost for preparation and implementation of the Regional Conservation Plan may be shared by various project proponents on a proportionate basis keeping in view the likely impacts of each project on the wild life and their habitat. Project proponent also confirmed that they shall be part of the regional conservation plan and will pay the fee as determined for project.

ix. Green belt/plantation details:

Proposed area for green belt/plantation	At the end of life of mine, out of the total 25 ha area, 20.12 ha will be used for Bench Plantation/ Grassification, 1.46 ha. along the 7.5 m wide peripheral boundary will be developed to green belt.
Budget for green plant & plantation till the end of life of mine.	Rs 1.03 Cr
Budget for nursery	NA
Details of existing plantation and its survival rate	NA as it is greenfield project
No. of tree cuts in the mine lease area and compensatory afforestation	215 trees will be cut in the mine lease. Total about 37854 trees will be planted upto conceptual period.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	1.46 Ha

x. Baseline detail:



Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/others)	
Period of baseline data collection	March to May 2023
Season (Summer / Pre-monsoon / Post- monsoon / Winter)	Summer Season
Predominant Wind direction (From)	Towards East
Ambient Air Quality (no. of locations) and results	<p>No. of locations- 06</p> <p>Results-Core zone: The mean value of PM10 ranges from (64.55 - 66.49 $\mu\text{g}/\text{m}^3$) & PM2.5 ranges from (29.20 - 30.08 $\mu\text{g}/\text{m}^3$), SO2 ranges from (6.15 - 6.33 $\mu\text{g}/\text{m}^3$), NO2 ranges from (16.45 - 16.94 $\mu\text{g}/\text{m}^3$) & CO ranges from (0.29 - 0.30 mg/m^3) which are within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB, the air quality of the core zone is found to be Satisfactory in the Summer season.</p> <p>Buffer zone: The mean value of PM10 ranges from (69.07 - 75.53 $\mu\text{g}/\text{m}^3$), PM2.5 ranges from (31.25 - 34.17 $\mu\text{g}/\text{m}^3$), SO2 ranges from (6.57 - 7.19 $\mu\text{g}/\text{m}^3$), NO2 ranges from (17.60 - 19.24 $\mu\text{g}/\text{m}^3$) & CO ranges from (0.31 - 0.34 mg/m^3) which are within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB the air quality of the buffer zone is found to be Satisfactory during the sampling campaign.</p>

<p>Noise level (no. of locations) and results</p>	<p>No. of locations- 08</p> <p>Results- Core Zone (Industrial Area): N1 & N2: The ambient noise level during day time at the proposed project site varies from 57.4 dB (A) to 57.6 dB (A) which are within the standard limit of Industrial area ~ 75 dB (A). During night the noise level at the project site ranges from 44.7 dB (A) to 44.8 dB (A) which are within the standard limit of Industrial area 70.0 dB (A).</p> <p>Buffer Zone: Residential Area: N5 to N8-The ambient noise level in residential areas ranges from 53.1 dB (A) - 56.6 dB (A) during day time and from 43.9 dB (A) to 47.2 dB (A) during night time. The slightly higher noise level compared to standard limit may be regarded to the residential and other local activities occurring within the village.</p> <p>Commercial Area: N3- Approach Road, N4- NH - 6 The ambient noise level in commercial area i.e. Approach Road & NH-6 is 57.4 dB (A) to 62.8 dB (A) during day time which is within the standard limit of commercial area of ~ 65 dB (A) and 46.7 dB (A) to 57.9 dB (A) during night time which is slightly higher than the standard limit of commercial area ~ 55 dB (A).</p>
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<p>Water Quality (no. of locations) and results</p>	<p>No. of GW locations- 08 No. of SW locations- 04 Results of GW-</p> <ul style="list-style-type: none"> ❖ The Total Dissolved Solids (TDS) of the sampling locations W1, W2, W3, W4, W5, W6, W7, W8 ranges from 68 mg/l to 182 mg/l which are within the drinking water standard (IS:10500) i.e. 500 mg/l. ❖ The Total Hardness of the sampling locations ranges from 18 mg/l to 70 mg/l which are within the drinking water standard (IS:10500) i.e. 200 mg/l. ❖ The Alkalinity of the sampling locations ranges from 13.80 mg/l to 61.60 mg/l which are within the drinking water standard (IS:10500) i.e. 200 mg/l. ❖ The Fluoride content in the sampling locations ranges from <0.1 mg/l to 0.64 mg/l which are within the drinking water standard (IS:10500) i.e. 1.0 mg/l. ❖ The Calcium Concentration of sampling locations ranges from 5.4 mg/l to 26 mg/l. Calcium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 75 mg/l. ❖ The Magnesium Concentration of sampling locations ranges from 0.48 mg/l to 7.20 mg/l. Magnesium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 30 mg/l. ❖ The Chloride Concentration of all the sampling locations ranges from 6.80 mg/l to 31 mg/l. Chloride levels of all the sampling locations are within the drinking water standards (IS:10500) i.e. 250 mg/l. <p>Results of Surface Water- Surface water samples were derived from 4 locations in different surface water bodies within study area, analysis results of the same revealed that pH values amongst all samples</p>
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	<p>varied in the range of 7.40 - 7.78, Total Hardness concentration varied in the range of 118 mg/l to 172 mg/l &, TDS concentration varied in the range of 201 to 252 mg/l. Electrical Conductivity was found to be ranging in between 352 to 432 mS/cm.</p> <p>The surface water samples falls under class D & E as per CPCB surface water criteria i.e. Water is suitable for Propagation of Wildlife and Fisheries</p>
Soil Quality (no. of locations) and results	<p>No. of locations- 08</p> <p>Results- Soil samples at location S1 - S8 shows that the soil texture class is Clay, Clay Loam, Colour is 5/3 Dull reddish brown, Brown (3/4), 5/3 Dull brown, pH range is (6.90 - 7.70). Amount of primary nutrients like Organic matter range is (0.35 - 2.31) %, the available nitrogen range is (62.40 - 106.40) mg/kg is Low and available Potassium range is (12.20 - 43.70) mg/kg is Low while the available Phosphorus range is (7.20 - 14.10) mg/kg is medium to high. Thus it can be concluded that soil is average fertile.</p>
Hydro geological study and results	Not conducted
Traffic study (no. of locations) and results	2 Locations, LOS of both locations -“A”.

xi. Rehabilitation & Resettlement:

R & R details	The Project Proponent has submitted that the R&R is not involved in this project.
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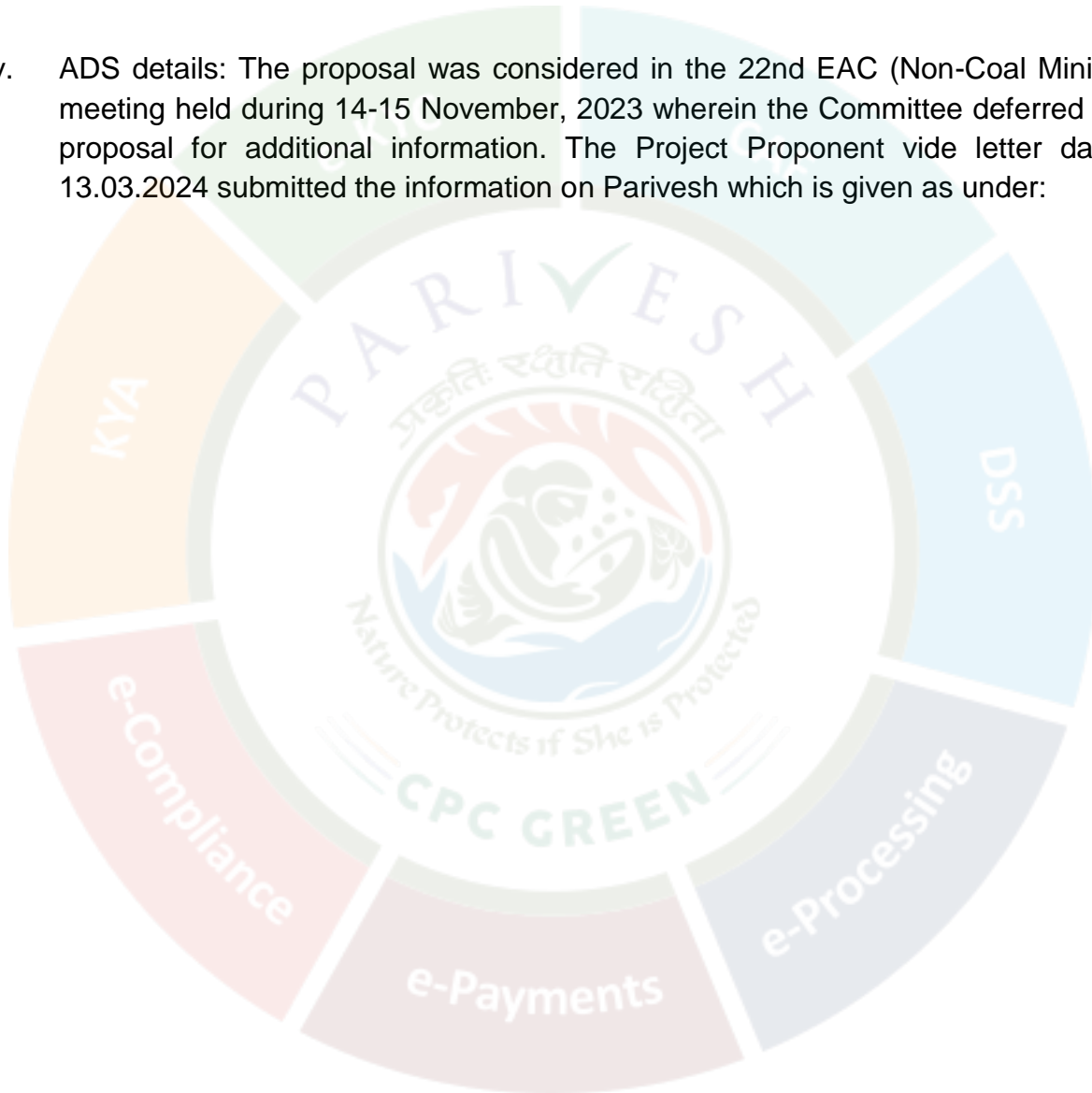
xii. Court case details:

Court Case, No and its present status	The Project Proponent has submitted that there is no litigation pending against the project and/or land in which the project is proposed to be set up
Undertaking by Project Proponent w.r.t court case	

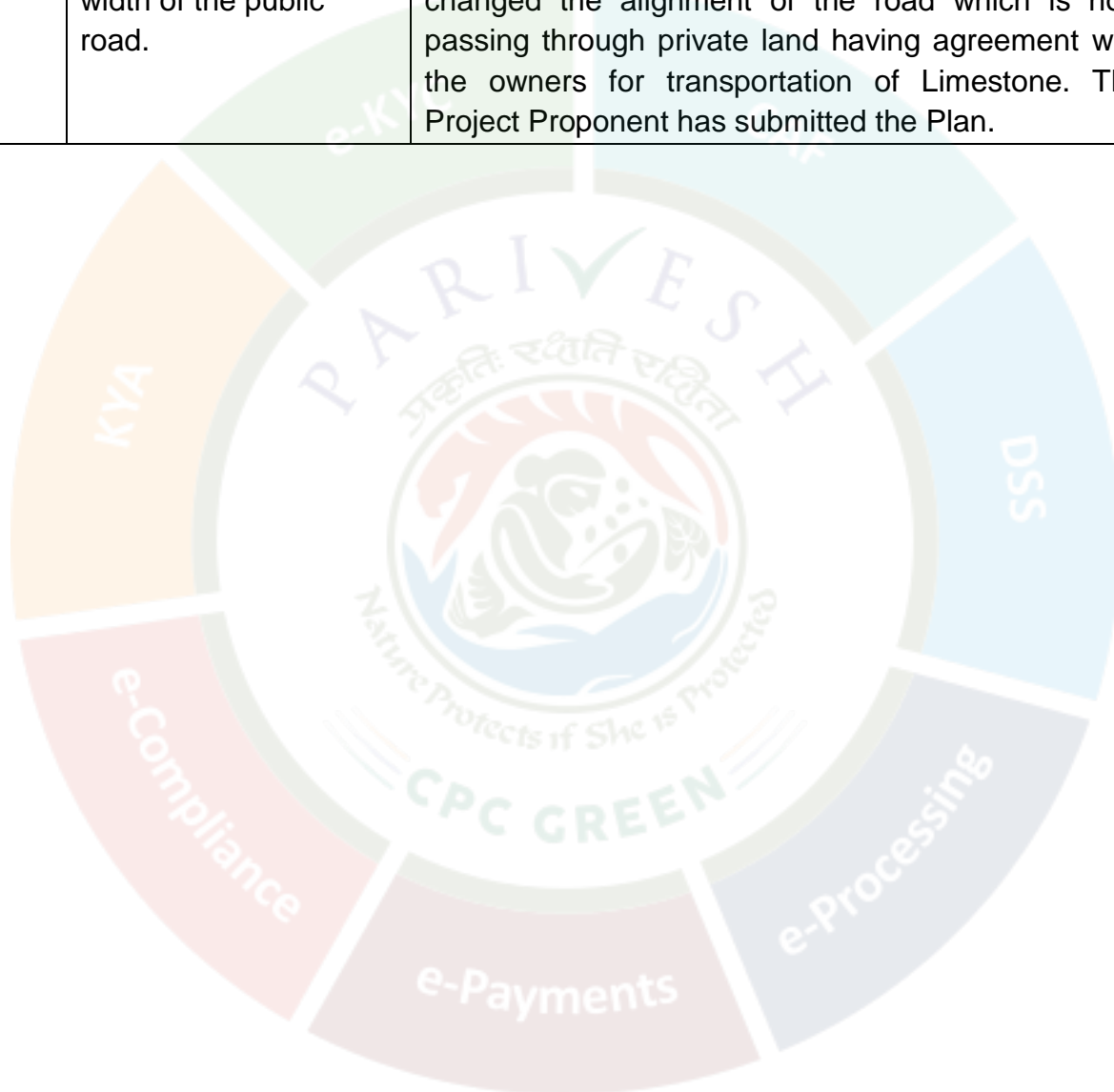
xiii. Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018	The Project Proponent has submitted the Affidavit dated 17.10.2023 stating that they commit to comply with order of the Hon'ble Supreme Court order dated 2 nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India &Ors.
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xiv. ADS details: The proposal was considered in the 22nd EAC (Non-Coal Mining) meeting held during 14-15 November, 2023 wherein the Committee deferred the proposal for additional information. The Project Proponent vide letter dated 13.03.2024 submitted the information on Parivesh which is given as under:



S.No	ADS Point	Reply by project proponent
i	The Project Proponent needs to submit the NOC from the Ministry of Defence.	The Project Proponent has submitted the NOC from the Ministry of Defence dated 05.04.2024.
ii	The Project Proponent needs to submit the width of the public road.	The existing road is an approach for broom garden & a hamlet. After appraisal project proponent has changed the alignment of the road which is now passing through private land having agreement with the owners for transportation of Limestone. The Project Proponent has submitted the Plan.



iii	<p>The Project Proponent needs to submit the hardness of Limestone tested by a reputed Institute.</p>	<p>As advised, Limestone samples from Daba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited were sent to Indian Institute of Technology (Indian School of Mines), Dhanbad for determination of Moh's hardness along with Compressive strength, Tensile strength. Their recommendation are as under:</p> <p>"The results of Moh's hardness ranges from 3 to 5. In general, the Moh's hardness is an indirect measure of the tool consumption of the cutting machine, again this is indicative of high tool consumption that may result into more downtime of the surface miner machine on account of tool change if deployed. Therefore, based on the test results it is recommended to avoid deployment of surface miner."</p> <p>"It is observed from the test results of UCS of rock samples of Dabba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited, that the compressive strength has an average value of $47.48 \pm 16.2 \text{ MPa (N/mm}^2\text{)}$ which is considered a high value for deployment of Continuous Miner as far as production capacity is considered (Kramadibrata, 1996). At this value the surface miner will be producing at a very low and uneconomical rate."</p> <p>"Considering the test results of the tensile strength of the rock samples of Daba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited, the average value is $25.95 \pm 3.78 \text{ MPa}$. At this value of tensile strength, the deployment of Surface miner is ruled out (Figure 2). As can be seen that the deployment of surface miner is practically unsuitable beyond 6 MPa of tensile strength of rock."</p> <p>The project proponent has requested EAC to refer page no. ii & iii- Executive summary of report from Indian Institute of Technology (Indian School of Mines), Dhanbad submitted to MoEF&CC.</p> <p>The Project Proponent had procured Dozer with Ripper attachment for mining but it could not be used as Limestone is very hard & massive in nature. Thus equipment has not been utilized.</p>
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iv	The Project Proponent needs to explore the possibility of installing a fixed/ mobile crusher within the lease area.	The Project Proponent has examined the possibility of installing fixed/mobile crusher within the lease area & reply is as under: Mining lease area is only 25 Hectare, so as to conserve the mineral resource Crusher is located outside the mining lease area in the Cement plant premises. Common crushers will be operated at Cement plant for Limestone, received from other mining areas as well. The crushers will cater the requirement of Limestone from Lumshnong Limestone Mine (66.98 Ha ML area), Khub I- 4.96 ha ML &Khub II-4.70 ha ML, Wah-Pynkon Limestone Mine- II having 13.58 Ha ML area and DabaSaitthad Limestone Deposit having 25 Ha ML area. These crushers will cater the need of SCL cement plants. It also facilitates avoiding emissions at multiple locations.

xv. Details of project cost and employment:

Particulars	(Rs. In Lakhs)
Project Cost	Rs 37.30 crores
Employment	99

3. Observation and Recommendation of the EAC: -

The instant proposal attracts the General conditions as the Narpuh Wildlife Sanctuary is located at a distance of 3.9 km, SE direction and its ESZ boundary is located at a distance of 2.7 km SE to the project site. The project proponent after explaining the site features on the KML presented the reply of the ADS points raised during the 22nd EAC Meeting held during 14-15 November 2023. PP stated that they have obtained the NoC from Ministry of Defence vide letter dated 05.04.2024. Further with regard to the use of surface miner PP stated that as advised by the EAC earlier they sent their limestone sample to Indian Institute of Technology (Indian School of Mines), Dhanbad for determination of Moh's hardness along with Compressive strength, Tensile strength. The recommendation of study is given as under:-

- The results of Moh's hardness ranges from 3 to 5. In general, the Moh's hardness is an indirect measure of the tool consumption of the cutting machine, again this is

indicative of high tool consumption that may result into more downtime of the surface miner machine on account of tool change if deployed. Therefore, based on the test results it is recommended to avoid deployment of surface miner.”

- It is observed from the test results of UCS of rock samples of Dabba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited, that the compressive strength has an average value of $47.48 \pm 16.2 \text{ MPa (N/mm}^2\text{)}$ which is considered a high value for deployment of Continuous Miner as far as production capacity is considered (Kramadibrata, 1996). At this value the surface miner will be producing at a very low and uneconomical rate.”
- Considering the test results of the tensile strength of the rock samples of Daba Saitthad Limestone Deposit of 25.00 Ha Mining Lease Area of Star Cement Limited, the average value is $25.95 \pm 3.78 \text{ MPa}$. At this value of tensile strength, the deployment of Surface miner is ruled out. As can be seen that the deployment of surface miner is practically unsuitable beyond 6 MPa of tensile strength of rock.”

Based on the aforesaid recommendation of Indian School of Mines Dhanbad, PP requested EAC to allow deep hole drilling & blasting. Further with regard to the possibility of installing fixed/mobile crusher PP stated that Mining lease area is only 25 Hectare, so as to conserve the mineral resource Crusher is located outside the mining lease area in the Cement plant premises. Common crushers will be operated at Cement plant for Limestone, received from other mining areas as well. The crushers will cater the requirement of Limestone from Lumshnong Limestone Mine (66.98 Ha ML area), Khub I-4.96 ha ML & Khub II-4.70 ha ML, Wah-Pynkon Limestone Mine- II having 13.58 Ha ML area and Daba Saitthad Limestone Deposit having 25 Ha ML area.

In view of the foregoing submission of PP, the EAC asked the PP about the possibility of transporting the ore through OLBC upto the highway, PP informed that they have approached the village head and community members for their consent for making an alternate road for transportation of mineral to completely avoid the village/public road. PP also presented the alternate route to the EAC

Based on the above, EAC **recommended** the proposal in the 29thEAC meeting held during 9-10th May, 2024 for Terms of Reference for Mining of Daba Saitthad Limestone Deposit with production capacity of 2.51 MTPA of Limestone in the mine lease area of 25 Ha by M/s Star Cement Ltd located at Daba Saitthad (wahlareng), Village Lumshnong, District East Jaintia Hills, Meghalaya under provisions of EIA Notification, 2006 and its amendments therein with following specific conditions in addition to the standard ToR conditions applicable for the non-coal mining projects-

- i. The Project Proponent needs to submit the action plan for year wise backfilling.
- ii. The Project Proponent needs to submit the details of the year wise excavation and plan for the proposed exploration program.

- iii. The Project Proponent needs to submit the total excavation in tonnes including mineral, overburden, inter-burden, waste, top soil, rejects etc. to be handled and the management of topsoil and waste needs to be properly addressed in EIA/EMP report. The mineable reserves, blocked reserves need to be mentioned along with the life of mine. Waste to be generated during the entire life of mine and details of the location of dumping/backfilling area need to be submitted
- iv. The Project Proponent needs to submit the Land Use/Land Pattern based on the mineral deposit.
- v. The Project Proponent shall conduct drone survey of the mine lease area and buffer area. The report of the said survey shall be submitted during the appraisal for EC.
- vi. The Project Proponent needs to monitor the ambient air quality and noise level at the mine lease boundary, nearest village, predominant downwind direction and at other sensitive receptors. Accordingly, Project Proponent shall propose to install Continuous Ambient Air Quality Monitoring Station within certain timeline.
- vii. The Project Proponent should prepare the EMP considering the scenario of pollution to be generated for normative and peak total excavation for assessing air and noise pollution.
- viii. The Project Proponent needs to submit the map showing the transport route of the mineral from the mine lease area to the destination, impact of details of habitation at a distance of 100m from the centre on both sides of road, details of no. of trips/day to and fro, capacity of the dumper/tipper to be deployed and the dimensions of the road and the carrying capacity of the road.
- ix. The Project Proponent shall carry out the assessment of impact due to the proposed project as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP. The project proponent shall conduct hydrological study for projects involving intersection of ground water table as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP.
- x. The Project Proponent shall prepare the scheme for mandatory recycle/re- use of water as specified by the Central Ground Water Authority for different category areas seeking NoC for ground water withdrawal and the shall submit as part of EIA/EMP report.
- xi. The Project Proponent needs to submit the engineering design for construction of retaining wall, garland drains, catch drains and siltation ponds along with the timeline.
- xii. The Project Proponent needs to submit the greenbelt/afforestation development plan (2500 plants per ha) for undertaking plantation in the periphery of the mine lease boundary, safety zone etc., The details of the no. of saplings proposed, type

- of saplings, spacing and the area to be covered including the cost and timeline for completion of plantation needs to be provided in the EIA report.
- xiii. PP should clearly bring out that what is the specific diesel consumption (Liters/Tonne of total excavation & mineral) and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
 - xiv. The Project Proponent needs to submit employment based skill development plan for the local people, and thrust should be to provide employment to local people after imparting training.
 - xv. The Project Proponent shall monitor the water quality in the impact zone such as water reservoir, river water with specific reference to the parameter Langelier Saturation Index which will denote the impact of calcium carbonates on water bodies and these parameters and determine the tendency of water to form calcium carbonate scaling.
 - xvi. The Project Proponent needs to carry out the cumulative impact assessment showcasing the impact by considering all peripheral mining activities of the combined mine operation for area towards wildlife sanctuary.
 - xvii. PP shall prepare a Plan for implementation of Continuous Automatic Air Quality Monitoring Station (CAAQMS) at mine site or its vicinity.
 - xviii. Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.
 - xix. Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report. Further, detailed mineralogical and chemical composition of the mineral and percentage of free silica in Air quality and other parameters Arsenic, Lead shall also be analyzed in ambient air quality & to be furnished in EIA/EMP report.
 - xx. The PP while carrying out base line monitoring 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 also submit the original Lab reports of air, water, soil and noise quality and NABL/MoEF&CC certificates of the respective laboratory.
 - xxi. PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.
 - xxii. PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of Limestone.
 - xxiii. The PP shall submit an action plan for prevention of landslide and rollouts from the surrounding hillocks, inter alia, including plantation, cribs and gabbions, etc.

