

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

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**SUMMARY RECORD OF 8<sup>TH</sup> MEETING OF THE COMMITTEE OF THE RE-CONSTITUTION OF EXPERT APPRAISAL COMMITTEE FOR ENVIRONMENTAL APPRAISAL OF NON-COAL MINING PROJECTS CONSTITUTED UNDER THE EIA NOTIFICATION, 2006.**

The 8<sup>th</sup> meeting of the Re-constitution of Expert Appraisal Committee for Environmental Appraisal of Mining Projects (Non-Coal) of the Ministry of Environment, Forest and Climate Change was held during 27<sup>th</sup>-28<sup>th</sup> December, 2022 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 7<sup>th</sup> EAC meeting held during 5<sup>th</sup>-6<sup>th</sup> December, 2022:**

The minutes of the 7<sup>th</sup> EAC meeting held during 5<sup>th</sup>-6<sup>th</sup> December, 2022 were placed before the members of the EAC. The Member Secretary also informed the EAC regarding the following corrigendum: -

S. No	As per MoM of 7 <sup>th</sup> EAC meeting held during 5 <sup>th</sup> -6 <sup>th</sup> December, 2022	Typographical Error/corrigendum	Recommendation of EAC (Non-Coal Mining) meeting held during 27-28 December, 2022
1	Agenda 1.1	One more additional specific condition stipulated by EAC	xxxv. The Project Proponent needs to maintain zero discharge and garland drains, settling ponds needs to be properly designed.
2	Agenda 1.3, Point No: ix, Pg. No: 31,	The Project Proponent needs to submit <b>the timeline</b> for construction of retaining wall, garland drains, catch drains and siltation ponds.  One more additional specific condition stipulated by EAC	The Project Proponent needs to submit the <b>design with</b> timeline for construction of retaining wall, garland drains, catch drains and siltation ponds.  xviii. The Project Proponent needs to submit the year wise back filling plan.

**Day 1: 27<sup>th</sup> December, 2022 (Tuesday)**

**1.1 Surjagarh Iron Ore Mine of M/s. Lloyds Metals & Energy Limited for mining of Iron Ore with production capacity of Iron Ore: 10.0 MTPA (ROM), Waste: 1.769 MTPA (Total Excavation: 11.769 MTPA) along with crushing and screening plant(250 TPH – 2 No. Semi mobile Jaw Crusher, 200 TPH – 4 No. Mobile Jaw Crusher, 200 TPH – 4 Nos. Mobile/Semi Mobile Screens, 400 TPH – 5 Nos. Mobile/Semi Mobile Screens, 200 TPH – 6 Nos. Mobile Cone Crusher) in the mine lease area of 348.09 Ha located near Village Surjagarh, Tehsil Etapalli, District Gadchiroli, Maharashtra – [F.No:J-11015/348/2005-IA.II(M), Proposal No: IA/MH/MIN/408171/2022, Consultant: Creative Engineers & Consultants] – Environmental Clearance (Violation under SOP)**

The proposal is for grant of Environmental Clearance for Surjagarh Iron Ore Mine of M/s. Lloyds Metals & Energy Limited for mining of Iron Ore with production capacity of Iron Ore: 10.0 MTPA (ROM), Waste: 1.769 MTPA (Total Excavation:11.769 MTPA) along with crushing and screening plant (250 TPH - 2 No. Semi mobile Jaw Crusher, 200 TPH - 4 No. Mobile Jaw Crusher, 200 TPH - 4 Nos. Mobile/Semi Mobile Screens, 400 TPH - 5 Nos. Mobile/Semi Mobile Screens, 200 TPH - 6 Nos. Mobile Cone Crusher) in the mine lease area of 348.09 Ha, located near Village Surjagarh, Tehsil Etapalli, District Gadchiroli, Maharashtra.

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 falls between the Latitude:19°36'58.96"N-19°38'21.48"N and Longitude: 80°20'57.12"E- 80°22'32.84"E and falls under the Survey of India Toposheet No: 65 A/6 (New Toposheet No E 44C6) and falls in Seismic Zone-II.
- ii. 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 mine lease area is greater than 250 Ha and appraised at the Central level.
- iii. Details of previous Environmental Clearance (EC):
  - a) The Project Proponent initially obtained Environmental Clearance (EC) vide letter dated 29.05.2006 for Surjagarh Iron Ore mining project of M/s Gadchiroli Metals and Minerals for production capacity of 3.0 MTPA of Iron Ore by opencast mechanized method involving total lease area of 348.09 Ha under the provisions of EIA Notification, 1994.
  - b) Then, the Project Proponent obtained the approval of change of name of project company from Gadchiroli Metals and Minerals Ltd to Lloyds Metals and Engineers Ltd vide letter dated 07.02.2007.
- iv. Details of Terms of Reference (ToR):
  - a) Initially, the Project Proponent obtained EC on 29.05.2006 under EIA, 1994 and the EC was valid for a period of 5 years only and the Project

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Proponent operated the mine after 2011 without obtaining EC under EIA Notification, 2006 and hence the project falls under violation case. The Project Proponent did not submit the application under Ministry's Notification S.O 1530(E) dated 06.04.2018.

b) Hence, the Project Proponent obtained Terms of Reference under Violation as per Ministry's O.M dated 7<sup>th</sup> July, 2021 vide ToR letter dated 18.07.2022 for Surjagarh Iron Ore Mine of M/s. Lloyds Metals & Energy Limited with production capacity of Iron ore (RoM) of 10.0 MTPA along with crusher and screening plant (250 TPH – 2 No. Semi mobile Jaw Crusher, 200 TPH – 4 No. Mobile Jaw Crusher, 200 TPH – 4 Nos. Mobile/Semi Mobile Screens, 400 TPH – 5 Nos. Mobile/Semi Mobile Screens, 200 TPH – 6 Nos. Mobile Cone Crusher) over an extent of 348.09 Ha.

v. Details of Mine Lease:

- a) The Project Proponent submitted that initially mining lease was granted vide Lr.No – MMN-1104/C.R.683/Ind-9 dated 13.04.2007 for a period of 20 years over an area of 348.09 Ha and mine lease deed was executed on 03.05.2007 for the period upto 02.05.2027.
- b) The Govt. of Maharashtra vide Order No: MLV-G-14-(2)/2017/1086, dated 02.05.2017 has granted approval for a further extension of 30 years. The Supplementary lease deed for extension of lease period was executed on 03.12.2021 and the mine lease is valid up to 02.05.2057.

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

Private land	Nil
Forest land	348.09Ha falls in the Bhamragarh Reserve Forest.
Total Mining lease area (MLA)	348.09 Ha
Private land for crusher, workshop & other infrastructure outside the MLA	--
Additional information (if any)	The Project Proponent submitted that the Forest clearance has been obtained from MoEF&CC Vide Letter No. F.No- 8-31/2005 /FC dated 23.03.2007 under section-2 of the Forest (Conservation) Act, 1980 for diversion of 374.90 ha of Reserved/Protected/Zudpi forest land for Iron-Ore mining, transmission line and approach road in favour of M/s Lloyds Metals and Engineers Limited (LMEL). PP also submitted that 348.09 ha is the mine lease area and the balance area is for road and transmission line.

vii. Mining Plan details: -

Review of Mining Plan with	Letter No.	GAD/FE/MPLN-862(2)/NGP-2022
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Progressive Mine Closure Plan approved by Indian Bureau of Mines	Date	28.03.2022		
	Mine lease area	348.09 Ha		
	Mineral	Iron Ore		
	Validity	2022-23 to 2026-27		
Mining Parameters	Quantitative Description			
Method of Mining	Fully Mechanized (FM) Opencast mining method			
Total Geological Reserves	87.927 Mill. Tons.			
Total Mineable Reserves	58.204 Mill.Tons			
Life of mine	9 years (Likely to increase after future exploration)			
Bench Height	10m			
Bench Width	More than 15m			
Individual bench slope	80°			
Overall pit slope	45°			
Drilling/Blasting	Drilling using 115/150mm diameter drills with 10% sub grade drilling. Blasting by SME and electronic initiation system for safe blasting operations at the mine.			
Crushing/Screening	ROM ore to be excavated from the mine will be sent to the screening plant to segregate the ore to different size. Oversize boulders will be crushed in the primary jaw and secondary cone crusher for size reduction as per the plant requirement and buyer's specification. This will be done in the crusher and screen unit located within the mine lease area.			
RoM output size	0 – 550 mm size			
Transportation details	By Road utilizing the public railway sidings at about 150 kms distance (3 nos. - Mul RS, Manikgarh, Balarshah RS), besides direct destination by road to different buyers			
Dumpers capacity	30 T Dumpers			
Waste Generation and Management	Waste Management	Plan Period (Mil.cum)	Conceptual Period (Mil.cum)	Total (Mil.cum)
	Road maintenance	0.746	1.449	2.195
	Dumping	1.742	2.173	3.915
	Total	2.488	3.622	6.110
Groundwater intersection	Mine Depth: Upto 480m AMSL Water Table: 260m AMSL No Groundwater intersection is envisaged due to mining operations.			

viii. Water requirement:

Total water requirement	1200 KLD (Make up)	Fresh water	1200 KLD
		Treated water	112 KLD
Source	Borewell and Surface Water		

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Permission	The Project Proponent submitted the NOC obtained from CGWA vide CGWA/NOC/MIN/ORIG/2022/14843 for Groundwater abstraction of fresh water of 70m <sup>3</sup> /day for the period upto 20.03.2024. Allocation for surface water is under process from Department of Water Resources, Government of Maharashtra. Chief Engineer has recommended and the final allocation letter is awaited.
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ix. Nearest village / town/ highway/railway station / water bodies/monument:

Particulars	Particular's Name	Distance & Direction
Village	Bande	2.1 km, S
Town	Etapalli	26 km, S
Highway	National Highway (NH-353C)	45 km
	State Highway (SH-363)	22 km
Railway Station	Ballarshah	157 km
Water Body	Bande river	1.75 km, W
	Kappe N	2.95 km, N
	Akeran N	6.04 km, W
	Dumme N	6.07 km, SW
	Jambla river	7.77 km, SE

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

Forest Area/Environmental Zone	Land/Protected Area/Environmental Sensitivity	Yes/No	Details of Certificate/letter/Remarks
Forest Land		Yes	<p>Project Proponent submitted that Forest clearance has been already obtained for 374.90 Ha (comprising 348.09 ha of mine lease area and balance area for approach road and transmission line) vide letter F.No- 8-31/2005 /FC dated 23.03.2007.</p> <p>The Project Proponent has deposited Rs.34,26,51,000/- (Rs. Thirty Four Crores twenty six lakhs fifty one thousand Only) as NPV amount with DCF Bhamragarh in Corporation Bank, New Delhi vide DD no.633149 dated 22.02.2007. The project authority has also given an undertaking to pay the cost of additional amount in case there is an upward revision of rates of NPV. An amount of Rs.2,49,93,618/- (Rs. Two crore forty nine lacs ninety three thousand six hundred and eighteen only) paid towards compensatory afforestation and Rs.8,60,639/- (Rs. Eight</p>

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		lacs sixty thousand six hundred and thirty-nine only) paid for afforestation over 13.00 ha degraded forest area (together deposited through DD no.633149dated 22.02.2007 in CAMPA Fund respectively.
National Park	No	Project Proponent submitted that Wildlife map has been authenticated by Chief Wildlife Warden.
Wildlife Sanctuary	No	
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area(ESA)	No	
Schedule-I species	Yes	Sloth bear and Pea Fowl are the Schedule-I species found in the Study area. List of Flora and Fauna has been vetted by the Forest Dept.
Status of Wildlife Conservation Plan	Yes	Wildlife conservation plan was vetted by Wildlife Institute of India (WII), Dehradun and forwarded to the Principal Chief Conservator of Forests (Wildlife) vide WII-EIA(AR)/Gadchiroli-2005dated 23.10.2006 with a financial provision of Rs. 1,47,03,440/- The Project has deposited Rs.53,25,440/- vide DD no.143677 dated 03.07.2007 in favour of Dy. Conservator of Forests, Bhamragarh. The Dy. Conservator of Forests, Bhamragarh has raised a demand to deposit the balance amount of Rs.93,78,000/-. The amount of Rs.93,78,000/- deposited through RTGS vide UTR no. KKBKR2202210130524 3957 dated 13.10.2022 in favour of Dy. Conservator of Forests, Bhamragarh to this effect. PP also submitted that the different safeguard measures as per approved plan i.e., soil moisture conservation measures, fire protection measures and awareness programs have been implemented.  The Project Proponent has submitted the updated "Site Specific Wildlife Management Plan" to State Forest Department vide letter dated 23.12.2022.

xi. Green belt/plantation details:

Proposed area for green belt/plantation	6.17 Ha (3,750 Saplings during 2022-23 to 2026-27)
Budget for green plant& plantation till the end of life of mine.	Capital Cost - Rs.26 Lakhs Recurring Cost - Rs. 4.0 Lakhs per annum
Budget for nursery	--

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Additional information (if any)	At present gap filling plantation has been carried out in the safety zone area and good avenue plantation in the road from Hedri to Alapalli is also completed. So far, about 18,590 trees have been planted in both these areas. Avenue plantation along mineral transport road area will be carried out.
7.5 m barrier & non-mineralized zone	6.17 Ha

xii. Baseline details:

Baseline Data (Air / Water / Noise / Soil / Ground water table/ others)			
Period of baseline data collection	March - May 2022		
Season (Summer / Pre-monsoon / Post-monsoon / Winter)	Summer Season		
Predominant Wind direction (From)	W & NW		
Ambient Air Quality (10 locations)	PP reported that the concentrations of PM10 ranged from 47.7-78.6 µg/m <sup>3</sup> , PM2.5: 18.8-34.9 µg/m <sup>3</sup> , SO2: 9.0-22.4 µg/m <sup>3</sup> and NO2: 14.1-27.8 µg/m <sup>3</sup> .		
Noise level (10 locations)	Day Time: 51.9 – 65.1 dB (A) Night Time: 40.6 – 59.6 dB (A)		
Water Quality	Parameters	Surface water (3 locations)	Ground water (9 locations)
	pH at 25°C	7.10 – 7.52	6.99 – 8.02
	Total Dissolved Solids, mg/l	255 - 360	268 - 712
	Chloride as Cl-, mg/l	45 - 55	52.50 – 202
	Total Hardness (as CaCO <sub>3</sub> ), mg/l	120 - 245	180 – 585
	Total Alkalinity (as CaCO <sub>3</sub> ), mg/l	135 – 205	160 – 410
	Sulphates as SO <sub>4</sub> <sup>2-</sup> , mg/l	30.40 – 62.50	22.80 – 73
	Iron as Fe, mg/l	0.07 – 0.15	0.03 – 0.12
	Nitrate Nitrogen as N, mg/l	2.60 – 3.41	0.60 – 22.50
	Fluoride as F, mg/l	BDL	BDL
Soil quality (9 locations)	Parameters	Core Zone	Buffer Zone
	pH	7.28	6.98 – 7.76

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	Electrical Conductivity (µmho/cm)	325.6	54.20 – 312.50
	Total Organic Carbon (%)	0.92	0.21 – 1.12
	Nitrate as N (Kg/Ha)	145.6	135.60 – 231.70
	Phosphorus (Kg/Ha)	7.23	3.10 – 7.82
	Sodium (mg/kg)	25.9	10.63 – 18.40
	Potassium (Kg/Ha)	9.62	8.81 – 152.80
Traffic Study	The maximum V/C ratio on these stretches of the road is 0.17 which is under category “A” LOS as per the IRC guideline. Post expansion, there will be additional of 59 Trips/Hr. Further the maximum V/C ratio will go up to 0.28 and the level of service (LOS) will be in Category “B” which represents a zone of stable flow. Existing road network of the area easily accommodate the additional traffic due to expansion of 10 MTPA without any adverse impact.		

xiii. Public Hearing (PH) Details:

Advertisement for PH with date (Name of major national daily and one regional vernacular daily newspaper)	23.09.2022 Local Newspaper: Daily Lokmat (Marathi) National Newspaper: The Times of India (English)
Date of PH	27.10.2022
Venue	NiyojanBhavan, District Collector Office, Gadchiroli District, Maharashtra
Chaired by	Additional District Magistrate
Main issues raised during PH	Public asked for improvements in village road infrastructure, electricity, education facilities, medical facilities, employment etc. and expressed their concern about water quality, road, etc.
Budget proposed for addressing issues raised during PH	Rs.58.71 Crores (Capital cost), Rs. 21.45 crores per annum (Recurring cost)

xiv. Details of CTE/CTO, Certified Compliance Report, Past production details: -

Consent to Operate (CTO)	Consent to Operate issued by the Maharashtra Pollution Control Board vide Lr No: Format1.0/CC/UAN.NO0000122378/CO2111000155 dated 02.11.2021 for production capacity of 3.0 MTPA for the period upto 31.03.2023.
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Certified Compliance Report (CCR)	Certified Compliance Report (CCR) issued by the Integrated Regional Office (IRO), Nagpur vide F.No: 3-32/2006 (ENV)/10689 dated 02.12.2022. Site was conducted by IRO on 26.10.2022.
Past production details	The District Mining Officer, Gadchiroli vide Lr No. Desk-2/Sr.Cl.Mining/Lloyds/34722 dated 28.06.2022 has certified the past production detail for the period 2007-08 to 2021-22.

xv. Details of Violation:

Initially, the Project Proponent obtained EC on 29.05.2006 under EIA, 1994 and the EC was valid for a period of 5 years only and the Project Proponent operated the mine after 2011 without obtaining EC under EIA Notification, 2006 and hence the project falls under violation case. The Project Proponent did not submit the application under Ministry's Notification S.O 1530(E) dated 06.04.2018. The Project Proponent submitted the revised budget for the violation period 2011-12 to 2022-23 (upto 4<sup>th</sup> Dec, 2022) that included the damage assessment from Rs 7.30 Cr to Rs 26.64 Cr and the penalty provisions as per SOP dated 07.07.2021 from Rs 0.59 Cr to Rs 5.48 Cr.

- a) Remediation, Natural Resource Augmentation Plan, Community Resource Augmentation Plan:

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**Remediation Plan**

S.No.	Component Remediation	Remediation Proposed	Description	Locations	Rate	Total Qty.	Total Cost	Year I	Year II	Year III
1a.	Land Environment	Soil Moisture Conservation and Augmentation of ground water resources	i.Series of SMC in villages	13 Villages including Parsalgundi GP villages	@10 Lakhs each	13	130,00,000	65,00,000	60,00,000	5,00,000
			ii. Augmentation of ground water resources	2. Aldandi, Bande, Surjagarh, Parsalgundi	@6 Lakhs each	4	24,00,000	8,00,000	8,00,000	8,00,000
2a.	Air Environment	Dust Suppression	i. Augmentation/ Revamping of village roads	13 Villages including Parsalgundi GP villages	LS	LS	147,00,000	100,00,000	40,00,000	7,00,000
			ii.Truck mounted road sweep machine for mineral transportation roads	2. NH and State Highways (Etapali to Asthi-353)			65,00,000	55,00,000	5,00,000	5,00,000
2b.	Plantation	Plantation / Greenbelt development & Block Plantation	i. 12000 Nos. Sapling avenue plantation along the roads including maintenance for 3 years	1. Etapali to Allapali & Etapalli to Bholapali	@Rs.175/ plant	12000	21,00,000	7,00,000	7,00,000	7,00,000
			ii.Block Plantation in villages (@2000 saplings / village)	2. Parsalgundi, Bande, Hedri	@Rs.115/ plant	3x2000	6,90,000	2,30,000	2,30,000	2,30,000
3a.	Water Environment	Water Treatment Plant	i. Water Treatment Plant in villages	1. Parsalgundi, Bande, Hedri	@Rs.5Lakh each	3	15,00,000	5,00,000	5,00,000	5,00,000
			ii. Renovation of village ponds with bathing construction of ghats	2. Hedri, Parsalgundi, Peta, Todsa, Udera,	@Rs.2lakh each	5	10,00,000	4,00,000	4,00,000	2,00,000
			iii. Provision of Bore Wells with overhead	13 Villages including	@Rs.7 Lakhs each	13	91,00,000	70,00,000	11,00,000	10,00,000

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			tanks for supply of drinking water	Parsulgundi GP villages							
4a.	Public Health & Safety	Health Camp, Awareness, Mosquito control	i. Regular health camp in surrounding villages	1. Health Camps once in a year	LS	LS	26,00,000	12,00,000	10,00,000	4,00,000	
			ii. Malaria & Breast Cancer Prevention programs	2. 13 no. of villages			13,00,000	6,00,000	4,00,000	3,00,000	
			iii. Health Helpers in each villages	3. Hedri, Surjagarh, Pursulgundi, Manger, Bande, Peta, Parsalgundi, Aldandi, Todsa, Nander			31,20,000	15,20,000	10,00,000	6,00,000	
			iv. Door step ambulance facility for surrounding villages	4. Ambulance facility			3500000	25.00,000	5.00,000	5.00,000	
			v. Establishment of Sanitary napkins ATM vending machine	5. Pursulgundi, Hedri & Aldandi			15,00,000	5,00,000	5,00,000	5,00,000	
5a.	Biological Environment	Eco park, Encouragement of Bamboo Plantation	i. Development of 1 no. of Eco Park as per guidelines of Forest Dept.	1. Etapali	LS	LS	15,00,000	8,00,000	5,00,000	2,00,000	
			ii. Development of Bamboo plantation in villages	2. Hedri, Surjagarh, Pursulgundi, Manger, Bande, Peta, Parsalgundi, Aldandi, Todsa, Nander			7,50,000	3,50,000	2,00,000	2,00,000	
Total							6,52,60,000	3,91,00,000	183,30,000	78,30,000	

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**Natural Resource Augmentation Plan**

S.no	Component	Activity Proposed	Description	Locations	Rate	Total Qty.	Total Cost	Year I	Year II	Year III
							(Rs.)			
1a.	Natural Resource Augmentation Plan	Conservation & Development of ecology and bio diversity	Setting of an Apiary and employment provided to local villagers and production of honey bee in each village	Etapalli for Apiary Centre and cultivation in villages	LS	1	8,40,000	3,00,000	3,00,000	2,40,000
1b.			Promotion of apiculture, fisheries, dairy farm etc.	13 Villages including Parsulgundi GP villages	LS	LS	92,00,000	40,00,000	40,00,000	12,00,000
1c.			Augmentation of Village ponds	Aldandi, Tumurgunda, Parsalgundi, Todsa, Yelchal,	@Rs. 5 lakhs/VP	5	25,00,000	15,00,000	6,00,000	4,00,000
2a.		Ground Water Recharge & Water Conservation	5 Nos. Rain water harvesting pits to recharge ground water level of the area.	Peta, Parsalgundi, Aldandi, Todsa, Nander	@Rs. 3 lakh each	5	10,00,000	5,00,000	3,00,000	2,00,000
2b.			Provision of loose boulder gabion checks in village areas	Aldandi, Hedri, Surjagarh, Manger, Bande, Jharweda	@Rs. 3 Lakh each	6	18,00,000	12,00,000	3,00,000	3,00,000
Total							153,40,000	75,00,000	55,00,000	23,40,000

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**Community Resource Augmentation Plan**

S.no	Component	Activity Proposed	Description	Locations	Rate	Total Qty.	Total Cost	Year I	Year II	Year III
							(Rs.)			
1a.	Community Resource Augmentation Plan	Socio-Economic Environment	i. Local employment (Training)	1. Local villagers	1000 nos.	LS	50,00,000	35,00,000	10,00,000	5,00,000
			ii. Garment Unit for Women	Hedri Village	--	LS	7,00,00,000	5,00,00,000	2,00,00,000	---
			ii. Deployment of SHG and financial aid.	2.Peta, Parsalgundi, Aldandi, Todsa, Nander	@Rs. 5 Lakh/ SHG	5	25,00,000	15,00,000	5,00,000	5,00,000
			iii. Kendu leaf hub center for collection and dispersal	3. Each village in 3 Panchayats	LS	3	6,00,000	2,00,000	2,00,000	2,00,000
			iv. Promotion of local play, cultures,	4. Each village and central academy at Krishnar	@Rs.2 Lakhs each	13	13,00,000	5,00,000	5,00,000	3,00,000
2a.	Community Resource Augmentation Plan	Socio-Economic Environment	Construction & maintenance of Sports facilities like Basketball court, Hockey, Badminton court for children from the nearby areas. The same will be maintained for a further period of two years.	Central Sports Academy at Krishna	LS	LS	1,30,00,000	50,00,000	40,00,000	40,00,000
			Development of Archery Academy							
	Community Resource Augmentation Plan	Infrastructure Development	Encouragement of Common Vehicle Repair Shops in Main Chowks .	1. Etapali, Allapali, Aasthi	LS	LS	9,00,000	3,00,000	3,00,000	3,00,000
			CBSE Residential	Hedri			690,00,000	400,00,000	290,00,000	--

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			School							
			10 bedded Primary Health Center	Hedri			150,00,000	150,00,000	---	--
			Art & Craft center in each Panchayat – 2 nos.	3. Pursulgudi & Etapali			20,00,000	12,00,000	4,00,000	4,00,000
			Study Library in each Panchayat – 2 nos.	4. Pursulgudi & Etapali			5,00,000	2,00,000	2,00,000	1,00,000
			Network Tower establishment for communication	5. Communication facility in surroundings			60,00,000	50,00,000	6,00,000	4,00,000
Sub Total III (Rs.)							18,58,00,000	12,24,00,000	5,67,00,000	67,00,000
Grand Total (I + II + III) (Rs.)							26,64,00,000	16,90,00,000	8,05,30,000	1,68,70,000

**Summary of Remediation, Natural Resource Augmentation Plan, Community Resource Augmentation Plan**

S. No	Description	Estimated Cost (Rs. Crores)
1	Remediation Plan	6.53
2	Natural Resource Augmentation Plan	1.53
3	Community Resource Augmentation Plan	18.58
	Total Damage amount to be given under bank guarantee	Rs 26.64

**b) Penalty provisions as per Ministry's SOP dated 07.07.2021**

The Project Proponent submitted the revised estimation of penalty provisions as per SOP dated 07.07.2021 as mentioned in table below:

Particulars	Amount (Rs in Cr)
1 % of the capital cost of Rs. 54 Crores	Rs.0.54 Crores
0.25% of total turnover of Rs. 1975.54 Crores	Rs.4.94 Crores
Revised Penalty to be paid to SPCB	Rs.5.48 Crores

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xvi. Rehabilitation & Resettlement (R & R) Plan: The Project Proponent submitted that the mining activities will be carried out within the mine lease area only. The entire mine lease area is a Forest area falling under Bhamragarh Reserve forest. The Forest clearance for the entire forest area is obtained. There is no population within the ML area. Hence, R& R does not arise.

xvii. Details of Court Cases:

Court Case	<p>The Ministry vide letter dated 18.07.2022 requested the Secretary, Dept. of Environment to initiate action under the provisions of section 19 of the Environment (Protection) Act, 1986.</p> <p>The Maharashtra Pollution Control Board filed a case against Lloyds Metal and Energy Ltd under E (P) Act 1986 (Section 15, 16 and 19) vide case no 128/2022 on 06.12.2022. PP also submitted the certified copy of the court case filed before the Hon'ble Judicial Magistrate, First Class Aheri vide case no: 128/2022 on 06.12.2022.</p> <p>The Project Proponent submitted an undertaking vide letter dated 28.12.2022 stating that there are no other pending cases against Surjagarh Iron Ore mines of Lloyds Metals &amp; Energy Ltd.</p>
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xviii. Affidavit/Undertaking details:

Undertaking of Project Proponent	Project Proponent submitted an undertaking vide letter dated 18.06.2022 stating that "we undertake to comply all statutory requirements and judgment of Hon'ble Supreme Court dated 2 <sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India &Ors".
Declaration of Project Proponent	Project Proponent has given declaration that "the data given in the EIA/EMP report are factually correct to the best of our knowledge".
Undertaking of Consultant	Consultant submitted an undertaking vide letter no nil stating that "the prescribed ToR is complied with and incorporated in the EIA Report. 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".

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

Activities	Capital cost (Rs. in Crores)	Recurring cost (Rs. in Crores/annum)
Air Environment	2.255	0.485
Water Environment	0.400	0.141
Plantation	0.440	0.085

Safety	0.500	0.011
Other	0.830	0.689
Total	4.425	1.411

xx. Details of project cost and employment:

Particulars	(Rs. In Crore)
Total cost of EMP (Capital Cost of EMP + capital cost of Public hearing)	Capital Cost of EMP – Rs.4.425 Crores Capital Cost of Public Hearing – Rs.58.71 Crores Total Cost of EMP = Rs.63.135 Crores
Project Cost	Rs 364.28 crores.
Employment	5000 people (Direct and Indirect)

### **3. Observation and Recommendation of the Committee:**

The EAC noted that the initially, the Project Proponent obtained EC on 29.05.2006 under EIA, 1994 and the EC was valid for a period of 5 years, as per Hon'ble Supreme Court Judgement dated 2.08.2017 and the Project Proponent operated the mine after 2011 without obtaining EC under EIA Notification, 2006 and hence the project falls under violation case as per Ministry's SOP dated 07.07.2021.

The Project Proponent presented the KML file to indicate the site features in the study area. The Project Proponent informed the EAC that on the northern side, the nearest village is Moharli, and on western side, the nearest village is Bande, on eastern side, the nearest village is Mallampardi and on the southern side, the nearest village is Hedri. The area is approachable from Gadchiroli via Etapalli-Allapalli- Ashti Road and there are three railway sidings are located in this region. The Project Proponent informed the EAC that the mine is presently operating with a production capacity of 3.0 MTPA of Iron Ore and now it is proposed to expand the production to 10.0 MTPA (ROM).

The Project Proponent informed the EAC that the mine was in operation since 2007. PP also informed that the mine was not in smooth operation and hampered from time to time being a sensitive area (Gadchiroli) owing to frequent Naxalite issues. The mine operation was disturbed from time to time with frequent Naxalite issues from 2007 to 2019 which includes major incidents in the year 2007, 2011, 2013, 2016 and 2019. Till the year 2021-22, only 3.207 Mill. Tons of Iron Ore was mined and 85% of the granted EC capacity (3.0 MTPA) was achieved only in the 2021-22. Since the past 14 years, no progress was made in mine development due to the reason which was beyond the control of the Project Proponent. The company suffered irreparable loss of several lives of employees apart from the huge financial loss. Further, the Project Proponent informed the EAC that the various additional measures have been undertaken to operate this mine. The Proponent also informed that the several infrastructure facilities, health care facilities and basic amenities have been provided to the local community.



