EXECUTIVE SUMMARY

Of

PARSABHADER LIMESTONE MINE,
WITH PRODUCTION CAPACITY OF 0.60 MTPA, ML AREA – 28.461 HA

AT

VILLAGE- PARSABHADER, TAHSIL- BALODABAZAR,
DISTRICT- BALODABAZAR-BHATAPARA, CHHATTISGARH

STUDY PERIOD: DECEMBER 2022 TO FEBRUARY 2023

The proposed project is listed under Schedule 1 (a) Mining of Minerals under the Schedule of EIA Notification, 2006 and its amendment till date, categorized as Category B]

APPLICANT	ENVIRONMENT CONSULTANT
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INDEX

Contents

EXECUTIVE SUMMARY

1.1 PROJECT DESCRIPTION

Nuvoco is part of India's leading business conglomerate – Nirma Group, which forayed into the Cement business in 2014 through a greenfield cement plant in Nimbol, Rajasthan. Thereafter, growing the business through the acquisitions of Lafarge India Limited in 2016 and NU Vista Limited (formerly Emami Cement Limited) in 2020. The growth journey of Nuvoco is exclusive in the country. Over the years, it has scaled up its capacity to 23.82 MTPA making it the fastest growing Cement Company doubling its installed capacity over the last five years.

Nuvoco has 11 cement plants, comprising five integrated units, five grinding units and one blending unit, in the states of West Bengal, Bihar, Orissa, Chhattisgarh and Jharkhand in East India and Rajasthan and Haryana in North India – strategically located to efficiently fulfill the customer requirement. The integrated plants are equipped with Waste Heat Recovery (WHR) systems and Captive Power Plants (CPP) and Solar Power Plants at Bhiwani and Chittorgarh. Project proponent is proposing Parsabhader Limestone Mine, production Capacity 0.60 MTPA, covering an area 28.461 ha at village – Parsabhadar, Tehsil- Tehsil Balodabazar, district - Balodabazar-Bhatapara, Chhattisgarh.

LOI has been issued in favor of NU VISTA LIMITED vide letter no. Sr. No. F-3-03/2020/12 on dated 4th August 2022.

This is fresh Mining project. Total Mining lease area is 28.461 ha. Out of this 3.84 ha area is Government Land and 24.621 ha is Private Land.

Mining Plan along with Progressive Mine Closure Plan has been approved by Indian Bureau of Mines vide Letter No. RPR/Baloda-Bazar/LST/1372/MP/2022-23, dated 22.08.2023.

The proposed project is listed under activities 1(a), Mining of Minerals under the Schedule of EIA Notification, 2006 and categorized as Category-B1.

1.2 STATUS OF STATUTORY CLEARANCES AND APPROVALS

STAGES OF ENVIRONMENTAL CLEARANCE	DATE
LOI has been issued by Directorate of Geology and Mining, Chhattisgarh in favor of NU VISTA LIMITED vide letter no. Sr. No. F-3-03/2020/12	04.08.2022
Mining Plan along with Progressive Mine Closure Plan has been approved by Indian Bureau of Mines vide Letter No. **RPR/Baloda-Bazar/LST/1372/MP/2022-23**	22.08.2023
Terms of Reference (TOR) for the project by the SEIAA, Chhattisgarh vide letter	09.02.2024

no. 2979/SEAC, Chhattisgarh/Mine/2360 Nva Raipur Atal Nagar	
Project Proponent has obtained the Forest NOC from the Forest Department, Balodabazar, Chhattisgarh.	27.02.2024