- xxiv. Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted.
- xxv. PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.
- xxvi. 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 person to be engaged for implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.
- xxvii. PP should submit the detailed mineralogical and chemical composition of the mineral and percentage of free silica from a NABL/MoEF&CC accredited laboratory.
- xxviii. The control case and worst-case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants and it should be clearly mentioned. The input parameters used for the modeling also needs to be submitted in the EIA/EMP report.
- xxix. The project proponent needs to carry out the study to identify the species including the Schedule-I species as per Wildlife Act 2022 and prepare the wildlife conservation plan for the available Schedule- I species. The wildlife conservation plan should cover the impact of mining.
- xxx. The project proponent needs to carry out the Vibration study and submit the impacts of vibration during blasting in the EIA report. Effective measures should be taken to prevent the damage due to fly rock and its impact on the nearby Lumshnong village. Blasting activity shouldn't cause damage to the nearby villages.
- xxxi. The Project Proponent needs to carry out the Public Hearing as per provisions of EIA Notification, 2006. PP should also submit the time bound action plan on concerns of the public with a timeline for the concerns of the local people in terms of Education, Health-care and Environment.
- xxxii. The Project Proponent mentioned a school is at the distance of 1.5 Km from the mine lease area. Therefore, the PP shall ensure safety of the school and also mention for betterment of schools and to facilitate the online education system by providing Wi-Fi connectivity, smart classrooms and desktops/tablets, infrastructure, and environment protection.

- xxxiii. The impact of earthquake on the mining operation vis-à-vis Safety for the mine be delineated in the EIA report.
- xxxiv. Since the mine is on the slope, the hydro-geological study including water & its impact of stream on mine & vice versa to be included in the EIA report.
- xxxv. PP should submit an undertaking by way of affidavit as per Ministry's O.M No 3-50/2017-IA. II(M) dated 30.05.2018 to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 passed in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.

2.4 Brishyrnot Limestone Deposit-II with total excavation of 3.58 MTPA (3.0 MTPA of Limestone, 0.2 MTPA of Shale, 0.38 MTPA of Waste/OB including Soil in the ML area of 65 ha by M/s Star Cement Meghalaya Limited located at Village Brishyrnot, Tehsil Khliehriat, District East Jaintia Hills, Meghalaya [Online Proposal No. IA/ML/MIN/456863/2023, File No. IA-J-11015/17/2019-IA-II(NCM), EIA Consultant - M/s Perfect Enviro Solutions Pvt Ltd] - Terms of Reference reg.

The instant proposal is for Terms of Reference for Brishyrnot Limestone Deposit-II of M/s Star Cement Meghalaya Limited with proposed maximum production capacity of 3.2 MTPA (Limestone: 3.0 MTPA & Shale: 0.2 MTPA), 0.38 MTPA of Waste/OB including Soil (Total excavation: 3.58 MTPA) in the mine lease area of 65 ha, located at Village: Brishyrnot, Tehsil: Khliehriat, District: East Jaintia Hills, Meghalaya.

2 The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under:

- i. The project activity is listed at schedule no. 1(a) Mining of Minerals. The instant proposal attracts the general conditions as Narpuh Wildlife Sanctuary boundary is located at a distance of 1342 m, SE direction and it's ESZ boundary at a distance of 25.29 m, SE to the project site and falls under Category "A" of the schedule of the EIA Notification, 2006 and appraised at the Central level.
- ii. The mine lease area is located between Latitude: 25°09'51.010"N to 25°10' 18.600" N and Longitude:92°25' 09.717 "E to 92°25' 55.894"E. The mine lease area falls under the Survey of India Toposheet No: 83C/8 (Restricted)and falls in Seismic Zone – V.
- iii. Details of Mine Lease:

S.No	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral &	Period of Grant	Granted by	Mine lease area in Ha

			(Major/ Minor)			
1	Prospecting License- MG.8/2023/36	Granted on 12/04/2023/and executed on 08/05/2023	Limestone & Shale (Major)	3 years	Mining & Geology Department, Government of Meghalaya	65 ha.
2	Letter of Intent/authorization order- MG.8/2023/376	22.09.2023	Limestone & Shale (Major)	3 years	Mining & Geology Department, Government of Meghalaya	65 ha.

iv. Land Use/Land Cover of the Mine Lease Area:

Private land	65 ha.
Government land	Nil
Forest land	Nil
Total Mining lease area (MLA), ha	65 ha.
Private land for crusher, workshop & other infrastructure outside the MLA	NA

v. Mining plan details:

Mining Plan(approved by Indian Bureau of Mines/DMG)	Letter No.	MCDR-MPCP0CaFI/11/2023-GUH-IBM_RO_GUH
	Date	05.02.2024
	Mineral (Major/Minor)	Major
	Mine Lease Area, Ha	65
	Validity	5 year from the date of execution of mining lease
Mining Parameters	Quantitative Description	
Method of Mining	Opencast mechanized mining using HEMM	
Drilling/Blasting	Deep hole drilling & blasting.	
Geological Reserves	138.15 million tons of Limestone and 0.861 million tons of shale	
Mineable Reserves	111.20 million tons of Limestone and 0.698 million tons of shale	
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/Waste, MTPA)	3.58 MTPA (including 3.0 MTPA of limestone, 0.2 MTPA of shale, 0.38 MTPA of waste/OB including soil).	
Life of mine	The life of mine is estimated at about 38 years considering the mineable reserves based on present exploration.	
Mine Bench Height & Bench Width	The height of the bench will be 9 m and a minimum working width of the benches in minerals will be 20 m for safe operation of mining machinery.	
No. of Mine Benches	24	
Existing Depth, m bgl	NA, as it is a green field project	
Ultimate Depth of Mining, m RL	70	
Ground Water Table, m RL	55	
Details of ground water intersection	Water table will not be intersected as it is at 55 mRL and mining will be done up to 70 mRL.	
Individual bench slope	85° from horizontal	
Overall pit slope	<45°	
Details of existing/ proposed Crusher	No crushing and screening plant is proposed in the mine. Limestone & shale will be transported to cement plant crusher of 1200 TPH capacity.	
Mineral Beneficiation	NA	
RoM output size	-1000 mm	

Transportation details including capacity of dumper/tipper, mode of transport and distance.	The material after blasting will be loaded by hydraulic excavators of about 2.6 m ³ bucket capacity into tippers of 25 tons carrying capacity for its transportation to crusher and waste dump yards.
Generation of Topsoil/OB & its Management during plan period & conceptual period	Max. 0.28 MTPA of waste & 0.1 MTPA of soil will be generated. Waste/OB will be dumped at earmarked places. The soil generated will be used extensively for plantation. About 3.332 million tons of Waste and 0.245 million tons of soil will be generated upto the life of mine. Waste will be stacked separately in the temporary dump. The entire waste will be used in the cement plant as blending material after taking the permission from the government.
Generation of Mineral Rejects/ Waste & its Management during plan period & conceptual period	There will be no rejection from the mine.

vi. Water requirement

Total water requirement	45 KLD	Fresh water	05 KLD
		Treated water	40 KLD
Source	Total water requirement for the proposed mine will be around 45 KLD which will be sourced through water tankers from the company's cement plant.		
Permission	Vide Letter No. AID (J) 223 / 2008-09/971 dated 16th June 2009.		
Additional information(if any)	Total water requirement for the proposed mine will be around 45 KLD, out of which 40 KLD will be STP treated water and 5 KLD will be fresh water for domestic purposes.		

vii. Nearest village / town/ highway/railway station / water bodies

Particulars	Particular's Name	Distance & Directions
Village	Brishyrnot	0.16 Km South
Town	Khliehriat	21.20 Km N
Highway	NH-6	2.53 km WNW
Interstate Boundary	Meghalaya-Assam State Boundary	8.15 km SE
	India-Bangladesh International Boundary	12.50 Km SW
Railway station	Hilara railway station	70 km (by road)
Water bodies	Um lunar	0.07 Km East
	Lukha River	1.23 Km SE
	Lubha River	1.23 Km SE
	Um Talang	3.60 km SW
	Um Sangat	4.46 Km N
	Um Ronsong	4.48 Km ESE
	Um Badoh	5.74 Km WNW
	DongtangleNala	6.13 Km N
	KukhaNala	6.57 Km NNW
	PongkoloNadi	7.07 Km ESE
	AphaNala	7.72 Km SSE
	ThangpyrshaidNala	7.81 Km NW
	KhunngoiNala	8.46 Km ESE
	Sakha Nala	8.61 Km NW
	Singlei River	8.98 Km ESE
RaphingdungNala	9.33 Km NE	
LunthangtangNala	9.86 Km SSE	
Who ThaniangNala	9.93 Km NNW	
Forest	Narpuh Reserve Forest Block I	8.82 km SW

viii. Presence of Environmentally Sensitive areas in the study area

Forest Land/Protected Area/Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest land within the mine lease area and (if yes) status of Forest Clearance	No	Not Applicable
National Park	No	Not Applicable
Wildlife Sanctuary	Yes	Narpuh Wildlife Sanctuary - 1342 m SE
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area(ESA)	Yes	Narpuh Wildlife Sanctuary ESZ -25.29 m SE
Coastal Regulation Zone (CRZ)	No	Not Applicable
Schedule-I species (No.s and name of schedule-I species with authenticated letter)	Yes	There are ten Schedule I Species found in the buffer zone are given below: Hoolockhoolock (Western hoolock gibbon), Nycticeusbengalensis (Slow loris), Prionailurus bengalensis (Leopard Cat), Python molurus (Indian Rock Python), Neofelis nebulosa (Clouded Leopard), Buceros bicornis (Great Pied Hornbill), Canis lupus pallipes (Indian Wolf), Manis pentadactyla (Pangolin), Melursus ursinus (Sloth bear) and Capricornis sumatraensis (Himalayan serow).
Wildlife Conservation Plan	Yes	The Chief Wildlife warden had a meeting with Industries and Government departments for preparation of Regional Conservation plan for the East Jaintia Hills district under the supervision and guidance of CWLW, Meghalaya and the cost for preparation and implementation of the Regional Conservation Plan may be shared by various project proponents on a proportionate basis keeping in view the likely impacts of each project on the wild life and their habitat. Project proponent also confirmed that they shall be part of the regional conservation plan and will pay the fee as determined for project.

ix. Green belt/plantation details:

Proposed area for green belt/plantation	At the end of life of mine, out of the total 65 ha area, 52.52 ha mined out benches will be rehabilitated by plantation/grassification, 2.71 ha. along the 7.5 m wide peripheral boundary and 0.36 ha undisturbed area will be developed to green belt.
Budget for green plant & plantation till the end of life of mine.	Rs 2.91 Cr
Budget for nursery	NA
Details of existing plantation and its survival rate	NA as it is greenfield project
No. of tree cuts in the mine lease area and compensatory afforestation	150 trees will be cut in the mine lease. Total about 96959 trees will be planted upto conceptual period.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	2.71 Ha

x. Baseline detail:



Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/others)	
Period of baseline data collection	March to May 2023
Season (Summer / Pre-monsoon / Post- monsoon / Winter)	Summer Season
Predominant Wind direction (From)	Towards East
Ambient Air Quality (no. of locations) and results	<p>No. of locations- 06</p> <p>Results- Core zone: The mean value of PM10 ranges from (59.27 - 61.11 $\mu\text{g}/\text{m}^3$) & PM2.5 ranges from (26.51 - 27.33 $\mu\text{g}/\text{m}^3$), SO2 ranges from (5.28 - 5.44 $\mu\text{g}/\text{m}^3$), NO2 ranges from (14.82 - 15.28 $\mu\text{g}/\text{m}^3$) & CO ranges from (0.26 - 0.27 mg/m^3) which are within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB, the air quality of the core zone is found to be Satisfactory in the Summer season.</p> <p>Buffer zone: The mean value of PM10 ranges from (64.77 - 75.53 $\mu\text{g}/\text{m}^3$), PM2.5 ranges from (28.97 - 34.17 $\mu\text{g}/\text{m}^3$), SO2 ranges from (5.77 - 7.19 $\mu\text{g}/\text{m}^3$), NO2 ranges from (16.19 - 19.24 $\mu\text{g}/\text{m}^3$) & CO ranges from (0.29 - 0.34 mg/m^3) which are within the limits of National Ambient Air Quality Standards (NAAQS). As per the Air Quality Index by CPCB the air quality of the buffer zone is found to be Satisfactory during the sampling campaign.</p>

Noise level (no. of locations) and results

No. of locations- 08

Results- Core Zone (Industrial Area): N1 & N2: The ambient noise level during day time at the proposed project site varies from 52.60 dB (A) to 53.20 dB (A) which are within the standard limit of Industrial area ~ 75 dB (A). During night the noise level at the project site ranges from 44.40 dB (A) to 45.10 dB (A) which are within the standard limit of Industrial area 70.0 dB (A).

Buffer Zone: Residential Area: N4, N5, N7 & N8:-The ambient noise level during day time at the proposed project site varies from 52.10 dB (A) - 54.60 dB (A) which are within the standard limit of Residential area ~55 dB (A). During night the noise level at the project site ranges from 43.90 dB (A) to 47.20 dB (A) which is slightly higher noise level compared to the standard limit of Residential area 45 dB (A). It may be regarded as the residential and other local activities occurring within the village.