The Project Proponent presented the certified compliance report dated 02.12.2022 issued by the Integrated Regional Office, Nagpur before the EAC. The Project Proponent informed the EAC that the land has been already identified for establishment of Biodiversity Park and will be developed. There is also no movement of animals in the vicinity of the mine lease area. The EAC opined that the Project Proponent needs to install the cameras all around the mine lease area to identify and ensure the movement of animals. The EAC noted that the earlier Wildlife Conservation Plan was vetted by the Wildlife Institute of India (WII) in the year 2006 and the Project Proponent needs to update the Wildlife Conservation Plan. The Project Proponent informed the EAC that the latest Site Specific Wildlife Management Plan has been prepared and the Project Proponent submitted the latest Wildlife Conservation Plan to State Forest Department vide letter dated 23.12.2022. The EAC asked the Project Proponent whether any beneficiation is proposed. The Project Proponent informed that no beneficiation is proposed and only dry screening proposed and no beneficiation facilities exist in the mine lease area. The Project Proponent informed that the pilot scale study for utilization of Banded Hematite Quartzite (BHQ) is under process. The EAC was of the view that the low grade Iron Ore needs to be effectively utilized. The EAC observed that the Project Proponent is proposing to install stationery integrated Screening and crushing plant of 2000 TPH which is not a part of the prescribed Terms of Reference (ToR) issued by the Ministry vide letter dated 18.07.2022. However, the Project Proponent informed the EAC that the proposal to install stationery integrated Screening and crushing plant of 2000 TPH has been included in the EIA/EMP report and discussed during public hearing. The Project Proponent informed the EAC that the budget of Rs.58.71 Crores (Capital cost) has been earmarked to address the issues raised during Public Hearing with a timeline of three years.

The EAC noted that the Project Proponent has calculated the ecological damage assessment from the year 2018 instead of the year 2011 which is not relevant. The EAC asked the Project Proponent to revise the budget of the damage assessment and the penalty provisions as per SOP dated 07.07.2021 for the violation period by considering it from the year 2011 onwards. The Project Proponent vide email dated 27.12.2022 submitted the revised budget for the violation period 2011-12 to 2022-23 (upto 4<sup>th</sup> Dec, 2022) that included the damage assessment from Rs 7.30 Cr to Rs 26.64 Cr and the penalty provisions as per SOP dated 07.07.2021 from Rs 0.59 Cr to Rs 5.48 Cr. Then the proposal was again placed before the EAC on 28.12.2022 for due deliberations on the revised damage assessment and penalty provisions. The project proponent submitted the damage assessment and penalty incurred up to date of filing of application for EC under violation SOP for the period 2011-12 to 2022-23 (upto 4<sup>th</sup> Dec, 2022). The EAC agreed with the submission of the Project Proponent's revised estimation for the violation period 2011-2022-23 (upto 4<sup>th</sup> Dec) for the damage assessment of Rs 26.64 Cr and Rs 5.48 Cr as per penalty provisions of SOP dated 07.07.2021. The Project Proponent also informed the EAC that the Maharashtra Pollution Control Board filed a case against M/s

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Lloyds Metal and Energy Ltd under Section 15, 16 and 19 of Environment (P) Act 1986 vide case no 128/2022 (CNR No: MHGA070010902022) on 06.12.2022 and also the PP submitted the certified copy of the court case filed before the Hon'ble Judicial Magistrate, First Class Aheri vide case no: 128/2022 on 06.12.2022. Further, the Project Proponent submitted an undertaking vide letter dated 28.12.2022 stating that there are no other pending cases against Surjagarh Iron Ore mines of Lloyds Metals & Energy Ltd.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC (Non-Coal Mining) **recommended** the proposal during the EAC meeting held during 27-28 December, 2022 for grant of Environmental Clearance (EC) under Ministry's SOP dated 07.07.2021 for Surjagarh Iron Ore Mine of M/s. Lloyds Metals & Energy Limited for mining of Iron Ore with production capacity of Iron Ore: 10.0 MTPA (ROM), Waste: 1.769 MTPA (Total Excavation:11.769 MTPA) along with crushing and screening plant (250 TPH – 2 No. Semi mobile Jaw Crusher, 200 TPH – 4 No. Mobile Jaw Crusher, 200 TPH – 4 Nos. Mobile/Semi Mobile Screens, 400 TPH – 5 Nos. Mobile/Semi Mobile Screens, 200 TPH – 6 Nos. Mobile Cone Crusher) in the mine lease area of 348.09 Ha, located near Village Surjagarh, Tehsil Etapalli, District Gadchiroli, Maharashtra subject to the following specific conditions in addition to the standard EC conditions applicable for non-coal mining projects: -

- i. This Environmental Clearance will be valid upto 9 years as the life of the mine is 9 years.
- ii. EAC recommended for an amount of Rs. 26.64/- Cr 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:

**Summary of amount for Remediation Plan, Natural Resource Augmentation Plan and Community Resource Augmentation Plan**

S. No	Description	Estimated Cost (Rs. Crores)
1	Remediation Plan	6.53
2	Natural Resource Augmentation Plan	1.53
3	Community Resource Augmentation Plan	18.58
	Total	26.64

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**Remediation Plan**

S.No.	Component Remediation	Remediation Proposed	Description	Locations	Rate	Total Qty.	Total Cost	Year I	Year II	Year III
1a.	Land Environment	Soil Moisture Conservation and Augmentation of ground water resources	i.Series of SMC in villages	13 Villages including Parsulgundi GP villages	@10 Lakhs each	13	130,00,000	65,00,000	60,00,000	5,00,000
			ii. Augmentation of ground water resources	2. Aldandi, Bande, Surjagarh, Parsalgundi	@6 Lakhs each	4	24,00,000	8,00,000	8,00,000	8,00,000
2a.	Air Environment	Dust Suppression	i. Augmentation/ Revamping of village roads	13 Villages including Parsulgundi GP villages	LS	LS	147,00,000	100,00,000	40,00,000	7,00,000
			ii.Truck mounted road sweep machine for mineral transportation roads	2. NH and State Highways (Etapali to Asthi-353)			65,00,000	55,00,000	5,00,000	5,00,000
2b.	Plantation	Plantation / Greenbelt development & Block Plantation	i. 12000 Nos. Sapling avenue plantation along the roads including maintenance for 3 years	1. Etapali to Allapali & Etapalli to Bholapali	@Rs.175/ plant	12000	21,00,000	7,00,000	7,00,000	7,00,000
			ii.Block Plantation in villages (@2000 saplings / village)	2. Parsalgundi, Bande, Hedri	@Rs.115/ plant	3x2000	6,90,000	2,30,000	2,30,000	2,30,000
3a.	Water Environment	Water Treatment Plant	i. Water Treatment Plant in villages	1. Parsalgundi, Bande, Hedri	@Rs.5Lakh each	3	15,00,000	5,00,000	5,00,000	5,00,000
			ii. Renovation of village ponds with bathing construction of ghats	2. Hedri, Parsalgundi, Peta, Todsa, Udera,	@Rs.2lakh each	5	10,00,000	4,00,000	4,00,000	2,00,000
			iii. Provision of Bore Wells with overhead	13 Villages including	@Rs.7 Lakhs each	13	91,00,000	70,00,000	11,00,000	10,00,000

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			tanks for supply of drinking water	Parsulgundi GP villages						
4a.	Public Health & Safety	Health Camp, Awareness, Mosquito control	i. Regular health camp in surrounding villages	1. Health Camps once in a year	LS	LS	26,00,000	12,00,000	10,00,000	4,00,000
			ii. Malaria & Breast Cancer Prevention programs	2. 13 no. of villages			13,00,000	6,00,000	4,00,000	3,00,000
			iii. Health Helpers in each villages	3. Hedri, Surjagarh, Pursulgundi, Manger, Bande, Peta, Parsalgundi, Aldandi, Todsa, Nander			31,20,000	15,20,000	10,00,000	6,00,000
			iv. Door step ambulance facility for surrounding villages	4. Ambulance facility			3500000	25.00,000	5.00,000	5.00,000
			v. Establishment of Sanitary napkins ATM vending machine	5. Pursulgundi, Hedri & Aldandi			15,00,000	5,00,000	5,00,000	5,00,000
5a.	Biological Environment	Eco park, Encouragement of Bamboo Plantation	i. Development of 1 no. of Eco Park as per guidelines of Forest Dept.	1. Etapali	LS	LS	15,00,000	8,00,000	5,00,000	2,00,000
			ii. Development of Bamboo plantation in villages	2. Hedri, Surjagarh, Pursulgundi, Manger, Bande, Peta, Parsalgundi, Aldandi, Todsa, Nander			7,50,000	3,50,000	2,00,000	2,00,000
Total							6,52,60,000	3,91,00,000	183,30,000	78,30,000

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**Natural Resource Augmentation Plan**

S.no	Component	Activity Proposed	Description	Locations	Rate	Total Qty.	Total Cost	Year I	Year II	Year III
							(Rs.)			
1a.	Natural Resource Augmentation Plan	Conservation & Development of ecology and bio diversity	Setting of an Apiary and employment provided to local villagers and production of honey bee in each village	Etapalli for Apiary Centre and cultivation in villages	LS	1	8,40,000	3,00,000	3,00,000	2,40,000
1b.			Promotion of apiculture, fisheries, diary farm etc.	13 Villages including Parsulgundi GP villages	LS	LS	92,00,000	40,00,000	40,00,000	12,00,000
1c.			Augmentation of Village ponds	Aldandi, Tumurgunda, Parsalgundi, Todsa, Yelchal,	@Rs. 5 lakhs/VP	5	25,00,000	15,00,000	6,00,000	4,00,000
2a.		Ground Water Recharge & Water Conservation	5 Nos. Rain water harvesting pits to recharge ground water level of the area.	Peta, Parsalgundi, Aldandi, Todsa, Nander	@Rs. 3 lakh each	5	10,00,000	5,00,000	3,00,000	2,00,000
2b.			Provision of loose boulder gabion checks in village areas	Aldandi, Hedri, Surjagarh, Manger, Bande, Jharweda	@Rs. 3 Lakh each	6	18,00,000	12,00,000	3,00,000	3,00,000
Total							153,40,000	75,00,000	55,00,000	23,40,000

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**Community Resource Augmentation Plan**

S.no	Component	Activity Proposed	Description	Locations	Rate	Total Qty.	Total Cost	Year I	Year II	Year III
							(Rs.)			
1a.	Community Resource Augmentation Plan	Socio-Economic Environment	i. Local employment (Training)	1. Local villagers	1000 nos.	LS	50,00,000	35,00,000	10,00,000	5,00,000
			ii. Garment Unit for Women	Hedri Village	--	LS	7,00,00,000	5,00,00,000	2,00,00,000	---
			ii. Deployment of SHG and financial aid.	2.Peta, Parsalgundi, Aldandi, Todsa, Nander	@Rs. 5 Lakh/ SHG	5	25,00,000	15,00,000	5,00,000	5,00,000
			iii. Kendu leaf hub center for collection and dispersal	3. Each village in 3 Panchayats	LS	3	6,00,000	2,00,000	2,00,000	2,00,000
			iv. Promotion of local play, cultures,	4. Each village and central academy at Krishnar	@Rs.2 Lakhs each	13	13,00,000	5,00,000	5,00,000	3,00,000
2a.			Construction & maintenance of Sports facilities like Basketball court, Hockey, Badminton court for children from the nearby areas. The same will be maintained for a further period of two years.	Central Sports Academy at Krishna	LS	LS	1,30,00,000	50,00,000	40,00,000	40,00,000
			Development of Archery Academy							

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		Infrastructure Development	Encouragement of Common Vehicle Repair Shops in Main Chowks .	1. Etapali, Allapali, Aasthi	LS	LS	9,00,000	3,00,000	3,00,000	3,00,000
			CBSE Residential School	Hedri			690,00,000	400,00,000	290,00,000	--
			10 bedded Primary Health Center	Hedri			150,00,000	150,00,000	---	--
			Art & Craft center in each Panchayat – 2 nos.	3. Pursulgudi & Etapali			20,00,000	12,00,000	4,00,000	4,00,000
			Study Library in each Panchayat – 2 nos.	4. Pursulgudi & Etapali			5,00,000	2,00,000	2,00,000	1,00,000
			Network Tower establishment for communication	5. Communication facility in surroundings			60,00,000	50,00,000	6,00,000	4,00,000
Sub Total III (Rs.)							18,58,00,000	12,24,00,000	5,67,00,000	67,00,000

- iii. Total budgetary provision with respect to Remediation plan and Natural & Community Resource Augmentation plan is Rs. 26.64/- Cr. Therefore, Project Proponent shall be required to submit a bank guarantee of an amount of Rs. 26.64/- Cr towards Remediation plan and Natural and Community Resource Augmentation plan with the SPCB prior to the grant of EC.
- iv. 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.
- v. The Project Proponent shall be required to remit the amount of Rs 5.48 Cr as per penalty provisions of SOP dated 07.07.2021 into the fund maintained by the concerned State Pollution Control Board. EC shall be issued on submission of proof regarding the same.
- vi. 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 2<sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- vii. 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 2<sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- viii. 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.
- ix. The Project Proponent needs to monitor the air quality, noise level and ground vibration during drilling and blasting at the edge of the mine, near the village, crusher and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Integrated Regional Office.
- x. The Project Proponent shall effectively utilize the low grade Iron ore.



- xi. The Project Proponent has submitted the “Site Specific Wildlife Management Plan” to State Forest Department vide letter dated 23.12.2022. The instant EC shall be functional upon the proof of submission of funds for updated/ approved above said plan and its initiation/commencement by Forest Department to IRO/Ministry. Till the time “Site Specific Wildlife Management Plan” is approved, funds are deposited with State Govt. and plan is initiated/commenced, the project proponent shall restrict its production upto 3.0 MTPA.
- xii. The Project Proponent should follow-up the status of implementation on Wildlife Management and Safety Plan from the Forest Officials and the same shall be submitted to the Ministry’s Integrated Regional Office in the six monthly compliance report.
- xiii. The Project Proponent needs to install the cameras all around the mine lease area to identify and to ensure the movement of animals.
- xiv. The Project Proponent needs to establish the parks like butterfly park, biodiversity park etc., in the already identified land as committed by the Project Proponent before the EAC.
- xv. The Project Proponent needs to implement the recommendations of the Slope stability study carried out by CSIR- Central Institute of Mining and Fuel Research, Dhanabad. The implementation status of the same shall be submitted to the Ministry’s Integrated Regional Office (IRO) along with the six monthly compliance report.
- xvi. The Project Proponent shall adhere to the recommendations of the Ground vibration study carried out by CSIR- Central Institute of Mining and Fuel Research, Dhanabad. The implementation status of the same shall be submitted to the Ministry’s Integrated Regional Office (IRO) along with the six monthly compliance report.
- xvii. The Project Proponent needs to install the permanent water sprinklers along the haul road and the approach road. 10 nos. of fog canon/mist sprayer of atleast 40 m throw shall be installed at various locations in the mine lease area. Effective dust suppression system shall be adopted at the transportation site and in the other parts of the mining lease to arrest the fugitive dust emission.
- xviii. 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. 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 shall be carried out at periodic intervals.

- xix. Vacuum cleaner for cleaning of dust from permanent haul road within the lease area and workshop for vehicle washing facility shall be provided.
- xx. The Project Proponent needs to install the proposed rooftop rainwater harvesting structure and additional rainwater harvesting structures within 6 months from the date of issue of this EC.
- xxi. The budget of Rs. 58.71 Crores to address the concerns raised by the public including 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.
- xxii. The Project Proponent should adopt the proper mitigation measures as proposed under EMP with budgetary provision of Rs.4.425 Crores. 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 Integrated Regional Office.
- xxiii. 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.
- xxiv. The Project Proponent needs to complete the entire peripheral plantation under green belt, safety barrier plantation and gap plantation within three years from the start of mining operations. 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. 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.

- xxv. 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 Integrated Regional Office which should be monitorable and verifiable. The period of addressing these issues is restricted to a period of 3 years.
- xxvi. As committed by the Project Proponent, multi specialty hospital shall be established.
- xxvii. The Project Proponent shall provide the solar pumps to the local farmers.
- xxviii. The Project Proponent shall explore the possibility of using electric/CNG/Solar based equipment's and machineries to reduce the diesel consumption.
- xxix. Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.
- xxx. 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.
- xxxi. The Project Proponent needs to obtain the permission for withdrawal of Surface water from the Department of Water Resources, Government of Maharashtra before start of mining operations of this instant EC.
- xxxii. 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.
- xxxiii. The mining lease holder shall, after ceasing mining operations, under take regrassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to condition which is fit for growth of fodder, flora and fauna etc. The implementation report of the above said condition shall be submitted to the Ministry's Integrated Regional Office.

xxxiv. The Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.

**1.2 Barsua-TaldihKalta Iron mines of M/s SAIL for expansion in production from 8.05 MTPA to 16.0 MTPA (ROM), Topsoil/OB/IB: 3.92 MTPA and handling 2.0 MTPA Sub-grade dumps/Tailings (Total excavation: 22.0 MTPA) and installation of new Dry Processing Plants of 7.0 MTPA for Taldih& 4 MTPA for Kalta and augmentation of existing 3.5 MTPA Barsua Beneficiation Plant along with adequate loading, siding and associated infrastructure in the amalgamated mine lease area of 2558.581 ha [FC available 2419.871 ha + non-forest land 138.710 ha] out of 2564.323 ha, located at Tantra & Bahamba Villages and Toda RF under Koira Tehsil, Sundargarh District, Odisha – [File. No: J-11015/351/2006-IA.II(M), Proposal No: IA/OR/MIN/291173/2021 dated 31.08.2022; Consultant: MECON Limited] - Environmental Clearance (Expansion)**

The instant proposal of M/s SAIL is for expansion of Barsua-TaldihKalta Iron mines from 8.05 MTPA to 16.0 MTPA (ROM), Topsoil/OB/IB: 3.92 MTPA and handling 2.0 MTPA Sub-grade dumps/Tailings (Total excavation: 22.0 MTPA) and installation of new Dry Processing Plants of 7.0 MTPA for Taldih& 4.0 MTPA for Kalta and augmentation of existing 3.5 MTPA Barsua Beneficiation Plant along with adequate loading, siding and associated infrastructure in the amalgamated mine lease area of 2558.581 ha [FC available 2419.871 ha + non-forest land 138.710 ha] out of 2564.323 ha, located at Tantra & Bahamba Villages and Toda RF under Koira Tehsil, Sundargarh District, 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 amalgamated mine lease area falls under the Survey of India Toposheet No: 73G/1 (F45N1) and bounded by Latitude from 21°49'25.43880"N to 21°59'50.88516"N and Longitude from 85°07'43.73832"E to 85°13'53.48136"E and falls in Seismic Zone-II.
- ii. The proposed project activity is listed at schedule no. 1(a) Mining of Minerals and 2(b) Mineral beneficiation and falls under Category "A" of the schedule of the EIA Notification, 2006 and appraised at the Central level. PP submitted that Odisha-Jharkhand inter-state boundary is located at a distance of ~0.3 km, N from the mine lease area.
- iii. The proposal was earlier considered in the 4<sup>th</sup>EAC (Non-Coal Mining) meeting held during 28-29 September, 2022 wherein the EAC deferred the proposal. The Project Proponent submitted the information on 29.11.2022 in Parivesh portal and accordingly the proposal was reconsidered in the 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022.

**Minutes of 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022**

Based on observation of EAC, compliance of observation of EAC made by Project Proponent, are detailed below:

S. No	Observation of EAC	Reply by Project Proponent
1	<p>The Project Proponent needs to specifically assess the impact of biological environment while laying the conveyor belt from Kalta to Roxy railway siding through forest land. PP also needs to submit the timeline for commencement of the conveyor belt.</p>	<p>The Project Proponent submitted that it is proposed to construct an overland Long-Distance Belt Conveyor (LDBC) directly from Kalta Mines to Roxy Railway Siding to transport sized iron ore from the mine to the railway siding. The LDBC shall replace the existing system of road transport through NH-520. The proposed mode of ore transport will comply 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” w.r.t. SOTM (Suggested Ore Transport Mode).</p> <p>The proposed conveyor route is about 16 km long; whereas the existing evacuation of ore by road (NH-520) is about 18 km long. The proposed conveyor shall contribute to reduction of traffic on NH-520 as SAIL’s trucks will no longer use the road for evacuation of ore upto Roxy railway siding. Out of 16 km length of the LDBC, ~2 km will be within the ML and ~14 km will be outside the ML parallel to NH-520. Trestles supporting the conveyor gallery will be ~30m apart with a Right of Way (ROW) of 30 m, each trestle will occupy only about 10 m X 3 m area at ground level. The gallery of the LDBC will be located at a height of 12m above the ground profile of the alignment with minimum trestles for free movement of animals in the forest. Overall, the system will leave minimum footprint on the forest land, limited to the trestle support system only.</p> <p><u>Impact on biological environment:</u></p> <p>i. The proposed conveyor route passes</p>

		<p>through forest areas which is the habitat of several species of wild animals including Elephants and Sloth-Bears.</p> <ul style="list-style-type: none"><li>ii. Movement of mega-wildlife may be affected during the construction phase.</li><li>iii. Man-Animal conflicts during construction phase may occur.</li><li>iv. Clearance of vegetation near trestles is inevitable.</li><li>v. Increase in Noise levels is likely during the construction.</li></ul> <p>PP reported that the Following management strategies will be adopted during the construction and operation phase to minimise impact on wildlife:</p> <ul style="list-style-type: none"><li>i. The construction period shall be from November to May i.e., Non-Monsoon Period. Any unfinished work will be taken up only during the next Non-Monsoon season. This is planned so as to not disturb the wild animals during the Monsoon season, the breeding season of most wild animals.</li><li>ii. Fabrication of the conveyor gallery shall be done off-site and brought to the site for installation.</li><li>iii. The conveyor shall be unilluminated so that lights do not affect behaviour/ activities of nocturnal animals.</li><li>iv. All construction work shall be carried out strictly during day-light hours unless unavoidable (e.g., pouring of concrete for the base of each trestle must be completed at one go).</li><li>v. As laying of the conveyor will be done only during day hours; no lighting arrangement shall be required.</li><li>vi. During construction, excavations for civil structures shall be fenced-off to prevent fall of animals.</li><li>vii. Construction workers will be inculcated</li></ul>
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		<p>not to discard any food and plastic waste at construction sites.</p> <p>viii. The conveyor gallery shall be at least 12 m above the ground to allow free movement of wildlife (an African elephant standing on its hind legs can reach a height of ~10 m with the tip of its trunk; Asian elephants have a shorter reach).</p> <p>ix. Only the trestles supporting the conveyor shall touch the ground.</p> <p>x. The bases of the trestles will be surrounded by engineered walls of sufficient height and strength so that their presence does not influence wild animals' behaviour in any way (e.g., elephants using the trestles as rubbing posts).</p> <p>xi. Material transfer points (Junction-Houses) on the conveyor system will be minimum.</p> <p>xii. Technological measures to minimize noise generation from conveyor operation shall be incorporated into design.</p> <p>xiii. Conveyor shall be covered to prevent fugitive dust generation during dry seasons and discharge of iron ore fines laden sediments during heavy rains.</p> <p>xiv. Overhead maintenance trolley will be provided in place of service road for regular maintenance of the conveyor system during operational phase. Hence, no activity on the forest land during operation of the conveyor is anticipated.</p> <p>PP submitted that it is expected to take about 3 years for installation and commissioning of the proposed Long Distance Belt Conveyor from Kalta to Roxy Siding for evacuation of the iron ore. It is proposed that during construction phase or till the stabilisation of new proposed LDBC system, Kalta Iron Mine will continue to dispatch lump and fines through dump trucks to Roxy Railway Siding at 4 MTPA.</p>
2	The Project Proponent needs to explore the	The Project Proponent submitted that based on the suggestion of the Hon'ble EAC, feasibility of

<p>possibility of laying conveyor belt from Kalta to Taldih within the mine lease area. PP also needs to submit the action plan for strengthening the Barsua railway siding.</p>	<p>laying conveyor from Kalta to Barsua Rly Siding through Taldih within ML for evacuation of iron ore from Kalta Iron Mine has been studied in detail. However, the same may not be feasible in view of the following limitations:</p> <ol style="list-style-type: none"><li>I. <u>Space Availability with in ML and Barsua Siding:</u><ol style="list-style-type: none"><li>i. Barsua-Taldih-Kalta ML area measures 18 km long from N-S direction with narrow width varying from 800m to 1500m in E-W direction. In order to transport iron ore from Kalta through Taldih, the belt conveyor route has to pass through Taldih-D, Taldih-B, Taldih-C Blocks from North to South.</li><li>ii. There is no space in the eastern side of the northern part of Taldih-D Block in between ultimate pit limit and lease boundary. Further, eastern side of TaldihC, B and part of Taldih-D block has been earmarked for OB dumps. It is not prudent to locate the conveyor through the dump area.</li><li>iii. On the western side of Taldih-D, B &amp; C Blocks, the ultimate pit limit extends very close to the lease boundary (avg. 10 m to 30 m). Practically there is no space for construction of corridor of conveyor belt line in between Kalta and Taldih. The limited available space between ultimate pit boundary and lease boundary is kept for the green belt and statutory safety zone of 7.5 m within ML boundary. Moreover, the terrain on the western side is very steep, undulated and thickly vegetated.</li><li>iv. Handling total iron ore to the tune of 14 MTPA planning to produce from Barsua–Taldih–Kalta Mines under the proposed expansion will be difficult at SAIL’s Barsua Valley area as most of the existing infrastructure facilities of Barsua Iron Mine including tailings pond are already established in this area, and further, additional loading &amp; siding facilities to handle iron ore from the Taldih Mine will also be</li></ol></li></ol>
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		<p>located at Barsua Railway Siding.</p> <p>II. <u>Rail Infrastructure:</u></p> <p>i. The rail line from Barsua–Bimlagarh is a single line and busy with the traffic from SAIL's Pvt. Siding, Public Rly. Siding &amp; JSPL Siding including a passenger train. Expansion plan of SAIL's Barsua Siding to dispatch 10 MTPA iron ore has already been approved by South-Eastern Railway. Further, expansion of Kurmitar Iron &amp; Manganese Mines of M/s OMC from 2.4 to 6 MTPA is under progress and the ore will be dispatched from Barsua–Bimlagarh Rail Line in addition to the other private mines. In order to improve the line capacity to take care of additional traffic from the proposed expansion of mines in the region, South-Eastern Railway has planned for augmentation of Bimlagarh– Barsuan Section by one new loading station at Gagnaposh. The Barsua Bimlagarh Rail Line will be saturated with already proposed expansions of SAIL, OMC and other mines in the region. Hence, despatching further additional 4 MTPA iron ore of Kalta Mine from SAIL's Barsua Siding will further add traffic on the Barsua–Bimlagarh Single Line and affect the rail traffic on this Rail Route.</p> <p>III. <u>Other Limitations:</u></p> <p>i. Approval for enhancing capacity of SAIL's Barsua Rly. Siding to 10 MTPA for dispatching of iron ore from Barsua and Taldih Mines has already approved by South-Eastern Railway vide letter No. AS/60B/80/Pt.1 dated 20.01.2020. Detailed Project Report (DPR) / Engineering Scale Plan (ESP) for up gradation of SAIL's Barsua Siding to 10 MTPA has already been prepared &amp; submitted and approval of the same by South-Eastern Railway is under final stages. Execution will start immediately after obtaining Environmental Clearance for the proposed expansion of Barsua-Taldih-</p>
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		<p>Kalta Iron Mines to 16 MTPA expansion.</p> <p>ii. The iron ore produced from Barsua–Taldih–Kalta Mines is supplied to Rourkela Steel Plant (RSP) on continuous &amp; uninterrupted basis from the SAIL’s Barsua &amp; Roxy Railway Sidings. In case entire iron ore from all the three mines is dispatched from SAIL’s Barsua Railway Siding, any disturbance in the Barsua – Bimlagarh Single line will affect supply of iron ore to RSP and ultimately affect the operations of the steel plant. Dispatching of iron ore utilizing both the SAIL’s Barsua and Roxy Sidings shall not only help in uninterrupted iron ore supply from Barsua, Taldih &amp; Kalta Mines even in case of any eventualities in either of the Barsua–Bimlagrah or Roxy–Bimlagarh single rail routes but also facilitate in effective utilization of the existing infrastructure at SAIL’s Roxy Siding.</p> <p>iii. The four lane NH–520 (Panikoili-Keonjhar-Rajamunda) is passing across the SAIL Barsua–Taldih–Kalta Mining Lease and dividing the Taldih and Kalta Blocks. The NH - 520 is passing through various mining towns in the region and used for transportation of iron ore. Hence, laying of conveyor from the Kalta to Taldih will pass over the four lane NH–520 near Kalta village, which may affect the safety of the road users.</p> <p>Plan for strengthening the Barsua railway siding:</p> <p>i. Barsua Siding is located about 70 kms from Rourkela and about 4 MTPA of iron ore produced from Barsua and Taldih Iron Mines is being dispatched to SAIL’s Steel Plants. Presently about 3.5 rakes on an average is being dispatched from the SAIL’s Barsua Siding</p> <p>ii. It is planned to enhance the capacity of SAIL’s Barsua Siding to dispatch 10 MTPA</p>
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		<p>of iron ore proposed from Barsua and Taldih Iron Mines with rail infrastructure to accommodate full length rake along with provision of Mechanical loading system in the form of Rapid Loading System (RLS) through SILOs.</p> <p>iii. Feasibility Study Report (FSR) towards modification of SAIL Barsua Siding for transportation of 10 MTPA (~8 rakes/day) iron ore has been prepared by M/s RITES Ltd. FSR was submitted to SE Rly. on 15.10.2019 and obtained In Principle Approval (IPA) vide letter No. AS/60B/80/Pt.1 dated 20.01.2020. Detailed Project Report (DPR) and Engineering Scale Plan (ESP) for development of Rail infrastructure at SAIL's Barsua Siding has also been prepared through M/s RITES at an estimated cost of Rs. 109.65 Cr. The following facilities have been envisaged to augment the capacity of the Barsua Siding to load and dispatch 10 MTPA iron ore:</p> <ul style="list-style-type: none"><li>• Development of the siding with two separate yards i.e., Reception &amp; Dispatch Yard and Rapid Lading System (RLS) Loading Yard with 2 full rake length lines in each yard. A 720 m x19 m manual loading platform planned in case of failure of RLS.</li><li>• Mechanical loading arrangement through 2 nos. of RLS for effective loading of iron ore (Estimated time for loading a rake through RLS: 1 - 1½ hrs. Turn round time for a rake will be ~2½ hrs.</li><li>• 2 numbers of Electronic In-Motion Weighbridges over RLS line having capacity of 140T</li><li>• Incorporating all the important signalling functions, Datalogger system with networking arrangement shall be provided with available network as per latest RDSO guidelines.</li><li>• Complete illumination of the yards</li></ul>
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		<p>through 30 m &amp; 20m high mast tower &amp; 6m Octagonal Pole with LED Flood light fixture.</p> <p>PP also submitted that the Engineering Scale Plan for Modification in Barsua Siding to augment capacity to 10 MTPA has been approved by South-Eastern Railway on 09.12.2022. The approved augmentation plan will be implemented in 2 years during which Taldih &amp; Barsua Iron Mines will also be expanded to produce 10 MTPA product.</p> <p>Further, PP submitted that significant progress in up-gradation of SAIL's Barsua Siding to 10 MTPA has already been made and requested to allow the planned transportation of iron ore produced from the Kalta to Roxy Rly. Siding through long distance belt conveyor parallel to the NH – 520.</p>
3	<p>The Project Proponent needs to submit the timeline for construction of concrete approach roads at Kalta &amp; Taldih Mines.</p>	<p>The Project Proponent submitted that in compliance to the recommendations 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” Concrete approach roads of 300 m length from mine entrance and exit to the Public Road have already been provided at Taldih Iron Mine, Barsua Railway Siding and Roxy Railway Siding with proper drainage system. PP also submitted the photograph showing the stretch of concrete roads.</p> <p>PP also submitted that the order for construction of concrete approach roads at Kalta Iron Mine and Roxy Rly. Siding was placed vide Work Order No. RMD/K/PROJ/KIM/LOA/19-20/115, dated 09.01.2020 with a cost of Rs. 1.45 Cr. Though, the concrete approach road at Roxy siding has been completed, the concrete road to Kalta Iron Mine from the NH-520 could not</p>