1.3 MINE SITE DETAILS

S. No.	Description	Particulars
1.	**Name of the Project**	Parsabhadher Limestone Mining Project
2.	**Location**	
	Villages	Parsabhadher
	Tehsil	Balodabazar
	District	Balodabazar-Bhatapara,
	State	Chhattisgarh
3.	**Coordinates**	Latitude- 21°38'51.952" N to 21°39'17.563" N Longitude- 82°7'20.147" E to 82°7'4.924" E
4.	**Toposheet No.**	Core Zone: F44Q2 Buffer Zone: F44P14, F44Q1, F44Q2 & F44Q6
5.	**Life of mine**	8 year
6.	**Geological Reserves**	10.671 Million Tonne
7.	**Mineable Reserves**	4.734 Million Tonne
8.	**Production capacity**	0.60 MTPA
9.	**Method of mining**	Opencast Mining fully- Mechanized
10.	**Working regimen**	300 days/ year, in 2 shifts/day, Effective Shift Time 7 hours/shift
11.	**Employment potentiality**	**52 Person (Skilled & Unskilled)**
12.	**Water Requirement**	Total Water Requirement: 40.0 KLD Domestic/Drinking: 7.5 KLD Dust Suppression: 17.5 KLD Plantation: 15.0 KLD **Note-** Ground water/Mine pit water will be utilized after the

		requisite permission from CGWA.
13.	**Details of Wildlife Sanctuaries, National Park, eco-sensitive Zones, within 10 km radius?**	There is no National Park, Wild Life Sanctuary and Biosphere Reserve etc. within 10 Km of Project site. **Reserved Forest-** ➢ Dhabadih RF ~ 2.3 km in SW direction ➢ Latwa RF ~5.1 km in NNE direction ➢ Sonbarsa RF ~6.8 km in NNE direction ➢ Mohtara RF ~8.2 km in NE direction
14.	**Water Bodies (within 10 km radius)**	➢ One Seasonal nallah is passing within the lease area. It will be left undisturbed during the mining operation. ➢ Kukurdih water reservoir~ 1.4 km in WSW direction ➢ Chuiha Dam ~ 2.2 km in NNE direction ➢ Mahanadi Canal ~ 3.3 km in N direction ➢ Kukuda Talav ~4.2 km in SSE direction ➢ Khorsi Nala ~ 5.5 km in SE direction ➢ Chitawar Nala ~ 7.9 km in SSW direction
15.	**Total cost of the project**	Total Project Cost- Rs. 50 Cr Total EMP Cost - Rs. 5 Cr Recurring- Rs. 10 Lacs/Year CER Cost - Rs. 50 Lacs

1.4 NEED OF PROJECT

M/s NU Vista Limited has and Integrated Cement Plant with the capacity of 4.1 MTPA Clinker, 3.0 MTPA Cement, CPP 30 MW, WHRS-15 MW at village Risda. Proposed mine is located adjacent to the Integrated Cement Plant and its fulfill the limestone requirement of the plant for captive use. The state is endowed with major and minor mineral resources. The region, where the project is situated, people are mostly dependent on agricultural. The developments of mining in the area provide direct and indirect employment opportunities, infrastructure development, communication, and development socio-economic infrastructure. The important benefits accruing from the project can thus be stated as boost to local and regional economy, direct contribution to the state exchequer.

1.5 BENEFITS OF THE PROJECT

- Shall add to revenue generation of the District / State.
- Shall generate additional employment, both direct and indirect which will lead to economic growth.
- Shall provide services like medical facilities and other facilities to local villages under the company's community development program.
- Establishment of small and medium scale ancillary industries with cascading effect on the economy and skill development of the locality.

1.6 MACHINERY REQUIREMENT

Machinery to be deployed is listed below:

S. No.	Type	No. of Equipment
1.	Excavator	03
2.	Drill Machine	02
3.	Tippers/Dumpers	04
4.	Water Tanker	02

1.7 POWER REQUIREMENT

As the mining will be carried out in two shifts and the power is required only for lighting purpose.

It will be fulfilled by solar lights or own captive power plant.

1.8 WATER REQUIREMENT

Total water requirement for the proposed project will be 40 KLD. Water will be used for dust suppression around 17.5 KLD and Domestic/Drinking purpose for 7.5 KLD and Green belt/Plantation for 15 KLD.