Commercial Area: N3 & N6: The ambient noise level in commercial area i.e. Approach Road & NH-6 is 53.40 dB (A) to 62.80 dB (A) during day time which is within the standard limit of commercial area of ~ 65 dB (A) and 44.80 dB (A) to 57.90 dB (A) during night time which is slightly higher noise level compared to the standard limit of commercial area ~ 55 dB (A).

<p>Water Quality (no. of locations) and results</p>	<p>No. of GW locations- 07 No. of SW locations- 04 Results of GW-</p> <ul style="list-style-type: none"> ❖ The Total Dissolved Solids (TDS) of the all (W1 to W7) sampling locations ranges from 68 mg/l to 182 mg/l which are within the drinking water standard (IS:10500) i.e. 500 mg/l. ❖ The Total Hardness of the sampling locations ranges from 18 mg/l to 70 mg/l which are within the drinking water standard (IS:10500) i.e. 200 mg/l. ❖ The Alkalinity of the sampling locations ranges from 22 mg/l to 52 mg/l which are within the drinking water standard (IS:10500) i.e. 200 mg/l. ❖ The Fluoride content in the sampling locations ranges from <0.1 mg/l to 0.64 mg/l which are within the drinking water standard (IS:10500) i.e. 1.0 mg/l. ❖ The Calcium Concentration of sampling locations ranges from 5.4 mg/l to 26 mg/l. Calcium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 75 mg/l. ❖ The Magnesium Concentration of sampling locations ranges from 0.48 mg/l to 7.20 mg/l. Magnesium levels of sampling locations are within the drinking water standards (IS:10500) i.e. 30 mg/l. ❖ The Chloride Concentration of all the sampling locations ranges from 6 mg/l to 42 mg/l. Chloride levels of all the sampling locations are within the drinking water standards (IS:10500) i.e 250 mg/l. <p>Results of Surface Water-</p> <p>Surface water samples were derived from 4 locations in different surface water bodies within study area, analysis results of the same revealed that pH values amongst all samples varied in the range of 7.33 - 7.70, Total</p>
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	<p>Hardness concentration varied in the range of 92 mg/l to 172 mg/l &, TDS concentration varied in the range of 162 to 218 mg/l. Electrical Conductivity was found to be ranging in between 352 to 412 mS/cm.</p> <p>The surface water samples are falls under class C, D & E as per CPCB surface water criteria i.e. Drinking water source after conventional treatment and disinfection, Water is suitable for Propagation of Wildlife and Fisheries & Irrigation, Industrial Cooling, Controlled Waste disposal.</p>
Soil Quality (no. of locations) and results	<p>No. of locations- 08</p> <p>Results- Soil samples at location S1 - S8 shows that the soil texture class is Clay, Clay Loam, Colour is 5/3 dull reddish, brown (3/4), (5/3) dark brown, (5/3) dull reddish, pH range is 6.87 - 7.70. Amount of primary nutrients like Organic matter range is (0.35 - 2.12) %, the available nitrogen range is (82.40 - 122.60) mg/kg is Low and available Potassium range is (12.20 - 41.20) mg/kg is Low while the available Phosphorus range is (8.60 - 19.10) mg/kg is Medium to high. Thus it can be concluded that soil is average fertile.</p>
Traffic study (no. of locations) and results	<p>2 Locations,</p> <p>LOS of both locations -"A".</p>

xi. Rehabilitation & Resettlement:

R & R details	There is no habitation on the said land, hence, R&R is not applicable.
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xii. Court case details:

Court Case, No and its present status	The Project Proponent reported that there is no litigation pending against the project and/or land in which the project is proposed to be set up.
Undertaking by Project Proponent w.r.t court case	

xiii. Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018	The Project Proponent has submitted the Affidavit in a nonjudicial stamp paper of Rs 10 dated 26.12.2023 stating that the company undertakes by affidavit that they commit to comply with the order of the Hon'ble Supreme Court order dated 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India &Ors.
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- xiv. ADS details: The Proposal was earlier considered in the 26th EAC (Non-Coal Mining) meeting held during 31st January & 1st February, 2024 wherein the Committee has deferred the proposal for the submission of requisite information. The Project Proponent has submitted their reply vide letter dated 13.03.2024 are as follows:

S.No	Observation of EAC	Reply by project proponent
1	The EAC opined that the Ministry may seek comments from the Eco-Sensitive Zone (ESZ) Division in the Ministry stating whether the instant mine lease area falls under Eco-Sensitive Zone or not.	Eco-Sensitive Zone (ESZ) Division of the Ministry referred to the Hon'ble Supreme Court of India orders dated 26.04.2023 and further clarification issued on 28.04.2023 by the Hon'ble Supreme Court in I.A No. 131377 of 2022 in W.P (C) 202 of 1995: T.N. Godavarman Thirumulpad Vs Uol&Ors., mining not only within ESZ, but also even if ESZ is less than 1.0 km, is strictly prohibited. In the absence of kml/shape file of the ESZ boundary and the Protected Area, vis-à-vis the mine location co-ordinates, it is difficult to assess specifically the distance of nearest mining activity from the nearest ESZ boundary.
2.	The EAC also asked the Project Proponent to submit a letter from the State Forest Dept. clearly stating that the mine lease area falls under Eco-Sensitive Zone or not.	After physical verification by the DFO (T) Division, it is certified that the said area of limestone mining of 65 ha is a non-forest land and is also not a part of any Reserve Forest/ Protected Forest/Community Reserve/Wildlife Corridor/ Biodiversity Heritage site/ Catchment area/sacred grooves and it is also outside the Narpuh Wildlife Sanctuary and its Eco Sensitive Zone. The letter dated 24.01.2023 has been submitted by the Project Proponent.

		<p>Based on the site inspection report of the DFO, Conservator of Forest (T), Office of the Principal Chief Conservator of Forest (HoFF), Department of Forests and Environment, Government of Meghalaya has also issued a letter dated 14.02.2023, clearly stating that the proposed site is not part of any forest land and does not fall within the Eco Sensitive Zone nor WL Sanctuary. Letter dated 14.02.2023 has been submitted by the Project Proponent.</p> <p>The Project Proponent has obtained the Non-Forest Certificate issued by the Chief Conservator of Forest, Office of the Principal Chief Conservator of Forest (HoFF), Department of Forests and Environment, Government of Meghalaya on 30.03.2023 and same letter has been submitted by the Project Proponent.</p> <p>As per the discussion held during the 26th EAC dated 31.01.2024, the Project Proponent has again applied to the Additional Principal Chief Conservator of Forest (T) for issuing clarification that the project land is outside the boundary of the notified Eco Sensitive Zone of Narpuh Wildlife Sanctuary vide letter no. SCML-65 ha/PCCF/2023-24, dated 01.02.2024. GIS Lab of the Office of the Principal Chief Conservator of Forest (HoFF), Department of Forests and Environment, Government of Meghalaya, Shillong has generated the map on the GPS Co-ordinates pertaining to the plot of 65 ha and has also certified that the said plot is outside the boundary of the notified Eco Sensitive Zone of Narpuh Wildlife Sanctuary. The Project Proponent has received information from the Conservator of Forests (T), Office of the Principal Chief Conservator of Forest (HoFF), Department of Forests and</p>
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		<p>Environment, Government of Meghalaya vide letter no. MFG.16/50/CMCL/Vol-III/16,676 dated 08.02.2024 which states that:</p> <p>“As per the map and the report of Divisional Forest Officer, Jaintia (T) Division, Jowai depicting the same dated 24.01.2023, the boundary of limestone mining lease and prospecting license of 65 Ha at Brichyrnot village, ElakaNarpuh, East Jaintia Hills District as applied by M/s Star Cement Meghalaya Limited is located outside the boundary of the notified Eco-Sensitive Zone of Narpuh Wildlife Sanctuary.”</p> <p>Thus, on the basis of above information the Project Proponent informed that the land is at a distance of approx. 25.29 mtr from the Eco Sensitive Zone of Narpuh Wildlife Sanctuary and 1.342 km from the boundary of Narpuh Wildlife Sanctuary which is more than 1 km as per the Order of the Hon’ble Supreme Court of India.</p> <p>The Project Proponent has requested to DFO for issuance of certificate confirming that the mining lease area measuring 65 ha land falls outside the notified Eco Sensitive Zone (ESZ) of Narpuh Wildlife Sanctuary vide letter no. SCML-65ha/DFO/2023-24 dated 01.02.2024.</p> <p>DFO, Jaintia Hills Wildlife Division Jowai has issued a letter no. MWL/JH/299/Mining Plan/2022-23/2135 dated 1st March, 2024 supported by map mentioning that mining area of 65 ha is located at distance of 25.29m away from the boundary of the ESZ of Narpuh Wildlife Sanctuary and 1.342 km away from the boundary of Narpuh Wildlife sanctuary.</p> <p>The Project Proponent informed that as per the kml file available on the Parivesh portal the status of this plot of land shows that:</p>
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		<ul style="list-style-type: none"> • The project is outside the ESZ boundary of the Narpuh Wildlife Sanctuary. • The Forest Clearance and Wildlife Clearance do not apply to this project which implies that the project is outside of the ESZ boundary.
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xv. Details of project cost and employment:

Particulars	(Rs. In Lakhs)
Project Cost	Rs 33.96 crores
Employment	94

3. Observation and Recommendation of the Committee:

The instant proposal attracts the General conditions as the Narpuh Wildlife Sanctuary is located at a distance of 1342 m, SE direction and its ESZ boundary is located at a distance of 25.29 m SE to the project site. The project proponent after explaining the site features on the KML presented the reply of the ADS points raised during the 26th EAC Meeting held during 31st January & 1st February 2024. The EAC noted the comments of ESZ Division of the Ministry as well as the submission of PP with regard to the distance of the project site from the ESZ boundary based upon the DFO letter dated 24.01.2023 and CF letter dated 14.02.2023. The EAC also noted that the PP has obtained NoC from Ministry of Defence vide letter dated 05.04.2024.

Thereafter EAC enquired about the measures proposed by PP to protect the river flowing adjacent to mine site in the northern direction at located a distance of 0.07 Km. PP informed that they have designated the area upto 50 m towards the side of the river as a no mining zone. The EAC opined that the river should be protected and efforts should be made towards maintaining its originality. The EAC advised the PP to ensure that untreated water/effluent is not disbursed into the river stream at any point of mine operation. Adequate streams protection measures are to be taken by constructing embankment along the ML area near to the river. PP shall ensure that the natural flow of the river is maintained. The EAC also noted that PP intends to mine shale which is a minor mineral, accordingly, EAC asked the PP to submit the SEIAA approved DSR for shale. The EAC also suggested the PP to explore the possibility of installing a mobile crusher within the mine lease area and laying a OLBC to transport the mined ore instead of transporting it through a private road by dumpers/tippers.