		<p>be started as final road profile of NH-520 which is under expansion to 4 lanes was under progress near Kalta Mine. The final road profile of NH-520 near Kalta Mine has been recently completed. Subsequently, the matter for NOC for approach permission from Kalta Mine to NH-520 from NHAI has been taken up with National Highways Authority of India (NHAI), Rourkela. As per the direction of the NHAI, Work Order has been placed vide No. KIM/CC/CIVIL/WO-35/2022-23/583, dated 27.10.2022 for approach permission from Kalta Iron Mine to NH-520 and obtaining of provisional NOC for NH access permission. Survey and design of the access road from Kalta Mine to NH – 520 in accordance with the MoRTH guidelines have been completed and application submitted to NHAI, Rourkela vide letter dated 18.11.2022. PP also submitted the timelines for construction of access road from Kalta Mine to NH-520 including concrete approach road of 300 m as given below:</p> <table border="1" data-bbox="719 1122 1362 1727"> <thead> <tr> <th>S.No</th> <th>Activity</th> <th>Expected Timeline</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Approval of access road design and obtaining NOC for access permission from Kalta Mine to NH-520</td> <td>Dec. 2022</td> </tr> <tr> <td>2</td> <td>Grant of capital sanction for construction of approach concrete road according to NHAI and NEERI guidelines</td> <td>Feb. 2023</td> </tr> <tr> <td>3</td> <td>Issue of Open Tender and placement of W.O. for construction of concrete road from Kalta Mine to NH-520</td> <td>Apr. 2023</td> </tr> <tr> <td>4</td> <td>Execution of concrete road work from Kalta mine to NH-520</td> <td>Sept. 2023</td> </tr> </tbody> </table>	S.No	Activity	Expected Timeline	1	Approval of access road design and obtaining NOC for access permission from Kalta Mine to NH-520	Dec. 2022	2	Grant of capital sanction for construction of approach concrete road according to NHAI and NEERI guidelines	Feb. 2023	3	Issue of Open Tender and placement of W.O. for construction of concrete road from Kalta Mine to NH-520	Apr. 2023	4	Execution of concrete road work from Kalta mine to NH-520	Sept. 2023
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4	The Project Proponent needs to prepare fresh/update of the Wildlife Conservation Plan and also to submit the status of the implementation of the conditions as per approval	The Project Proponent submitted that the Site-Specific Wildlife Conservation Plan of Barsua-Taldih-Kalta Iron Mines (ML130) was approved in 25.02.2013 with financial outlay of Rs.2900.96 lakh and implementation period of 10 years covering Project Area (Rs.1118.96 lakh) and Project Impact Area (Rs.1782.00															

	<p>of conservation plan in the year 2013 and 2016 in consultation with the Forest Department. PP also needs to upload the earlier Wildlife Conservation Plan in Parivesh portal.</p>	<p>lakh).Further, the Site-Specific Wildlife Conservation Plan of ML-162 (77.94 ha) was approved in 13.01.2016 with financial outlay of Rs.1277.68 lakh for a plan period of 10 years covering Project Area (Rs. 293.50 lakh) and Project Impact Area (Rs.984.18 lakh).After the approval of these conservation plans, on demand, the PP has deposited total of Rs. 2766.18 lakh in State CAMPA fund for implementation of the activities through State Forest Department in project impact areas.</p> <p>PP also submitted that subsequent to the amalgamation of both the leases vide proceeding No. IV(B) SM03/2020/10418/SM, Bhubaneswar, dated 02.12.2020 and in compliance to the conditions stipulated in SSCPs; SAIL vide letter no. BIM/E&amp;L/2021-22/093 dated 24.08.2021; the Project Proponent sought clarification from Principal Chief Conservator of Forests (Wildlife) and Chief Wildlife Warden (CWLW) of Odisha regarding preparation of next Site Specific Wildlife Conservation Plan in respect of Amalgamated BarsuaTaldih-Kalta Iron Mines.Again, with reference to the Summary record of 4<sup>th</sup> EAC meeting held on 28.09.2022, request was made to the Divisional Forest Officer, Bonai Forest Division vide letter no. SAIL/RSP/MINES/BTK/2022-23/1652, dated 12.10.2022 for Preparation / Updation of Site-Specific Wildlife Conservation Plans in respect of Amalgamated Barsua-Taldih-Kalta Iron Mines (ML-130 &amp; ML162) of M/s SAIL.</p> <p>Further, PP submitted that as per the guidelines issued by the PPCF (Wildlife) &amp; Chief Wildlife Warden Odisha dated 16.04.2022, concerned DFOs shall prepare the Site Specific Wildlife Conservation Plans. Accordingly, the matter has been discussed with DFO, Bonai. Vide Memo No. 9673/6F-(Mg.), dated 19.11.2022, DFO, Bonai has clarified that the</p>
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		<p>implementation of SSWCP of ML-130 has started from 2016-17 and implementation of SSWCP of ML-162 is yet to be started. Hence, revision / updation of both the Plans of SAIL's Barsua – Taldih – Kalta Mines shall be done after implementation of the existing plans. The approved interventions of Site Specific Wildlife Conservation Plans of both ML – 130 and ML – 162 Mining Leases under the Barsua – Taldih – Kalta Mines are being implemented in the project area in consultation and guidance of DFO, Bonai.</p> <p>PP submitted the details of cost incurred since 2013-14 to 2021-22 towards implementation of approved interventions of the Site Specific Wildlife Conservation Plan of ML-130 and a total of Rs 563.33 Lakhs has been incurred. PP also submitted that the details of cost incurred since 2016-17 to 2021-22 towards implementation of approved interventions of the Site-Specific Wildlife Conservation Plan of ML-162 and a total of Rs 81.86 Lakhs has been incurred. Further, PP submitted that the implementation of the Site-Specific Wildlife Conservation Plans is being reviewed regularly by the DFO, Bonai. Status of in respect of Barsua-Taldih-Kalta Iron Mines (ML-130 &amp; ML-162) has been communicated to DFO, Bonai vide letter no. BIM/E&amp;L/2022-23/106 dated 22.10.2022. PP submitted the copy of the approval of the earlier wildlife conservation plans in the Parivesh portal.</p>
5	<p>The EAC not convinced with the reason for increase in PM level due to pollen generation from Sal trees in the forests and the EAC asked the Project Proponent to justify with the supporting data by physical/chemical analysis.</p>	<p>The Project Proponent submitted that the sources contributing to Particulate Matter in the study area are Mining &amp; allied activities, Movement of vehicles, Widening/ Strengthening of road, Use of wood as domestic fuel, Pollen grain from flowering plants, Movement of livestock herds and Forest fires.</p> <p>PP reported that the size of pollen varies from ~2.5<math>\mu</math> to ~40<math>\mu</math>. The size, geometry and quantity</p>

		<p>of pollen depends on the species of tree. In general trees which depend on pollination by wind, produce large quantities of smaller pollen so that they can be easily dispersed by wind. Sal (<i>Shorea robusta</i>) is the dominant tree species in the study area. This tree flowers during the summer season. Other common trees found in the region which also flower during the same period are Asan (<i>Terminalia tomentosa</i>), Mahua (<i>Madhuca indica</i>), Tendu (<i>Diospyros melanoxylon</i>), Mango (<i>Mangifera indica</i>) and Australian acacia (<i>Acacia auriculiformis</i>).</p> <p>Further, PP submitted that it has been estimated that a sal tree produces <math>\sim 3.3 \times 10^{14}</math> – <math>\sim 6.2 \times 10^{14}</math> nos. of pollen grains (Ref: Samir Kumar Bera (1990) <i>Palynology of Shorea robusta (Dipterocarpaceae) in relation to pollen production and dispersal</i>, Grana, 29:3, 251-255, DOI:10.1080 / 00173139009427758). Studies have indicated that sal pollen constitutes only a small fraction of the “pollen rain” (Ref: M.S. Chauhan and M.F. Quamar; <i>Pollen rain deposition pattern in tropical deciduous Sal (Shorearobusta Gaertn.) forest in Shahdol District, Madhya Pradesh, India, The Palaeobotanist 62(2013): 47–53 0031 0174/2013</i>). Major portion of sal pollen remains airborne for long distances / periods of time.</p> <p>PP reported that the ambient air quality was monitored at the twelve locations during summer season (March – May, 2021). Of the above locations Jhirpani Village (A4) and Taldih Village (A9) are surrounded by sal forests, with Mahua &amp; Mango trees on the forest fringes. These two locations are far from Mining &amp; Allied Activities. The PM<sub>10</sub> collected during the March-May 2021 was analysed for organic matter content (as pollen grains are organic in nature). The PM<sub>10</sub> Levels and mean Organic</p>
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		<p>carbon and Organic Matter Content of PM<sub>10</sub> in % at these four locations are as follows:</p> <table border="1" data-bbox="719 277 1385 792"> <thead> <tr> <th>Stn.No</th> <th>Location</th> <th>PM<sub>10</sub> Conc. in µg/m<sup>3</sup> Figures in {} are the Mean Values</th> <th>Mean Organic Carbon Content of PM<sub>10</sub> in %</th> <th>Mean Organic Matter Content of PM<sub>10</sub> in %</th> </tr> </thead> <tbody> <tr> <td>A1</td> <td>Kalta Mine area</td> <td>73 – 98 {91}</td> <td>9.1</td> <td>15.8</td> </tr> <tr> <td>A10</td> <td>Barsua Mine Office</td> <td>77 – 95 {88}</td> <td>13.2</td> <td>22.8</td> </tr> <tr> <td>A4</td> <td>Jhirpani Village</td> <td>65 – 89 {78}</td> <td>20.0</td> <td>34.6</td> </tr> <tr> <td>A9</td> <td>Taldihi Village</td> <td>70 – 91 {82}</td> <td>18.4</td> <td>31.9</td> </tr> </tbody> </table> <p>The above data indicates that proportion of organic matter in PM<sub>10</sub> was higher at the AAQ monitoring locations with large nos. of trees in the vicinity, which were flowering during the monitoring period in comparison to those places far from trees in flower. Higher organic matter content in PM<sub>10</sub> samples from locations in vicinity of Sal forests in comparison to those locations at some distance from forests, indicates that airborne pollen may have contributed to the airborne PM<sub>10</sub>.</p>	Stn.No	Location	PM <sub>10</sub> Conc. in µg/m <sup>3</sup> Figures in {} are the Mean Values	Mean Organic Carbon Content of PM <sub>10</sub> in %	Mean Organic Matter Content of PM <sub>10</sub> in %	A1	Kalta Mine area	73 – 98 {91}	9.1	15.8	A10	Barsua Mine Office	77 – 95 {88}	13.2	22.8	A4	Jhirpani Village	65 – 89 {78}	20.0	34.6	A9	Taldihi Village	70 – 91 {82}	18.4	31.9
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A9	Taldihi Village	70 – 91 {82}	18.4	31.9																							
6	<p>The Project Proponent shall submit the action plan for handling of rejects from tailing pond and recycling of wastewater after treatment.</p>	<p>The Project Proponent submitted that the tailings generated from the Barsua Beneficiation Plant are stored in the Tailings Pond at Barsua Valley over an area of 35.88 ha, out of which 3.95 ha is located within the amalgamated mine lease area and the balance 31.93 ha is located outside the lease area in land acquired by SAIL adjacent to amalgamated lease.</p> <p>PP also submitted that the tailings pond has been designed to store about 5 million tonnes of tailings. The tailing pond has a dyke wall constructed by stone pitching on three sides and fourth side being the lowest contour of the hill range. As on FY: 2019-20, about 4.15 Million Tonnes stored in the pond.</p>																									

		<p>Further, PP submitted that the Ministry of Mines, Gol order dated 19.09.2019 allowed sale of sub-grade iron ore lying at captive mines of SAIL and subsequently, Govt. of Odisha vide order dtd. 02.12.2019 allowed sale of dump fines / tailings from SAIL Mines in Odisha. Sale of tailings from Barsua tailings Pond has been started since October' 2020 and so far about 1 million tonnes sold in open market and dispatched about 0.9 million tonne of tailings in the open market.</p> <p>PP submitted that after the proposed modifications at existing Barsua Beneficiation Plant, the rejects generated from the Jigging Plant and Classifiers will be further ground and processed through WHIMs and other beneficiation equipment. Due to this modification, at one hand, recovery of iron ore will increase and generation of tailings will decrease, on the other hand, plant will be able to take feed of low grade iron ore. It is expected that about 50% of the ROM will be processed through wet circuit plant of which about 60% of the material will be fines which will be processed through fines beneficiation unit. It is expected, that about 20% of the feed to fines will be rejected as tailings. Tentatively, it may be estimated that about 2,40,000 tonne of tailings will be generated annually. PP will continue to sell tailings from Barusa Tailings Pond subject to demand from open market.</p> <p>PP also submitted that the effluent generated from the ore beneficiation plant of Barsua is being treated in thickeners and about 60% of clear water from the thickener is being recycled back to the system. The underflow from thickener is discharged into Tailing Dam for further solid - liquid separation. The overflow from the tailings pond is further collected in the Zero Discharge System and pumped back to</p>
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		the system for recycling. PP also submitted the photographs showing the thickener and water collection pit downstream of the tailings pond made under Zero Liquid Discharge (ZLD).																																										
7	The Project Proponent needs to submit the flow chart of water balance by considering the makeup water.	<p>The Project Proponent submitted that the total water requirement for the Beneficiation plant will be 700 m<sup>3</sup>/hr i.e., 1 Ton of ROM: 1 m<sup>3</sup> of water. Total water input to the Beneficiation plant will be 700 m<sup>3</sup>/hr, out of which 450 m<sup>3</sup>/hr will be recovered through Thickener and Zero Discharge System and make-up water requirement will be 250 m<sup>3</sup>/hr only.</p> <p>PP also submitted that it is expected that about 2 MTPA the ROM shall be beneficiable ore and will be processed through wet circuit of the Barsua Ore Processing Plant i.e. @ 6500 per day or 9.2 hours per day. The make – up water requirement for the ore processing plant will be 2300 m<sup>3</sup> / day, which can be drawn from the Kuradih Nala. Further, PP submitted the flow chart of water balance by considering the makeup water.</p>																																										
8	The Project Proponent needs to submit the breakup of the Project Cost of Rs. 2740.88 Crores.	<p>The Project Proponent submitted the breakup of the Project cost of Rs 2740.88 Crores as given in Table below:</p> <table border="1"> <thead> <tr> <th>S. No</th> <th>Item</th> <th>Cost Rs in Cr</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Equipment</td> <td>1090.58</td> </tr> <tr> <td>2</td> <td>Structures</td> <td>235.86</td> </tr> <tr> <td>3</td> <td>Civil Works</td> <td>515.80</td> </tr> <tr> <td>4</td> <td>Erection &amp; Commissioning</td> <td>178.55</td> </tr> <tr> <td>5</td> <td>Engineering &amp; Construction</td> <td>253.13</td> </tr> <tr> <td>6</td> <td>Freight &amp; Insurance</td> <td>48.01</td> </tr> <tr> <td>7</td> <td>Taxes &amp; Duties</td> <td>415.14</td> </tr> <tr> <td>8</td> <td>Contingencies</td> <td>136.85</td> </tr> <tr> <td>9</td> <td>Total Plant Cost</td> <td>2873.92</td> </tr> <tr> <td>10</td> <td>Interest during Construction</td> <td>177.22</td> </tr> <tr> <td>11</td> <td>Capital Cost</td> <td>3051.14</td> </tr> <tr> <td>12</td> <td>Input Tax Credit (ITC)</td> <td>310.26</td> </tr> <tr> <td>13</td> <td>Capital Cost net of ITC</td> <td>2740.88</td> </tr> </tbody> </table> <p><i>Note : Base date for the estimate is 3rd Quarter of 2020</i></p>	S. No	Item	Cost Rs in Cr	1	Equipment	1090.58	2	Structures	235.86	3	Civil Works	515.80	4	Erection & Commissioning	178.55	5	Engineering & Construction	253.13	6	Freight & Insurance	48.01	7	Taxes & Duties	415.14	8	Contingencies	136.85	9	Total Plant Cost	2873.92	10	Interest during Construction	177.22	11	Capital Cost	3051.14	12	Input Tax Credit (ITC)	310.26	13	Capital Cost net of ITC	2740.88
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9	The Project Proponent shall submit the certified compliance report on the Recommendation of CSIR-	The Project Proponent submitted the Certified Compliance Report (CCR) issued by the Integrated Regional Office, Bhubaneswar vide File.No: 101-257/21/EPE dated 28.11.2022 for																																										

<p>NEERI Report on "Carrying Capacity Study for Environmentally Sustainable Iron and Manganese Ore mining activity in Keonjhar, Sundargarh and Mayurbhanj Districts of Odisha State" from Ministry's Integrated Regional Office (IRO). PP also needs to submit the examination of the verification report by IRO for the non-compliances of the EC conditions w.r.t construction of HEMM vehicle maintenance unit and maintenance of garland drains to maximize rain water harvesting and water conservation. Further, PP needs to submit the certified compliances of conditions mentioned in all amendment in EC's.</p>	<p>the following:</p> <ol style="list-style-type: none"> <li>i. Examination of the verification report for the status of compliance of measures suggested in the CCR vide letter dated 01.11.2021</li> <li>ii. Amendment in EC dated 30.03.2016</li> <li>iii. Amendment in EC dated 03.07.2020</li> <li>iv. Amendment in EC dated 17.03.2021</li> <li>v. EC dated 25.01.2022</li> <li>vi. Compliance to conditions of Recommendations 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.</li> </ol> <p>The project was monitored on 09.11.2022 and 10.11.2022. IRO observed that the minor non-compliances, partial complied conditions and not complied conditions are communicated to Project Proponent for taking corrective measures at the earliest and are listed as follows:</p> <ol style="list-style-type: none"> <li>1. It was observed during monitoring that cement concrete road from mine entrance and exit to the main road, with proper drainage system, and greenbelt development along the roads, is not done for the Kalta mine.</li> <li>2. Vacuum cleaning of all mineral carrying roads is not carried out.</li> <li>3. Report on R&amp;D studies towards utilization of low-grade iron ore which should be conducted through research/academic institutes like IMMT, Bhubaneswar, NML, Jamshedpur, and concerned metallurgical departments in IITs, NITs etc., targeting full utilization of low-grade iron ore (Fe content up to 45% by 2020 and up to 40% by 2025) is not submitted.</li> <li>4. Also, report on R&amp;D studies on utilization</li> </ol>
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		<p>of mine waste water having high concentration of Fe content for different commercial applications in industries such as cosmetics, pharmaceutical, paint industry is not submitted. However, work order for proposed study of surface runoff is made.</p> <p>5. No such fund of amount of Rs 0.0839 Crores, as committed by project proponent is earmarked for activities under Corporate Environment Responsibility (CER).</p>
10	The Project Proponent shall ensure that the activities proposed under public hearing action and Corporate Social Responsibilities should not be similar.	The Project Proponent submitted an undertaking vide letter dated 29.11.2022 stating that <i>“the activities proposed under public hearing action and Corporate Social Responsibilities will not be similar”</i>
11	The Project Proponent needs to submit the current status of the court case filed vide Writ Petition bearing WP (C) No- 24282/2017 in the Hon’ble High Court of Odisha, Cuttack.	<p>The Project Proponent submitted that there is a pending court case in the High Court of Orissa under case no. WP(C) No. 24282/2017. After the judgment of Apex Court dated 02.08.2017, the Government of Odisha has issued demand notices to Barsua/ Kalta Iron Mines for payment of compensation towards excess production on or before 31st December 2017 against EC / CTO capacity. Dy. Director of Mines (DDM), Koiravide letter dated 02.09.2017 issued a demand notice for payment of Rs. 66,89,42,779.50/- in respect of Barsua/ Kalta Iron Mines to recover price of mineral produced without / beyond EC alone under Section 21 (5) of MMDR Act, 1957. The said amount was deposited on 29.12.2017 under protest.</p> <p>Further, Dy. Director of Mines (DDM),Koiravide letter No.5962/Mines dtd 24.10.2017 has directed to pay compensation of Rs. 90,19,71,684.40/- for mining in excess of the permissible limit under the Consent to Operate. Against the above stated demands, the Project Proponent had filed a Writ Petition bearing WP</p>

		(C) No- 24282/2017 in High Court of Odisha, Cuttack. The matter was heard, and Hon'ble High Court vide order dated 04.04.2018 had passed the stay order on demand dated 24.10.2017 & the matter is sub-judice. PP also submitted the copy of the court order date 04.04.2018.
12	The Project Proponent needs to revise and upload the Chapters of 5, 6 & 7 in proper format in PARIVESH. PP also needs to upload the copy of advertisement of public hearing published in local language on PARIVESH.	The Project Proponent has submitted the revised Chapters of 5, 6 & 7 of the EIA/EMP report in Parivesh.  PP also submitted the copy of the advertisement of Public Hearing published in "The Sambad" on 20.05.2022 in Odia language.

- iv. The Project Proponent submitted that Environmental Clearances has been obtained in the following chronological order: -
- a. Initially, Integrated Environmental Clearance was obtained vide letter No. J-11015/351/2006-IA.II(M) dated 29.10.2010 for Barsua-Taldih-Kalta Iron Ore Mining (ML-130), Beneficiation and Pelletisation plant project of M/s Steel Authority of India Limited for an annual production capacity of 8.05 million tonnes of iron ore by the opencast mechanized method along with setting up of a beneficiation plant of 4.25 million TPA (in additional to existing plant of 2.5 million TPA) and setting up of a pelletisation plant of 2.0 million TPA capacity involving total mine lease area of 2486.391 ha.
  - b. Thereafter, PP obtained the amendment in Environmental Clearance vide F.No.J-11015/351/2006- IA.II(M) (pt.) dated 30.03.2016 for the following:-
    - i. Temporary permission to change iron ore production (ROM) from three blocks viz. Barsua, Talidh and Kalta in ML-130 lease from 2.5, 4.25 and 1.3 million TPA to 3.5, 2.05 and 2.5 million TPA respectively, keeping the total iron ore (ROM) production restricted to 8.05 million TPA as specified in the earlier environment Clearance.
    - ii. Permission to operate existing beneficiation plant at the rate 4.5 million TPA instead of 2.5 million TPA.
    - iii. Permission for road transportation of part of iron ore (ROM) from Talidh block to the Barsua Valley (about 11kms.) and to the Barsua beneficiation plant for a period of five years till facilities viz. crushing plant, LDBC are erected and commissioned for the Taldih block.
    - iv. 'To replace outside mine lease area' with 'ML-162 lease and acquired area' in environmental clearance, in order to utilize the infrastructure facilities for processing of iron ore produced from ML-130 lease.

- v. To modify the total lease area of ML-130 lease from 2486.391 to 2486.383 ha as per the joint survey committee report (DGPS survey report) of Govt. of Odisha and the lease deed executed by and between the Govt. of Odisha and SAIL on 13<sup>th</sup> November, 2014.

The amendment for point no. (i) to (iii) will be only for 5 years.

- c. Further, the PP amended the Environmental Clearance vide F.No. J-11015/351/2006-IA.II(M) dated 03.07.2020 for i) Excavation of iron ore from Barsua Block at 3.50 MTPA including a provision of excavation of maximum upto 1 MTPA tailings from the tailings pond at Barsua for selling. The excavated tailings will be transported through internal road over 2.1 km to the stacking yard and then to Barsua Public Siding by public road over 0.6 km or any other nearby railway sidings, ii) Excavation of iron ore from Taldih&Kalta Blocks at 2.05 MTPA and 2.50 MTPA respectively including provision of excavation and dispatch of sub-grade iron ore fines maximum upto 0.5 MTPA from Fines Stocks from each block for selling. The excavated sub-grade iron ore fines will be dispatched by road / road & rail and iii) Continuation of the already amended provisions of EC amendment dated 30.03.2016 (valid up to 30.03.2021) for further two years i.e. up to 31.03.2023, which are (i) Permission to change iron ore production (ROM) from three blocks viz. Barsua, Taldih and Kalta in ML-130 lease from 2.5, 4.25 and 1.3 MTPA to 3.5, 2.05 and 2.5 MTPA respectively, keeping the total iron ore (ROM) excavation restricted to 8.05 MTPA as specified in the earlier environmental clearance, ii) Permission to operate existing beneficiation plant at the rate of 4.5 MTPA instead of 2.5 MTPA), subject to the following conditions (Sl. No 22 A), in addition to the conditions prescribed in the EC and subsequent amendments.
- d. Subsequently, the PP amended the Environmental Clearance vide F.No. J-11015/351/2006-IA.II(M) dated 03.07.2020 with corrigendum dated 13.07.2020 that the entire 2.05 MTPA iron ore excavated at Taldih will be trucked directly to Barsua Private/Public Sidings till construction of road from Taldih to Barsua Beneficiation Plant.
- e. Again, PP amended the Environmental Clearance vide F.No. J-11015/351/2006- IA.II(M) dated 17.03.2021 for re-distribution as (i) increase in iron ore production from Kalta Block by 0.7 MTPA from 2.5 MTPA and the final capacity is 3.2 MTPA which also includes maximum of 0.5 MTPA of sub-grade iron ore fines excavated from accumulated stocks and (ii) reduction in iron ore production from Taldih Block by 0.7 MTPA from 2.05 MTPA and the final capacity is 1.35 MTPA which also includes maximum of 0.5 MTPA of sub-grade iron ore fines excavated from accumulated stocks within permitted EC capacity of 8.05 MTPA.

