EXECUTIVE SUMMARY

OF

DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT

FOR

Amalgamation of Gumgaon and Khodegaon Manganese Mine (Amalgamated Lease Area - 212.736 ha) and Expansion in Manganese Ore production capacity from 3,05,200 TPA to 6,05,200 TPA

At

Villages Gumgaon, Khodegaon, Tegai, Khapa, Khapapeth & Rajna, Tehsil: Saoner, District: Nagpur, Maharashtra

APPLICANT

MOIL LIMITED

A Govt. of India Enterprise

MOIL Bhavan 1 A, Katol Road Nagpur - 440013

Website: moil.nic.in, Fax: 0712-2592073

Email: vrparida@moil.nic.in

INDEX

EXECUTIVE SUMMARY

1.1 INTRODUCTION

M/s. MOIL Limited (A Government of India Undertaking) is proposing Amalgamation of Gumgaon and Khodegaon Manganese Mine (Amalgamated Lease Area - 212.736 ha) and Expansion in Manganese Ore production capacity from 3,05,200 TPA to 6,05,200 TPA at Villages: Gumgaon, Khodegaon, Tegai, Khapa, Khapapeth & Rajna, Tehsil: Saoner, District: Nagpur, Maharashtra.

As per EIA Notification dated 14th September, 2006, as amended from time to time; the project falls under Category "B" S. No. '1' (Mining of Minerals), Project or Activity '1(a) - (4)'.

Application (For ToR) has been submitted to SEIAA, Maharashtra on 30.12.2024. Standard ToR was issued by SEIAA, Maharashtra vide letter No. SIA/MH/MIN/516618/2024 dated 11.01.2025.

1.2 MINING LEASE STATUS

- Mining Lease was granted by the Govt. of Maharashtra in favor of M/s. MOIL Limited over an area of 212.736 ha vide letter no. MNG-0323/C.R. 46/Ind-9 (A) dated 15.03.2024.
- Mining lease deed in favor of M/s. MOIL Limited was executed on 03.06.2024 and registered on 07.06.2024 and the same is valid up to 31.03.2040.
- Prior to amalgamation of leases Gumgaon and Khodegaon mining lease grant chronology is as follows:

Grant	From	To	Lease deed execution date	Lease registration date	Lease Name
Initial Grant	01.07.1962	30.06.1982	14.10.1967	14.10.1967	48.596 Ha
1st Extension	01.07.1982	30.06.2002	17.02.1984	17.02.1984	
2nd Extension	01.07.2002	30.06.2022	06.01.2009	25.02.2009	
3rd Extension	01.07.2022	30.06.2042	01.07.2022	01.07.2022	
Initial Grant	30.06.2000	29.06.2020	30.06.2000	27.08.2000	35.97 Ha
1st Extension	30.06.2020	29.06.2050	04.01.2018	19.05.2018	
Initial Grant	26.07.1969	25.07.1984	26.07.1969	26.07.1969	1.33 Ha
1st Extension	26.07.1984	31.03.2020	26.07.1984	26.07.1984	
2nd Extension	01.04.2020	31.03.2040	01.04.2020	01.04.2020	
Initial Grant	06.04.2016	05.04.2066	06.04.2016	06.04.2016	126.84 Ha
Amalgamation	03.06.2024	31.03.2040	03.06.2024	07.06.2024	Combined Lease

1.3 STATUS OF APPROVAL OF MINING PLAN

Mining Plan/Modification of Mining Plan with Progressive Mine Closure Plan for expanded capacity of Amalgamated lease area 212.736 Ha has been approved by IBM, Nagpur.