Based on the above, EAC **recommended** the proposal in the 29th EAC meeting held during 9-10th May, 2024 for Terms of Reference for Brishyrot Limestone Deposit-II with total excavation of 3.58 MTPA (3.0 MTPA of Limestone, 0.2 MTPA of Shale, 0.38

MTPA of Waste/OB including Soil in the ML area of 65 ha by M/s Star Cement Meghalaya Limited located at Village Brishyrnot, Tehsil Khliehriat, District East Jaintia Hills, Meghalaya under provisions of EIA Notification, 2006 and its amendments therein with following specific conditions in addition to the standard conditions applicable for non-coal mining projects:

Specific conditions:

- i. The project proponent needs to submit the SEIAA approved District Survey Report for Shale during submission of EC application.
- ii. The Project Proponent shall explore the possibility of installing fixed/mobile crusher within the ML Area
- iii. The Project Proponent shall explore the possibility of laying OLBC for transportation of the mined out material.
- iv. The Project Proponent needs to submit the action plan for year wise backfilling.
- v. The Project Proponent needs to submit the details of the year wise excavation and plan for the proposed exploration program.
- vi. The Project Proponent needs to submit the total excavation in tonnes including mineral, overburden, inter-burden, waste, top soil, rejects etc. to be handled and the management of topsoil and waste needs to be properly addressed in EIA/EMP report. The mineable reserves, blocked reserves need to be mentioned along with the life of mine. Waste to be generated during the entire life of mine and details of the location of dumping/backfilling area need to be submitted
- vii. The Project Proponent needs to submit the Land Use/Land Pattern based on the mineral deposit.
- viii. The Project Proponent shall conduct drone survey of the mine lease area and buffer area. The report of the said survey shall be submitted during the appraisal for EC.
- ix. The Project Proponent needs to monitor the ambient air quality and noise level at the mine lease boundary, nearest village, crusher, predominant downwind direction and at other sensitive receptors. Accordingly, Project Proponent shall propose to install Continuous Ambient Air Quality Monitoring Station within certain timeline.
- x. The Project Proponent shall obtain the baseline data from the nearby existing industries and showcase the comparison between its baseline data with the others.
- xi. The Project Proponent should prepare the EMP considering the scenario of pollution to be generated for normative and peak total excavation for assessing air and noise pollution.
- xii. The Project Proponent needs to submit the map showing the transport route of the mineral from the mine lease area to the destination, impact of details of habitation at a distance of 100m from the centre on both sides of road, details of no. of

- trips/day to and fro, capacity of the dumper/tipper to be deployed and the dimensions of the road and the carrying capacity of the road.
- xiii. The Project Proponent shall carry out the assessment of impact due to the proposed project as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP. The project proponent shall conduct hydrological study for projects involving intersection of ground water table as per the guidelines issued by the Central Ground Water Authority from time to time and submit the same as a part of the EIA/EMP.
 - xiv. The Project Proponent shall prepare the scheme for mandatory recycle/re- use of water as specified by the Central Ground Water Authority for different category areas seeking NoC for ground water withdrawal and the shall submit as part of EIA/EMP report.
 - xv. The Project Proponent needs to submit the engineering design for construction of retaining wall, garland drains, catch drains and siltation ponds along with the timeline.
 - xvi. The Project Proponent needs to submit the greenbelt/afforestation development plan (2500 plants per ha) for undertaking plantation in the periphery of the mine lease boundary, safety zone etc., The details of the no. of saplings proposed, type of saplings, spacing and the area to be covered including the cost and timeline for completion of plantation needs to be provided in the EIA report.
 - xvii. The Project Proponent needs to submit employment based skill development plan for the local people, and thrust should be to provide employment to local people after imparting training.
 - xviii. The Project Proponent shall monitor the water quality in the impact zone such as water reservoir, river water with specific reference to the parameter Langelier Saturation Index which will denote the impact of calcium carbonates on water bodies and these parameters and determine the tendency of water to form calcium carbonate scaling.
 - xix. PP should clearly bring out that what is the specific diesel consumption (Liters/Tonne of total excavation & mineral) and steps to be taken for reduction of the same. Year-wise target for reduction in the specific diesel consumption needs to be submitted.
 - xx. The Project Proponent needs to carry out the cumulative impact assessment showcasing the impact by considering all peripheral mining activities of the combined mine operation for area towards wildlife sanctuary.
 - xxi. PP shall prepare a Plan for implementation of Continuous Automatic Air Quality Monitoring Station (CAAQMS) at mine site or its vicinity.
 - xxii. Wind rose pattern in the area should be reviewed and accordingly location of AAQMS shall be planned by the collection of air quality data. Monitoring location

- for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.
- xxiii. Heavy metals including other parameters in surface water quality shall be analyzed and provided in EIA Report. Further, detailed mineralogical and chemical composition of the mineral and percentage of free silica in Air quality and other parameters Arsenic, Lead shall also be analyzed in ambient air quality & to be furnished in EIA/EMP report.
 - xxiv. The PP while carrying out base line monitoring 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 also submit the original Lab reports of air, water, soil and noise quality and NABL/MoEF&CC certificates of the respective laboratory.
 - xxv. PP shall submit design details of all Air Pollution control equipment (APCEs) to be implemented as part of Environment Management Plan vis-à-vis reduction in concentration of emission for each APCEs.
 - xxvi. PP shall propose to use LNG/CNG based mining machineries and trucks for mining operation and transportation of Limestone.
 - xxvii. The PP shall submit an action plan for prevention of landslide and rollouts from the surrounding hillocks, inter alia, including plantation, cribs and gabbions, etc.
 - xxviii. Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted.
 - xxix. PP should submit the quantity of surface or ground water to be used for this project. The complete water balance cycle need to be submitted. In addition to this PP should submit a detailed plan for rain water harvesting measures to be taken. The PP should submit the year wise target for reduction in consumption of the ground/surface water by developing alternative source of water through rain water harvesting measures. The capital and recurring expenditure to be incurred needs to be submitted.
 - xxx. 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 person to be engaged for implementation of environmental management plan (EMP). The capital and recurring expenditure to be incurred needs to be submitted.
 - xxxi. PP should submit the year-wise, activity wise and time bound budget earmarked for EMP, occupational health surveillance & Corporate Environmental Responsibility needs to be submitted. The capital and recurring expenditure to be incurred needs to be submitted.
 - xxxii. The control case and worst-case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants and it should be clearly

mentioned. The input parameters used for the modeling also needs to be submitted in the EIA/EMP report.

- xxxiii. The project proponent needs to carry out the study to identify the species including the Schedule-I species as per Wildlife Act and prepare the wildlife conservation plan for the available Schedule- I species. The wildlife conservation plan should cover the impact of mining.
- xxxiv. The project proponent needs to carry out the Vibration study and submit the impacts of vibration during blasting in the EIA report. Effective measures should be taken to prevent the damage due to fly rock and its impact on the nearby Lumshnong village. Blasting activity shouldn't cause damage to the nearby villages.
- xxxv. The Project Proponent needs to carry out the Public Hearing as per provisions of EIA Notification, 2006. PP should also submit the time bound action plan on concerns of the public with a timeline for the concerns of the local people in terms of Education, Health-care and Environment.
- xxxvi. The impact of earthquake on the mining operation vis-à-vis Safety for the mine be delineated in the EIA report.
- xxxvii. PP should submit an undertaking by way of affidavit as per Ministry's O.M No 3-50/2017-IA. II (M) dated 30.05.2018 to comply with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 passed in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- xxxviii. PP should not divert any stream/nallah passing through the ML area or flowing adjacent to the ML area. PP shall ensure the natural flow is not affected and shall undertake upstream/downstream monitoring of flow and quality of water.

2.5 Hanamaneri Limestone Mine Block with total excavation of 6.13 MTPA (4.0 MTPA of Limestone, 1.0 MTPA of Intercalated Waste, 0.19 MTPA of Top Soil, 0.94 MTPA of Over Burden) along with installation of Crusher with screening capacity of 1300 TPH and OLBC Capacity of 1200 TPH of 14 km length in the ML area of 445.37 ha by M/s J K Cement Limited located at Villages Hanamaneri, Lokapur, Jalikatti B.K. & Jalikatti K.D., Taluka Badami & Mudhol, District Bagalkot, Karnataka. [Online Proposal No. IA/KA/MIN/453560/2023, File No. J-11015/39/2022-IA-II(NCM), EIA Consultant - J. M. Environet Pvt. Ltd.] - For Environmental Clearance reg.

2.5.1 The Proposal for Environmental Clearance for Hanamaneri Limestone Mine Block with total excavation of 6.13 MTPA (4.0 MTPA of Limestone, 1.0 MTPA of Intercalated Waste, 0.19 MTPA of Top Soil, 0.94 MTPA of Over Burden) along with installation of Crusher with screening capacity of 1300 TPH and OLBC Capacity of 1200 TPH of 14 km length in the ML area of 445.37 ha by M/s J K Cement Limited located at Villages

Hanamaneri, Lokapur, Jalikatti B.K. & Jalikatti K.D., Taluka Badami & Mudhol, District Bagalkot, Karnataka.

2.5.2 The details of the project as ascertained from the document submitted by the Project Proponent and revealed from the discussions held during the meeting are given as under: -

- i. The instant project activity is listed at schedule no. 1(a) Mining of Minerals, the project falls under Category "A" i.e. ML area greater than 250ha as per EIA Notification dated 14th September, 2006 as amended from time to time.
- ii. The mine lease area is located between Latitude 16° 08' 21.96"N to 16° 09' 57.63" N and Longitude 75° 23' 35.31" E to 75° 26' 02.58" E. The mine lease area falls under the Survey of India Toposheet No. for Core zone E43V7 and Buffer zone E43V7, E43V8 & E43V12 and falls in Seismic Zone-II as per IS:1893 (Part - I): 2002.
- iii. Details of Terms of Reference (ToR): The Project Proponent has obtained ToR on 23.12.2022 for Hanamaneri Limestone Mine Block (Area: 445.37 Ha) with Proposed Limestone Production Capacity: 4.0 MTPA, Intercalated Waste: 1.0 MTPA, Top Soil: 0.19 MTPA, Over Burden: 0.94 MTPA (Total Excavation: 6.13 MTPA) in the ML area of 445.37 ha by M/s JK Cement Limited along with installation of Crusher & Screening 1300 TPH and OLBC 1200 TPH with 14 km length located at Villages Hanamaneri, Lokapur, Jalikatti B.K. & Jalikatti K.D., Taluka Badami & Mudhol, District Bagalkot, State Karnataka.
- iv. Details of Mine Lease:

S. No.	Prospecting License/ Letter of Intent (Lol)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
1.	Letter of Intent for grant of mining lease vide letter No. DMG-17012/20/2021/2021-22/9171 in pursuant to Rule 10 (2) of the Mineral (Auction) Rules, 2015	31.12.2021	Limestone	Letter of Intent is valid for a period of 3 years from the date of its issuance	Govt. of Karnataka	430 ha
2.	Corrigendum to Lol vide letter no. 17012/20/2021/2021-	05.01.2022	Limestone	Letter of Intent is valid for	Govt. of Karnataka	445.37 ha

S. No.	Prospecting License/ Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/ Minor)	Period of Grant	Granted by	Mine lease area in Ha
	22/9321 w.r.t the extent of the Hanamaneri Block was mentioned as 430 ha and it stands corrected as 445.37 ha			a period of 3 years from the date of its issuance		

v. Land Use/Land Cover of the Mine Lease Area:

Private land	419.83
Government land	25.54
Forest Land	-
Total Mining lease area (MLA), Ha	445.37
Private land for crusher, workshop & other infrastructure outside the MLA	No infrastructure is proposed outside the ML area except an OLBC of Capacity 1200 TPH with 14 km length from the Mine to Plant

vi. Mining plan details:

Mining Plan including Progressive Mine Closure Plan (approved by Indian Bureau of Mines/DMG)	Letter No.	MP/MECH-01(KNT)/GOA/2022-23	
	Date	21.06.2022	
	Mineral & (Major/Minor)	Major	
	Mine Lease Area, Ha	445.37	
	Validity	5 years	
Mining Parameters	Quantitative Description		
Method of Mining	Opencast Mechanized Limestone Mine		
Drilling/Blasting	Drilling & Blasting Parameters		
	S. No.	Particular	Details
	1.	Dia of Hole	115 mm
	2.	Burden	3.5 M
	3.	Spacing	4 M
	4.	Depth of the Hole	6 to 8.5 Mts
	5.	Yield/Mtr.	84 to 112 Mtr
	6.	Powder Factor	9.5 Tonne/Kg

Geological Reserves	147.35 Million Tonnes
Mineable Reserves	69.37 Million Tonnes
Breakup of Total Excavation (Topsoil/OB/SB/IB/Mineral Rejects/ Waste, MTPA)	<ul style="list-style-type: none"> ➤ Limestone: 4.0 Million TPA ➤ Top Soil: 0.19 Million TPA ➤ Intercalated waste: 1.0 Million TPA ➤ Overburden: 0.94 Million TPA Total Excavation: 6.13 Million TPA
Life of mine	~21 years
Mine Bench Height & Bench Width	Bench height: 8 m Bench Width: 25 to 30 m
No. of Mine Benches	07
Plan period m bgl	533 m AMSL (36 m bgl)
Ultimate Depth of Mining, m bgl	519 m AMSL (50m bgl)
Ground Water Table, m bgl	Pre-Monsoon: 16.3-36.8m bgl (531.2 to 559.7m AMSL), Post-Monsoon: 15.2 to 35.8 m bgl (532.2 to 560.8m AMSL)
Details of ground water intersection	Groundwater will be intersected in 5 th year of mining operation and permission will be obtained from KGWA before intersection
Individual bench slope	70°
Overall pit slope	45°
Details of existing/ proposed Crusher	Installation of Crusher & Screening Plant: 1300 TPH Capacity
Mineral Beneficiation	Nil
RoM output size	40 to 85 mm
Transportation details including capacity of dumper/tipper, mode of transport and distance	Initially, crushed limestone will be transported to its existing cement plant located at 15.5km distance by covered trucks/tippers via road & after 4 th year crushed limestone will be transported via 14 km length of OLBC.
Generation of Topsoil/OB & its Management during plan period & conceptual period.	<u>Top Soil:</u> <ul style="list-style-type: none"> ➤ During the Plan Period 0.574 Million Tonnes (0.441 Million CuM) of top will be generated out of which 0.370 Million Tonnes (0.284 Million CuM) of top soil will be utilized for greenbelt/plantation & 0.204 Million Tonnes (0.156 Million CuM) of top soil will be stored & later on same will be utilized for greenbelt/plantation. ➤ At conceptual stage, 2.16 Million Tonnes (1.66 Million CuM) of top soil will be generated & same will be utilized for greenbelt/plantation and for