- f. Then, PP obtained amendment in Environmental Clearance vide J-11015/351/2006-IA.II(M) dated 25.01.2022 for amalgamation of contiguous mine lease areas comprising of ML-130 (2486.383ha) and ML-162 (77.94ha) as total area of 2558.581 ha [FC available 2419.871 ha + non-forest land 138.710 ha] without change in production capacity [8.05 MTPA ROM and Beneficiation Plant Capacity 3.5 MTPA].
- v. The project was granted Terms of Reference (ToR) by the Ministry vide its letter dated 22.03.2022 based on the recommendation of sectoral EAC meeting held during 15<sup>th</sup> - 17<sup>th</sup>February, 2022.
- vi. The Project Proponent submitted that the Barsua Iron mine (Southern part) and Kalta Iron mine (Northern part) are in operation since 1960 and 1966 respectively. The Taldih Iron mine (Middle part) has started production in the year 2016. There were two contiguous mining leases namely ML-130 (main iron ore mining lease) and ML -162 (for infrastructure) under the Barsua – Taldih-Kalta Iron Mines. The mining lease for ML- 130 (2486.383 ha) was granted on 06.01.1960 for a period of 30 years and subsequently it has renewed & lease deed for the 2<sup>nd</sup> renewal period has been executed on 13.11.2014 having validity up to 05.01.2030. The associated infrastructure facilities of Barsua Iron Mine are located in another adjoining mining lease viz ML - 162 (77.94 ha), which was granted on 29.04.1960 and subsequently it has also been renewed as well as extended the lease period up to 28.04.2030 and supplementary lease deed was executed on 24.09.2016. Based on the SAIL's application, Dept. of Steel and Mines, Govt. of Odisha vide proceeding No. IV(B)SM-03/2020/10418/SM, Bhubaneswar, dated 02.12.2020 amalgamated the contiguous mining leases viz ML - 130 (2486.383 ha) and ML - 162 (77.94 ha) covering total area of 2564.323 ha having validity up to 05.01.2030. Lease deed of the amalgamated lease has been executed on 30.03.2021.
- vii. Land use/Land Cover of the Mine Lease Area:

Particulars	Area	Remarks
Forest Land	2425.613 ha	Total Forest Land for which Stage-II FC is available is 2419.871 ha
Private land	24.014 ha	Non-Forest Land
Government land	114.696 ha	
Schedule Tribe & Other Traditional Forest Dwellers	5.742 ha	
Total mine lease area	2564.323 ha	

viii. Mining plan details:

Modification of Mining Plan along with Progressive Mine Closure Plan approved by Indian Bureau of Mines (IBM)	Letter No.	MP/A/39-ORI/BHU/2020-21
	Date	01.04.2021
	Mineral	Iron Ore
	Area	amalgamated mine lease area of 2564.323 ha



**Minutes of 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022**

	Validity	2020-21 to 2024-25
Mining Parameters	Quantitative Description	
Method of Mining	Opencast mining with deep hole drilling and blasting and excavation and haulage through shovel dumper combination.	
Mineable Reserve	Barsua Block: 130.72 MT Taldih Block: 328.26 MT Kalta Block: 96.01 MT	
Drilling/Blasting	Barsua Block: DTH drill of 150m dia/Slurry Explosive Taldih Block: DTH drill of 150m dia/Slurry Explosive Kalta Block: DTH drill of 100m dia/Slurry Explosive	
Bench Height	Barsua Block: 10 m Taldih Block: 12 m Kalta Block: 6 m	
Bench Width	Barsua Block: 20 m Taldih Block: 20 m Kalta Block: 10 m	
Individual bench slope	80°	
Overall pit slope	37°	
Life of mine	Barsua Block: 33 Years Taldih Block: 43 Years Kalta Block: 24 Years	
Transportation details	Barsua Block: Belt conveyer to Barsua railway siding Taldih Block: Long distance conveyor to Barsua Railway Siding Kalta Block: Long distance conveyor to Roxy Railway Siding	
Dumpers capacity	Barsua Block: 50/60/100T Taldih Block: 25/35/100T Kalta Block: 25/35T	
RoM output size	150 mm	
Throughput Capacity of Processing Plants	Barsua Block: 3.5 MTPA Taldih Block: 7.0 MTPA Kalta Block: 4.0 MTPA	
Waste Dump Management	PP submitted that Waste/ overburden/ sub-grade materials will be hauled to designated dump yards as planned in the approved mining plan. The waste materials will be utilized for back-filling of ultimate pit voids. During the conceptual stage there will be no external OB dumps. All external OB dumps will be rehandled and backfilled in the minedout pits during the final closure.	

ix. Water requirement:

Total water requirement	8845 m <sup>3</sup> /day	Fresh water	8675 m <sup>3</sup> /day
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**Minutes of 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022**

		Treated water	170 m <sup>3</sup> /day
Source	KuradihNalla / NajkuraNalla		
Permission	PP submitted that Department of Water Resources, Govt. of Odisha has permitted allocation of 3.406 cusec (~8333 m <sup>3</sup> /day) of surface water from KuradihNalla vide Letter no.4897/WR dated 15.02.2021. The permitted drawl quantity from NajkuraNalla is 24,110 m <sup>3</sup> /month (~803 m <sup>3</sup> /day).		

x. Nearest village / town/ highway/railway station / water bodies:

Particulars	Particular's Name	Distance & Direction
Village	Tantara	Within mine lease
Town	Koira	10 km
Highway	NH - 520	Passing through mine lease
Railway Station	Barsua	1 km
Water bodies	SamajNalla KurarhiNala Karo River	Passing through mine lease 0.1 km 3.0 km

- xi. The Project Proponent submitted that total mine lease area is 2564.323 ha, out of which 2425.613 ha is Forest Land (Toda R.F.) and 138.710 ha is Non-Forest Land. PP submitted that 5.742 ha of Forest Land, which was part of ML – 130, is under occupation of the local Schedule Tribe & Other Traditional Forest Dwellers in Village Tantra. Their individual rights have been recognized by granting pattas under Forest Right Act., 2006. PP obtained Stage-II Forest Clearance vide MoEF F.No.8-90/1996-FC (pt), dated 06.03.2013 for diversion of forest land over 2341.931ha (2248.252 ha for mining and allied activities and 93.679ha for safety zone) under ML – 130 of BarsuaTaldih-Kalta in favour of M/s SAIL. Then, PP obtained Stage-II Forest Clearance vide MoEF F.No.8-18/2014-FC dated 23.10.2017 for diversion of 77.94 ha of forest land including 2.562 ha of safety zone area for development of mining infrastructure in Toda RF in ML–162 lease of M/s SAIL. Further, PP submitted that Stage – II Forest Clearance over 2419.871 ha obtained covering under the amalgamated lease.
- xii. Further, PP submitted that there is no National Park, Wild Life Sanctuary, Eco Sensitive Zone, Elephant Reserve/Tiger Reserve, Wildlife Corridors within 10km radius.
- xiii. The Project Proponent reported that there are six Schedule-I species in the buffer zone such as Indian Elephant, Sloth Bear, Wolf, Peafowl, Leopard, Indian python. In support of this, PP submitted the authenticated list of flora and fauna from the Office of the Divisional Forest Officer, Bonai Division, vide letter dated 06.04.2022. PP also submitted that the Site Specific Wildlife conservation plans (SSWCP) was approved by Chief Wildlife Warden, Odisha vide letter dated 25.02.2013 over an area of 2486.313 ha & 13.01.2016 over an area of 77.94 ha. Further, PP submitted that an amount of Rs.17.82 Crores

&Rs. 9.84 Crores were deposited for implementation of approved SSWCPs in buffer zone of Barsua-Taldih-Kalta Iron Mines.

xiv. The Project Proponent submitted that the plantation is being done inside the lease area of Barsua-Taldih-Kalta Mines and nearby areas for creating greenbelt over the period of years. In compliance to the forest clearance condition related to Safety Zone protection, scheme for Safety Zone plantation has been prepared and phase wise plantation within safety zone of mining lease is being done through State Forest Department. Safety Zone plantation of 32,000 saplings over an area of 93.679 ha has been done through State Forest Department. Apart from this, so far 2,25,865 saplings have been planted covering an area of 110.48 ha since 2010. In the year 2020-21, total 13,000 saplings have been planted over an area of 5.50 ha at Barsua and Kalta block. A total of 2408.21 ha will be under green cover at the end of mine life, out of which 150.48 ha is existing/proposed safety zone/greenbelt and 732.064 ha is undisturbed forest areas. The additional plantation will be carried out over 1548.726 ha with 24,52,596 saplings within the Mine lease area. The estimated cost of afforestation within the ML area as per the plan shall be about Rs. 7358 Lakhs as per prevailing rates for plantation of 2022-23.

xv. Baseline Details:

Period	March, 2021 to May, 2021 (Summer Season)				
AAQ parameters at 12 locations	Pollutant	Min, $\mu\text{g}/\text{m}^3$	Max, $\mu\text{g}/\text{m}^3$	98 Percentile value	Standard, $\mu\text{g}/\text{m}^3$
	PM10	65.0	110.0	106.0	100
	PM2.5	32.0	59.0	55.0	60
	SO2	4.0	24.9	24.6	80
	NOx	10.0	33.9	33.2	80
AAQ modeling	Pollutant	Baseline Concentration, $\mu\text{g}/\text{m}^3$	Incremental Concentration, $\mu\text{g}/\text{m}^3$	Total GLC, $\mu\text{g}/\text{m}^3$	Standard
	PM10	96.0	11.3	107.3	100
	PM2.5	55.0	0.1	55.1	60
	SO2	24.6	-	24.6	80
	NOx	33.0	-	33.0	80
Noise level at 10 locations	Day Time: 40.3 to 68.9 Leq dB (A) Night Time: 38.7 to 55.6 Leq dB (A)				
Ground water quality at 8 locations	PP reported that nitrate concentrations are found to be below detection limits in all the ground water monitoring samples except in GW1 and GW8. The concentration of Total hardness (asCaCO <sub>3</sub> ) varied from 84 to 160 mg/l in eight ground water samples which is well within the "Acceptable Limits". Slightly high turbidity was found in locations as per the following order: GW2 > GW7 > GW6; however, within the "Permissible Limits".				
Surface water quality at	PP reported that pH of water samples is in the range of 7.02 to 7.39 which are well within 6.5-8.5. The Dissolved Oxygen varied				

8locations	from 4.4 to 6.9 mg/l. The Fe concentration with 0.598 mg/l is high in SW1 (Tailing Pond discharge water (Outlet) (BIM)when compared with other surface water samples. The Fe concentrations are found to below in upstream when compared with downstream samples. The concentrations of total alkalinity (as CaCO <sub>3</sub> ), in eight surface water samples ranged from 20 to 56 mg/l and the Total hardness (as CaCO <sub>3</sub> ) concentrations varied from 20 to 48mg/l. Hence the water samples can be categorised as soft water due to low degrees of hardness. Total Coliform results of SW1, SW3, SW7 & SW8 samples are above 500 MPN/100 ml which makes this surface water quality fall under Class C i.e. surface water which can be used as drinking water source after conventional treatment and disinfection. The rest of the surface water samples SW2, SW4,SW5 & SW6 is suitable can be used for outdoor bathing (organised) (i.e. Class B) as the Total coliform concentrations are less than 500 MPN/ 100 ml.
Soil quality at 8 locations	PP reported that the soil pH was observed in the range of 4.62 (Strongly acidic) to 5.81 (Moderately acidic). Electrical conductivity ranged from 19.4 to 141.6 µs/cm. Availability of Nitrogen at all locations ranged from 314 kg/ha (Medium) to 941 kg/ha (High), Phosphorus at all locations ranged from 0.45kg/ha (Low) to 1.83 kg/ha (Low) and Potassium at all locations ranged from 0.24 kg/ha(low) to 1.13 kg/ha (High). Organic content varied from 0.78% (dump/OB area) to 2.38% (agricultural land). Fe and Mn are found to be generally higher in the region, due to the natural geology of the area. Overall, the level of some micro-nutrients is above the critical limits in the study area. Hence, it is deduced that no external application of micro-nutrients is required (fertilisers) for good plant growth.
Traffic Survey	PP reported that traffic Density has been studied on the nearby routes at four locations (1). On the public road near Barsua Public Siding (TDS1), (2). Near Tensa Guest House on the Koira to Barsua Valley public road (TDS2), (3) On the Koira to Barsua Valley public road just beyond Taldih Mine towards Barsua Valley (TDS3) and (4). On NH-520 at Toda Village at Toda (between Kalta Mines gate & Roxy siding) (TDS4). Traffic density has been monitored every hour continuously for seven days during the monitoring period. TheTensa-Barsua Road (TDS 2 & TDS 3) is a Two-lane road in Rolling Terrain with surfaced shoulders of at least 1.5 m on either side (i.e. capacity – 12,650 PCUs/day as per IRC:64-1990). The road near Barsua Siding (TDS1) is also a two-lane road but on “Plain Terrain” (i.e. capacity – 15000 PCUs/day as per IRC:64-1990). The Kalta– RoxySiding Road (NH-520) is a “four-lane Highway in plain terrain” (i.e. capacity – 40000PCUs/day as per IRC-SP:084-2014). At present the traffic volumes at TDS1, TDS2, TDS3and TDS4 are within the respective recommended Design Service Volumes.

xvi. Public Hearing (PH) Details:

Advertisement for PH with	i. National English Daily: “Sunday Times”
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**Minutes of 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022**

date	Bhubaneshwar edition dated 22-05-2022, ii. Odiya Daily: "The Sambad" dated 20-05-2022
Date of PH	23.06.2022
Venue	Ispat High School Playground of Tensa Village under Koira Block, Sundargarh District, Odisha
Chaired by	Shri Shiv Shankar Toppo, Additional District Magistrate, Sundargarh
Main issues raised during PH	Protection of natural resources, plantation, health camp, development of Anganwadi, employment of locals in the mine, protection of environment, protection of perennial nallahs, water sprinkling on road, noise pollution, desilting of nallahs, improved in drinking water supply, improvement in social infrastructure, school bus, improvement in education facilities, improvement in medical facilities, pollution control, promotion of sports especially hockey, support to Self Help Groups in peripheral villages, skill development, improvement in sanitation facilities, improvement in roads
Budget proposed for addressing issues raised during PH	Rs. 21.88 crores over the next three years

- xvii. The Project Proponent submitted the Consent to Operate issued by the Odisha State Pollution Control Board vide Consent Order Letter No. 4882/IND-I-CON-1(A), dated 28.03.2022 for production of 8.05 MTPA (ROM) [(i) Barsua – 3.5 MTPA iron ore including excavation and dispatch of tailings maximum up to 1.0 MTPA from the tailing pond at Barsua, (ii) Kalta – 3.2 MTPA iron ore including excavation and dispatch of subgrade iron ore fines maximum up to 0.5 MTPA from fines stocks and (iii) Taldih – 1.35 MTPA iron ore including excavation and dispatch of subgrade iron ore fines maximum up to 0.5 MTPA from fines stocks] and operation of mobile crushing and screening plant of capacity 4x300 TPH and operation of mobile screening plant of capacity 4x300 TPH for the period up to 31.03.2023. PP submitted the Certified EC Compliance report issued by the Integrated Regional Office (IRO), Bhubaneswar vide Lr No. 101-257/21/EPE/1353 dated 29.10.2021. Site visit was carried out by IRO, Bhubaneswar on 22<sup>nd</sup> & 23<sup>rd</sup> October, 2021.
- xviii. The Project Proponent submitted the year wise production data of ML-130 (2486.383 Ha) from 1993-94 to 2018-19 certified by Deputy Director of Mines, Koira vide Mem No 6522/Mines, dt 13.12.2019 and for the period 2019-20 to 2020-21 certified by Deputy Director of Mines, Koira vide Mem No 4004/Mines, dt 22.10.2021. PP reported that subsequent to the judgment of Apex Court dated 02.08.2017, the Government of Odisha has issued demand notice to BarsuaKalta Mines for payment of compensation towards excess production on or before 31<sup>st</sup> December, 2017 against EC/CTO capacity. Dy. Director of Mines (DDM), Koira vide letter dated 02.09.2017 issued a demand notice for payment of Rs. 66,89,42,779.5 /- in respect of Barsua / Kalta Iron

Mines to recover price of mineral produced without/beyond EC alone under Section 21 (5) of MMDR Act, 1957. The said amount was deposited on 29.12.2017 under protest. Further, letter No.5962/Mines dtd, 24.10.2017 of DDM, Koira has directed to pay compensation of Rs.90,19,71,684.40 /- for mining in excess of the permissible limit under the Consent to Operate. Against the above stated demands, SAIL had filed a Writ Petition bearing WP (C) No- 24282/2017 in High Court of Odisha, Cuttack. The matter was heard and Hon'ble High Court had passed the stay order on 04.04.2018 & matter is sub-judice. PP also submitted the affidavit dated 20.04.2020 that Barsua-Taldih-Kalta Iron Ore Mine (ML-130, Mining Lease: 2486.383 Ha) of SAIL shall comply with all the statutory requirement & judgment of Hon'ble Supreme Court dated 2<sup>nd</sup> August 2017 in writ Petition (civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ors subject to the result of the pending writ petitions before Hon'ble High Court of Odisha and further appeals thereto if need arises.

xix. The Project Proponent submitted that no R&R plan is required as no displacement of people is proposed for the expansion of Barsua-Taldih-Kalta Iron Ore Mining Project.

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

Activities	Capital cost (Rs. in Crores)	Recurring cost (Rs in Lakhs/annum)
<b>POLLUTION CONTROL</b>		
A. Water Pollution Control	16.00	190
B. Air Pollution Control	20.95	491
C. Solid Waste Management	0.55	40
OCCUPATIONAL SAFETY & HEALTH	0.30	15
GREEN BELT DEVELOPMENT	73.58	0
WILDLIFE CONSERVATION & MANAGEMENT	0.00	142
POLLUTION MONITORING	0.00	40
RAINWATER HARVESTING	0.50	5
Cost for Environmental Protection Measures (in Rs. Lakhs)	111.88	923

xxi. Details of project cost and employment:

Particulars	(Rs. In Crore)
Capital Cost for Environment Protection	Rs.111.88 Crores
Budget for addressing the Public Hearing issues	Rs.21.88 Crores over the next 3 years (including 13.27 Crores of cost of Environmental Protection)
Total Cost for EMP	Rs.120.49 Crores (Including PH issues)
Recurring Cost for EMP	Rs. 9.23 Crores per year

Project Cost	Rs. 2740.88 Crores
Employment	1133 nos. additional

**3. Observation and Recommendation of the Committee:**

The EAC deliberated on the additional details submitted by the Project Proponent and the Consultant. The Project Proponent informed the EAC that the proposed conveyor route is about 16 km long, out of which ~2 km will be within the ML and ~14 km will be outside the ML parallel to NH-520. The EAC asked about the status of the conveyor belt. The Project Proponent informed the EAC that the construction of conveyor is still not commenced and it will take three years to commence. The proposal for diversion of forest clearance will be submitted after obtaining the EC. Barsua-Taldih-Kalta ML area is ~18 km long in N-S direction. E-W width narrow is ~800 m to ~1500 m. In order to transport iron ore from Kalta through Taldih, the belt conveyor route has to pass through Taldih-D, Taldih-B, Taldih-C Blocks from N to S and cross the NH – 520 near Kalta Mine. The limited space is available between ultimate pit boundary and lease boundary earmarked for green belt and safety zone. i.e. there is no space for construction of corridor of conveyor belt line through this area. The EAC opined that the Project Proponent shall install the noiseless conveyor. PP also informed the EAC that the NOC for approach from Kalta Mine to NH-520 from National Highways Authority of India (NHAI), Rourkela has been taken up and the same will be completed by Sept. '2023.

The Project Proponent informed the EAC that the DFO, Bonai vide Memo No. 9673/6F-(Mg.), dated 19.11.2022 has clarified that the implementation of Site Specific Wildlife Conservation Plan (SSWCP) of ML-130 has been started from the year 2016-17 and implementation of SSWCP of ML-162 is yet to be started. Hence, revision /updatation of both the plans shall be done after implementation of the existing plans. Effluent generated from the ore beneficiation plant is being treated in Thickeners and about 60% of clear water from the thickener is being recycled back to the system. The underflow from thickener is discharged into Tailing Dam for further solid - liquid separation. The overflow from the tailings pond is further collected in the Zero Discharge System and pumped back to the system for recycling.

Further, the Project Proponent informed the EAC that the action taken report submitted on 17.12.2022 for the non-compliances identified by Integrated Regional Office (IRO). The EAC asked about the status of the court case. The Project Proponent informed the EAC that the Dy. Director of Mines (DDM), Koira vide letter No.5962/Mines dtd 24.10.2017 has directed to pay compensation of Rs. 90,19,71,684.40/- for mining in excess of the permissible limit under the Consent to Operate. Against the above stated demands, the Project Proponent had filed a Writ Petition bearing WP (C) No- 24282/2017 in High Court of Odisha, Cuttack. The matter was heard, and Hon'ble High Court vide order dated 04.04.2018 had passed the stay order on demand dated 24.10.2017 & the matter is sub-judice.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC (Non-Coal Mining) **recommended** the proposal in its EAC meeting held during 27-28 December, 2022 under the provisions of EIA Notification, 2006 for grant of Environmental Clearance (EC) for Barsua-TaldihKalta Iron mines of M/s SAIL for expansion in production from 8.05 MTPA to 16.0 MTPA (ROM), Topsoil/OB/IB: 3.92 MTPA and handling 2.0 MTPA Sub-grade dumps/Tailings (Total excavation: 22.0 MTPA) and installation of new Dry Processing Plants of 7.0 MTPA for Taldih& 4 MTPA for Kalta and augmentation of existing 3.5 MTPA Barsua Beneficiation Plant along with adequate loading, siding and associated infrastructure in the amalgamated mine lease area of 2558.581 ha [FC available 2419.871 ha + non-forest land 138.710 ha] out of 2564.323 ha, located at Tantra & Bahamba Villages and Toda RF under Koira Tehsil, Sundargarh District, Odisha subject to the following specific conditions in addition to the standard EC conditions applicable for non-coal mining projects: -

- i. This EC will be subject to the outcome of the Writ Petition (C) No- 24282/2017 in the Hon'ble High Court of Odisha, Cuttack.
- ii. The Environmental Clearance (EC) is accorded for the reduced area of 2558.581 Ha [FC available 2419.871 ha + non-forest land 138.710 ha] out of 2564.323 ha. The Project Proponent needs to submit the revised mining plan for the reduced area of 2558.581 Ha approved by the Indian Bureau of Mines (IBM) or Stage-I FC for 5.742 ha area prior to grant of Environmental Clearance (EC).
- iii. No mining activity shall be carried out over an area of 5.742 ha (Schedule Tribe & Other Traditional Forest Dwellers).
- iv. The Project Proponent shall commence the operation of the conveyor belt within 2 years from the date of issue of this EC, till the conveyor belt is implemented, SPCB shall grant CTO upto 12 MTPA Only. After the operational of conveyor belt, SPCB may grant CTO upto 16 MTPA based on site inspection of compliance of this conditions.
- v. PP shall obtain NOC from Department of Steel and Mines, Odisha for extension of timeline to implement condition conveyor belt for transportation of minerals beyond the stipulated timeline as per guidelines/recommendation of NEERI.
- vi. The Project Proponent shall submit a progress report of implementation of the conveyor belt in compliance report of EC vide six monthly report to the Integrated Regional Office (IRO)/Ministry.



- vii. The Project Proponent shall install the noiseless conveyor. Installation of the conveyor should be completed within two years after obtaining forest clearance of the proposed conveyor route.
- viii. The Project Proponent shall undertake the stringent air pollution measures to control the air pollution in the vicinity of the mine lease area and the efforts made and the outcome shall be submitted to the Ministry's Integrated Regional Office. The Project Proponent shall ensure that the concentration of the air pollutants does not exceed the prescribed National Ambient Air Quality Standards (NAAQS).
- ix. The Project Proponent should follow-up the status of implementation on Site Specific Wildlife Conservation Plan from the Forest Officials and the same shall be submitted to the Ministry's Integrated Regional Office in the six monthly compliance report.
- x. The Project Proponent shall effectively utilize the low grade Iron ore.
- xi. The Project Proponent needs to utilize the mine waste water having high concentration of Fe content for different commercial applications in industries such as cosmetics, pharmaceutical, paint industry.
- xii. The Project Proponent needs to complete the work of the concrete road from Kalta mine to NH-520 by September, 2023. No village road shall be used for transportation of minerals.
- xiii. The Project Proponent shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.
- xiv. The Project Proponent shall take adequate measures to prevent the pilferage of mineral.
- xv. The surface water quality from upstream and downstream are to be regularly monitored.
- xvi. The Project Proponent needs to maintain zero discharge and garland drains, settling ponds needs to be properly designed. Stone pitching shall be made at suitable places to regulate water flow.
- xvii. The Project Proponent shall carry out the vacuum cleaning all along the mineral transportation route.

- xviii. The Project Proponent needs to facilitate the online education system in the schools by providing Wi-Fi connectivity, smart classrooms and desktops/ tablets.
- xix. The Project Proponent shall take adequate measures to protect the perennial nallas.
- xx. 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 atleast 40 m throw shall be installed at various locations in the mine area.
- xxi. The Project Proponent shall explore the possibility of using atleast 20% of electric vehicles/LNG/CNG instead of diesel operation within three years from the start of mining operations.
- xxii. The budget of Rs. 21.88 Cr to address the concerns raised by the public including 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.
- xxiii. The Project Proponent should adopt the proper mitigation measures as proposed under EMP with budgetary provision of Rs.111.88 Crores. 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 Integrated Regional Office.
- xxiv. 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.
- 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 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 Integrated Regional Office. Project proponent shall use saplings of 10 ft height for plantation.
- 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 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.
- xxviii. 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.

**1.3 Lolo Stone Deposit of M/s Fairmine Resources Limited for mining of Stone with production capacity of 3,60,872 TPA along with Crushing & Screening Plant of 250 TPH capacity in the mine lease area of 6.07 Ha, located at Plot no. - 2392 P, 2402 P, 2403, 2404, 2405 P, 2408 P, 2410 P, 2411 P, 2412 P, Khata no. 184,55 & 25, Mauza: Lolo, Block: Ramgarh, District: Ramgarh, Jharkhand – [J-11015/46/2020-IA-II(M), Proposal No: IA/JH/MIN/173744/2020, Consultant: Crystal Consultants] – Reconsideration of Environmental Clearance (EC)**

The proposal is for mining of Stone in Lolo Stone Deposit of M/s Fairmine Resources Limited with production capacity of 3,60,872 TPA along with Crushing & Screening Plant of 250 TPH capacity in the mine lease area of 6.07 Ha, located at Plot no. - 2392 P, 2402 P, 2403, 2404, 2405 P, 2408 P, 2410 P, 2411 P, 2412 P, Khata no. 184,55 & 25, Mauza: Lolo, Block: Ramgarh, District: Ramgarh, Jharkhand.

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: 23°33'33.64"N to 23°33'44.94"N and Longitude: 85°33'53.51"E to E85°34'03.40"E. The mine lease area falls under the Survey of India Toposheet No. F45B10.

**Minutes of 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022**

- ii. The proposed project activity is listed at Schedule no. 1(a) Mining of Minerals of the schedule of the EIA Notification, 2006.
- iii. The proposal was initially considered in the 41<sup>st</sup>EAC (Non-Coal Mining) Meeting held during 15<sup>th</sup> – 16<sup>th</sup>November and 18<sup>th</sup>November, 2021 wherein the EAC deferred the proposal for want of requisite information. The Project Proponent submitted the information on 27.12.2021 in Parivesh portal and the proposal was again considered in the 45<sup>th</sup>EAC (Non-Coal Mining) Meeting held during 24<sup>th</sup>, 25<sup>th</sup>and 27<sup>th</sup>January, 2022wherein the EAC deferred the proposal for want of requisite information. Then, the Project Proponent submitted the information on 31.03.2022 and the proposal was reconsidered in the 49<sup>th</sup>EAC Meeting (Non-Coal Mining) held during 19<sup>th</sup> to 21<sup>st</sup>April, 2022 wherein the EAC deferred the proposal for want of additional information. Then, the Project Proponent submitted the information on 19.06.2022 in Parivesh portal.
- iv. The Ministry on 22.08.2022 informed the Project Proponent that the decision regarding consideration of deferred cases for minor mineral to be consider at the Central level or State level is pending at Ministry. The proposal may consider accordingly. The Ministry vide OM dated 27.09.2022 mentioned that “the proposals which have been considered/ appraised once by EAC either for TOR or EC, but final decision has not been taken, shall continue to be appraised at the Central level only, till final disposal for ToR/EC, even after the amendments in the EIA Notification are issued from to time regarding delegation of projects to SEIAAs”
- v. The Ministry examined the reply of the Project Proponent and sought additional details on 25.11.2022 and the Project Proponent submitted the information on 03.12.2022 in Parivesh portal and accordingly the proposal is considered in the 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022 as per Ministry’s OM dated 27.09.2022.

Based on observation of EAC, compliance of observation of EAC made by Project Proponent, are detailed below:

S. No	Observation of EAC	Reply by Project Proponent
1	The Committee noted that since the project falls under critically polluted area as identified by CPCB and the data that was collected by the project proponent over a period of two days does not convince the committee that this project qualifies to come under critically polluted	The Project Proponent submitted the environment monitoring were carried out by YugantarBharati Analytical & Environmental Engineering Laboratory accredited by NABL and Jharkhand State Pollution Control Board.  The Project Proponent submitted the air quality and noise level were monitored on 06.05.2022 – 07.05.2022, 10.05.2022 –

	<p>area. The Project Proponent was directed to present the factual data collected by recognized agency of CPCB/SPCB. Based on the evaluation of factual data collected at least over a period of one month needs to be submitted.</p>	<p>11.05.2022, 13.05.2022 – 14.05.2022, 17.05.2022 – 18.05.2022, 20.05.2022 – 21.05.2022, 24.05.2022 – 25.05.2022, 27.05.2022 – 28.05.2022 &amp; 31.05.2022 – 01.06.2022.</p> <p>PP reported that the prevailing wind direction in the study area found to be from NW to SE direction. The major source of generation of air pollutants in the study area is movement of diesel / petrol based vehicles on road connecting NH-33 to Lolo village. Other source of dust is fallow agricultural land in study area. Road traffic on NH-33 which runs on NW side of lease area does not contribute significant pollutant to study area as there is thick green belt between NH-33 &amp; study area. The area lying on SE direction of the road receives air pollutant generated by road traffic. However, level of PM2.5, PM10, So2 &amp; NOx at all monitoring station have been found to be below the level prescribed by MoEF&amp;CC /CPCB.</p> <p>PP also reported that at present there is no mining or other industrial project in operation that generate noise in the study area. Only source of noise is movement of vehicle on the evacuation route connecting NH-33 to village Lolo. Effect of movement of traffic on NH33 does not have significant impact on noise level in the study area. Level of noise observed both during day time &amp; night time on all monitoring stations have been found to be below level prescribed by CPCB.</p> <p>The mining operation will not intersect the Ground Water Table. and there will not be any impact on Ground Water Resource due to mining activities.</p>
2	<p>District Survey Report as per S.O.3611 (E) dated 25<sup>th</sup> July, 2018.</p>	<p>The Project Proponent submitted the District Survey Report of Stone, Ramgarh District in accordance with Ministry's Notification</p>

		<p>S.O.3611 (E) dated 25<sup>th</sup>July 2018 approved by DEIAA, Ramgarhinthe year 2018.</p> <p>Further, the Project Proponent submitted that the Deputy Commissioner,Ramgarh vide his letter no.1406 dt 14/12/2021 requested the SEIAA stating that “the above project should be considered as part of the District Survey Report (DSR). The said project will be included in the DSR to be amended in the future of RamgarhDistrict. Further action can be taken for environmental clearance”.</p> <p>PP submitted that it may deemed to be included in DSR and the same has been confirmed from SEIAA, Jharkhand as they practicing the same for other projects under their jurisdiction.</p>
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- vi. The Project Proponent obtained Terms of Reference (ToR) vide ToR letter dated 12.11.2020 for Lolo Stone mine with proposed production capacity of 3,60,872 TPA along with Crushing & Screening Plant of 250 TPH capacity in the mine lease area of 6.07 Ha.
- vii. The Project Proponent submitted that the Letter of Intent (LoI) was issued by the Govt. of Jharkhand in pursuance to the Rule 11 of Jharkhand Minor Mineral (Auction) Rules, 2017 vide Letter No. Kha.Ni (Nilami)-04/2019 1852 dated 06.08.2019 for grant of mining lease of Lolo Stone Block – 6.07 Ha.
- viii. The Project Proponent submitted that the Mining Plan including Progressive Mine Closure Plan approved by the Mines & Geology Department vide Lr Memo No. 135/M, Ranchi dated 10.08.2020 for mining of Stone over an area of 6.07 Ha. The method of mining will be opencast mechanized. The mineable reserve would be 2550291 Tonnes. The anticipated life of the mine will be 10 years. For transportation of blasted materials, dumpers/ tippers of 20 Ton, will be used. It is proposed to provide a crusher cum screening plant of 250 TPH capacity to crush mined out boulders & screen them to pre – determined size. There is no overburden over stone reserve. Small quantity of overburden material would be used for road building. Total water requirement will be 16.5 KLD.
- ix. The Project Proponent reported that there is no forest land involved in the mine lease area. There is no notified National Parks, Wildlife Sanctuaries, Bio-Sphere Reserve, Tiger/Elephant reserve in the study area. There is no Schedule-I species reported in the study area.
- x. The Project Proponent reported that the proposed area for greenbelt/ plantation will be 0.38 ha during the plan period. PP earmarked a budget of

- Rs 5.0 Lakhs towards development of green plant & plantation till the end of life of mine.
- xi. The Project Proponent submitted that the baseline data was generated during October 2020 to December 2020. The ambient air quality monitored at 5 locations. The concentrations of PM<sub>10</sub> & PM<sub>2.5</sub> observed to be in the range from 33 µg/m<sup>3</sup> to 45 µg/m<sup>3</sup> and 24 µg/m<sup>3</sup> to 32 µg/m<sup>3</sup> respectively. The concentrations of SO<sub>2</sub> and NO<sub>x</sub> observed to vary from <5 µg/m<sup>3</sup> to 16 µg/m<sup>3</sup> and <10 µg/m<sup>3</sup> to 18 µg/m<sup>3</sup> respectively. The quality of surface water (2 locations) and ground water (2 locations) have been found to be in conformity to standards prescribed by CPCB and BIS:10500 respectively. Noise level were monitored at 5 locations and found to be below the level prescribed by CPCB.
  - xii. The Project Proponent submitted that the Public Hearing was conducted on 10.04.2021. The advertisement for public hearing was published in Hindustan on 11.3.2021 and The Pioneer on 10.3.2021. The public hearing was chaired by the Additional Collector. The issues were related to Employment, Pollution Mitigation, Social Development, etc.
  - xiii. The Project Proponent submitted that R & R is not required for this project. Mining activity will be confined to the lease area, shifting of any family is not involved in this project. There is no household located within lease area.
  - xiv. The Project Proponent submitted that there is no Court Cases pending against the project and/or land in which the project is proposed to be set up.
  - xv. The Project Proponent submitted that the capital cost for EMP is Rs 0.4853 Cr and recurring cost is Rs 15.0 Lakhs/annum.
  - xvi. The total cost of the project is Rs 4.7645 Cr and about 39 persons will get employment.