1.4 NEED OF THE PROJECT

- The project will prove beneficial in terms of socio-economic development as it will create direct/indirect employment opportunities to locals. Further, the average income level, which is the indicator of socio - economic status of households is expected to increase, which will ultimately result in better standard of living of the local people.
- With respect to the importance of the project to the nation, the steel demand for infrastructure projects such as the dedicated freight corridor, upgraded and new airports and ports, housing and roads, is likely to increase substantially. Manganese ore is an essential mineral for steel making. As per National Steel Policy of India, 2017, the capacity of steel making in the country is set to touch the level of 300 million tons for which around 11 million tons of manganese ore is needed. EC capacity expansion of Gumgaon Khodegaon amalgamated mining lease of Moil Limited will cater a significant percentage of manganese ore demand of Indian Steel market from domestic production resulting in less dependency over import of manganese ore. Keeping this requirement in mind, mining of manganese is necessary for the nation's growth and modernization.
- The manganese excavated from these mines will be utilized in iron & steel industries, also used in making various alloy like Silico Manganese, Ferro Manganese and used in paints. In present market scenario, the ore of +10% Mn is saleable.

1.5 BRIEF INTRODUCTION OF THE PROJECT

Table - 1.1
Brief Introduction Of The Project

S. No.	Particulars	Details
A.	**Nature of the Project**	Amalgamation and Expansion in Gumgaon and Khodegaon Manganese Mine
B.	**Size of the Project**	
1.	Mining Lease Area	212.736 ha (36.29 ha. Govt. Land, 16.16 ha. forest area and 160.286 ha. Private Land)
2.	Proposal	3,05,200 TPA to 6,05,200 TPA
C.	**Location Details**	
1.	Villages	Gumgaon, Khodegaon, Tegai, Khapa, Khapapeth & Rajna
2.	Tehsil	Saoner
3.	District	Nagpur
4.	State	Maharashtra
5.	Latitude & Longitude	Latitude - 21° 24' 29.831" N to 21° 24' 27.346" Longitude - 78° 59' 8.629" E to 78° 59' 8.457" E
6.	Toposheet No of study area	Core Zone - F44M15 (55K/15) Buffer Zone - F44N3 (55O/3), F44M15 (55K/15)
D.	**Environmental Setting Details** *(with approx. aerial distance & direction from the mining lease boundary)*	
1.	Habitation	➢ Habitation of Village Tegai (Adjacent in SW direction) ➢ Habitation of Village Gumgaon (200 m in SE direction)

S. No.	Particulars	Details
2.	Schools	➢ Z.P. School Tigai (200 m in SW direction) ➢ Z.P. Primary School Gumgaon (200 m in SE direction) ➢ Rashtriya Upper Primary School, Khapa (100 m in NE direction)
3.	State/ National Highway in proximity	➢ NH - 753 (700 m in WNW direction) ➢ NH - 47 (Old name NH - 69) (2.5 km in SW direction)
4.	Railway Station in proximity	➢ Khapa Railway station (South Eastern Railway Line) (500 m in North direction)) ➢ Saoner Railway station (~3.5 km in WSW direction) ➢ Patansaongi Railway Station (~6.0 km in SE direction)
5.	Nearby Airports	Dr. Babasaheb Ambedkar International Airport (30 km in South direction)
6.	Nearest Town / City	Saoner (3.0 km in WSW direction)
7.	National Park, Wild Life Sanctuaries, Biosphere Reserves, Tiger Reserves, Wildlife Corridors etc. within 10 km radius study area	There is no National Park, Wild Life Sanctuaries, Biosphere Reserves, Tiger Reserves and Wildlife Corridors etc. within 10 km radius study area.
8.	Reserved / Protected Forest within 10km radius study area	➢ Sitagondi RF (6.0 km in NE direction) ➢ Khapa padri RF (9.5 km in NW direction)
9.	Water Bodies within 10 km radius of the mine site.	➢ Korardhari Nala (passing through the project site) ➢ Kanhan river (1.0 km in NE direction) ➢ Kolar river (3.0 km in SW direction) ➢ Pench right bank canal (3.5 km in SE direction) ➢ Kapleshwar Nala (4.5 km in NW direction) ➢ Chandra Bhaga Nadi (7.7 km in South direction) ➢ Kesar nala (8.5 km in WSW direction)
10.	Inter-state Boundary	Maharashtra and Madhya Pradesh State Border (9.5 km in NNW direction)
11.	Seismic Zone	Zone - II as per IS: 1893 (Part-I): 2002
11.	CRZ within 10 km radius study area	None
E.	**Cost Details**	
1.	Project Cost	Rs. 285 Crore (Existing - Rs. 118.05 Cr & Proposed for expansion - Rs. 167 Cr)
2.	Cost of EMP	Rs. 1.70 Cr (Rs. 1.20 Cr existing + Rs. 0.50 Cr proposed) Rs. 60 Lakhs (Rs. 50 Lakh existing + Rs. 10 Lakh proposed)
F.	**Requirements of The Project**	
1.	Water Requirement	883 KLD
2.	Power Requirement	9000 MWh
3.	Man Power Requirement	335 Persons