1.9 MAN POWER REQUIREMENT

About 52 employees will be hired from the nearby villages for this proposed project.

Sr. No	Particulars	Total No. of Persons per day
1	Mine Manager	03 (1st class -1 & 2nd class – 2)

2	Mining Engineer	01
3	Geologist	02
4	Mechanical Engineer	01
5	Mines Foreman	01
6	Mining Mate	02
7	Blaster	02
8	Skilled Workers / Operators	14
9	Semi-skilled Workers	06
10	Unskilled Workers	20
	Total	**52**

1.10 BASELINE STUDY

Parameters	**(October to December 2021)**
Ambient Air Quality	PM 10 – 43.2 (Risda village) to 62.8 µg/m^3 (Rawan Village) PM 2.5 – 20.0 (Risda village) to 45.2 µg/m^3 (Rawan Village) SO2 – 7.7 (Baloda Bazar) to 15.8 µg/m^3 (Project Site) NOx – 18.00 (Baloda Bazar) to 24.60 µg/m^3 (Project Site)
Noise Level	Noise Level During Day Time – 42.50 (Project Site) to 72.6 Leq.(dB)A (Bharsela Village) Noise Level During Night Time –37.2 (Risda Village) to 66.7 Leq.(dB)A (Bharsela Village)
Water Quality	**Ground Water:** All the Parameters Like TDS (390 [karmadih Village] to 490 mg/L [Barsela village]), pH (7.26 [Dasrma Village] to 7.51 [Bardela Village]), Total Hardness (172.02 [Dasrma Village] to 195.37 mg/L [Baloda Bazar]) etc. are found within the permissible limits.
	Surface Water: All the Parameters Like TDS (353.0 [Pond Near Village Parsabhadar]

Parameters	(October to December 2021)
	to 658.0 mg/L [Kukardih Talav Near Village Kukardih]), pH (7.25 [Khosri Nala Near Village Hawaikhapri (US)] to 7.99 [Pond Near Village Bharuwadih]), Total Hardness (172.02 [Kukardih Talav Near Village Kukardih] to 258.34 mg/L. [Pond Near Village Bharuwadih]) etc. are found within the permissible limits.
Soil Quality	pH – 7.42 (Dhabadih RF Near Village Khairwari) to 7.67 (Kokri Village) Organic Matter – 0.20 % (Murhipar Village) - 0.40 % (Kokri Village) Potassium (K) – 139.10 (Rawan Village) to 191.20 kg/ha (Kokri Village) Nitrogen (N) – 130 (Rawan Village) to 173.64 kg /ha (Kokri Village)
Ecology And Biodiversity	There is no wildlife sanctuary/biosphere reserve/national park present within 10 radius of the study area. 8 schedule-I species is found in a 10 km radius of the study area. Wildlife Conservation Plan has been prepared for the conservation of scheduled-1 species and submitted to the forest department balodabazar on 20.02.2024. Submission receipt with wildlife conservation plan is enclosed as an Annexure with the Draft EIA/EMP Report.
Socio-Economic	The proposed project will have a positive impact on the nearby area. The project will provide direct and indirect employment to nearby villagers.

1.11 ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

LAND ENVIRONMENT

The total mining lease area is 28.461 ha. Out of 28.461 ha. area, Government Land is 3.84 ha and Private Land is 24.621 ha. There is no forest land involved in the ML area.

Impact

At the end of the life of mine, 23.041 ha area will be mine out (mine void).

Mitigation Measures

At the end of the life of the mine, 19.71 ha area will be converted into the water reservoir and the rest of the area will be backfilled and reclaimed by the plantation.

AIR ENVIRONMENT

Impact

- Fugitive dust emissions during blasting & drilling.
- Dust generation due to loading and unloading of minerals & transportation.
- Dust and gaseous emissions during blasting.
- Gaseous emissions from mining fleet machinery and transport vehicles.