### **3. Observation and Recommendation of the Committee:**

The EAC noted that the instant proposal is for reconsideration of EC for mining of Stone in Lolo Stone Deposit in the mine lease area of 6.07 Ha. The Project Proponent informed the EAC that the instant mine lease was granted under auction. The instant mine lease area falls under Ramgarh District i.e., Severely Polluted Area.

The EAC asked the Project Proponent about the status of the District Survey Report. The Project Proponent informed the EAC that the Deputy Commissioner, Ramgarh vide his letter no.1406 dated 14/12/2021 requested the SEIAA stating that “the above project should be considered as part of the District Survey Report (DSR). The said project will be included in the DSR to be amended in the future of Ramgarh District. Further action can be taken for environmental clearance” and hence it may deem to be included in DSR and the same has been confirmed from SEIAA, Jharkhand as they practicing the same for other projects under their jurisdiction. The EAC was of the view that the Project Proponent needs to submit the District Survey Report approved by the SEIAA.

The EAC asked the Project Proponent whether any illegal mining has been carried out or not? The Project Proponent informed the EAC that the mining was carried out in past in two patches within the lease area illegally over an area of 0.56 ha. The EAC asked the Project Proponent to obtain the letter from the Dept. of Mines and Geology clarifying whether any illegal mining within the mine lease area has been carried out or not, and whether the same has been carried out by PP or not? Based on the above discussions, the EAC **deferred** the proposal for want of following additional information: -

- i. The Project Proponent needs to submit the District Survey Report approved by the SEIAA.
- ii. The Project Proponent needs to submit the letter from the Dept. of Mines and Geology clarifying whether any illegal mining within the mine lease area has been carried out or not, and whether the same has been carried out by PP (M/s Fairmine Resources Limited) or not?
- iii. The Project Proponent needs to submit the letter from the State Forest Dept. confirming the presence of forest land within the mine lease area and National Park, Wildlife Sanctuary, Eco Sensitive Zone, Elephant/Tiger Reserve within 10km radius of the study area.
- iv. The Project Proponent needs to submit the 500 meters Cluster Certificate from State Mines and Geology Dept.
- v. The Project Proponent needs to obtain water drawal permission from CWC.

**1.4 Ravur Limestone Mine Block of M/s UltraTech Cement Limited for mining of Limestone with proposed Production Capacity of Limestone: 5.10 Million TPA, Topsoil: 0.022 Million TPA, OB: 0.454 Million TPA (Total Excavation: 5.576 Million TPA) along with Installation of 1600 TPH capacity of Crusher with Wobbler in the mine lease area of 713 ha, located at Villages: Ravur, Yaragal, K. Chittapur & K. Nagavva, Taluka: Chittapur, District: Kalaburagi, Karnataka –[F.No: IA-J-11015/45/2022-IA-II(NCM), Proposal No: IA/KA/MIN/405937/2022, Consultant: J.M. EnviroNetPvt. Ltd] - Terms of Reference (Auction block)**

The proposal is for mining of Limestone in Ravur Limestone Mine Block of M/s UltraTech Cement Limited with proposed Production Capacity of Limestone: 5.10 Million TPA, Topsoil: 0.022 Million TPA, OB: 0.454 Million TPA (Total Excavation: 5.576 Million TPA) along with Installation of 1600 TPH capacity of Crusher with Wobbler in the mine lease area of 713 ha, located at Villages: Ravur, Yaragal, K. Chittapur & K. Nagavva, Taluka: Chittapur, District: Kalaburagi, Karnataka.



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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: 17°05'50.97"N to 17°06'43.01"N and Longitude: 77°00'35.07"E to 77°00'35.00"E. The mine lease area falls under the Survey of India Toposheet No. 56C/16 (E43Q16) & 56G/4 (E43R4).
- ii. The proposed project activity is listed at Schedule no. 1(a) Mining of Minerals of the schedule of the EIA Notification, 2006 and falls under Category "A" as the mining lease area is greater than 250ha and appraised at the Central level.
- iii. Details of Mine lease:

S. no	Letter of Intent (LoI)	Date of the grant	Name of the Mineral	Period of Grant	Granted by	Mine lease area
1	Letter of Intent for grant of mining lease vide Lr No DMG-17012/21/2021/2021-22/9258-9262 in pursuant to Rule 10 (2) of the Mineral (Auction) Rules, 2015	04.01.2022	Limestone	Letter of Intent is valid for a period of three years from the date of its issuance	Govt., of Karnataka	713 Ha

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

Private Agriculture land	707.082 ha
Government land	5.918 ha
Total Mining lease area (MLA)	713.0 ha
Private land for crusher, workshop & other infrastructure outside the MLA	No infrastructure is proposed outside the ML area

v. Details of Mining Plan:

Mining Plan including Progressive Mine Closure Plan approved by Indian Bureau of Mines	Letter No.	Sr./No.:279/1110/2022/BNG-812
	Dated	01.07.2022
	Mine lease area	713.0 Ha
	Mineral	Limestone
	Validity	5 years from the date of execution of mining lease deed

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Mining Parameters	Description
Method of Mining	Fully – Mechanized Opencast Mining
Total Geological Reserves	708.21 Million Tonnes
Total Mineable Reserves	536.11 Million Tonnes
Life of mine	109 years (Based on detailed exploration may be changed)
Bench Height	9.0 m
Bench Width	15 to 20 m
Individual bench slope	80°
Overall pit slope	45°
Drilling/Blasting	Drilling will be done with wet drilling process. Controlled blasting with proper spacing, burden, stemming and optimum charge/delay to be adopted.
Transportation details	Limestone will be transported from mine face to crusher by dumpers via haul road. Crushed limestone will be transported to UTCL Cement Plant via Road/Covered Conveyor belt.
Dumpers capacity	100T within the ML and 20T Tippers for outside the ML
Crushing	Impact crusher with wobbler of 1600 TPH capacity will be installed within the mine. Feed size of the crusher is 900 x 1000 mm
RoM output size	Less than 50 mm
Topsoil/Waste	The Project Proponent reported that during the plan period about 0.596 Million Tonnes of waste will be generated (Topsoil + OB Soil), which will be used in Greenbelt/plantation. At conceptual stage, 14.77 Million Tonnes of waste will be generated which will be used for backfilling in 73.08 ha area and same will be rehabilitated by plantation/regrassing.
Conceptual Land Use	The Project Proponent submitted that the total mine lease area is 713 ha out of which 608.69 ha will be excavated out of which 73.08 ha will be backfilled (rehabilitated by plantation/regrassing), 535.61 ha will be converted into water reservoir, 1.05 ha under Roads & 95.37 ha will be covered under Greenbelt/Plantation & remaining 7.89 ha area will be undisturbed.
Additional information (if any)	Limestone produced from this mine will be used in Proposed Integrated Cement Plant & Existing Cement Plant of UTCL.

vi. Water requirement:

Total water requirement	250 KLD
Source	Water will be sourced from Ground water, Kagina River & Mine Sump
Permission	Water will be sourced from ground water after getting the permission from Karnataka Ground Water Authority.

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

Particular	Particular's Name	Directions
Nearest Village	Ravur Village	~1.0 km, SW
Nearest Town / City	Kalaburagi	~25.0 km, NW
Nearest State/National Highway	NH-150	~380m, SSW
	SH-51	~1.0 km, SW
Nearest Railway Station	Sulhalli RS	~2.5 km, SE
Nearest Water Bodies	Two streams originating from the ML area, flowing towards NW direction.	
	RavurHalla	~ 2.5 km, SW
	Kagina River	~5.5 km, NW
	NandanaHalla	~ 6.0 km, WNW
	Chika Halla	~ 7.0 km, South
	DodaHalla	~ 8.5 km, SSE

viii. 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	No forest land
National Park	No	`No National Park, Wild Life Sanctuaries, Eco Sensitive Zone (ESZ)/ Eco-Sensitive Area (ESA) etc. within 10 km radius study area.
Wildlife Sanctuary	No	
Eco Sensitive Zone (ESZ)/ Eco-Sensitive Area (ESA)	No	
Schedule-I species	-	This proposal is for ToR.Study will be carried out, if schedule -I Will found in the study area Wildlife Conservation Plan will be prepared during the preparation of EIA/EMP Report.
Status of Wildlife Conservation Plan	-	

ix. Green belt/plantation details:

Proposed area for green belt/plantation	168.45 ha (Greenbelt (7.5 m) along ML boundary: 9.60 ha, Plantation along the Village Road, power line & Streams will cover 85.77 ha, & Plantation over backfilled Area: 73.08 ha).Local and fruit bearing species will be planted.
Budget for green plant & plantation till the end of life of mine.	Rs. 10.23 Cr. (168.45 ha, 4,21,125 Saplings)
Budget for nursery	5 Lakhs
7.5 m barrier & non-mineralized zone	9.60 ha
50 m safety zone of canal, nallah, HT lines	85.77 ha
500 m safety zones of nearest habitation villages	No habitation falling within 500m

- x. The Project Proponent submitted that the total mining lease area is 713 ha, out of which 707.082 ha. is Private Agriculture land and 5.918 ha is Govt. land which spreads in 4 Villages namely Ravur, Yaragal, K. Chittapur & K. Nagavva. Approx. 350 PAFs will be affected due to this project. Exact No. of PAFs will be covered in detailed R&R report. Land will be purchased with negotiation and R&R provisions will be followed as per Central and State Government Rules & Notifications.
- xi. The Project Proponent submitted that there is no court case pending against the project.
- xii. The Project Proponent submitted the Affidavit in a non-judicial stamp duty amount of Rs 100 bearing Certificate No. IN-KA60102808299183U dated 17.10.2022 stating that "the company hereby undertake by affidavit comply with all the statutory requirement & judgment of Hon'ble supreme court dated the 2<sup>nd</sup> 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".
- xiii. The Project Proponent submitted that the total project cost is Rs. 692 Crores/- and about 48 persons will get employment.

### **3. Observation and Recommendation of the Committee: -**

The EAC noted that the instant mine lease area is a green filed project for mining of Limestone granted under Auction. The Project informed that the total mine lease area is 713 ha, out of which 707.082 ha is a Pvt. Agriculture land and 5.918 ha is a Pvt. Land. The EAC asked about the crops being grown in the agricultural land. The Project Proponent informed the EAC that Rabi, Gram, Barley, Thuvar are being cultivated. The limestone produced from Ravur Mine will fulfil the limestone requirement of Integrated Cement Plant. PP also informed that there are two streams flowing from South to North in the mine lease area and a village road passing through the mine lease area. 50m safety distance will be maintained on either of the nallah and village road respectively. Ultimate depth of the mine working will be upto 371 m AMSL (60 m bgl). No. of working days will be 300 days and the mine will be operated in two shifts. The EAC was of the view that the Project Proponent needs to submit the details of the year wise excavation and the proposed exploration program.

The Project Proponent informed the EAC that the Limestone will be transported from mine face to crusher by dumpers via haul road. Crushed limestone will be transported to UTCL Cement Plant via Road/Covered Conveyor belt. The EAC asked about the distance of the crusher and the Cement Plant. The Project Proponent informed the EAC that the distance between the crusher and the Cement Plant is 3 km. The EAC on viewing the KML noted that few other quarries are located in the vicinity of the mine lease area. PP informed the EAC that the slab quarries are located in the vicinity of the mine lease area. Further, PP informed that no forest land within the mine lease area and no National Park and Wildlife Sanctuary, Eco Sensitive Zone within 10 km radius of the study area. The Project Proponent

informed the EAC that the total mine lease area is 713 ha, out of which 73.08 ha will be backfilled and 535.61 ha will be converted into water reservoir, Greenbelt/ Plantation will be carried out over an area of 95.37 ha and undistributed area will be 7.89 ha. PP also informed the EAC that the no litigation is pending against the project.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC **recommended** the proposal during the EAC meeting held during 27-28 December, 2022 for grant of Terms of Reference (ToR) for mining of Limestone in Ravur Limestone Mine Block of M/s UltraTech Cement Limited with proposed Production Capacity of Limestone: 5.10 Million TPA, Topsoil: 0.022 Million TPA, OB: 0.454 Million TPA (Total Excavation: 5.576 Million TPA) along with installation of 1600 TPH capacity of Crusher with Wobbler in the mine lease area of 713 ha, located at Villages: Ravur, Yaragal, K. Chittapur & K. Nagavva, Taluka: Chittapur, District: Kalaburagi, Karnataka for undertaking detailed EIA/EMP study subject to the following specific conditions in addition to the standard ToR conditions applicable for non-coal mining projects:-

- i. In view of the agricultural land proposed under the mining lease area, the Project Proponent needs to submit the Cost Benefit analysis comparing the current agricultural production and annual turnover including the cost and the benefits drawn by the local villages vis-a-vis the mineral cost and beneficiaries. The Project Proponent needs to submit the action plan for returning the land back to the farmers along with the timeline.
- ii. 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.
- iii. 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.
- iv. The Project Proponent needs to submit the action plan for the area to be backfilled i.e., 73.08 ha and water management plan for creation of water body of 535.61ha and its utilization for benefit of the agriculture, local people and community use.
- 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 work out the requirement of manpower in accordance with the proposed production capacity.

- vii. The Project Proponent needs to carry out the cumulative impact assessment by considering all the mining activity including the transport scenario of the operating mines in the study area and should indicate the capacity of each mine considered for predication of air quality modeling. The control case and worst-case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants needs to be clearly mentioned. The modeling should also indicate the transport scenario through forest area. The input parameters used for the modeling also needs to be submitted.
- viii. The Project Proponent needs to study the traffic density and carrying capacity of the road and should include the same in the EIA/EMP report. PP needs to submit the map showing the transport route through forest area and its impact due to mining activity and the mitigation measures to be taken.
- ix. The Project Proponent needs to submit the action plan for converting the diesel operating machineries and vehicles to CNG/Solar/Electrical equipment's.
- x. The Project Proponent needs to submit the action plan for installing permanent water sprinklers on the haul road and the approach road with the timeline.
- xi. The Project Proponent needs to submit the action plan for plantation in the 7.5m safety zone of the mine lease boundary, 10m safety zone, 50 m safety zone, mine bench, nalla and also its protection measures. PP also needs to submit the action plan for regrassing over the backfilled area. 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.
- xii. 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.
- xiii. 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.
- 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 map demarcating the location of the retaining wall, garland drains, catch drains and siltation ponds along with design and timeline based on the detailed hydro geological study.
- xvi. 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.
- xvii. 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 at the time of appraisal of EC.
- xviii. The Project Proponent shall conduct drone survey of the mine lease area and buffer area and submit during the appraisal for EC.

**1.5 Moharwa Limestone Deposit of M/s Adhunik Corporation Ltd for mining of Limestone with production capacity of 4.0 MTPA (ROM) along with Crusher with capacity of 1200 TPH in the mine lease area of 869.032 ha, located at Villages Moharwa, Ghotari, Gondin, Patahara, Goraiya, Barkula, Jhanjhwari, Tehsil – Maihar, District-Satna, Madhya Pradesh - [Proposal No: IA/MP/MIN/285429/2022, F.No: J-11015/177/2016-IA-II(M), Consultant: Ind Tech House Consult] - Terms of Reference (ToR)**

The instant proposal is for Terms of Reference (ToR) of M/sAdhunik Corporation Ltd for mining of Limestone in Moharwa Limestone Deposit with proposed production capacity of Limestone of 4.0 MTPA (ROM) along with Crusher with capacity of 1200 TPH in the mine lease area of 869.032 ha, located at Villages Moharwa, Ghotari, Gondin, Patahara, Goraiya, Barkula, Jhanjhwari, Tehsil – Maihar, District- Satna, 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 24°08'25.3"N to 24°10'56.6"N and Longitude 80°51'14.9"E to 80°55'14.1"E. The mine lease area falls under the Survey of India Toposheet No. 63 D/16.
- ii. The proposed project activity is listed at Schedule no. 1(a) Mining of Minerals of the schedule of the EIA Notification, 2006 and falls under Category "A" as the mining lease area is greater than 250ha and appraised at the Central level.
- iii. The proposal was initially considered in the EAC meeting held during November 23-25, 2016 wherein the EAC noted that the total mine lease area is 869.032ha. Out of which 99% land is single crop agriculture land. No forest land is involved. Letter of Intent was issued by State Government of Madhya Pradesh vide letter dated 01.04.2015. The Committee noted that the lease is located in seven villages and there are human habitations (208 kutcha houses and 21 pucca houses) exist in the mine lease area. There are 1956 khata holders for the entire mine lease area. Based on the information furnished and presentation made by the Project Proponent and discussions held, the Committee is of the view that the Project Proponent shall revise the proposal and the proposal for reduced area may be submitted as the proposed mine site. Now, the Project Proponent submitted the fresh proposal for grant of Terms of Reference vide online proposal no: IA/MP/MIN/285429/2022 dated 26.07.2022 and submitted Form-1 and Prefeasibility report under the provisions of the EIA Notification, 2006.
- iv. The proposal was considered in the 2<sup>nd</sup> EAC (Non-Coal Mining) Meeting held during 16<sup>th</sup> - 18<sup>th</sup> August, 2022 wherein the Member Secretary informed the EAC that the Project Proponent vide email dated 06.08.2022 sought deferment and informed that the technical expert is not feeling well and hence PP was unable to furnish the desired information. Also, the Project Proponent requested to postpone the ToR proposal. Therefore, the EAC deferred the proposal as per the request of the Project Proponent vide email dated 06.08.2022. The Project Proponent vide letter dated 21.10.2022 requested to consider the proposal for grant of Terms of Reference (ToR) and the proposal was reconsidered in the 6<sup>th</sup> EAC (Non-Coal Mining) meeting held during 9<sup>th</sup>-11<sup>th</sup> November, 2022 wherein the Member Secretary informed the EAC that the Project Proponent vide email dated 09.11.2022 informed that they are not aware that the instant proposal was listed in the 6<sup>th</sup> EAC (Non-Coal Mining) meeting held during 9<sup>th</sup> - 11<sup>th</sup> November, 2022 and hence the Proponent requested the EAC to defer the proposal. Therefore, the EAC deferred the proposal based on the request of the Project Proponent. The Project Proponent on 05.12.2022 in Parivesh requested to consider the proposal and accordingly the proposal was again reconsidered in the 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27-28 December, 2022.
- v. Details of Mine lease:
  - a) The Project Proponent submitted that the Govt. of Madhya Pradesh vide letter dated 14.08.2008 granted the Prospecting Licence over an area of



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987.53 ha. Prospecting Licence deed was executed on 25.08.2008 for a period of two years upto 24.08.2010.

- b) Then, the Govt. of Madhya Pradesh vide letter dated 13.12.2011 granted the Letter of Intent (LoI) for grant of mining lease over an area of 869.032ha. PP submitted that an area of 118.498 ha was deducted to avoid forest land, nallas, village roads and statutory barriers.
- c) The Govt. of Madhya Pradesh vide Order No. F3-20/2010/12-1, dated 01.04.2015 granted the mining lease over an area of 869.032ha for a period of 50 years.
- d) The Project Proponent submitted that the time for execution of mine lease was extended vide letter dt.31.05.2016.

vi. Land use/Land Cover of the Mine Lease Area:

Private land	861.532 ha
Government land	7.5 ha
Total Mining lease area (MLA)	869.032 ha
Private land for crusher, workshop & other infrastructure outside the MLA	No land will be acquired outside the MLA. All infrastructure, crusher, workshop, etc., will be located inside MLA. (4.5 ha area inside ML will be used)

vii. Details of Mining Plan:

Mining Plan along with Progressive Mine Closure Plan approved by Indian Bureau of Mines (IBM)	Letter No.	MP/Satna/Limestone/G-14/14-15
	Date	05.12.2014
	Mineral	Limestone
	Mine lease area	869.032 ha
Mining Parameters	Quantitative Description	
Method of Mining	Fully mechanised mine. All operations of mining will be done by deployment of HEMM including deep hole drilling & blasting.	
Mineral Reserve	Mineral resource: 105.262 Million tons Mineral Reserve: 83.906 Million tons	
Life of mine	27 Years based on present level of exploration.	
Bench Height	7.5m	
Bench Width	30m	
Overall pit slope	45°	
Drilling/Blasting	Dia. of holes 150 mm Charge per hole 45 kg	
Transportation details	Blasted Limestone will be loaded in to the dumpers by loaders and will be transported to the destination crushing plant. Then, to the cement plant using Over Land Belt Conveyor. Cement plant is proposed at village Sagmania, at a distance of about 8 km from the Moharwa Mines	

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Dumpers capacity	60 Tons
OB/Waste	PP reported that about 2,54,460 m <sup>3</sup> of soil and 10,05,955 m <sup>3</sup> of OB/waste generated will be utilized for preparing protective bund by the side of the road and along the boundary. Rest OB will be stacked in south of the applied area and utilised for backfilling of mined out area.
Ultimate depth of Mining	320 m RL
Ground water level	45-50 m bgl (310-315 m RL)
Groundwater intersection	No

viii. Water requirement:

Total water requirement	100.0 KLD	Fresh water (Ground water)	50.0 KLD
		Treated water (mine sump)	50.0 KLD
Source	31 dug wells and hand pumps present in mine lease area. This water will be used for drinking purpose.		
Permission	Project Proponent submitted that the permission from the concerned authority will be obtained.		
Additional information (if any)	Water for dust suppression will be obtained from water accumulated in abandoned mine sump and other low lying areas. The domestic effluent from the site office and rest shelter will be discharged in septic tank and soak pit system.		

ix. Nearest village / town/ highway/railway station / water bodies/monument:

Particulars	Particular's Name	Distance & Direction
Village	Moharwa	Mine Lease Area
Town	Maihar	14 km, NW
Highway	NH7 Maihar	17 km, NW
Railway Station	Maihar	20 km, NW by road
Water bodies	Andhiarinala	1 km, SE

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

Forest Land/Protected Area/Environmental Zone	Yes/No	Details of Certificate/letter/Remarks
Forest Land	No	Project Proponent reported that there is no forest land involved in the mine lease area. However, the following forests are present within 10km radius of the study area such as Hardua RF - 10 km, Kerreha RF - 6.5 km, Junwani RF-3.5 km &Gorala RF- 1 km.
National park	No	
Wildlife Sanctuary	No	
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area(ESA)	No	
Schedule-I species	The Project Proponent submitted that the information will be furnished after conducting the flora-fauna survey.	

- xi. The Project Proponent submitted that the details of the greenbelt/plantation will be submitted along with the EIA report. PP also submitted that the baseline study is being conducted from 1<sup>st</sup> October 2022 to 31<sup>st</sup>December 2022.
- xii. The Project Proponent has filed a writ petition No WP/6702/2021 before Hon'ble High Court Jabalpur for direction to Government of Madhya Pradesh to react upon the pending application dated 10.01.2017. The Hon'ble High court passed an order dated 16.02.2022 and disposed the Writ Petition. The Collector, Satna after receiving the Hon'ble High Court order dated 08.04.2022 through the Mineral Resources Department, GoMPMantralaya, Bhopal, issued a letter dated 28.04.2022 to the Project Proponent for execution of ML after getting Environmental Clearance (EC) from MOEF. In view of the above, Project Proponent submitted a fresh application for grant of Terms of Reference (ToR).
- xiii. The Project Proponent submitted that the human settlements are present inside the ML area and will be disturbed due to the mining activity. There are 208 kutcha houses and 21 pucca houses inside the ML area. The number of identified khasra for the ML area is 1956. Rehabilitation and Resettlement plan shall be prepared as per LAAR 2013 and State Govt. Policy. Social Impact Assessment (SIA) study shall be conducted. Information related to land less labourers dependent on the identified land shall be also obtained during the SIA study. R&R Plan will be prepared as per the provisions of LAAR Act 2013.
- xiv. The Project Proponent submitted that the total cost of the project is Rs.220 Crores and about 150 persons will get employment.

### **3. Observation and Recommendation of the Committee:**

The EAC noted that the instant proposal was initially considered in the EAC meeting held during November 23-25, 2016 wherein the EAC deferred the proposal due to the following reason. The EAC noted that the total mine lease area is 869.032 ha out of which 99% land is single crop agriculture land. No forest land is involved. Letter of Intent was issued by State Government of Madhya Pradesh vide letter dated 01.04.2015. The Committee noted that the lease is located in seven villages and there are human habitations (208 kutcha houses and 21 pucca houses) exist in the mine lease area. There are 1956 khata holders for the entire mine lease area. Based on the information furnished and presentation made by the Project Proponent and discussions held, the Committee was of the view that the Project Proponent shall revise the proposal and the proposal for reduced area may be submitted as the proposed mine site.

In view of above observation of earlier EAC, the committee observed that the Project Proponent has submitted the application for Terms of Reference (ToR) without complying the observation regarding reducing the mine lease area. The

justification submitted by PP was not convincing for not reducing in mine lease area. The Project Proponent also informed the EAC that the writ petition has been filed before Hon'ble High Court Jabalpur vide No WP/6702/2021 for direction to Government of Madhya Pradesh to react upon the pending application dated 10.01.2017 for execution of mining lease. The Hon'ble High court passed an order dated 16.02.2022 and disposed the Writ Petition. The Collector, Satna after receiving the Hon'ble High Court order dated 08.04.2022 through the Mineral Resources Department, GoMP Mantralaya, Bhopal, issued a letter dated 28.04.2022 to the Project Proponent for execution of ML after getting Environmental Clearance (EC) from MOEF. Accordingly, this instant proposal for has been submitted for grant of Terms of Reference (ToR). The EAC observed that there are different contradictory statements has been given by the Project Proponent. The EAC asked the Proponent to submit the details of the court case in chronological manner along with copy of respective court orders and also to justify the reason for not reduction in mine lease area.

The Project Proponent informed the EAC that the Govt. of Madhya Pradesh vide letter dated 13.12.2011 granted Letter of Intent (LoI) for grant of mining lease over an area of 869.032ha. An area of 118.498 ha was deducted to avoid forest land, nallas, village roads and statutory barriers. Then, the Govt. of Madhya Pradesh vide Order dated 01.04.2015 granted the mining lease over an area of 869.032ha for a period of 50 years. The EAC asked the Project Proponent whether the mine lease deed has been executed or not. The Project Proponent informed the EAC that the time for execution of mine lease was extended vide letter dated 31.05.2016. The EAC reiterated the letter issued by the Ministry of Mines vide letter dated 27.11.2018 wherein it was stated that "the MMDR Amendment Act, 2015 came into force with effect from 12.01.2015. As per section 10A(2)(c) of the amended act, applications where previous approval of the Central Government was conveyed under section 5(1) for grant of mining lease or where a Letter of Intent (LoI) was issued by the State Govt. for grant of mining lease, were saved from becoming ineligible, provided the lease was granted (i.e., executed & registered) subject to fulfilment of conditions of the previous approval or LoI, within a period of two years from the date of commencement of the amended act i.e., upto 11.01.2017. The date within which saved cases had to be converted into a mining lease has already lapsed. Hence, no mining lease can be granted beyond 11.01.2017 on the mineral concessions covered under Section 10A(2)(c) as it would be treated to be ab-initio void under Section 19 of the Act for being in contravention of the Act". The EAC asked the Project Proponent to obtain the letter from the State Govt. regarding the current status of the mine lease area from the State Govt. in reference to Section 10 A(2)(c) of the MMDR Amendment Act, 2015. Based on the above discussions held, the EAC **deferred** the proposal for want of following additional information: -

- i. The Project Proponent needs to justify that why the mine lease area shall not be reduced as per the observation of EAC in its meeting held during November 23-25, 2016.