Source: *Site Visit & Pre- Feasibility Report*

1.5 LOCATION MAP

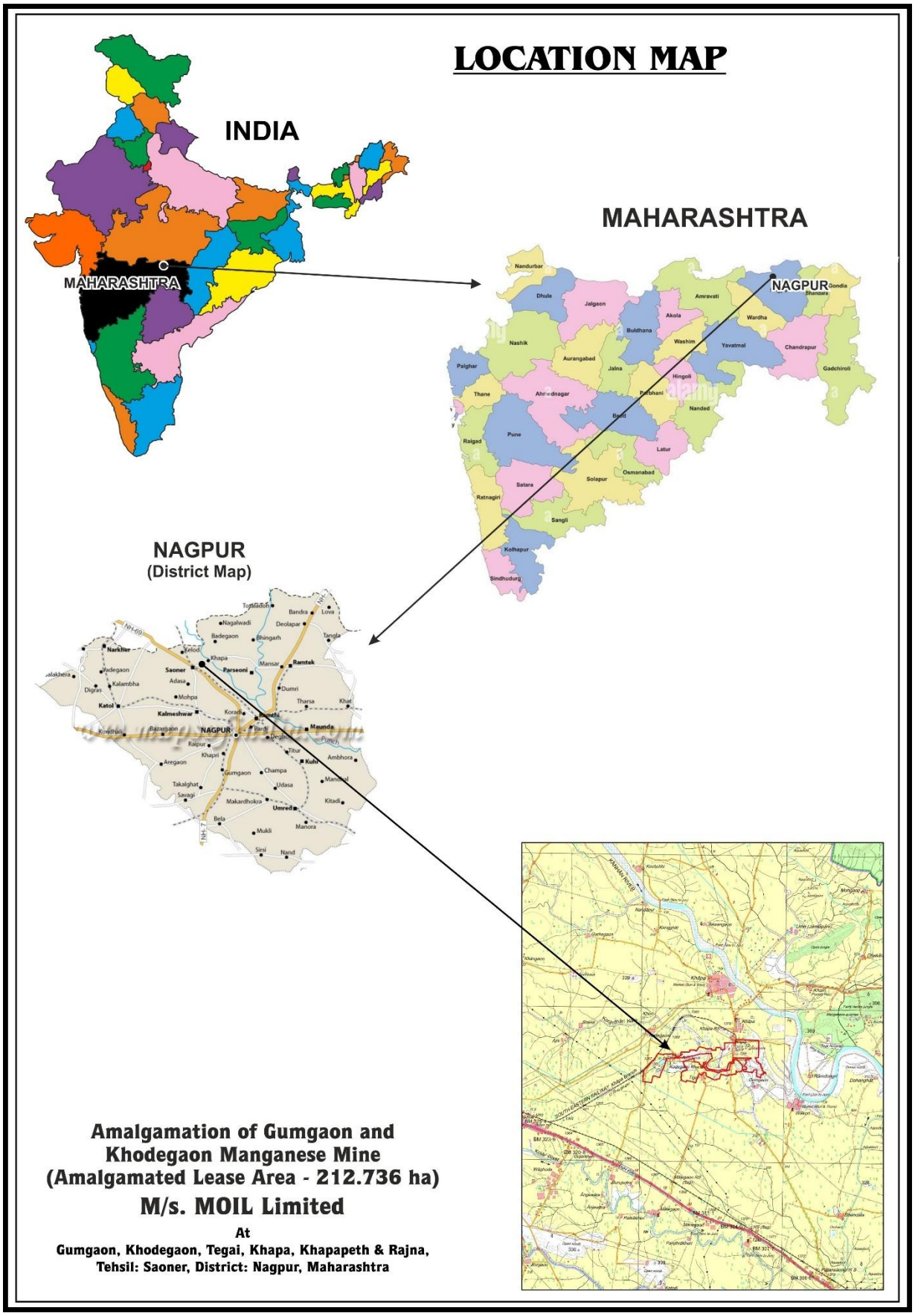

Figure 1: Location map (Showing general as well as specific location of the ML area)

1.6 MINING DETAILS

Table - 1.2
Mining Details (Opencast and underground)

S. No.	Particulars	Details	
		Fully Mechanized Opencast	**Underground Cut and Fill method**
1.	Production Capacity	3,05,200 TPA to 6,05,200 TPA	
2.	Total Geological Resources	49875 Tonnes	16.10 million tonnes
3.	Mineable reserves	49875 Tonnes	10.61 million tonnes
4.	Life of Mine	~7 Years	~20 Years
5.	Bench Height	5 m (Max.)	-
6.	Bench Width	5 m (Min.)	-
7.	Number of benches	2 (During Plan period)	-
8.	Overall pit slope	33^0	-
9.	Present working depth	312 mRL	162 mRL
10.	Depth during plan period	297.5 mRL	132 mRL
11.	Ultimate working depth	297.5 mRL	-108 mRL
12.	Roof bolting	-	1.5 m (length)
13.	Crown Pillar	-	5 m
14.	Size/Shape of Manway	-	1.2 m dia.
15.	Size/Shape of Ore pass	-	1.0 m dia.
16.	Level interval	-	30 m
17.	No. of stopes	-	10
18.	Elevation Range	256.5000 to 333.5500 m AMSL	
19.	Water Table Level	35 m bgl	
20.	General Ground Level	295.0250 m AMSL	
21.	Number of Working days	305	
22.	Number of Working Shifts	3 shifts	

Source: *Approved Mining Plan*

1.7 METHOD OF MINING

Opencast mining involves Excavation of mineral with hydraulic excavators of 1.80 m^3 capacity, loading into dumper of capacity 10 tonnes for onward transportation of Manganese to the crusher and waste to the waste dump (within lease area). Underground Mining involves Drilling, Blasting, Stoping in the mine, cut and fill method in conjunction of hydraulic sand stowing was being/ will be used for extraction of ore. Blasted ore in the stope loaded manually in the side tipping tub which is unloaded in the ore pass.

Existing Jaw Crusher of 40 TPH capacity, Size 500 mm, Screen Triple Deck having capacity 40 TPH and Single deck of capacity 40 TPH and Proposed Mobile crusher of 80 TPH rated capacity is proposed in Mining Lease area. The Mobile Crusher and Screening Unit of 80 TPH rated capacity and Beneficiation Plant of 50 Tons/ Hour rated capacity is proposed to be installed and commissioned at Gumgaon Mine in the first and second year in the proposed Mining plan and

Crushed Manganese ore will be transported from crushers directly dispatched by road, rail for selling and will be utilized in iron & steel industries.