Mitigation Measures

- Controlled blasting and wet drilling shall be used.
- Before loading of material water shall be applied on blasted material.
- Increased frequency of water spray on haul roads to avoid dust generation during transportation.
- Transportation of material shall be carried out during day time only.
- The speed of dumpers plying on the haul road should limited to avoid generation of dust.
- Haul road shall be covered with gravels.
- Covering of material when transport through trucks/dumpers.
- Regular maintenance and overhaul of mining fleet machinery and vehicles.

WATER ENVIRONMENT

Impact

There is no wastewater will be discharge during the mining operation. Domestic wastewater will be dispose by septic tank via soak pit.

Mitigation Measures

- Natural drainage system will be followed for rainwater.
- No toxic effluents will be generated.
- Regular monitoring of the quality and quantity of groundwater and surface water in the study area is proposed to be done.
- Water conservation measures will be followed.
- The mining pits will be properly benched; soil and waste dumps will be properly terraced with inward slope retaining walls at the toe so that there is no landslide during the rains and mixing of slits with flowing water thereof.
- As the manpower is likely to be from nearby villages, therefore discharge of domestic wastewater will be limited and can be easily controlled by a septic tank via soak pit.

NOISE ENVIRONMENT

Impact

Followings are the major noise source from the Mine:

- Drilling
- Blasting
- Operation of HEMM & Vehicular Movement

Mitigation Measures

- Drilling will be carried out with the help of sharp drill bits which will help in reducing noise.
- Controlled blasting with proper spacing, burden, stemming and optimum charge/delay shall be maintained.
- The blasting will be carried out during favourable atmospheric condition and less human activity timings.
- Proper maintenance, oiling and greasing of machines at regular intervals shall be done to reduce generation of noise.
- The prime movers/diesel engines are properly maintained.
- Provision of sound-insulated chambers for the workers deployed on machines (HEMM) producing higher levels of noise.
- Proper designing of plant & machinery by providing inbuilt mechanisms like silencers, mufflers, and enclosures for noise-generating parts and shock-absorbing pads at the foundation of vibrating equipment.
- Green Belt/Plantation shall be developed around the mining activity area and along with haul roads. The plantation minimizes the propagation of noise.

ECOLOGY & BIO-DIVERSITY

Impact

- There may be some impact on the biological environment due to air pollution during transportation & loading & unloading of minerals.
- Noise and vibrations due to the blasting operations may have some impact on the fauna present in the area.

Mitigation Measures

- Transportation of mineral in truck, covered with tarpaulin and regular water sprinkling on the approach road.
- Plantation along the approach road will further reduce the impact.

- Blasting operations will be during daytime, preferably before 15.00 hrs.
- No National Park, Wild Life Sanctuary, Bio-sphere Reserve, Elephant Reserve, Tiger Reserve or Elephant Corridor etc. is present within 10 km of mining lease area.
- The project does not involve any fresh tree felling for the proposed mine instead of 23475 trees will be planted inside the mining lease area during the planned period.
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SOCIO-ECONOMIC ENVIRONMENT

- The project does not have rehabilitation & resettlement due to this mining operation. Hence, R&R plan is not applicable under the present proposal.
- Additionally, project will generate employment for about 52 persons.
- Minimum burden on existing infrastructure as local people will be given preference in employment.
- Improved infrastructural facilities such as developments of approach routes within the village area, street light, health facilities etc.

1.12 DEVELOPMENT OF GREEN BELT

It is proposed to plant **23475** trees in a first years with consultation of Forest department with some fruit bearing and medicinal trees, along the haul roads, community land and government building. Cost of the plantation will be Rs. 9390000/- around @ 100 Rs./Plant Capital and annual recurring will be around @ 300 Rs./Plant.

1.13 ENVIRONMENT MANAGEMENT PLAN

The Environmental Management Plan consists of the set of mitigation, management, monitoring and institutional measures to be taken during the implementation and operation of the project, to eliminate adverse environmental impacts or reduce them to acceptable levels.