- ii. The EAC noted that the Project Proponent has not executed the mine lease deed. The Project Proponent needs to submit the current status of the mine lease area from the State Govt. in reference to Section 10 A(2)(c) of the MMDR Amendment Act, 2015.
- iii. The Project Proponent needs to revisit the Land Use/Land Pattern based on the mineral deposit.
- iv. The Project Proponent needs to submit the details of the total excavation to be handled annually.
- v. The Project Proponent needs to submit the details of the court case in chronological manner along with copy of respective court orders.

**Day 2: 28<sup>th</sup> December, 2022 (Wednesday)**

**2.1 Bathiya Limestone Mine of M/s. AAA Resources Private Limited for mining of Limestone with proposed production capacity of Limestone: 4.0 MTPA, Waste/Reject: 4.43 MTPA Topsoil: 0.41 MTPA (Total Excavation: 8.84 MTPA) along with 1400 TPH crusher in the Mine Lease Area of 266.302 ha, located at Bathiya, Barahiya, Karaundi, Chapna, and Tamoria villages, Tehsil: Maihar, District: Satna, Madhya Pradesh – [F.No: J-11015/44/2020-IA-II(M), Proposal No: IA/MP/MIN/405276/2022, Consultant: Vimta Labs Ltd] – Environmental Clearance (EC)**

The proposal is for mining of Limestone in Bathiya Limestone Mine of M/s. AAA Resources Private Limited with proposed production capacity of Limestone: 4.0 MTPA, Waste/Reject: 4.43 MTPA Topsoil: 0.41 MTPA (Total Excavation: 8.84 MTPA) along with 1400 TPH crusher in the Mine Lease Area of 266.302 ha, located at Bathiya, Barahiya, Karaundi, Chapna, and Tamoria villages, Tehsil: Maihar, District: Satna, Madhya Pradesh.

**3. Observation and Recommendation of the Committee:**

The EAC noted that the Project Proponent vide letter dated 24.12.2022 requested for deferment of the proposal due to unforeseen circumstances. Based on the request of the Project Proponent, the EAC **deferred** the proposal.

**2.2 Chenpura Limestone mine of M/s Rathore Cement Private Limited for mining of Limestone with production capacity of 0.5 MTPA of Limestone, no waste, no OB/IB, in the mine lease area of 12.0 Ha, located at Village Chenpura, Tehsil & District Neemuch, Madhya Pradesh – [File No: IA-J-11015/31/2020-IA.II(M), Proposal No: IA/MP/MIN/155912/2020, Consultant: R.K Consultants] – Reconsideration of Environmental Clearance (EC)**

**Minutes of 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022**

The instant proposal is for reconsideration of Environmental Clearance (EC) of M/s Rathore Cement Private Limited for mining of Limestone in Chenpura Limestone mine with production capacity of 0.5 MTPA of Limestone, no waste, no OB/IB, in the mine lease area of 12.0 Ha located at Village Chenpura, Tehsil & District Neemuch, 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 24°32'28.14"N to 24°32'28.48"N and Longitude 74°46'07.08"E to 74°46'09.99"E. The mine lease area falls under the Survey of India Toposheet No: 45L/14 and falls in Seismic Zone-II.
- ii. 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 instant proposal attracts the general conditions as the Interstate boundary of Rajasthan and Madhya Pradesh is located about 1.68 km, W from the mine lease area and appraised at Central level.
- iii. The proposal was earlier considered in the 49<sup>th</sup> EAC Meeting (Non-Coal Mining) held during 19<sup>th</sup> to 21<sup>st</sup> April, 2022 wherein the EAC deferred the proposal for want of requisite information. The Project Proponent submitted the information on 26.07.2022 and 23.09.2022 in Parivesh portal and the proposal was reconsidered in the 6<sup>th</sup> EAC (Non-Coal Mining) meeting held during 9<sup>th</sup>- 11<sup>th</sup> November, 2022 wherein the EAC deferred the proposal for want of requisite information. The Project Proponent submitted the information on 02.12.2022 in Parivesh portal and accordingly the proposal was again reconsidered in the 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022.

Based on observation of EAC in its 6<sup>th</sup> meeting held during 9-11 November, 2022, compliance of observation of EAC made by Project Proponent, are detailed below:

S. No	Observation of EAC	Reply by Project Proponent
1	The Project Proponent needs to frame the Safe Operation Procedure (SOP) by mentioning the details of the safety distance left from the railway boundary and the railway track, frequency of the train passing along with their timings and the time of blasting	The Project Proponent submitted that the mining work will be done at a distance of more than 100m away from Railway track and assured that Safe Operation Procedure (SOP) will be framed and signed with the consent of railway and the same has been given in the NOC obtained from the railway authority vide letter no. W340/22 E-office file No. 272 dated 16.08.2022.

	<p>in consultation with the Railway Department and shall obtain the approval from the Directorate General of Mines Safety (DGMS).</p>	<p>PP also submitted that the permission will be obtained from the Directorate General of Mines Safety (DGMS) for blasting under 164 (1-A) (1-B) regulation of MMR 1961 to carry out the blasting operation 100 meter away from railway land before starting of mining operations.</p> <p>The Project Proponent also committed to follow the Safe Operation Procedure (SOP) to be approved by railway authority and the conditions to be stipulated by the Directorate General of Mines Safety (DGMS). PP also submitted an Affidavit dated 01.12.2022 in this regard.</p>
2	<p>The Project Proponent needs to explore the possibility of placing the crusher/ screen for sizing inside the mine lease area and accordingly EMP measures will be implemented.</p>	<p>The Project Proponent submitted that generally after blasting, the fragmentation of limestone is 9-12 inch size and few percentage of limestone will be more than 12 inch size. The size of 12 inch and more than 12 inch size limestone boulders will be further broke down with the help of rock breaker. The hydraulic excavator/ loader will be deployed to load the blasted limestone into the trucks and no manual loading is involved. The body of dumper will be covered so that there will be no chances of spillage of stone. Further, PP submitted that to overcome this problem crusher will be established in future.</p>
3	<p>The Project Proponent needs to submit the clear transportation plan specifying the production per day, capacity of the dumpers, no. of trips per day to and fro, distance and dimensions of the haul road and approach road and the destination along with the map showing the route for transportation of mineral.</p>	<p>The Project Proponent submitted that this is a small non-captive merchant mine producing limestone of 1666 tons per day in the form of lumps of approx. 9-12 inch size. This will be sold either to nearby cement plants or in the open market. The Limestone will be stacked at the designated place. From the stock yard the material will be dispatched to nearby cement plants and in open market through trucks/ dumpers/ tractors. 7 numbers of dumpers of 15 ton capacity will be deployed for transportation. The average</p>

		lead will be about 500 m. The haul roads will be water sprinkled to control the air pollution. The approach road of 425 m will be maintained by the Project Proponent.
4	The Project Proponent needs to specifically submit the reply of the previous Additional Details Sought (ADS) of point no: 5. (The Project Proponent needs to carry out the impact assessment by considering all the mining activity and should indicate the capacity considered for predication of air quality modeling. The control case and worst-case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants needs to be clearly mentioned. The input parameters used for the modeling also needs to be submitted).	<p>The Project Proponent submitted that the impact assessment study for prediction of air quality has been conducted by using AERMOD software developed by Envitrans Pvt. Ltd. The proposed mining activity includes various activities like; Drilling, Blasting, Excavation, Loading &amp; Unloading Handling and transport of limestone. The said activities have been analyzed based on USEPA-Emission Estimation Technique Manual, for Mining AP-42, to arrive at possible emission rates.</p> <p>The Project Proponent reported that the cumulative concentration of PM10 at mine site without control measures observed to be 77.57 <math>\mu\text{g}/\text{m}^3</math> and PM2.5 as 36.53 <math>\mu\text{g}/\text{m}^3</math> and with control measures PM10 observed to be as 76.29 <math>\mu\text{g}/\text{m}^3</math> and PM2.5 as 36.31 <math>\mu\text{g}/\text{m}^3</math>.</p>
5	The Project Proponent needs to include the treatment cost of the soil conservation measure in Greenbelt development.	<p>The Project Proponent submitted that the budget of Rs. 26.70 Lakh as Capital cost, Rs 4.50 lakh as Recurring cost and Rs 5.0 lakhs (Treatment cost of the soil conservation measure) have been earmarked for development of greenbelt &amp; plantation till the end of life of mine @ Rs 525/sapling (including plantation and maintenance cost). The budget includes the cost of Saplings, Watering facilities, Labour Charge, Organic manure, Bio-fertilizers, Maintenance, fencing etc., which may vary in due course of time. The species will be selected as per the guidelines of CPCB.</p>
6	As committed by the Project Proponent before the EAC during the meeting, the Project Proponent shall identify the alternate areas for livestock	The Project Proponent submitted that total mine lease area of 12.0 ha is a Govt. waste land (Bardi) and no livestock grazing Land is inside the mining lease area. The condition of compensatory livestock grazing is not



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	grazing and submit the proposal for the same.	<p>applicable. However, as per the commitment made before EAC on 10.11.2022, an alternate area equivalent to mining lease will be developed in consultation with the local administration.</p> <p>PP also submitted that an area of 18.91 ha of Government Land is available in the village Chenpura having status of Pahad will be developed for livestock grazing by an expenditure of Rs 5.0 Lakhs subject to the permission of Government. Further, PP submitted that a request letter has been submitted to Tehsildar, Neemuch (M.P.) for permitting to develop 12.00 ha land as livestock grazing out of 18.91 ha (Same Village) titled as Pahad Kasra No. 1(s) Village Chenpura Tehsil &amp; District Neemuch or any Government Land.</p>
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iv. The details of the Terms of Reference (ToR) are furnished as below:

Date of application	Proposal No	Consideration	Details	Date of accord
04.06.2020	IA/MP/MIN/155912/2020	22 <sup>nd</sup> -24 <sup>th</sup> July, 2020	Terms of Reference for production of 0.5 MTPA Limestone no waste, no OB/IB, in the mine lease area of 12.0 Ha at Survey No 333/1, Chenpura Village, Tehsil & District Neemuch, Madhya Pradesh	10.08.2020

v. Details of Mine lease:

S.no	Prospecting License/Letter of Intent/Grant of Mine lease	Date of the grant	Name of the Mineral	Period of Grant	Granted by	Mine lease area in Ha
1	Prospecting License vide No. 2-26/2013/12/1	01.03.2014	Limestone	3 years (26.03.2014 to 25.03.2017)	Government of Madhya Pradesh	12.0
2	Letter of Intent for grant of mining lease vide No. F.3-	03.10.2018	Limestone	50 years	Government of Madhya Pradesh	12.0

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	59/2018/12/1					
3	Grant of mine lease vide F.3-59/2018/12/1	07.02.2020	Limestone	50 years	Government of Madhya Pradesh	12.0

vi. Details of executed mine leases:

S.no	Date of grant of Lease execution	Period of Grant		Details
		From	To	
1	Date of entering into original lease deed.	20.03.2020	19.03.2070	PP submitted the lease deed executed between the Governor of Madhya Pradesh and M/s Rathore Cement Private Limited dated 11.03.2020 and registered vide Ref No: MP279462020A1228809 dated 20.03.2020 for a period of 50 years.

vii. Land use/Land Cover of the Mine lease area:

Private land	Nil
Government land	12.0 Ha
Total Mining lease area (MLA)	12.0 Ha
Private land for crusher, workshop & other infrastructure outside the MLA	Nil

viii. Mining plan:

Mining Plan with Progressive Mine Closure Plan approved by Indian Bureau of Mines,	Letter No.	MP/Neemuch/Limestone/MPLN/G-07/19-20/3809
	Date	19.12.2019
	Validity	5 years
	Mine lease area	12.0 ha
	Mineral	Limestone
Mining Parameters	Quantitative Description	
Method of mining	Opencast mechanized method with drilling and blasting	
Geological Reserves	14.73 Million Tonnes	
Mineable Reserves	10.73 Million Tonnes	
Life of the Mine	22 years	
Bench Height	8.0 m	
Bench Width	Minimum bench width 8.0m (Bench width during excavation will be 25.0m)	
Individual bench slope	Individual bench slope will be 80 <sup>0</sup> from vertical	
Overall pit slope	45°	
Dumpers capacity	20/25 Tons	
Transportation	PP submitted that the material will be loaded with the help of excavators into dumpers/tippers and	

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	transported to the cement plant located nearby by road.
Topsoil	PP reported that small quantity of top soil will be encountered in crevices or pockets will be removed and will be simultaneously used for plantation. During the 1 <sup>st</sup> year 37.49 cu.m, 2 <sup>nd</sup> year 586.99 cu.m and in 3 <sup>rd</sup> year 266.94 cu.m of top soil will be generated.
OB/IB & Waste	PP reported that there will be no OB/IB and no waste generation is envisaged during course of mining.
Crusher	PP submitted that there is no proposal to install crusher within the mining lease area
Mineral beneficiation	PP reported that no mineral beneficiation is required at the mine lease except sorting and removing of any rock or waste material. The ROM limestone lump after sizing and sorting is directly supplied to market
Groundwater intersection	PP reported that the ground water table during the pre- monsoon is 396m AMSL and during the post - monsoon is 390m AMSL, whereas the ultimate pit level will be up to 406 mRL much above the level of ground water table and hence there will be no ground water intersection.

ix. The Project Proponent submitted that the Sr. Divisional Engineer/Co/RTM, Divisional Office, Western Railway has issued no objection to carry out the work adjacent to Railway land subject to the conditions mentioned in Rathore Cement Pvt. Ltd letter no nil dtd 29.07.2022 are compiled & followed completely by Rathore Cement Pvt. Ltd. PP also submitted that the Dy. Director/LML-1, Railway Board, New Delhi vide No. W340/22 dated 16.08.2022 has mentioned that the proposal has been examined thoroughly by the Railway and M/s Rathore Cement Pvt Ltd vide letter under ref (iii) has submitted detailed report of the queries raised by Railway vide ref (ii). It is mentioned that the mining work will be done at a distance of more than 100 m away from Railway track. M/s Rathore Cement Pvt Ltd has also assured that safe operation procedure (SOP) will be framed and signed with the consent of Railway. It is observed that NOC may be granted subject to the strict compliance as assured by M/s Rathore Cement Pvt Ltd in the detailed report during course of mining work in view of safety of Railway track. The Project Proponent submitted that the Central Institute of Mining and Fuel research (CMIFR), Dhanbad has carried out the scientific study for blast vibration prediction for commencement of Chenpura Limestone Mine (Non Captive) Area 12.0 Ha of M/s Rathore Cement Pvt Ltd and subsequently optimization of blast design parameters considering the safety of nearby Railway line, houses and industrial structures.

x. Water requirement:

Total water requirement	7.0 – 8.0 KLD (Fresh water: 7.0 – 8.0 KLD, Treated water: Nil)	Drinking & Domestic	0.5 - 1.0 KLD
		Plantation	3.0 -3.5

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			KLD
		Dust Suppression	3.5 KLD
Source	Mine sump and nearby Villages through water tankers		
Permission	PP submitted the Certificate of Exemption for Ground Water Withdrawal issued by Central Ground Water Authority (CGWA) vide Application No. 21-4/1158/MP/MIN/2021 which is valid from 01.09.2021 stating that that as per information furnished by the applicant, M/s CHENPURA LIMESTONE MINE SERVE NO. 333/1 comes under Micro and Small Enterprises category and has ground water withdrawal of less than 10 cum/day. As per S.O. 3289(E) dated 24/09/2020 by Department of Water Resources, River Development and Ganga Rejuvenation, guidelines to regulate and control ground water extraction in India, 2020 Micro and small Enterprises drawing ground water less than 10 cum/day are exempted. The firm is exempted from seeking NOC. The firm shall install digital water flow meter on all ground water abstraction structures and maintain the logbook.		

xi. Nearest village / town/ highway/railway station / water bodies:

Particulars	Particular's Name	Distance & Direction
Nearest Village	Chenpura	0.45 km, SW
Nearest Town	Neemuch	11.0 km, SE
Nearest State/ National Highway	SH 15	11.30 km, SSE
	NH 79	2.34 km, NEE
Nearest Railway line	100 m towards East from the mine lease area	
Nearest Water Bodies	Nayagaon Pond	2.20 km, NE
	Borkheri Pond	5.98 km, NE
	Ratheem Pond	6.45 km, NE
	Gujarkheri talak Pond	7.43 km, NE
	Daru Nadi	2.53 km, W
	Kadmali Nadi	9.90 km, NW

xii. The Project Proponent reported that no forest land is involved in the mine lease area and in support of this PP submitted the letter issued by the Divisional Forest Officer vide Lr No. 451/2013/2019 dated 28.05.2013 and Forest Certificate, ID no. NEEM202109080176304 dated 08.09.2021 stating that there is no forest land involved in the mine lease area. PP reported that there are no National Park, Wildlife Sanctuary, Biosphere Reserves, Tiger/Elephant Reserves within the 10km radius of the study area. PP also submitted the letter from the Office of the Deputy Conservator of Forests, Wildlife, vide Lr No. Survey/DCF/2020-21/4181 dated 16.07.2021 stating that there is no any Wildlife Sanctuary within 10km radius. Further, PP reported that the following Reserve Forest/Protected Forest such as Bid Chaprol RF: 8.05 km, SW, Bid Charliya RF: 9.80 km, S and Motatok karunda PF: 8.45 km, SW are found within 10 km radius of the mine lease area.

xiii. The Project Proponent reported that the following Schedule-I species such as Peacock (*Pavo cristatus*), Monitor Lizard (*Varanus bengalensis*), Panther (*Panthera parades*) and Indian python (*Python molurus*). PP submitted the list

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of flora and fauna authenticated from the Office of the Divisional Forest Officer General Forest Gandal, Neemuch (M.P.) vide Lr No 2021/34113 Neemuch, dated 16.07.2021. The Project Proponent has submitted that the letter from the Office of the Principal Chief Conservator of Forests (Wildlife) & Chief Wildlife Warden, Madhya Pradesh vide letter dated 14.09.2022 stating that the list of approved flora fauna sent by the Forest Divisional Officer, General Forest Division, Neemuch and Chief Conservator of Forests, Ujjain Circle, is provided in page number 01 to 14 and on page number 79 to 80 in the recommended revised wildlife conservation plan. The Project Proponent submitted the approval of the Wildlife Conservation Plan from the Office of the Principal Chief Conservator of Forests (Wildlife) & Chief Wildlife Warden, Madhya Pradesh vide letter dated 14.09.2022 with a budget of Rs 17.0 Lakhs.

xiv. Green belt/plantation details:

Proposed area for green belt/plantation	3.96 ha
No of saplings proposed	3,960 no.s
Budget for green plant & plantation till the end of life of mine.	Rs 10.0 Lakhs
Budget for nursery	Nil
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	1.0 ha
50 m safety zone of nallah, roads, electric lines	-
500 m safety zones of nearest habitation villages	-
Additional information (if any)	2.96 ha on the mined out benches

xv. Baseline detail:

Period	October to December, 2020 (Post Monsoon Season)				
AAQ parameters at 7 locations	Pollutant	Min, $\mu\text{g}/\text{m}^3$	Max, $\mu\text{g}/\text{m}^3$	98 %ile, $\mu\text{g}/\text{m}^3$	Standard, $\mu\text{g}/\text{m}^3$
	PM2.5	26.4	53.4	52.3	60
	PM10	60.9	88.6	86.8	100
	SO2	5.4	14.6	14.3	80
	NOx	11.4	28.4	27.8	80
AAQ modelling (Incremental GLC)	The Project Proponent reported that the cumulative concentration of PM10 at mine site with control measures observed to be as $76.29 \mu\text{g}/\text{m}^3$ and PM2.5 as $36.31 \mu\text{g}/\text{m}^3$ .				
Noise level at 7 locations	Day Time: 49.2 to 54.7 Leq dB (A) Night Time: 32.4 to 40.6 Leq dB (A)				
Ground water quality at 6 locations	PP reported that pH of collected water samples varied from 6.93-7.98. Electrical conductivity ranged between 560 - 1510 $\mu\text{mhos}/\text{cm}$ . Total hardness varied from 235-425mg/l. Total Dissolved Solids in the water samples ranged from 313 to 864 mg/l. Chloride ranged between 43-227 mg/l. Total Coliform & E-Coli were absent in the samples analysed. The ground water samples comply to the standards (IS: 10500-2012) and are good for public health.				

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Soil quality at 6 locations	PP reported that pH in the soil water extract (1:25) ranges from 8.05 to 8.65 and all the samples are normal expect at mine lease. The soil texture found to be fine sand, sandy loam, loam and also clay loam. The water holding capacity varied from 27.41 to 36.83 percent and well correlated with their texture. The percentage of organic carbon was found to be in the range of 0.43 to 1.21 i.e. low to low in general, exception for two samples which has 1.21% & 1.13% i.e., high. The available phosphorous were ranged from 1.4 to 3.0 mg/kg. The available potash found to be in the medium range i.e., 71 -181 mg/kg.
Traffic Survey	PP reported that traffic survey has been conducted on Chenpura Village road which connects the lease area to the major surrounding villages like Chenpura, Bamanbardi, etc. Traffic density measurements were made continuously for 24 hours by visual observation and counting of vehicles under three categories, viz., heavy motor vehicles, light motor vehicles and two/three wheelers. The traffic density on the surrounding roads of the mine site is very low and capable of handling of increased traffic. Level of Service is 'B' at current PCU levels with and without mining i.e. excellent and it remains at level "B" after 10 years with an increase in traffic @ 8% which refers to very good with mining. Thus, due to mining operations even after 10 years, the Level of service is acceptable.

xvi. Public Hearing (PH) Details:

Advertisement for PH with date	23.09.2021 in Patrika (National News Paper) and Malwa Darsan (Local News Paper)
Date of PH	26.10.2021
Venue	Government Primary School, Village Chenpura
Chaired by	Additional District Magistrate, Neemuch
Main issues raised during PH	Local Employment, Infrastructure facilities, provision of road, drinking water supply, facilitation of online education system, maintenance of road, environment protection, plantation,
Budget proposed for addressing issues raised during PH	Rs 18.50 Lakhs

xvii. Rehabilitation & Resettlement:

R & R details	PP submitted that R&R is not involved in this proposal.
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xviii. Court case details:

Court Case	PP submitted that there is no any Court Cases pending against the project and/or land in which the project is proposed to be set up.
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xix. Affidavit/Undertaking details:

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Affidavit in a Non-Judicial stamp paper of Rs 100 bearing AZ 512271 dated 04.03.2022	<p>i. The project/activity pertaining to the mining lease has not been in violation of the judgment of Hon'ble Supreme Court dated 2<sup>nd</sup> August 2017 in writ Petition (Civil) No. 114 of 2014 in the matter of common cause versus Union of India &amp; Ors.</p> <p>ii. No illegal mining activity has been or is being carried out in the mining lease area in violation of the Mines and Minerals (Development and Regulation) Act, Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 and other relevant laws and timely permissions, clearances and approvals.</p>
Project Proponent submitted an Undertaking	The conditions laid down in Terms of Reference prescribed by MoEF&CC, New Delhi, vide Lr No. J-11015/31/2020-IA.II (M) dated 10.08.2020 in favor of M/s Rathore Cement Pvt Ltd have been complied with, and the data submitted and the information presented in this report are factually correct.
Consultant submitted an Undertaking	The Consultant submitted an undertaking to the effect that the Terms of Reference prescribed by MoEF&CC, New Delhi vide Letter No. J-11015/31/2020-IA.II (M) dated 10.08.2020 have been complied as per data/details provided by Project Proponent & as per Approved Modified Mining Plan along with Progressive Mine Closure Plan approved by IBM, Jabalpur and the data submitted are factually correct.

xx. Details of the EMP:

S.No.	Particulars	Capital cost (In Lac)	Annual recurring cost (In Lac /year)
1.	Air Pollution Control & Management		
	One tanker for water sprinkling on haul road	6.0	1.50
2	Water pollution Control, Management & conservation		
	Construction of garland and retaining wall at ultimate pit limit	3.50	1.0
3	Green Belt Development		
	Green Belt (Phase wise greenbelt development during course of mine) (Tree Guards, Re-Sapling plantation & its maintenance etc.)	24.0	4.0
4	Pollution Monitoring		
	a. Air sampling stations & analysis	3.0	1.0
	b. Water Quality Analysis		

	c. Noise & Vibration Monitoring d. Soil quality Analysis		
5	Occupational Health & Safety	-	1.0
6	Public Hearing Action Plan (Community Development Activities) for three year	18.50	3.0
7	Conservation of Fauna belonging to schedule I	17.0	3.0
<b>GRAND TOTAL</b>		<b>72.0</b>	<b>14.50</b>

xxi. Details of project cost and employment:

Particulars	(Rs. In Crore)
Capital Cost for Environment Protection	0.72
Budget for addressing the Public Hearing issues	0.185
Recurring Cost for EMP	0.145
<b>Project Cost</b>	<b>5.60</b>
<b>Employment</b>	<b>9 persons</b>

### **3. Observation and Recommendation of the Committee:**

The EAC deliberated on the additional details submitted by the Project Proponent and Consultant. The Project Proponent informed EAC that the request letter has been submitted to Tehsildar, Neemuch (M.P.) for permitting to develop 12.0 ha land as livestock grazing out of 18.91 ha (Same Village) titled as Pahad Kasra No. 1(s) Village Chenpura Tehsil & District Neemuch or any Government Land elsewhere and copy is endorsed to District Collector (Khanij) Neemuch (M.P.). Since, the study area falls between the Interstate boundary of Rajasthan and Madhya Pradesh, the EAC opined that the Project Proponent shall take adequate measures to protect the forest and as well as the wildlife in consultation with the Rajasthan Forest Dept. The EAC opined that the Project Proponent shall not carry out secondary blasting. The Project Proponent informed the EAC that no crusher will be installed within the mine lease area.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC (Non-Coal Mining) **recommended** the proposal in its EAC meeting held during 27-28 December, 2022 under the provisions of EIA Notification, 2006 for grant of Environmental Clearance (EC) for Chenpura Limestone mine of M/s Rathore Cement Private Limited for mining of Limestone with production capacity of 0.5 MTPA of Limestone, no waste, no OB/IB, in the mine lease area of 12.0 Ha, located at Village Chenpura, Tehsil & District Neemuch, Madhya Pradesh subject to the following specific conditions in addition to the standard EC conditions applicable for non-coal mining projects: -

- i. This Environmental Clearance (EC) will be valid upto 22 years as the life of the mine is 22 years only.



- ii. The Project Proponent shall ensure that no mining activity will be carried out within the distance of 150m from the railway acquired land. The conditions/preventive measures prescribed by the Railway Board shall be complied by the Project Proponent and implementation status should be submitted to the IRO & Railway Board.
- iii. The Project Proponent shall undertake the plantation in the safety zone of 150 falling in the mine lease area and the earthen embankment of 7.5m width with dense plantation of tall tree along the railway line in such a way that the area should act as barrier to reduce the ground vibration and abatement of noise level due to blasting.
- iv. The Project Proponent shall frame the Safe Operation Procedure (SOP) of mining operations regarding the details of the safety distance left from the railway boundary and the railway track, frequency of the train passing along with their timings and the time of blasting in consultation with the Railway Department before starting of mining operations and the same shall be informed to the Ministry's Integrated Regional Office.
- v. The Project Proponent shall obtain the approval from the Directorate General of Mines Safety (DGMS) to carry out blasting before starting of mining operations and the conditions to be stipulated shall be strictly followed.
- vi. The Project Proponent shall carryout the blasting in such a way that the direction of the blasting should be perpendicular to the railway track and DGMS shall ensure the same.
- vii. The Project Proponent shall implement the recommendations of the scientific study carried out by Central Institute of Mining and Fuel research (CMIFR), Dhanbad for blast vibration prediction. The implementation status of the same shall be submitted to the Ministry's Integrated Regional Office.
- viii. The Project Proponent intends to install the crusher in the future, necessary prior permission shall be obtained from the MoEF&CC as per the provisions of EIA Notification, 2006 and its subsequent amendments therein.
- ix. The Project Proponent shall monitor the ground induced blasting vibrations for every blast and the results are to be compared with the limiting values prescribed by Director General of Mine Safety (DGMS). PP shall ensure that the values of "peak particle velocity" and "Air Over Pressure" shall be maintained below the permissible values prescribed by the DGMS, from time to time. The data needs to be maintained and submitted along with the six monthly compliance report.
- x. The Project Proponent shall not carry out the secondary blasting.

- xi. The Project Proponent shall apply the soil conservation measures (Rs 5.0 Lakhs) as presented before the EAC.
- xii. As committed by the Project Proponent, an area of 12.0 ha shall be developed for livestock grazing. The Project Proponent shall fence the area of 12.0 ha for its protection and accessibility. Access to grazing land in the mine lease area shall not be disturbed and protected by way of developing plantation in such a way to minimize the risk to cattle and people.
- xiii. The Project Proponent shall take adequate measures to protect the forest, Schedule-I species and as well as the other wildlife in consultation with the Rajasthan Forest Dept also.
- xiv. The Project Proponent shall install digital water flow meter on all ground water abstraction structures and maintain the logbook.
- xv. The Project Proponent should adopt the proper mitigation measures as proposed under EMP with budgetary provision of Rs 72.0 Lakhs. 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 Integrated Regional Office.
- xvi. The budget of Rs 18.50 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. The Project proponent shall ensure that the activities proposed under the public hearing is different from the CSR activities. An undertaking in this regard needs to be submitted by the Project Proponent to the Ministry's Integrated Regional Office (IRO) at the time of submission of six monthly compliance report.
- xvii. The Project Proponent needs to increase the capacity of the dumper to 40 -50 Tons so as to reduce the no. of trips.
- xviii. The Project Proponent needs to install the permanent water sprinklers along the haul road and the approach road. The muddy pavements alongside the approach road may either be grassed or permanent pavements should be created in consultation with local administration. The Project Proponent shall ensure that the transportation shall not pass through village road.
- xix. The Project Proponent shall ensure the survival rate of 95% for planting the peripheral and safety barrier 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. Plantation shall be undertaken in consultation with the State Forest Department. The entire peripheral plantation and the safety barrier plantation shall be completed within 3 years from the start of mining operations.