	<p>levelling of backfilling, formation of the bund along the safety zone of road, nallah & strengthening of haul roads.</p> <p><u>Over Burden/Intercalated Waste:</u></p> <ul style="list-style-type: none"> ➤ During the plan period 5.12 Million Tonnes of waste will be generated; out of which 3.47 Million Tonnes will be OB and 1.65 Million Tonnes will be Intercalated waste which will be temporarily dumped systematically by retreating manner covering an area of 14.69 ha. ➤ At Conceptual Stage 19.75 Million Tonnes of overburden/intercalated waste will be generated & same will be used for backfilling & formation of the bund along the safety zone of road, nallah, HT line & strengthening of haul roads.
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vii. Water requirement

Total water requirement	150 KLD	Domestic	10 KLD
		Dust Suppression/Greenbelt	105 KLD
		Greenbelt/Plantation	25 KLD
		Workshop	10 KLD
Source	Water will be sourced from ground water or abstraction structure		
Permission for withdrawal/ intersection along with details of grant and its validity	The Project Proponent has obtained the permission for withdrawal of Ground water for 150 KLD from the Karnataka Ground Water Authority vide NOC No. KGWAN1302760125, dated 11.12.2023 and valid for 2 years from the Date of its issuance.		

viii. Nearest village/town/ highway/interstate boundary/railway station/water bodies/monument/ forest

Particulars	Particular's Name	Directions
Nearest Village	Kadarakoppa	~1.5 km in South direction
Nearest Town	Bagalkot	~20 km in East direction
Nearest State/National Highway	SH - 44	0.13 km in NNW direction
	SH -20	~ 2.5 km in West direction
	SH-34	~3.0 km in WSW direction

Railway Station/Railway line	Bagalkot Railway Station	~28 km in NNE direction
Water Bodies	Canal is passing through the mine area	--
	One Nallah Hale halla is passing through the mine area	--
	Midchi Halla	~ 1.5 km in ENE direction
	Lokapur Halla	2.5 km in NE direction
	Ghatprabha River	6.5 km in NW direction
	Kalaskoppa Lale	~ 8.0 km in ESE direction
	Hire Halla	~8.5 km in ENE direction
	Gondimada Halla	~9.5 km in ENE direction
Forest	<p>Reserved Forest:</p> <ul style="list-style-type: none"> ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest ➤ Reserved Forest 	<ul style="list-style-type: none"> ➤ ~1.0 km in WSW direction ➤ ~1.75 km in NWN direction ➤ ~2.5 km in North direction ➤ ~3.5 km in NNW direction ➤ ~3.5 km in West direction ➤ ~4.0 km in WSW direction ➤ ~4.0 km in East direction ➤ ~5.5 km in SE direction ➤ ~6.0 km in SE direction ➤ ~6.5 km in SE direction ➤ ~6.5 km in ESE direction

		<ul style="list-style-type: none"> ➤ ~8.5 km in SE direction ➤ ~9.0 km in ENE direction ➤ ~9.5 km in SE direction ➤ ~9.5 km in SE direction
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ix. Presence of Environmentally Sensitive areas in the study area

Forest Land / Protected Area / Environmental Sensitivity Zone	Yes/No	Details of Certificate/letter issued by the concerned Department mentioning the Lr no, date of grant and remarks
Forest Land within the mine lease area and (if yes) status of Forest Clearance	No	The Project Proponent has stated that no forest land involved in the proposed project area as per the letter issued by State DFO, Karnataka vide letter no. PCCF/WL/D/CR-01/2022-23, dated 16.11.2023.
National Park	No	
Wildlife Sanctuary	No	
Elephant/Tiger Reserve	No	
Eco-Sensitive Zone (ESZ) /Eco-Sensitive Area (ESA)	No	
Coastal Regulation Zone (CRZ)	No	-
Schedule-I species (No. s and name of schedule-I species with authenticated letter)	Yes	09 Schedule I species viz. 04 Mammals (<i>Canis aureus</i>) Jackal, (<i>Canis lupas</i>) Indian Wolf, (<i>Hystrix indica</i>) Indian Porcupine, (<i>Macaca radiata</i>) Bonnet macaque; 03 Reptiles (<i>Daboia russelii</i>) Russell's viper, (<i>Naja naja</i>) Spectacled cobra, (<i>Varanus bengalensis</i>) Indian Monitor Lizard; and 02 Avifaunal (<i>Milvus migrans</i>) Black kite, (<i>Pavo cristatus</i>) Indian Peafowl. Wildlife Conservation Plan has been prepared and recommended by the DFO Vide letter no. B2/GFL/JKCement/CR/2023-24/1948 on dated 06.01.2024. Further, the Conservation plan has been recommended by the CCF, Belgaum and forwarded to PCCF, Bangalore for further approval on 07.02.2024.
Wildlife Conservation Plan	Yes	

	Budget proposed for conservation Plan is Rs. 45 Lakh.
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x. Green belt/Plantation details:

Proposed area for green belt/plantation and no. of saplings proposed	131.18 ha
Budget for green plant & plantation till the end of life of mine.	Rs. 655.90 Lakh
Budget for nursery	The company is already having well established 02 no (s). of nurseries in its Existing Integrated Cement Plant & Colony located at approx. 15.5 km distance from the Proposed Limestone Mine Block. The saplings proposed for Greenbelt/ plantation will be sourced from these nurseries.
Details of existing plantation and its survival rate	Not Applicable as this is a proposed project
No. of tree cuts in the mine lease area and compensatory afforestation	Approx. 70 no. of trees will be cut due to the Proposed mining proposal. The company is proposing to plant 140 additional no. of saplings as Compensatory plantation.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & Non mineralized areas	8.52 Ha
50 m safety zone of nallah, roads, electric lines	At conceptual stage, Greenbelt & plantation will be developed will be carried out on 131.18 ha. Break-up given as follows: 1) Safety zone along ML boundary: 8.52 ha, 2) Safety zone along Canal, Nallah & HT line: 44.43 ha, 3) Plantation on Overburden: 20 ha, 4) Bench Plantation: 20.39 ha, 5) Plantation on Soil dump: 32.50 ha, 6) Plantation along Infrastructure: 5.34 ha

xi. Baseline detail

Baseline Data (Air / Water / Noise / Soil / Hydro geological study/ Traffic Study/ others)	
Period of baseline data collection	October to December 2022

Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Post Monsoon Season
Predominant Wind direction (From)	East
Ambient Air Quality (no. of locations) and results	8
Noise level (no. of locations) and results	8
Water Quality (no. of locations) and results	8
Soil Quality (no. of locations) and results	8
Hydro geological study and results	Done
Traffic study (no. of locations) and results	Done

xii. Public Hearing (PH) Details

Advertisement for PH with date (name of major national daily and one regional vernacular daily newspaper)	“Deccan Herald” & “Hosa Digantha” in English & Local language on 17.09.2023 “Sanje Darshan” & “Vijay Karnataka” in daily Kannada Newspaper respectively on 20.09.2023 & 23.09.2023
Date of PH	04.10.2023 at 11:00 AM
Venue	Project Site, Sy. No. 68/2, Lokapur, Lokapur-Bagalkot Road (SH-44), Near Viraktamath Petroleums, Mudhol-Taluk, Bagalkot-District
Chaired by	Smt. Janaki K.M., I.A.S. Deputy Commissioner and Chairman, Environmental Public Hearing Committee, Bagalkote, Karnataka
Main issues raised during PH	Education, Employment, Environment, Health care, Community welfare and Development
Budget proposed for addressing issues raised during PH over 3 years	Capital Cost: 186 Lakhs

The Project Proponent has submitted the following action plan with item wise break up of Public Hearing budget as follows:

Particular	Proposed Physical Activities to be done	Unit of Measurement						Budget (Rs. In Lakh)
		1 st Year		2 nd Year		3 rd Year		
		Location / Area	Budget (Rs. In Lakh)	Location / Area	Budget (Rs. In Lakh)	Location / Area	Budget (Rs. In Lakh)	
Education & Sports Facilities	Providing infrastructure to Govt. Schools like study tables (40), Benches (40), Chairs (80), White boards (22), Smart Class boards (9) & projectors (6) and computers (26) in each Govt. School) with wi-fi	Hanamaneri/ Lokapur	8	Jalikatti B.K./ Jalikatti K.D.	6	Kadarkoppa/ Venkatapur/ Hebbal	6	20

	connectivity (07), Facility of Girl's toilets (06)							
	Construction of library for preparation Competitive Exam (04)	Hanamaneri/ Lokapur	4	Jalikkatti B.K./ Jalikkatti K.D.	4	Kadarkoppa/ Venkatapur/ Hebbal	2	10
	Distribution of Sports kit to children (60), vending machine of Sanitary napkins (6)	Hanamaneri/ Lokapur	5	Jalikkatti B.K.	5	Jalikkatti K.D.	5	15
Health & Care Facilities	Organizing Medical Camp in nearby villages (24) (Medical, Eye, Dental etc.) Asha Health Worker support (124) Awareness Programme for Pregnant & Adolescent Women (07) One ambulance facility at Lokapur (Rs. 25 Lakh)	Hanamaneri/ Lokapur	7	Jalikkatti B.K./ Jalikkatti K.D.	7	Arlikatti/ Kajadoni	7	21
Skill Development	Setting up of skill training centre (04)	Hanamaneri/ Lokapur	5	Jalikkatti B.K./ Jalikkatti K.D.	4	Kadarakoppa	3	12
	Supporting surrounding Villages women Empowerment through Self Help Groups (40)	Hanamaneri/ Lokapur	5	Jalikkatti B.K./ Jalikkatti K.D.	5	Kadarakoppa	5	15
	Training of farmers or farmers groups in different agricultural methods (MODERN METHODS), Training to farmers to grow the Cash crops to enhance agricultural growth, Dairy farming/ Poultry farming/ Goatary (30)	Lokapur	5	Lokapur	5	Lokapur	5	15
Community Welfare	Infrastructure Development near plant surrounding villages like CC Roads (17000 SQ.ft), Community Halls (02), Construction of Toilets in association with Govt. Schemes, Developing Sports grounds etc.	Hanamaneri/ Lokapur	10	Jalikkatti B.K./ Jalikkatti K.D.	10	Kadarakoppa / Kajadoni	15	35
	02 Community Centre at Lokapur and Jallikkatti K.D.	Lokapur	14	Jalikkatti K.D.	-	-	-	14
	Support for Farmers by providing modern equipment (06)	Hanamaneri/ Lokapur	5	Jalikkatti B.K./ Jalikkatti K.D.	5	Varchagal/ Chitranukot	5	15
Environment	Construction of Water Check Dam / Anikat in nearby Villages for increased ground water level (01)	Hanamaneri/ Lokapur	2	Jalikkatti B.K./ Jalikkatti K.D.	2	Kadarakoppa	2	6
	Provide Water Filter Plant facility in nearby villages as per the requirement (06)	Hanamaneri/ Lokapur	2	Jalikkatti B.K./ Jalikkatti K.D.	2	Kadarakoppa	2	6
	Free distribution of 10000 Plants (2500 at each village), plantation of trees at prominent public places in nearby villages	Hanamaneri/ Lokapur	1	Jalikkatti B.K./ Jalikkatti K.D.	0.5	Chaudapur/ Venkatapur	0.5	2

Total		73		55.5		57.5	186
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xiii. Rehabilitation & Resettlement:

R & R details	<p>The Project Proponent has submitted that ML area 445.37 ha falls in 4 villages namely Hanamaneri, Lokapur, Jalikatti B.K. & Jalikatti K.D. Out of the total mining area 445.37 ha, 419.83 ha is Private Land & 25.54 ha is Govt. Land.</p> <p>The Project Proponent informed that 306.682 ha has been proposed to purchase out of 419.83 ha (private land). Out of 306.682 ha, 289.952 ha mining area and 16.73 ha non-mining area for future exploration.</p> <p>It was also submitted that 60.82 ha has been purchased (44.09 ha mining area and 16.73 ha non-mining area for future exploration).</p> <p>The Project Proponent has submitted that the Resettlement & Rehabilitation (R&R) cost of remaining land Rs. 121.23 Crore.</p>
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xiv. Court case details:

Court Case, No and its present status	<p>The Project Proponent has stated that one litigation pending against the Hanamaneri Limestone Mine Block in the High Court of Karnataka, Bengaluru vide Writ Petition No. 22125 of 2023 (GM-RES) filed on 03.10.2023 between Sri. Vittal Pandappa Harijan @ Madar & others and State of Karnataka & others.</p> <p><u>Chronology and Implication of the Case</u></p> <ul style="list-style-type: none"> • From the High Court's website, it is evident that the petition was filed on 3.10.2023 and listed on 4.10.2023. However, due to time constraints, the matter was rescheduled for 6.10.2023. • On 6.10.2023, despite being listed for the second time with office compliance items (8 in total), the petitioner's advocate requested an additional week to address office objections. • Regrettably, to date, no action has been taken to rectify these objections or to carry out the necessary amendments to the petition. ✓ Consequently, the matter has not been listed again till date before court apparently on account of non-removal of objections. ✓ Looking into above, the company would like to reiterate that the company has not been served with a copy of the petition till date despite undertaking by the Petitioner's counsel, before court on 06.10.2023, to supply copy of petition to respondent's counsel and as the company have not been provided with a copy of the petition leading to filing of the petition or any implications thereof, the chronology of events after 06.10.2023 is not available with us.
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	Furthermore, as the petitioner has failed to address these objections even after a lapse of five months it appears Petitioners are not interested in pursuing the present petition.
Undertaking by Project Proponent w.r.t court case	The project Proponent has submitted an undertaking vide letter dated 14.02.2024 and stated that only one litigation is pending against the PP and apart from the pending litigation no other notices has been received by the Project Proponent under section 5 of the Environment Protection Act, 1986.

xv. Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018	The Project Proponent has submitted an affidavit vide non-judicial stamp paper of Rs. 50 vide dated 07.11.2022 and certificate no. IN-KA77150483416555U in accordance with the statutory requirement & judgement of Hon'ble Supreme Court dated 2 nd August 2017 in writ Petition (civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ores.
Undertaking by Project Proponent in EIA/EMP report	The Project Proponent has submitted an undertaking vide letter dated 13.02.2024 in Final EIA/EMP Report.
Undertaking by Consultant in EIA/EMP report	The Consultant (J.M. Environet Pvt. Ltd) has submitted an undertaking vide letter dated 12.02.2024.
Plagiarism Certificate	The Project Proponent has submitted a Plagiarism Certificate dated 12.02.2024 in Final EIA/EMP Report.

xvi. Details of the Environmental Management Plan (EMP) (Rs. In Lakh)

S. No.	Activities	Capital Cost	Recurring Cost
A. Mitigative Measures			
1.	Permanent water sprinkling arrangements for main haulage road	100	5.0
2.	7 nos. of Bag-filter for crusher system (OLBC transfer points-6 +1 crusher)	175	4.0
3.	Installation of Crusher	130	3.0
4.	Acoustic enclosure for OLBC	200	2.0
5.	Spill control guarding for OLBC	120	2.0
6.	Canopy along Dry-fog system of 5 transfer points	100	1.0
7.	10 nos. of fog canon/mist sprayer of at least 40 m throw shall be installed at various locations in the mine area	30.0	2.0

8.	Greenbelt/Plantation on 131.18 ha area with 3,27,950 nos of saplings @ 2500		
	A. Green belt around 7.5 m periphery covering an area of 8.52 ha within initial 2 years (No. of saplings: 21300) (Considering Rs. 42.60 Lakh)	42.60	1.0
	B. Plantation along the safety barrier of canal 30.72 ha within initial 5 years (No. of saplings: 76,800) (Considering Rs. 153.60 Lakh)	153.60	0.30
	C. Plantation along the nallah 10.27 ha, within initial 5 years (Nos of saplings 25,675) (Considering Rs. 51.35 Lakh)	51.35	0.30
	D. Plantation along the HT line 3.44 ha, within initial 5 years (Nos of saplings 8600) (Considering Rs. 17.20 Lakh)	17.20	0.30
	E. Plantation/Regrassing 20 ha on backfilled area (No. of saplings: 50,000) (Considering Rs. 100 Lakh) (11 th to 20 th year)	-	10
	F. Plantation on top soil stacking 32.50 ha on waste dump (No. of saplings: 81,250) (Considering Rs. 162.50 Lakh) (16 th to 20 th year)	162.50	0.30
	G. Plantation on top bench of water reservoir 20.39 ha on waste dump (No. of saplings: 50,975) (Considering Rs. 101.95 Lakh) (16 th to 20 th year)	101.95	0.30
	H. Plantation on Mineral Storage: 1.20 ha, Statutory building: 0.20 ha, Mineral separation plant: 2.0 ha (No. of saplings: 13,350) (Considering Rs. 26.70 Lakh) (At the end of life of mine)	26.70	0.30
9.	Modular STP	50	3.0
10.	Washing Ramp with Oil-water Separator	32	0.20
11.	Rain Water Harvesting Plan	60	5.0
12.	Garland drain shall be made along the nallah (L*W*D = 16m x 1.2m x 0.6m)	4.27	0.20
13.	Construction of retaining walls within the mine area	6.34	0.20
14.	Protection for Plantation (Fencing around area)	20	0.50
15.	Construction of 02 nos Settling Tank	2.0	0.30
16.	Construction of Protective Bunds (L*W = 1.0m x 1.1m)	22.49	0.20
Sub Total		1608	41.40
B. Monitoring			
17.	03 nos. of Continuous Ambient Air Quality Monitoring Station at Mine Site for the measurement of air quality for PM10, PM2.5, SO2, NO2 and CO and real time data connectivity with CPCB/SPCB Server	300	10
18.	Fugitive dust emission monitoring (05 locations * monthly)	10.0	2.0

19.	Installation of 01 nos of piezometer in ML area	6.0	0.30
20.	Ground water quality analysis (Pre and Post-monsoon)	6.0	0.50
21.	Surface Water Quality Analysis (Nallah & Canal: Pre & Post-monsoon)	3.0	0.20
22.	Procurement of the Blast Vibration Measuring Instrument & Noise level meter	5.0	0.5
23.	Controlled blasting for minimizing ground vibration, fly rock, air pressure/ noise, etc. by Using Nonel and Exel	-	7.0
24.	Ambient Noise Monitoring (05 locations * quarterly frequency)	4.0	0.4
25.	Work Place Noise Level Monitoring (05 locations * quarterly frequency)	4.0	0.2
26.	Providing Ear muffs/plugs to workers working in high noise area & PPEs	4.0	1.0
27.	Digital Mapping of entire mine area once in 5 years (Rs. 4.5 Lakh once in 5 years)	-	1.5
Sub Total		342	23.6
Total		1950	65

xvii. Details of project cost and employment:

Particulars	Budget (Rs. in Crores)
Total Cost for EMP (Capital Cost of EMP + Capital cost of public hearing + Budget Proposed for WLCP)	Capital Cost: Rs. 21.81 Crores/- Recurring Cost: Rs. 65 Lakh/ annum
Project Cost	Rs. 373 Crores
Employment	123 persons

2.5.3 Observation and Recommendation of the Committee:

EAC after deliberations noted that the instant proposal falls under green field project for mining of Limestone (auctioned block). The Project Proponent informed that there is no forest land involved in the mine lease area. The Committee noted that the project proponent has conducted the Public hearing after obtaining the Terms of Reference (ToR). Two Canals and a seasonal Nallah flowing through the ML area which should not be disturbed. On either side of the Canal and Nallah a 50 m safety distance has to be maintained. The crushed limestone will be transported to interlinked cement plant via road till 3rd year and from the 4th year via covered conveyor belt system. The Committee emphasised to submit the detail timeline in form of CPM/PERT chart and submit detailed work related to Civil, Electrical and Mechanical in form of percentage. The Committee

emphasised that the PP should submit one final feasible route out of two proposed route for transportation of Limestone through conveyor belt system.

Subsequently, The Committee noted that the Project Proponent has submitted the revised Socio-economic development plan to address the issues raised during the Public Hearing with a Budget expenditure of Rs. 408.2 Lakhs and Revised Wildlife Conservation Plan submitted to the Forest Department with Budgetary provision of Rs. 110 Lakhs/-. The Committee asked the PP to submit the activity-wise detail of the Socio-economic development plan addressing the issues raised during the Public Hearing and also submit the activity-wise detail of Revised Wildlife Conservation Plan. Accordingly, the PP needs to submit the revised budget of EMP and total project cost (which should include the cost of conveyor belt system separately).

In view of the above, the Committee **deferred** the proposal for the submission of following requisite information:

- i. The project proponent needs to submit the NOC from Indian Railways.
- ii. The Project Proponent shall submit the measures taken for strengthening of mine pit and protection of railway line which is running parallelly along the mine lease.
- iii. As the drilling & blasting activity is proposed and the railway line is passing parallelly the lease boundary, Project Proponent should carry out the scientific study from CIMFR or any other recognized institution of repute which is approved for carrying out such studies. The study should be clearly demonstrated that whether there are any adverse impacts and it can be controlled by adopting mitigative measures or not?
- iv. The Project Proponent should revisit the data submitted on noise level monitoring. The average data should be taken for every 15 minutes interval in view of the sensitivity of the railway line passing parallelly the lease boundary
- v. The PP needs to submit the detail timeline in the form of CPM/PERT chart considering all parameters involved for implementation of mechanized system (conveyor belt) and submit detailed work related to Civil, Electrical and Mechanical in form of percentage.
- vi. The PP should submit one final feasible route out of two proposed route for transportation of Limestone through conveyor belt system.
- vii. The PP needs to submit the updated list of Schedule-I species as per the wildlife Protection amendment act, 2022 and accordingly submit the revised wildlife conservation plan.
- viii. The PP needs to submit the update outcomes of the pending court case.
- ix. The PP needs to submit the revised Public Hearing cost w.r.t. addressing the issues raised during the Public Hearing.
- x. The PP needs to submit the detail backfilling and reclamation plan.

2.6 Sukurangi Chromite Ore Mining Project for enhancement in production capacity from 0.13 to 0.3 MTPA in ML Area of 382.709 Ha by M/s Odisha Mining Corporation Ltd. located at village (s) Sukrangi, Saruabli, Ostapal, Kamarda and Talangi, Teshil Sukinda, District Jajpur, Odisha. [Online Proposal No. IA/OR/MIN/468292/2024, File No. J-11015/348/2015-IA. II(M)] - For Corrigendum in EC dated 30.07.2020 reg.

2.6.1 The proposal is for Corrigendum in EC dated 30.07.2020 of 0.3 MTPA in the ML area of 382.709 ha by M/s Orissa Corporation Ltd located at village(s) Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, TeshilSukinda, District-Jaipur, Odisha.

2.6.2 The details of the project as ascertained from the document submitted by the Project Proponent as given under: -

- i. The PP has obtained the EC vide letter dated 30.07.2020 for mining of chromite of 0.3 MTPA in the ML area of 382.709 ha by M/s Orissa Corporation Ltd located at village(s) Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, TeshilSukinda, District-Jaipur, Odisha.
- ii. The SPCB, Odisha has issued CTO vide letter dated 28.03.2024 for Production capacity of 0.3 MTPA for Chromite ore.
- iii. The PP vide letter dated 03.04.2024 requested MoEF&CC for Corrigendum in EC accorded by MoEF&CC vide dated 30.07.2020 to resolve the following issues:
 - a. Specific Condition No.14 on Page No. 10 of 23 needs to be deleted, as the specified locations mentioned in the said Condition (Kannnappakunta and Kamalapuram) is in the State of Andhra Pradesh and not within Odisha. Also, the similar specific condition pertaining to the site-specific location already exists as Specific Condition No. 5.
 - b. Specific Condition No.15 on Page No. 10 of 23 needs to be deleted as this condition is not in line with the project specific EMP propositions and is over and above the specific condition no.6 (which had been recommended by EAC during the 17th EAC Meeting).
 - c. Specific Condition No. 17 on Page No. 11 of 23 needs to be deleted, as this condition is not in line with the project specific EMP propositions and is over and above the specific condition no.7 (which had been recommended by EAC during the 17th EAC Meeting).