- xx. 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.
- xxi. The Project Proponent shall explore the possibility of using atleast 20% of electric vehicles/LNG/CNG instead of diesel operation within three years from the start of mining operations.
- xxii. The Project Proponent needs to facilitate the online education system in the identified schools by providing Wi-Fi connectivity, smart classrooms and desktops/tablets. PP shall also provide the required infrastructure facilities for the identified schools.
- xxiii. The Project Proponent shall conduct the environment awareness program to create awareness among the workers and the local people.
- xxiv. The Project Proponent shall provide the RO drinking water supply to the local people.
- xxv. The Project Proponent should follow-up the status of implementation on the Wildlife Conservation Plan from the Forest Officials and the same shall be submitted to the Ministry's Integrated Regional Office in the six monthly compliance report. The Project Proponent shall deposit the funds allocated for Wildlife Conservation Plan to the Forest Dept. within 6 months from the date of issue of this EC.
- xxvi. 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.
- 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 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.

- xxviii. 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.

**2.3 Amanganj Limestone Mine of M/s Eco Cements Limited with proposed production capacity of Limestone: 3.75 Million TPA, Top Soil: 0.40 Million TPA & OB/IB: 9.60 Million TPA (Total Excavation: 13.75 Million TPA) along with installation of 1600 TPH Capacity of Crusher in the mine lease area of 1793.59 ha, located at Villages: Beli, Baraha Kala, Hinouti, Tehsil: Gunour and Villages: Chikalhai, Daharra, Gaura, Hinouta Mishra, Kanti, Mahewa, Patelpura, Pawaiya, Tehsil: Amanganj, District: Panna, Madhya Pradesh – [F.No: J-11015/29/2020-IA.II(M), Proposal No: IA/MP/MIN/227653/2021 dated 10.08.2022, Consultant: J.M.EnviroNet Pvt. Ltd] – Reconsideration of Environmental Clearance**

The instant proposal is for mining of Limestone in Amanganj Limestone Mine of M/s Eco Cements Limited with proposed production capacity of Limestone: 3.75 Million TPA, Top Soil: 0.40 Million TPA & OB/IB: 9.60 Million TPA (Total Excavation: 13.75 Million TPA) along with installation of 1600 TPH Capacity of Crusher in the mine lease area of 1793.59 ha, located at Villages: Beli, Baraha Kala, Hinouti, Tehsil Gunour and Villages Chikalhai, Daharra, Gaura, Hinouta Mishra, Kanti, Mahewa, Patelpura, Pawaiya, Tehsil Amanganj, District Panna, 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: 24°23'10.44"N to 24°28'34.00"N and Longitude 80°04'21.03"E to 80°11'38.65"E. The mine lease area falls under the Survey of India Toposheet No: G44U3 and falls in Seismic Zone - II.
- (ii) The proposed project activity is listed at schedule no. 1(a) Mining of Minerals of the schedule of the EIA Notification, 2006 and falls under Category "A" as the mining lease area is greater than 250ha and appraised at the Central level.
- (iii) The proposal was earlier considered in the 3<sup>rd</sup>EAC (Non-Coal Mining) meeting held on 5<sup>th</sup> September, 2022 wherein the EAC deferred the proposal for want of requisite information. The Project Proponent submitted the information on

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07.12.2022 in Parivesh and accordingly the proposal was reconsidered in the 8<sup>th</sup> EAC (Non-Coal Mining) meeting held during 27<sup>th</sup>-28<sup>th</sup> December, 2022.

Based on observation of EAC and the compliance of observation of EAC made by the Project Proponent are detailed below:

S. No	Observation of EAC	Reply by Project Proponent
1	The Project needs to submit the KML file by overlapping the KML file of the mine lease area with the KML file available from the National Tiger Conservation Authority website.	The Project Proponent submitted the map by overlapping the KML available from the National Tiger Conservation Authority website. Minimum Distance of the core area of Panna Tiger Reserve is 14.36 km & from buffer as well as from the ESZ is 9.15 km distance. Location map for the same has been authenticated by PCCF & Assistant Director of Panna Tiger Reserve.
2	The Project Proponent needs to refer the report prepared by Wildlife Institute of India/Madhya Pradesh State Biodiversity Board with respect to Tiger distribution if any in the study area and highlight the same in the EIA/EMP report.	The Project Proponent submitted that based on the report prepared by Wildlife Institute of India, entitled "Status and Distribution of Major Mammalian Fauna in the State of Madhya Pradesh" there is tiger distribution only in Panna Tehsil of Panna District whereas the proposed project site falls in the Tehsil Amanganj & Gunour of District Panna in which there is no tiger occupancy & no tiger distribution is reported. A letter has been obtained from the Assistant Director, Panna Tiger Reserve vide letter no. Raa Haa.Sancha./2022/1368, Panna, dated 18.10.2022. A Letter regarding the same was also obtained from the PCCF & MS, State Biodiversity Board to PCCF (Revenue Dept.), Satpuda Bhavan, MP dated 08.12.2022.
3	The Project Proponent needs to furnish the comments from the National Tiger Conservation Authority and also need to submit the letter from the Chief Wildlife Warden clearly indicating the distance of core and buffer zone of Panna Tiger Reserve from the mine lease boundary as well as any concern about movement of tigers from Panna Tiger Reserve to forests of South Panna Forest Division and then to Bandhavgarh Tiger Reserve.	The Project Proponent submitted that the letter has been obtained from the Assistant Director, Panna Tiger Reserve vide letter no. Raa Haa.Sancha./2022/1368, Panna, dated 18.10.2022 and from the Principal Chief Conservator of Forest & Chief Wildlife Warden vide letter no. V. Pra./Maa. Chi./2022/Mine-109/8116, Bhopal, dated 10.11.2022 mentioning that the proposed mine site is located at 14.36 km distance from Core zone of Panna Tiger Reserve, 9.15 km distance from Buffer zone of Panna Tiger Reserve & at 14.32

		<p>km distance from Panna-Bandhavgarh Tiger corridor. Therefore, no impact is anticipated on tiger movement.</p> <p>PP also submitted that the Letter regarding the same was also obtained from the PCCF, Bhopal, MP dated 12.12.2022.</p>
4	<p>The Project Proponent needs to include the scenario of pollution to be generated at the Cement Plant and accordingly needs to revise the air quality modeling and incorporate the same in the EIA/EMP report. PP should indicate the capacity considered for predication of air quality modeling. The control case and worst case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants needs to be clearly mentioned. The input parameters used for the modeling also needs to be submitted.</p>	<p>The Project Proponent submitted that the air quality modeling has been revised by the considering pollution to be generated at the Cement Plant for both control case &amp; worst-case scenario with controlling factor has been carried out and GLCs values for all the pollutants are given.</p> <p>The Project Proponent reported that the annual production will remain same i.e. Limestone 3.75 Million TPA, Top Soil 0.40 Million TPA &amp; OverBurden is 9.60 Million TPA. Sometimes in rainy season and during the plant shutdown the mining operation will be suspended, in that case to achieve full production of the mine, the mineral handling will be considered at 20% maximum as compared to daily handling &amp; same will be dispatched to Cement Plant. After considering the 20% maximum the limestone production of per day will be 15000 tonnes, Top Soil will be 1599 tonnes &amp; OB will be 38400 tonnes; thus, total handling will be 54999 tonnes/day (At Peak Stage) and the same has been considered for prediction of air quality modelling.</p> <p>PP submitted that in worst case scenario, the resultant value of PM<sub>10</sub> found to be 70.82 µg/m<sup>3</sup>, PM<sub>2.5</sub>: 33.38 µg/m<sup>3</sup>, SO<sub>2</sub>: 20.95 µg/m<sup>3</sup> and NO<sub>2</sub>: 13.29 µg/m<sup>3</sup>.</p>
5	<p>The Project Proponent needs to submit the action plan for installing Continuous Ambient Air Quality Monitoring Station (CAAQMS).</p>	<p>The Project Proponent submitted that the total 2 no.s of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) will be installed after the start of mining operations.</p>
6	<p>The Project Proponent needs to</p>	<p>The Project Proponent submitted that at</p>

	revisit and justify the proposal of backfilling over an area of 930.05 ha with actual data based on sequential mining.	the conceptual stage, total area of 930.05 ha area will be excavated and 132.32 Million CuM of Limestone, Waste & Soil will be mined out, out of which 35.07 Million CuM (87.68 Million Tonnes) is Limestone. After excluding the limestone, 97.25 Million CuM of Waste & Soil will be left and after considering the swelling factor total quantity of Waste & Soil will be 136.15 million CuM which will be backfilled and will be developed for regrading & plantation. PP also submitted the details of block wise sequential mining.
7	The Project Proponent needs to submit the action plan for developing new ponds near the villages and along with the budget in such a way that the surplus water shall be made available for villagers. Accordingly, the Project Proponent shall revise the budget of public hearing.	<p>The Project Proponent submitted that it is proposed to construct two ponds outside the lease in village Chikalhai &amp; Baraha Kala covering an area of 1.0 ha (1/2 ha each) with Capital Cost Rs. 30 Lakh &amp; Recurring Cost Rs. 3.5 Lakh/Annum within 3 years from the start of the mining operation.</p> <p>PP also submitted that the water stored in these ponds will be utilized by villagers for agriculture purpose. Taking into this consideration, capital cost of the public hearing budget has been revised from Rs. 4.6 Crore to 5.0 Crore &amp; Recurring Cost has been revised from 11.5 Lakh/Annum to 15.0 Lakh/Annum.</p>
8	The Project Proponent needs to submit the action plan for development of plantation/greenbelt along the 7.5m mine lease periphery (66.0 ha), safety zone along the road (36.0 ha), water bodies (4.30 ha), habitation (47.70 ha). The Project Proponent needs to clearly mention the area to be covered, saplings to be planted in the seven villages separately in the safety zone of 150m and backfilled area along with the timeline.	The Project Proponent submitted that the Green belt & plantation will be developed over an area of 1084.05 ha (154 ha area of statutory & safety barrier and plantation over 930.05 ha backfilled area). The trees will be planted @ 1500 trees/ha along the 7.5 m ML periphery & plantation along the safety zone whereas 10% @1500 trees/ha over the backfilled area. Greenbelt along the 7.5m mine lease periphery will be covered within initial 3 years covering an area of 66 ha area. Plantation on safety zone (36 ha along the road, 4.30 ha along the water bodies, 47.70 ha along the Habitation) will be carried out from initial year to upto the life of mine. At conceptual stage, total excavated area will be 930.05 ha and the entire area of

		<p>930.05 ha will be backfilled and rehabilitated by plantation @ 10% of 1500 nos of saplings &amp; regrassing over the entire area. Adequateplantation with the seedling of 10 ft height will be carried out. Survival rate will be maintained 90%.</p> <p>PP also submitted that the indigenous &amp; fruit bearing species will be planted in consultation with local Forest Department. Some of the species comprise Mango (<i>Mangifera indica</i>), Guava (<i>Psidium guajava</i>), Ashok(<i>Polyalthia longifolia</i>), Neem (<i>Azadirachta indica</i>), Senjana (<i>Moringa oleifera</i>), Gulmohar (<i>Delonix regia</i>),Lemon (<i>Citrus lemon</i>), Chiku (<i>Manilkara zapota</i>), Sitafal (<i>squamosa</i>), Pipal (<i>Ficus religiosa</i>), Karanj(<i>Pongamia pinnata</i>), Anar (<i>Punica granatum</i>), Jamun (<i>Syzygium cumini</i>), Imli (<i>Tamarindus indica</i>), Kaner(<i>Cascabela thevetia</i>), Bel (<i>Aegle marmelos</i>), Sal (<i>Shorea robusta</i>), Bargad (<i>Ficus benghalensis</i>), Amaltas(<i>Cassia fistula</i>), Babool (<i>Vachellia nilotica</i>), Palash (<i>Butea monosperma</i>) etc. Further, PP also submitted the detailed plan for development of greenbelt/plantation upto the life of the mine in tabular form.</p>
9	The Project Proponent needs to submit the letter from the Competent Authority with respect to flora and fauna in the study area of 10km radius and shall indicate the Schedule-I species if any found in the study area.	The Project Proponent submitted the authenticated list of flora & fauna issued by the Principal Chief Conservator of Forest & Chief Wild Life Warden vide letter no. V. Pra./Maa. Chi./2022/Mine-109/8116, Bhopal, dated 10.11.2022 andby the Divisional Forest Officer, South Forest Division, Panna M.P. vide letter no. Maa. Chi/2022/1615, Panna, dated 13.10.2022. As per the letter, there is no Schedule I species was found within the 10 km radius of the study area.
10	The Project Proponent needs to submit an undertaking stating that the current practices will be carried out continuously on non-purchased land i.e. 699.74 ha. as informed before the EAC	The Project Proponent submitted an undertaking vide letter dated 07.12.2022 stating that the “ <i>current practices will be carried out continuously on non-purchased land i.e.699.74 ha</i> ”.



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	during the meeting.	
11	The EAC was of the view that the Project Proponent shall ensure that the activities proposed under public hearing action and activities proposed under Environmental Management Plan (EMP) should not be similar.	The Project Proponent submitted that the activities proposed under public hearing action plan and activities proposed under Environmental Management Plan (EMP) are different.

(iv) The project was granted Terms of Reference (ToR) by the Ministry vide its letter no J-11015/29/2020-IA.II(M) dated 17.11.2021 based on recommendation of sectoral EAC meeting held during 15<sup>th</sup> – 17<sup>th</sup> September, 2021.

(v) Details of Mine lease of the project:

S. No.	Grant of PI/mine lease/ Order	Date of the grant	Name of the Mineral	Period of Grant	Granted by	Mine lease area in Ha
1	Prospecting License vide Lr no. F-2-2/2011/12/1, Bhopal	16.04.2013	Limestone	2 years	Govt., of Madhya Pradesh	1826.19
2	Letter of Intent vide No F 3-86/2015/12-1, Bhopal	06.02.2017	Limestone	50 years	Govt., of Madhya Pradesh	1793.59
3	Grant of mining lease vide F 3-86/2015/12-1, Bhopal	06.10.2018	Limestone	50 years	Govt., of Madhya Pradesh	1793.59

(vi) Details of executed Mine leases:

S.no	Date of grant of Lease execution	Period of Grant		Details
		From	To	
1	Date of entering into original lease deed.	17.10.2019	16.10.2069	Deed for grant of mining lease executed between the Governor of Madhya Pradesh and M/s Eco Cements Ltd for a period of 50 years vide reference: MP283052019A1710144 dated 17.10.2019

(vii) Land Use/Land Cover of the Mine lease area:

Private land	1735.867 ha
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Government land	57.723 ha
Total Mining lease area (MLA)	1793.59 ha
Private land for crusher, workshop & other infrastructure outside the MLA	No infrastructure is proposed outside the ML area

(viii) Details of Mining Plan:

Review of Mining Plan approved by Indian Bureau of Mines	Letter No.	MP/Panna/Limestone/MPLN/MOD-04/2021-22/5292, Jabalpur	
	Date	02.07.2021	
	Mine lease area	1793.59 ha	
	Mineral	Limestone	
	Validity	2021-22 to 2023-24	
Additional information (if any)	Project Proponent submitted that earlier Mining Plan along with Progressive Mine Closure Plan approved by IBM vide letter no. MP/Panna/Limestone/MPLN/G-24/18-19/5890, dated 10.08.2018. The Committee after detailed deliberations returned the proposal in the present form and advised the Project Proponent to fragment the lease into different phases and to revise the Mining Plan in consultation with IBM. Therefore, Modified Mining Plan along with progressive mine closure plan further approved by IBM dated 02.07.2021.		
Mining Parameters	Description		
Method of Mining	Fully Mechanized Opencast Mining		
Total Geological Resources	156.290 Million Tonnes		
Mineable Reserves	87.67 Million Tonnes		
Life of mine	28 years It may be increased after proposed exploration		
Bench Height	10 m (max) (Max. 6 nos of benches, Five 10m height & one 5m height)		
Bench Width	25-30 m (max)		
Individual bench slope	For 5 to 9 m height benches: 65° & 6 to 11 m height benches: 80°		
Overall pit slope	45°		
Drilling/Blasting	S. No.	Particular	Details
	1.	Bench height (m)	10 m (Max. 6 nos of benches, Five 10m height & one 5m height)
	2.	Bench Width (m)	25-30 m (working benches)
	3.	Drill hole dia	110 mm
	4.	Depth of hole	11 m
	5.	Burden	3 m
	6.	Spacing	5 m
	7.	No. of Drills required	330
	8.	Tonnage per hole	375 Tonne
	9.	Powder Factor	7.36 Tonne/Kg
Crusher	PP submitted that a crusher of 1600 TPH capacity is proposed		

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	to be installed near ML periphery in Block-1 which will be later shifted to Block-15 in conceptual period.
RoM output size	<75 mm (+90%) size
Transportation details	PP reported that the dump trucks of 55 tonne payload capacity are proposed to be used for transportation of limestone to the crusher (to be located in Block 1 & later on same will be shifted to block 15) and overburden rejects to the temporary dump yards. Crushed limestone will be transported to Cement Plant via covered belt conveyor (to be established in South direction). No transportation will occur through public transport road.
Dumpers capacity	55 tonne
Topsoil	PP reported that annually, 0.40 million tonnes of Top Soil & at conceptual stage, 4.26 million tonnes of top soil will be generated & same will be simultaneously used for greenbelt/plantation.
OB/IB	PP reported that OB/IB consist of Overburden soil in the form of clay, murrum with shale and intermediate shale & shaly limestone. Annually, 9.60 million tonnes of OB/IB & at conceptual stage, 59.89 million tonnes overburden soil in the form of clay, murrum with shale and 77.45 million tonnes intermediate shale & 57.23 million tonnes shaly limestone will be generated. OB and shale shall be initially stacked in the waste dump yard and will be used in reclamation of excavated pits by backfilling. A part of lower shaly limestone shall also be used with the ROM limestone and part shall be kept separately for future use, if any and it will not be mixed with other waste rocks.
Water level	12-18 m bgl
Ultimate working depth	275 to 306m AMSL (13 to 55m bgl)
Groundwater intersection	PP reported that there will be groundwater intersection due to mining activity.

(ix) Water requirement:

Total water requirement	250.0 KLD	Fresh water	232.0 KLD
		Treated Water	18.0 KLD
Source	Initially, for 2 years the water requirement will be 100.0 KLD which will be sourced initially from ground water after that from the 3 <sup>rd</sup> year onwards at peak production capacity it will be 250.0 KLD which will be sourced from Mine Sump as & when it gets developed except for drinking water which is 10 KLD.		
Permission	NOC for Ground water abstraction has been obtained from CGWA vide NOC No. CGWA/NOC/MIN/ORIG/2021/12466, dated 04.08.2021 for abstraction of fresh water 100 m <sup>3</sup> /day of fresh water and 57 m <sup>3</sup> /day for dewatering and is valid up to 03.08.2023.		

(x) Nearest village / town/ highway/railway station / water bodies:

Particular	Particular's Name	Directions
Nearest village	Mukeha, Pawaia, Dhahara, Hinauta, Chikalahi, Baraha kalan, Beli, Gaura Khurd	Falling nearby the lease area & surrounded by mine lease
Nearest Town / City	Amanganj	~ 3.5 km, West
Nearest State/National Highway	SH 10	~ 2.75 km, WSW
Nearest Railway Station	Maihar, Satna Katni and Damoh Railway Station	~ 60.5 km, - ~90 km
Nearest Water Bodies	There are few seasonal nallhas (rivulets) within the concession area which become active during monsoon period and rain water gets discharged through the nallhas to Mirhasan River flowing outside the lease area.	
	Mirhasan Nadi, Ken River Saigur Nala and Patne River	~ 4.5 km to ~9 km

(xi) 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	PP reported that no forest land falls within the mine lease area. A letter regarding confirmation of the same has been obtained from Forest Dept., Panna, MP vide letter no. Maa Chi/2015/3609, Panna, dated 24.07.2015.
National Park	No	No National Park, Wild Life Sanctuaries, Eco Sensitive Zone (ESZ)/ Eco-Sensitive Area (ESA) etc. within 10 km radius study area.
Wildlife Sanctuary	No	
Eco Sensitive Zone (ESZ)/ Eco-Sensitive Area (ESA)	No	
Schedule-I species	No	The Project Proponent submitted the authenticated list of flora & fauna issued by the Principal Chief Conservator of Forest & Chief Wild Life Warden vide letter no. V. Pra./Maa. Chi./2022/Mine-109/8116, Bhopal, dated 10.11.2022 and by the Divisional Forest Officer, South Forest Division, Panna M.P. vide letter no. Maa. Chi/2022/1615, Panna, dated 13.10.2022. As per the letter, there is no Schedule I species was found within the 10 km radius of the study area.
Status of Wildlife Conservation Plan	-	As no schedule I species is found, therefore, same is not applicable

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(xii) Green belt/plantation details:

Proposed area for green belt/plantation	PP reported that at conceptual stage, Greenbelt along the 7.5m mine lease periphery will be covered within initial 3 years covering an area of 66.0 ha. Plantation on safety zone (36 ha along the road, 4.30 ha along the water bodies, 47.70 ha along the Habitation) will be carried out from initial year to upto the life of mine. At conceptual stage, total excavated area will be 930.05 ha and the entire area of 930.05 ha will be backfilled and rehabilitated by plantation @ 10% of 1500 nos of saplings & regrassing over the entire area.
Budget for green plant & plantation till the end of life of mine.	Rs. 7.41 crore
Budget for nursery	-
Additional information (if any)	Local and fruit bearing species will be planted in consultation with local forest officer.
Particulars for Green belt/plantation	Area covered (in Ha)
7.5 m barrier & non-mineralized zone	66.0 ha
50 m safety zone of nallah, roads, electric lines	Along Nallah: 4.30 Ha, Along Road: 36.0 Ha
500 m safety zones of nearest habitation villages	47.70

(xiii) Baseline Details:

Period	December, 2020 to February, 2021 (Winter Season)				
AAQ parameters at 12 locations	Pollutant	Min, $\mu\text{g}/\text{m}^3$	Max, $\mu\text{g}/\text{m}^3$	98 %ile, $\mu\text{g}/\text{m}^3$	Standard, $\mu\text{g}/\text{m}^3$
	PM10	52.3	82.3	82.0	100
	PM2.5	25.4	43.1	43.0	60
	SO2	5.4	15.3	15.1	80
	NOx	10.0	25.9	25.8	80
AAQ modeling	PP submitted that in worst case scenario, the resultant value of PM <sub>10</sub> found to be 70.82 $\mu\text{g}/\text{m}^3$ , PM <sub>2.5</sub> : 33.38 $\mu\text{g}/\text{m}^3$ , SO <sub>2</sub> : 20.95 $\mu\text{g}/\text{m}^3$ and NO <sub>2</sub> : 13.29 $\mu\text{g}/\text{m}^3$ .				
	Controlled Case Scenario				
	Pollutant	Baseline Concentration, $\mu\text{g}/\text{m}^3$	Incremental Concentration, $\mu\text{g}/\text{m}^3$	Total GLC, $\mu\text{g}/\text{m}^3$	Standard
	PM10	67.06	3.76	70.82	100
	PM2.5	31.84	1.54	33.38	60
	SO2	10.13	1.80	20.95	80
	NOx	19.15	3.16	13.29	80
Noise level at 12	Day Time: 52.2 to 61.8 Leq dB (A)				

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locations	Night Time: 41.5 to 52.5 Leq dB (A)
Ground water quality at 11 locations	PP reported that the pH of the water samples ranged from 7.57 to 8.12 indicating slightly alkaline in nature and maximum pH was recorded at village Gunour. The observed values of parameter vary from: total hardness (306.82 to 588.78 mg/l), alkalinity (271.21 to 523.64 mg/l), total dissolved solids (519 to 1476 mg/l); however, maximum hardness & dissolved solids were found in village Gunour. The concentration of chloride was found to be (85.42 to 386.56 mg/l) and Sulphate was (69.64 to 201.56 mg/l). The concentrations of other micro and macro nutrients were also at low level i.e. nitrate (5.04 to 14.16 mg/l), calcium (75.16 to 177.75 mg/l), magnesium (28.99 to 62.90 mg/l), and iron (0.09 to 0.27 mg/l).
Surface water quality at 5 locations	PP reported that the pH of the water bodies ranges from 7.26 to 7.48 indicating slightly alkaline in nature. Total hardness (69.87 to 197.25 mg/l), Total dissolved solids (156 to 288 mg/l), Alkalinity (81.68 to 173.40 mg/l) and conductivity (259 to 442 µS/cm) were found to be within standards in water samples. The COD (14.2 to 24.6 mg/l) and BOD (3.1 to 9.7 mg/l). The nutrients were also found in sufficient quantity viz. sulphate (16.37 to 48.17 mg/l), nitrate (0.86 to 2.22 mg/l), calcium (16.45 to 54.11 mg/l), magnesium (7.01 to 15.13 mg/l) indicates that the water bodies are clean. Dissolved oxygen (6.9 to 7.6 mg/l) indicated that the water bodies are safe for aquatic biodiversity. The results indicated that water sample collected from Patne River is more clean as compare to Mirhasan River, Ken River and Dam.
Soil quality at 11 locations	PP reported that the soil samples exhibit Blackish, Brownish, Brownish Black & Blackish Brown color which indicated that the soil has high organic matter content. On the analysis of Soil samples, it was found that the organic matter in the collected samples varies from 0.74% to 0.99%. The textures of the collected soil samples found out to be Silt clay loam and clay loam which means that the soil contains 27 to 40 % of clay and 20 to 45 % of sand. All soil samples were slightly alkaline in nature having pH range from 7.77 to 8.05. The texture, alkaline nature and presence of organic matter of the soil reflects that the soil is appropriate for the plant growth. Moreover, In terms of essential macro-nutrients, it can be said that soil quality of selected locations is average for the plant growth.
Traffic Survey	PP reported that the excavated limestone will be transported from mine face to crusher by dumpers and further crushed limestone will be transported to its proposed interlinked Cement Plant via covered conveyor belt. No transportation will occur through public transport road.

(xiv) Public Hearing (PH) Details:

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Advertisement for PH with date (pl. mention name of major national daily and one regional vernacular daily newspaper)	National Level/Local Level: Star Samachar & Dainik Jagran on 19.01.2022 Dainik Bhaskar on 20.01.2022
Date of PH	24.02.2022 at 11:00 AM
Venue	Govt. High Sec. School Playground, Village: Maheba, Tehsil: Amanganj, District: Panna
Chaired by	Mr. V.S. Rai: Regional Officer, Sagar, MP Mr. J.P. Dhurve: Additional District Collector, Panna, MP
Main issues raised during PH	Land acquisition, loss of agriculture land, employment for local people, environment pollution, health issues, education for local people, infrastructure development, tree cutting, land for land, skill development, plantation in nearby areas, establishment of milk diary, promotion of medium and small scale industries, drinking water, community health centre etc...
Budget proposed for addressing issues raised during PH	Capital Cost- Rs. 5.0 crores Recurring Cost – 15.0 lakh/annum

(xv) Rehabilitation & Resettlement:

R & R details	PP reported that the total mine lease area is 1793.59 ha, out of which 57.723 ha is Govt. land and 1735.867 ha is Private Land. According to khasra details there are 1300 families involved in total lease area, out of which 474 are project affected families (whose land to be purchased). The estimated budget of R&R has been calculated on the basis minimum cost for each village separately. On the basis of same the budget estimated for R&R Action Plan is Rs. 169.72 crore. PP will negotiate or try to pay the land cost on the basis of uniformity considering maximum cost i.e. Rs. 23.26 Lakh. After considering the same the total budget for R&R Action Plan is Rs. 272.22 Cr.
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(xvi) Court case details: The Project Proponent submitted an undertaking vide letter dated 28.12.2022 stating that “there is no litigation pending against the project and/or any direction /order passed by any Court of Law against the project and/or land/R&R in which the project is proposed and that for any such litigation whatsoever, the sole responsibilities will be borne by the company”.

(xvii) Affidavit/Undertaking details:

Affidavit as per Ministry's OM dated 30.05.2018	PP submitted the Affidavit in an non-judicial e-stamp vide certificate no. UP57120777211706T dated 07.09.2021 stating that the company will comply with all the statutory requirement & judgment of Hon'ble
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	Supreme Court dated 2 <sup>nd</sup> August 2017 in writ Petition (civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ors.
Project Proponent submitted an Undertaking vide Letter dated 01.08.2022	PP submitted an undertaking stating that that “we have reviewed the EIA report and take full responsibility and ownership of the contents presented in the EIA report by J.M. EnviroNet Pvt. Ltd. Instructions as per MoEF&CC vide O.M. No. J-11013/41/2006-IA. II (I) dated 4th August, 2009 has been followed in the preparation of this EIA Report. We also assure that there is no litigation pending against the project and/or any direction / order passed by any Court of law against the proposed project and that for any such litigation whatsoever, the sole responsibilities will be borne by company”.
Consultant submitted an Undertaking dated 01.08.2022	The Consultant submitted an undertaking to the effect that the conditions laid down in Terms of Reference prescribed by MoEF&CC, New Delhi vide letter no. J-11015/29/2020-IA.II (M) dated 17.11.2021 have been complied as per data/details provided by Project Proponent & as per Approved Modified Mining Plan along with Progressive Mine Closure Plan approved by IBM and the data submitted are factually correct.
Plagiarism Certificate checked on 01.08.2022	The Head of the Accredited Consultant Organization/ Authorized person certified that this EIA Report has been evaluated by using online software viz. Plagiarism Checker X. The report produced has been analyzed by the system and based on it, I certify that the EIA Report produce in accordance with good scientific practice.

(xviii) Details of the Environmental Management Plan (EMP):

S. No.	Activities	Capital Cost (in Lakhs)	Recurring Cost (in Lakhs)
A	Mitigative Measures		
1	Permanent water sprinkling arrangements for main haulage road	14	3.0
2	2 water tanker (28 KL) for water sprinkling in other roads and mining areas/activities	80	4.0
3	Pollution Control Device (Bag filter at Crusher) Equipment and its installation Cost, Operation & Maintenance	50	6.0
4	Green belt around 7.5 m periphery covering an area of 66 ha (No. of saplings: 99,000) from initial year to upto the life of mine i.e. 28 years (Considering Rs. 198 Lakh)	198	1.0



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5	Plantation / Re-grassing in backfilled area of 930.05 ha with total 139508 saplings upto the life of mine i.e. 28 years (Considering Rs. 279 Lakh)	-	9.964
6	Plantation on Safety zone (Habitation: 47.70 ha, Road: 36 ha, Nallah: 4.30 ha) with total 1,32,000 saplings from initial year to upto the life of mine i.e. 28 years (Considering Rs. 264 Lakh)	-	9.42
7	Drip irrigation system for fruit orchard (Length of drip system is 2000 m X 8 lines)	7.0	1.0
8	Retaining Wall around soil dump (L*W*D = 3900 x 0.6 x 1)	3.0	1.0
9	Garland Drain around soil dump (L*W*D = 4000 x 1.2 x 1)	2.5	0.50
10	Channelized Catch Drains around soil dump (L*W*H = 10 m x 5 m x 1 m)	2.5	0.40
11	4 nos. of Settling Tank / Sedimentation Pond (Length*Width*Depth = 8 m x 4 m x 3 m)	5.0	0.50
12	Construction of 3 nos. of Check Dams in and around 5 km area of mine boundary (@ Rs. 6 lacs per Check Dam) and its annual maintenance	18.0	1.50
Sub Total		380	38.284
B	Monitoring		
1	Installation of 10 Ambient Air Quality Monitoring Stations (2 online at Mine Site and 8 manually at villages: Mukeha, Pawaia, Dhahara, Hinauta, Chikalahi, Baraha kalan, Beli, Gaura Khurd and display board at Mines Main Gate	100	14.0
2	Fugitive dust emission monitoring (9 locations * monthly)	2.5	1.0
3	Pond deepening, harvesting, desilting, maintenance & ghat development works of the village ponds and other structures	25	2.0
4	Installation of 5 Piezometers along the ML periphery in the premises with Digital Level Recorder & Telemetry Raw water analysis (PZ wells) (3 times in a year)	5	1.0
5	Surface Water Quality Analysis of Nallahs (3 Samples * Half yearly) & Pond (8 Samples * Half yearly)	2.0	0.50
6	Ground water quality analysis (5 locations * 4 times in a year)	-	0.50
7	Installation of Workshop & Workshop Waste Water Quality Analysis (monthly) as well as maintenance of oil-water separators	3.0	0.50
8	Peak Particle Velocity Monitoring for nearby habitation i.e. Pawaia, Dhahara, Hinauta, Chikalahi, Baraha kalan, Beli, Gaura Khurd	5.0	1.0
9	Ambient Noise Level Monitoring (9 locations * monthly frequency)	-	1.0
10	Work Place Noise Level Monitoring (5 Locations * quarterly frequency)	2.0	0.30
11	Providing Ear muffs/plus to workers working in high noise area	1.0	0.50

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Sub Total B		145.5	22.30
C	Miscellaneous		
1	Digital mapping of entire mine area once in three years (Rs. 3 Lacs once in 3 years)	-	1.0
2	Occupational Health Check-up of Mines Employees	15.0	5.0
3	Others, if any	-	2.0
Sub Total C		15.0	8.0
TOTAL (A +B+C)		540.5	68.584
D	Estimated budget for addressing the Public Hearing issues	500	15
TOTAL (A +B+C+D)		1040.5 10.4 crores	83.584 0.83 crore

(xix) Details of project cost and employment:

Particular	Budget
Total cost of EMP (Capital Cost of EMP + Capital cost of Public Hearing)	Rs 10.4 Cr
Project Cost	Rs 400 Cr
Employment	147 persons

**3. Observation and Recommendation of the Committee:**

The EAC deliberated on the additional details submitted by the Project Proponent and Consultant. The EAC asked the Project Proponent that whether any operating mines are in the vicinity of the mine lease area and whether any restrictions have been imposed. The Project Proponent informed the EAC that there are two operating mines in the vicinity of the mine lease area and no restrictions have been imposed. Then, the Project Proponent presented the KML file to indicate the core and buffer zone of the Panna Tiger Reserve. Minimum distance of the core area of Panna Tiger Reserve is 14.36 km & from buffer as well as from the ESZ is 9.15 km & at 14.32 km from Panna-Bandhavgarh Tiger Corridor. PP also informed the EAC in this regard letter has been obtained from the Assistant Director, Panna Tiger Reserve vide letter dated 18.10.2022 and from the Principal Chief Conservator of Forest & Chief Wildlife Warden vide letter dated 10.11.2022 and also informed that the letter regarding the same has been obtained from the PCCF, Bhopal dated 12.12.2022. No Schedule I species is found within the 10 km study area. The EAC asked the Project Proponent regarding the comments from the National Tiger Conservation Authority (NTCA). The Project Proponent informed the EAC that the request letter has been submitted to the NTCA vide letter dated 18.11.2022 and email dated 23.11.2022 and continuous efforts are being made to obtain the comments from the National Tiger Conservation Authority (NTCA). PP also submitted the copies of the correspondence made to the NTCA. The EAC opined that the Ministry may meek the comments from the National Tiger Conservation Authority (NTCA) in this regard.

The Project Proponent informed the EAC that the two no.s of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) will be installed after the start of mining operation. PP also informed the EAC it is proposed to develop two ponds outside the lease in village Chikalhai & Baraha Kala covering an area of 1.0 ha (1/2 ha each) with Capital Cost of Rs. 30 Lakh & Recurring Cost of Rs. 3.5 Lakh/Annum within 3 years from the start of the mining operation. Water stored in these ponds shall be utilized by villagers. The current practices will be carried out continuously on non-purchased land i.e. 699.74 ha. The EAC opined that the Project Proponent needs to install the online pH meter. Project Proponent also informed the EAC that there is no litigation pending against the project and PP also submitted an undertaking vide letter dated 28.12.2022 in this regard.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC (Non-Coal Mining) **recommended** the proposal in its EAC meeting held during 27-28 December, 2022 under the provisions of EIA Notification, 2006 and its subsequent amendments for grant of Environmental Clearance (EC) for mining of Limestone in Amanganj Limestone Mine of M/s Eco Cements Limited with proposed production capacity of Limestone: 3.75 Million TPA, Top Soil: 0.40 Million TPA & OB/IB: 9.60 Million TPA (Total Excavation: 13.75 Million TPA) along with installation of 1600 TPH Capacity of Crusher in the mine lease area of 1793.59 ha, located at Villages: Beli, Baraha Kala, Hinouti, Tehsil Gunour and Villages Chikalhai, Daharra, Gaura, Hinouta Mishra, Kanti, Mahewa, Patelpura, Pawaiya, Tehsil Amanganj, District Panna, Madhya Pradesh subject to the following specific conditions in addition to the standard EC conditions applicable for non-coal mining projects: -

- i. The Ministry may seek comments from the National Tiger Conservation Authority regarding the distance of core and buffer zone of Panna Tiger Reserve from the mine lease boundary as well as any concern about movement of tigers from Panna Tiger Reserve to forests of South Panna Forest Division and then to Bandhavgarh Tiger Reserve.
- ii. This Environmental Clearance (EC) will be valid upto 28 years as the life of the mine is 28 years.
- iii. The Project Proponent shall strictly adhere to the sequential block wise mining as presented before the EAC.
- iv. The excavation of the new block should begin only after backfilling an existing mined out block. The back-filled areas should be levelled to match with adjoining ground level. The Project Proponent shall restore the ecology of the mine lease area and shall return the land to the farmers after the completion of the backfilling.

- v. No mining activity shall be carried out over an area of 699.74 ha. The Project Proponent shall ensure that the current practices will be carried out continuously on non-purchased land i.e. 699.74 ha. The Project Proponent shall demarcate the area of 699.74 ha with ground wire fencing to prevent the inadvertent entry.
- vi. The Project Proponent must ensure that the Garland drains created to protect entry of water from river into the mine and from the mine to river to be dealt with the proper protection measures proposed and should be constructed in such a way that at no time solids and pollutants from the mine area from all the pits will not flow into the river and it should be ensured that the water in the drain as surface runoff from mine collected in the pit be monitored for quality and treated accordingly. The PP needs to install the online pH meter for the purpose of monitoring of quality of water.
- vii. All the adequate protection measures shall be taken up so that neither the morphology nor the quality of the water body will not have any impact till the entire mining operation.
- viii. 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 to denote the impact of calcium carbonates on water bodies.
- ix. The Project Proponent shall stay in touch with Forest and Wildlife Department for any intervention required in future for protecting the wildlife.
- x. The Project Proponent needs to install two no.s of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) within two years from the commencement of mining operations.
- xi. As committed, the Project Proponent needs to develop two ponds outside the lease in village Chikalhai & Baraha Kala covering an area of 1.0 ha (1/2 ha each) within 3 years from the start of the mining operations. Water stored in these ponds shall be utilized by villagers.
- xii. The Project Proponent shall monitor the air quality, noise level and ground vibration during drilling and blasting at the edge of the mine, near the village, crusher and at other sensitive receptors and such collected data shall be submitted quarterly to the Ministry's Integrated Regional Office.
- xiii. 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 atleast 40 m throw shall be installed at various locations in the mine

area. The muddy pavements alongside the approach road may either be grassed or permanent pavements should be created in consultation with local administration.

- xiv. The Project Proponent shall ensure that the transportation shall not occur through public road such as village road, any sensitivity infrastructure such as hospitals, schools etc.
- 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. 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 shall be carried out at periodic intervals.
- xvi. The Project Proponent shall explore the possibility of using atleast 20% of electric vehicles/LNG/CNG instead of diesel operation within three years from the start of mining operations.
- xvii. The Project Proponent shall undertake five times the plantation for the no. of trees to be cut in the mine lease area.
- xviii. The Project Proponent shall ensure the survival rate of 95% for planting the peripheral and safety barrier 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. Plantation shall be undertaken in consultation with the State Forest Department. The entire peripheral plantation and the safety barrier plantation shall be completed within 3 years from the start of mining operations.
- xix. 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.
- xx. The Project Proponent should adopt the proper mitigation measures as proposed under EMP with budgetary provision of Rs 5.40 Cr. 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 Integrated Regional Office.

- xxi. 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.
- xxii. The budget of Rs 5.0 Cr 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.
- xxiii. Approval/permission of the CGWA/SGWA shall be obtained before start of the mining operations.
- xxiv. 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.
- xxv. The Project Proponent needs to obtain the star rating as per the guidelines of Ministry of Mines within 3 years of commencement of mining operations.
- xxvi. The Project Proponent shall pay to farmers of agricultural land if there is any loss due to pollution found by concerned District Commissioner as per extent rules or norms.
- xxvii. 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.
- xxviii. The Project Proponent should implement the Rehabilitation of project affected families (PAFs) and payment of compensation to PAFs in line with the policy and guidelines of the Central/State Government, as provided under the law in such a way that the compensation should benefit the current and future generation.
- xxix. 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. PP shall also organize medical camp for the benefit of the local people and also the monitor the health impacts due to mining activity.

- 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 Integrated Regional Office.

**2.4 Ravirala Limestone Mine of M/s. The Ramco Cements Limited for mining of Limestone with proposed production capacity of Limestone: 0.115 MTPA (ROM), Topsoil:0.005 MTPA, Over Burden: 0.211 MTPA (Total excavation: 0.331 MTPA) in the mine lease area of 124.33 Ha, located at Ravirala Village, Jaggayyapeta Mandal, NTR District (earlier Krishna District), Andhra Pradesh-[F.No: IA-J-11015/44/2022-IA-II(NCM), Proposal No: IA/AP/MIN/407914/2022; Consultant: ABC Techno Labs India Private Limited] – Terms of Reference (ToR under SOP)**

The proposal is for mining of Limestone in Ravirala Limestone Mine of M/s. The Ramco Cements Limited with proposed production capacity of Limestone: 0.115 MTPA (ROM), Topsoil: 0.005 MTPA, Over Burden: 0.211 MTPA (Total excavation: 0.331 MTPA) in the mine lease area of 124.33 Ha, located at Ravirala Village, Jaggayyapeta Mandal, NTR District (earlier Krishna District), Andhra 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 16°49'30.77"N-16°50'21.60"N and Longitude 80°06'03.85"E -80°07'26.85"E. The mine lease area falls under the Survey of India Toposheet No. 65 D/1.
- ii. The proposed project activity is listed at Schedule no. 1(a) Mining of Minerals of the schedule of the EIA Notification, 2006 and attracts the general conditions as the interstate boundary of Andhra Pradesh-Telangana is located at a distance of 3.5 km, W from the mine lease area and falls under Category "A" and appraised at the Central level.
- iii. Details of Mine Lease:
  - a) The Project Proponent submitted that initially Mining Lease was granted by the State Govt. vide G.O. Ms. No.59, Inds. & Com (M.III) Dept., dated 02.05.1997 for Limestone mine over an extent of 124.33 Hects in Sy.No.20,28,38,39,41,42 etc., of Ravirala Village, Jaggayyapet Mandal, Krishna District for a period of 20 years in favour of M/s. Madras Cements Ltd.

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The Mining Lease deed was executed on 01.10.1997 and the lease was valid up to 30.09.2017.

- b) Then, the mining lease was transferred by the State Govt. vide G.O. Ms.No.96 dated 13.10.2015 from M/s. Madras Cements Ltd to M/s. The Ramco Cements Limited over an area of 124.33 Ha.
- c) Thereafter, the Govt. of Andhra Pradesh have extended the validity of mine lease vide G.O. Ms. No. 60 Inds. & Com (M.III) Dept., dated 02.05.2017 for a period of 50 years w.e.f. 01.10.1997 to 30.09.2047 for Limestone over an extent of 124.33 Hects. The Supplementary Lease Deed for extension was also executed on 27.02.2019 between the Govt. of Andhra Pradesh and M/s The Ramco Cements Limited for the period upto 30.09.2047.

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

Private land	55.89 Ha own Patta Land 51.30 Ha Private Patta Land to be purchased
Government land	17.14 Ha
Total Mining lease area (MLA)	124.33 Ha
Private land for crusher, workshop & other infrastructure outside the MLA	Nil
Additional information (if any)	There are now some agricultural activities taking place. At present, there is no mining activity in the ML Area.

v. Details of Mine Plan:

Review of Mining Plan along with Progressive Mine Closure Plan approved by Indian Bureau of Mines, Hyderabad	Letter No.	AP/KSN/MP/Lst-2A/Hyd
	Dated	03.12.2021
	Mine lease area	124.33
	Mineral	Limestone
	Validity	2022-23 to 2026-27
Mining Parameters	Quantitative Description	
Method of Mining	Conventional – Opencast method with controlled Drilling & Blasting	
Mineable Reserves	13.196 Million Tonnes	
Life of mine	26 years	
Bench Height	8 m in OB & 9 m in Mineral Band	
Bench Width	>10 m	
Individual bench slope	72°	
Overall pit slope	45°	
Drilling/Blasting	Wet drills and controlled blasting will be undertaken.	
RoM output size	30-300 mm	
Transportation details	The mine will be connected to the Cement Plant @ 5.5 km through existing haul road from	



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	Ravirala (Forest) Mine.
Dumpers capacity	25 Tons
Topsoil	Project Proponent reported that during ROMP Period (in Block-1), about 14,064 cu. m Topsoil will be removed and fully utilised for green belt along the periphery.
OB/Waste	Project Proponent reported that about 3,51,254 cu.m of OB waste will be removed during ROMP Period. The OB waste will be accommodated in the temporary dump yards over an extent of 4.15 Ha with maximum height of 20 m (from 36 m RL to 56 m RL) to be located in Block-4. From the year 2027-28 to 2047-48 (upto the lease period), a quantity of 2.6 Million Tonnes of ROM ore and a quantity of 0.45 Million cu.m of waste (Phyllite and Interstitial Clay) will be generated and stored in dump yards. Back filling will not be initiated as mineral existing at bottom.
Groundwater intersection	Groundwater table: Post Monsoon: 26 m BGL Pre Monsoon 40 m BGL Ultimate Pit Depth: 82 m BGL (-45 m RL) Mining activities will intersect the ground water-table.
Proposed Land use during Review of Mining Plan (ROMP)	The Project Proponent reported that at the end of ROMP Period, about 9.60 Ha will be opened out Pit Area, 7.63 Ha will be under OB dump, 1.79 Ha under Utilities, 2.80 Ha under Green Belt and 102.59 Ha of land will be untouched.

vi. Water requirement:

Total water requirement	20 KLD		Domestic Consumption	5.0 KLD
	Fresh water	-	Green Belt	10.0 KLD
	Treated water	20.0 KLD	Dust Control	5.0 KLD
Source	The rain water collected in the mine pit will be utilised to meet the water requirement. Initially the water requirement will be met from existing captive mines through Tankers.			
Permission	Not Applicable			

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

Particulars	Particular's Name	Distance & Direction
Nearest Village	Ravirala Tanda Ravirala Village	SW of Block-4 SW
Nearest Town	Jaggayyapeta	5.2 km, NW
Nearest Highway	NH-65 Hyderabad-Vijayawada Section	6.5 km, NNE
Nearest railway station	Bonakalu	28.5 km, NE

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Water body	River Paleru River Krishna	50 m, West 50 m, South
Pilgrimage Centre	Vedadri Temple	1.4 km, SE

viii. 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	No forest land is involved in the Lease-DFO, Krishna Division, Vijayawada Letter Rc. No. 1160/2019/TO dated 20.12.2019. There are 8 Reserved Forests falling fully/partly within 10 km radius area are :  i. Jaggayyapeta Extension RF (0.1 km in East& North) ii. Jaggayyapeta RF (3.0 km; SE) iii. Kuntimaddi RF Part (1.9 km; S) iv. Ginjupalli RF (2.4 km; S) v. Venkatayapalem Extension-1 RF (4.0 km; S) vi. Chintalapalem RF (9.5 km; SW) vii. Budawada RF (1.6 km; WNW) viii. Ballusupadu RF (8.5 km; NW)
National Park	Nil	-
Wildlife Sanctuary	Nil	-
Eco-Sensitive Zone(ESZ) /Eco-Sensitive Area(ESA)	Nil	-

ix. Green belt/plantation details:

Proposed area for green belt/plantation	2.80 Ha
Budget for green plant& plantation till the end of life of mine.	5.00 Lakhs
Budget for nursery	-
Additional information (if any)	The total area of Green Belt will be about 2.80 Ha with 2.25% coverage in the total mine lease area. Only native tree species of 7,000 Nos. will be planted @ 2,500 Tees/Ha and will be maintained with a survival rate of 85-90%.
7.5 m barrier & non-mineralized zone	1.3 Ha
50 m safety zone of nallah, roads, electric lines	0.4 Ha
500 m safety zones of nearest habitation villages	1.1 Ha

x. The Project Proponent submitted that the mine was opened on 31.12.1997. The Surface Outcrop Excavation (leveling works) was done occasionally during the

period from 1998-99 to 2002-03. During the excavation and leveling, there was production of Limestone of about 4,099 Tonnes in 4 years (with a maximum production of 1,622 Tonnes/Annum during 2001-02) and Dispatched 3,892 Tonnes. For the excavated quantity, Royalty and other applicable taxes were paid to the Department of Mines & Geology, Government of Andhra Pradesh. Thereafter, the entire mining activities were stopped. Actually, there was no Mining Pit made in the Mining Lease area during the Outcrop Excavation period. The imposition of Penalty (compensation amount) under Sec 21(5) of the MMDR Act, as per the judgment of the Hon'ble Supreme Court of India against WP (Civil) No. 114 of 2017 between Common Cause vs Union of India, for an amount of Rs.2,22,125/- (100% of the price of the Mineral) was also paid to the Asst. Director (Mines & Geology), Nandigama on the Demand vide Challan Transaction ID No.30061839632019 dated.08.08.2019. The Project Proponent submitted the letter issued by the Dept. of Mines and Geology vide letter no. 77/M/2008, dated 24.08.2019 stating that "M/s. The Ramco Cements Limited has paid an amount of Rs. 2.22.125/- (Rupees two lakh twenty two thousand one hundred and twenty five only) vide challan No.30061839632019 dated.08.08.2019. The M/s. Ramco Cements Limited has paid the penalty for complying the Section 21(5) of MMDR Act for the Limestone excavated during the period 2000-2001 to 2002-2003. The Lessee already paid the Royalty and other taxes for dispatches quantity during the period 1999 to 2002-03. Finally, it is to submit M/s. Ramco Cements Limited Mining Lease is in force and valid up to 30.09.2047. The lessee is paying Annual dead rent regularly".

- xi. The Project Proponent submitted that there are mainly 5 Mining Blocks (1-5) in the granted Ravirala Limestone Mine (Revenue). As the Mining Lease is located on the Banks of River Paleru (in western parts) and River Krishna (in southern parts), a Safety Distance of 300 m from the River Banks/High Flood Levels (HFLs) is left as No Mining Zone. Ravirala Thanda and Ravirala Village settlements fall in the Lease and large scale Rehabilitation & Resettlement (R&R) is involved. Thus, Blocks 2, 3 & 5 are not feasible for mining due to proximity to Rivers Paleru & Krishna and encompassing the village habitation. Thus, RCL undertakes not to carry out any mining activity in the part of Mining Lease Area in Blocks 2, 3 & 5 over an extent of 35.39 Ha and carry out mining activity in balance area of 88.93 Ha in Blocks 1 & 4.
- xii. 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. PP submitted the Affidavit in a non-judicial stamp of Rs 100 bearing no: CW 037909 stating that the company will comply with all the statutory requirement & judgment of Hon'ble Supreme Court dated 2<sup>nd</sup> August 2017 in writ Petition (civil) No. 114 of 2014 in the matter of common cause versus Union of India & Ors.
- xiii. The Project Proponent submitted that the total cost of the project is Rs.6.00 Crores and employment will be about 17 persons directly and 20 persons indirectly.

**3. Observation and Recommendation of the Committee:**

The EAC noted that the mine lease was granted in the year 1997. The EAC asked the Project Proponent that whether there is an existing EC and whether any mining operation was carried out. The Project Proponent/Consultant informed the EAC that the surface outcrop excavation (leveling works) was done during the period from 1998-99 to 2002-03. During the excavation and leveling, there was production of Limestone of about 4,099 Tonnes in 4 years (with a maximum production of 1,622 Tonnes/Annum during 2001-02) and Dispatched 3,892 Tonnes. For the excavated quantity, Royalty and other applicable taxes were paid to the Department of Mines & Geology, Government of Andhra Pradesh. The imposition of Penalty (compensation amount) under Sec 21(5) of the MMDR Act, as per the judgment of the Hon'ble Supreme Court of India against WP (Civil) No. 114 of 2017 between Common Cause vs Union of India, for an amount of Rs.2,22,125/- (100% of the price of the Mineral) was also paid to the Asst. Director (Mines & Geology), Nandigama on the Demand vide Challan No. 31118852102019 dated 08.08.2019. The Project Proponent accepted that the instant proposal attracts the violation under Ministry's SOP dated 07.07.2021. Further, the Project Proponent informed the EAC that after 2002-03 there was no mining operation carried out.

The Project Proponent presented the KML to indicate the surface features in the study area of 10 km radius. The Project Proponent informed the EAC that the instant mine is a captive mine. The interstate boundary of Andhra Pradesh-Telangana is located at a distance of 3.41 km, W from the mine lease area. There are four other mines are being operated in the vicinity of the mine lease area. Forest land is located adjacent to the mine lease area. River Krishna is located at a distance of 50m, S from the mine lease area. As the Mining Lease is located on the Banks of River Paleru (in western parts) and River Krishna (in southern parts), a Safety Distance of 300 m from the River Banks/High Flood Levels (HFLs) is left as No Mining Zone. There are five mining blocks. Blocks 2, 3 & 5 (35.39 ha) are not feasible for mining due to proximity to Rivers Paleru & Krishna and encompassing the village habitation. Mining activity will be carried out in Blocks 1 & 4 over an area of 88.93 ha. 60% of the land already acquired. There are now some agricultural activities taking place.

The Project Proponent informed the EAC that the waste dump will be located on the SW in the mine lease area and dump height will be 10m height and dump will be away 300m from the river. The EAC not convinced the location of dumping as it is close to proximity of river and habitation. The EAC asked the Project Proponent whether there is a possibility of concurrent backfilling to avoid the dumping of waste. The PP informed the EAC that still the mineral exists below and there is no possibility of concurrent backfilling. The EAC was of the view that the Project Proponent shall ensure that the no dumping shall be done within the HFL zone. The

EAC asked the Project Proponent to relocate the waste dump and revisit the Mining Plan.

After detailed deliberations made by the Project Proponent and the Consultant, the EAC (Non-Coal Mining) **recommended** the proposal in its EAC meeting held during 27-28, December 2022 for grant of Terms of Reference under Ministry's SOP for identification and handling of violation cases under EIA, notification 2006 dated 07.07.2021 for mining of Limestone in Ravirala Limestone Mine of M/s. The Ramco Cements Limited with proposed production capacity of Limestone: 0.115 MTPA (ROM), Topsoil: 0.005 MTPA, Over Burden: 0.211 MTPA (Total excavation: 0.331 MTPA) in the mine lease area of 124.33 Ha, located at Ravirala Village, Jaggayyapeta Mandal, NTR District (earlier Krishna District), Andhra Pradesh for undertaking detailed EIA/EMP study subject to the following specific conditions in addition to the standard ToR conditions applicable for non-coal mining projects: -

- i. The State Government/SPCB to take action against the project proponent under the provisions of the Environment (Protection) Act, 1986 and further no consent to operate to be issued till the project is granted EC. If the action has been initiated by the State/State PCB, status of the same may be submitted to the Ministry.
- ii. The Project Proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.
- iii. Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.
- iv. Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
- v. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants.

- vi. The Project Proponent needs to submit the penalty provisions as per Ministry's SOP dated 07.07.2021 at the time of appraisal of EC.
- vii. Details of benefit accrued during the violation period along with capital cost of the project is to be submitted.
- viii. The Action Plan on the compliance of the recommendations of the CAG as per Ministry's Circular No. J-11013/71/2016-IA.II(M) dated 25.10.2017 needs to be submitted at the time of appraisal of the project and included in the EIA/EMP Report.
- ix. The EAC noted that the mine lease area is in close proximity to the river Krishna and noted that there is a drain which allows the backwater into the mining area and the rainfall and surface outflow from the mine drains into the river Krishna. Hence, the Project Proponent needs to submit the detailed report on the engineering design for garland drain, settling tank and check dams and its efficacy through recognized institution. The study should also include the per day silt load, settling velocity of the silt, retention time required based on the annual rainfall with a provision to monitor the turbidity of the overflow from the siltation tank as well as monitoring of the turbidity into the drains.
- x. The Project Proponent needs to explore the likelihood of river water entering into the mine pit below the RL of the HFL and the measures that are required to be taken for prevention of seepage and in the event of seepage to drain out the water through settling tank. PP also needs to submit the measures to be taken for protection of water bodies in the vicinity of the mine lease area due to mining activity.
- xi. The Project Proponent needs to ensure that the location of the waste dump shall not be within the HFL zone and accordingly the Project Proponent needs to modify the mining plan.
- xii. The EAC noted that there are now some agricultural activities being taking place. Hence, the Project Proponent needs to submit the measures taken for protection of agricultural activity from the mining activity and also PP needs to submit the ecology restoration plan.
- xiii. The Project Proponent needs to monitor the ambient air quality and noise level at nearest receptors, predominant downwind direction and at other sensitive receptors. Accordingly, PP shall propose to install Continuous Ambient Air Quality Monitoring Station within certain timeline.

- xiv. 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.
- xv. The Project Proponent needs to carry out the cumulative impact assessment by considering all the mining activity including the transport scenario of the operating mines in the study area and should indicate the capacity of each mine considered for predication of air quality modeling. The control case and worst-case scenario needs to be demonstrated with controlling factor and GLCs values for all the pollutants needs to be clearly mentioned. The modeling should also indicate the transport scenario through forest area. The input parameters used for the modeling also needs to be submitted.
- xvi. The Project Proponent needs to study the traffic density and carrying capacity of the road and should include the same in the EIA/EMP report. PP needs to submit the map showing the transport route through forest area and its impact due to mining activity and the mitigation measures to be taken. PP should also explore the possibility of having dedicated Road/Over Land Belt Conveyor (OLBC) for transportation.
- xvii. 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 in terms of health care facilities for COVID, betterment of schools nearby and to facilitate the online education system by providing Wi-Fi connectivity, smart classrooms and desktops/tablets, infrastructure, and environment protection.
- xviii. The Project Proponent needs to submit the detailed greenbelt/plantation plan in tabular format (year wise for entire life of mine) with proper time bound capital and recurring cost. Entire plantation shall be carried out by planting the seedling of 10 ft height with at least 90% survival rate and the entire peripheral plantation and safety barrier plantation shall be completed within 3 years from the start of mining operations. The casualties of each year shall be replaced every year with new saplings and such number of saplings shall not be counted in the number of saplings proposed to plant in that year. PP shall undertake the progressive bench plantation up to HFL for eco restoration of water bodies. An undertaking in this regard needs to be submitted by PP at the time of appraisal of EC.
- xix. 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

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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 at the time of appraisal of EC.

- xx. The Project Proponent shall conduct drone survey of the mine lease area and buffer area and submit during the appraisal for EC.

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**List of members of Expert Appraisal Committee participated through VC**

<b>S.No</b>	<b>Member Name</b>	<b>Member Address</b>	<b>Designation</b>	<b>27<sup>th</sup> Dec., 2022</b>	<b>28<sup>th</sup> Dec., 2022</b>
1	Dr. Dinesh Misra, IFS (Retd.)	Plot No 65, Sector 8, Gandhinagar, Gujarat, 382 008	Chairman	Yes	Yes
2	Sh. Niranjana 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 (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	Shri Aurobindo College, University of Delhi 1372, B-1, Vasant Kunj, New Delhi- 110070	Member	No	No



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	Delhi				
7	Prof. Devesh Walia, Professor, 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 Viji Marg Rajinder Nagar, New Delhi - 110060	Member	No	No
9	Dr. K.G Asha Manjari, Professor, University of Mysore	10/B, "SPARSHA", 2nd Main, 2 <sup>nd</sup> Cross, Bhogadi Ind Stage, Mysore-570026, Karnataka	Member	Yes	No
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 Abhay Agrawal & Dr. Yogesh G. 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	Shri Gowrappan	No. 6, Ganesh Avenue II Street, Shakti Nagar, Porur, Chennai - 600 116, Tamil Nadu.	Special Invitee	Yes	Yes
15	Shri Pankaj Verma	2 <sup>nd</sup> Floor, Prithvi Block, Indira Paryawaran Bhawan, MoEF&CC, Jorbagh, New Delhi- 110003.	Member Secretary	Yes	Yes

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