2.6.3 Observation and Recommendation of the Committee:

The EAC after deliberations noted that the instant proposal is for Corrigendum due to typographically error in EC issued by MoEF&CC vide dated 30.07.2020 wherein the existing specific EC condition no. 14, 15 and 17 to be replaced as per earlier EAC minutes dated 28-29 May & 1 June, 2020, which is given below:

Specific condition no. 14: Budget proposed for Corporate Environment Responsibility (CER) shall be ₹ 32.02 Lakhs, which includes a) ₹ 2.5 Lakhs for Employment to locals (₹ 0.5 Lakh from 2019-20 to 2023-24), b) ₹ 2.50 Lakhs for Skill development for local SHGs (₹ 0.5 Lakh from 2019-20 to 2023-24), c) ₹ 2.50 Lakhs for Computer training, Scholarships (₹ 0.5 Lakh from 2019-20 to 2023-24), d) ₹ 4.50 Lakhs for Creation of employment opportunity (₹ 1.0 Lakh from 2019-20 to 2022-23 & ₹ 0.5 Lakh for 2023-24), e) ₹ 5.0 Lakhs for Health care services Medical camps, ambulance (₹ 1.0 Lakh from 2019-20 to 2023-24), f) ₹ 2.50 Lakhs for Pollution Control (₹ 0.5 Lakh from 2019-20 to 2023-24), g) ₹ 2.50 Lakhs for Plantation (₹ 0.5 Lakh from 2019-20 to 2023-24), h) ₹ 2.50 Lakhs for Solar Street lighting, distribution of LED, bulbs to villagers (₹ 0.5 Lakh from 2019-20 to 2023-24), i) ₹ 2.50 for Drinking Water & sanitation (₹ 0.5 Lakh from 2019-20 to 2023-24), and j) ₹ 5.02 for Peripheral development (₹ 1.0 Lakh from 2019-20 to 2022-23 & ₹ 1.02 Lakh for 2023-24). The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and details of implementation of CER activities along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, photographs & Geo-location of the infrastructures/facilities developed, etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

Specific condition no. 15: Budget proposed under Environmental Management Plan (EMP) shall be ₹ 2130 Lakh (Capital) & ₹ 190 Lakh (recurring/annum) which includes i) Rs 25.0 Lakh (Capital) & Rs 30.0 Lakh (recurring) for Surface drainage (garland drains, settling its, retaining wall etc.) & dust suppression system (timeline 1st year), ii) Rs 7.0 Lakh (recurring) for Environment Monitoring, iii) Rs 4 Lakh (Capital) (time line 1 year) & Rs 3 Lakh (recurring) for Occupational safety which includes Procurement of safety appliances, iv) Rs 4 Lakh (recurring) for Green Belt Development, v) Rs 1794 (Capital) for Net Present Value (NPV) Payment, vi) Rs 153.0 Lakh (Capital) for Compensatory Afforestation, vii) Rs 154.0 Lakh (capital) (timeline 10 years) Wildlife Conservation Plan, and viii) Rs 146.0 Lakh (Recurring cost) for Socio-economic welfare measures in nearby village which is likely to be revised every year. The amount (except occupational health) proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons

engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

Specific condition no. 17: Budget earmarked under Occupational Health plan is Rs 4.0 (Capital) & Rs 3 Lakh (Recurring) which includes Procurement of safety appliances. The amount proposed under this head should be kept in a separate bank account and should be audited annually. The PP should annually submit the audited statement and detailed environment monitoring report along with proof of activities viz. photographs (before & after with geo-location date & time), purchase documents, sampling reports, photographs & Geo-location of the infrastructures/facilities developed, details of persons engaged in Environment Management Cell etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

In view of the above, the EAC **recommended** the proposal for Corrigendum in EC dated 30.07.2020 for mining of chromite with enhancement in the production of chromite from of 0.3 MTPA in the ML area of 382.709 ha by M/s Orissa Corporation Ltd located at village(s) Sukrangi, Saruabli and village limits of Ostapal, Kamarda and Talangi, TeshilSukinda, District-Jaipur, Odisha as per the EIA Notification, 2006 and its subsequent amendments.

2.7 Petnikota Limestone Mine with production capacity of 4.0 MTPA in the ML area of 912.797 ha by M/s. UltraTech Cement Ltd. located at Village Petnikota, Mandal Kolimigundla, District Nandyal, Andhra Pradesh. [Online Proposal No. IA/AP/MIN/467299/2024, File No. J- 11015/243/2008-IA. II (M)] - For the Extension of validity of EC dated 20.11.2023 reg.

2.7.1 The proposal for extension of validity of EC and its amendment vide dated 14.11.2009 & 20.11.2023 for Petnikota Limestone Mine with production capacity of 4.0 MTPA in the ML area of 912.797 ha by M/s. UltraTech Cement Ltd. located at Village Petnikota, Mandal Kolimigundla, District Nandyal, Andhra Pradesh was submitted on Parivesh portal on 27.03.2024.

2.7.2 The details of the project as ascertained from the document submitted by the Project Proponent as given under: -

- i. The Project Proponent has requested to extend the validity of EC from 26.04.2024 till Mine Lease Validity i.e., 26.04.2054 of Environmental Clearance (EC) vide letter No J-11015/243/2008-IA. II (M) dated 14.11.2009 & 20.11.2023 as per MoEF&CC Notification S.O. 1807(E) dated 12.04.2022 of Petnikota Limestone Mine (ML Area 912.797 ha) with Existing Limestone Production Capacity of 4.0 MTPA located at Village Petnikota, Mandal Kolimigundla, District Nandyal, Andhra Pradesh.

- ii. The Project Proponent vide letter dated 11.09.2023 requested to the state government of Andhra Pradesh for extending the lease period from 26.04.2024 to 26.04.2054 under section 8A (5) of MMDR Act 1957.
- iii. MoEF&CC Notification S.O. 1807(E) dated 12.04.2022 Para IV mentioned that, “The prior Environmental Clearance granted for mining projects shall be valid for the project life as laid down in the mining plan approved and renewed by competent authority, from time to time, subject to a maximum of thirty years, whichever is earlier”.
- iv. The Project Proponent has submitted Mining Plan with Progressive Mine Closure Plan has been approved over an area of 912.797 ha by IBM on 19.12.2023 for the period of 2024-25 to 2028-29.
- v. Details of Mine Lease:

S. No.	Prospecting License/Letter of Intent (LoI)/ Grant of Mine lease and Lr No	Date of the grant	Name of the Mineral & (Major/Minor)	Period of Grant	Granted by	Mine lease area in Ha
1.	PL was granted vide no. G.O.Ms. No, 252 to M/s. Grasim Industries Limited	03.05.2000	Limestone	2 years	Govt. of Andhra Pradesh	1357.088
2.	The Mining Lease was Granted vide order no. G.O.MS.No.222 in favour of M/s. Grasim Industries Limited	22.07.2003	Limestone	20 years	Govt. of Andhra Pradesh	951.848 ha
3.	Revised extent vide Order G.O.Ms. No. 88 in favour of M/s. Grasim Industries Limited	27.12.2022	Limestone	-	Govt. of Andhra Pradesh	912.797 ha
4.	Transfer of ML in the Name of UltraTech Cement Limited vide order G.O.Ms.No.89	27.12.2022	Limestone	-	Govt. of Andhra Pradesh	912.797 ha

5.	Transfer deed & Registered Executed	23.01.2023	Limestone	-	Govt. of Andhra Pradesh	912.797 ha
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S. No.	Details of grant of Mine Lease deed execution	Period of Grant		Name of the Mineral	Mine lease area in Ha
		From	To		
1.	Mine lease has been executed and registered on 27.04.2004 for 20 years	27.04.2004	26.04.2024	Limestone	951.848 ha
2.	Revised extent vide Order G.O.Ms. No. 88 in favour of M/s. Grasim Industries Limited	27.12.2022	26.04.2024	Limestone	912.797 ha
3.	Transfer of ML in the Name of UltraTech Cement Limited vide order G.O.Ms.No.89	27.12.2022	26.04.2024	Limestone	912.797 ha
4.	Transfer deed Registered & Executed	23.01.2023	26.04.2024	Limestone	912.797 ha

vi. Details of CTE/CTO, Certified Compliance Report, Certified Production Details from the inception of the mine:

Particulars	Details of Letter along with date of grant and validity
Consent to Establish	Consent For Establishment for 4.0 Million TPA Limestone has been obtained from Andhra Pradesh Pollution Control board vide Consent Order No. 141/PCB/CFE/RO-KNL/HO/2009-570 dated 31.05.2010.
Consent to Operate	Consent for Operations for 4.0 Million TPA Limestone has been obtained from Andhra Pradesh Pollution Control board vide Consent Order No. PPCB/KNL/KNL17406/CFO/HO/ 2014-338 dated 25.04.2014. Consent for Operations Consent Order No. 322614/APPCB/KNL/KNL17406/CFO/HO/2022 Dated 23.11.2022 valid upto 31.03.2024. CFO Renewal application was submitted to APPCB before expire of the existing CFO validity.
Certified Compliance Report and Inspection date	Compliance Report Certified by RO Vijayawada on 17.10.2023 & date of inspection 11.10.2023.

Certified Production Details from the inception of the mine (in tabular form against the EC capacity)	DMG Certified production figures from the inception of mine has been submitted by the Project Proponent.
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2.7.3 The Committee after detail deliberations noted that the instant proposal is extension of validity of EC from 26.04.2024 to 26.04.2054. Earlier, the EC was issued on 20.11.2023 for validity upto 26.04.2024. The PP has requested to the Director of Mines and Geology, Andhra Pradesh for extending the lease period upto 26.04.2054, while the Director of Mines and Geology, Andhra Pradesh stated that the deemed extension of mining lease is under active consideration and orders will be issued. Therefore, the Committee emphasized to submit a certificate from the State government stating the validity of ML extended upto 26.04.2054.

In view of the above, the Committee **deferred** the proposal for submission of following requisite information:

- i. The PP needs to submit a certificate from the State government stating the validity of ML extended upto 26.04.2054.
- ii. The PP needs to submit the activity-wise detail expenditure status of Public Hearing.

List of members of Expert Appraisal Committee participated through VC

S.No	Member Name	Member Address	Designation	09 th May 2024	10 th May 2024
1	Dr. Dinesh Misra, IFS (Retd.)	Plot No 65, Sector 8, Gandhinagar, Gujarat, 382 008	Chairman	Yes	Yes
2	Sh. Niranjan Kumar Vasu, IFS (Retd.)	816, Shanti Nagar, Opposite Durgapur Railway Station, Jaipur-Rajasthan, 302018	Member	Yes	Yes

3	Dr. Asha Rajvanshi, Scientist 'G' (Retd.), WII	B/104/106 Rock Valley Apartments, GMS Road, Sewla Kalan, P.O. Majra, Dehradun, Uttarakhand-248171	Member	Yes	Yes
4	Shri. Avijit Ghosh (CMD- Heavy Engineering Corporation Limited) (Retd.)	Singhee Marg, A- 604 Shahadeo Tower, P.P.Compound, Ranchi 834001, Jharkhand	Member	Yes	Yes
5	Shri. Bandi Ramchandra Reddy (Former CMD-South Eastern Coalfields Limited)-(Retd.)	Flat No-503 A, Jyoti Cosmos, White Fields, Hi-Tech City, Kondapur, Hyderabad-500081	Member	Yes	Yes
6	Prof. Pramod Kumar, Professor, Shri Aurobindo College, University of Delhi	Shri Aurobindo College, University of Delhi 1372, B-1, Vasant Kunj, New Delhi-110070	Member	No	No
7	Prof. Devesh Walia, Department of Environmental Studies	Department of Environmental Studies, NEHU, Shillong-793022 Meghalaya	Member	Yes	Yes
8	Dr. Suresh Tiwari, Scientist-F	Indian Institute of Tropical Meteorology, Pune, New Delhi Branch, Prof. Ram Nath Vij Marg Rajinder Nagar, New Delhi - 110060	Member	Yes	Yes
9	Dr. K.G Asha Manjari, Professor, University of Mysore	10/B, "SPARSHA", 2nd Main, 2 nd Cross, Bhogadillnd Stage, Mysore-570026, Karnataka	Member	Yes	Yes
10	Prof. Dev Dutt Sharma, Vice-Chancellor	Sardar Patel University, Mandi H.P. 175001	Member	No	No
11	Shri V. K. Soni, Representative of India Meteorological Department	Government of India, Ministry of Earth Sciences, India Meteorological Department, Mausam Bhawan, Lodi Road, New Delhi – 110003	Member	No	No
12	Shri Yogesh Kale Representative of Indian Bureau of Mines	Controller of Mines, IBM Block D, Second Floor, Indira Bhavan, Civil Lines, Nagpur - 440001	Member	Yes	Yes
13	Shri Niazi Mohammed	Representative of Directorate General of Mines Safety	Member	Yes	Yes

14	Dr. S. R. Wate	148/149, Nagar vikash society, Narendra Nagar, Nagpur, Maharashtra-440015	Special Invitee	Yes	--
15	Shri Pankaj Verma	3 rd Floor, Vayu Block, Indira Paryawaran Bhawan, MoEF&CC, Jorbagh, New Delhi- 110003.	Member Secretary	Yes	Yes