2.0 DESCRIPTION OF THE ENVIRONMENT

The Primary baseline data for specific micro - meteorology data, ambient air quality, waste quality, noise level, soil and flora & fauna has been collected during Post Monsoon Season (October to December, 2024). The monitoring results of ambient air, surface water, soil, ambient noise and ground water have been reported.

Baseline study of the study area was conducted during Post Monsoon Season i.e., October to December, 2024.

Ambient Air Quality

The concentrations of PM10 and PM2.5 for all the 08 AAQM stations were found between 42.8 to 79.6 µg/m^3 and 23.9 to 49.4 µg/m^3, respectively. All the ranges of pollutants seem to be below the prescribed CPCB standards. The concentrations of SO_2 and NO_2 were found in range of 5.9 to 15.2 µg/m^3 and 11.5 to 29.2 µg/m^3 respectively. The concentrations of Ozone and Ammonia were found in range of 9.6 to 26.3 µg/m^3 and 11.8 to 46.2 µg/m^3 respectively. All values are well within the prescribed norms. The carbon monoxide is found to be maximum at Tehsil Saoner (0.81 mg/m^3) due to densely populated area, vehicular activities and at village Khapa near to the mine site (0.76 mg/m^3) due to vehicular activities and plant operational activities.

Noise Levels

Ambient noise levels were measured at 08 locations around the mine site. Noise levels varied from 51.7 to 54.4 Leq dB (A) during day time and from 40.8 to 43.7 Leq dB (A) during night time.

Maximum noise levels during day time and during night time were observed at Tehsil Saoner because of the traffic on road and highways, railways, industrial activity, human activities in villages and agricultural fields etc. Whereas, the minimum noise levels were found near village Gumgaon. Due to expected increase in noise level in mine, there may be impact on nearby habitation.

From the above study and discussions, it can be concluded that noise levels in the study area are well within the standards as prescribed by the CPCB.

Surface Water Quality

Surface Water Sampling has been carried out at 4 locations. One location i.e. River Kolan was found dry. The pH of the water bodies ranges from 7.59 to 7.78. The color and turbidity were found to be BDL (DL 1.0) at the sampled location. Total hardness varied from 116.7 to 196.9 mg/l, alkalinity varied from 91.6 to 166.5 mg/l, Total Dissolved Solids varied from 197.0 to 301.0 mg/l, BOD varied from 3.1 to 9.8 mg/l, COD varied from 13.0 to 33.0 mg/l. The level of DO is varied from 7.1 to 7.5 mg/l. The concentration of chloride, sulphate, magnesium, calcium, Iron and fluoride is found varied from 29.57 to 46.35 mg/l, 16.75 to 21.89 mg/l, 11.77 to 26.37 mg/l, 27.31 to 35.35 mg/l, 0.19 to 0.29 mg/l and 0.45 to 0.74 mg/l. Total Coliform was observed as 100 MPN/100 ml at location Mine site - 2.

Ground Water Quality

The ground water analysis for all the 08 sampling stations shows that pH varies from 7.40 to 7.62 indicating slightly alkaline nature; and maximum pH observed at the Village Tegai, total hardness

varied from 286.3 to 426.6 mg/l, total dissolved solids varied from 483.0 to 764.0 mg/l. The concentration of Chloride was found to be 79.57 to 134.5 mg/l, Sulphates 22.56 to 86.0 mg/l, Nitrate 15.24 to 21.78 mg/l, Calcium 41.24 to 80.20mg/l, Magnesium 35.90 to 75.49 mg/l, and Iron 0.35 to 0.76 mg/l and fluoride (0.59 to 1.30 mg/l) concentration within permissible limit which can be a concern for the dental health of the consumers. Thus, it can be concluded that the groundwater samples were observed to be good and complying to the drinking water standard (IS: 10500-2012).

Soil Quality

Samples collected from identified 08 soil locations indicate pH value ranging from 7.76 to 8.66. The soil samples were grayish brown in color and silty clay in texture. Organic Matter ranges from 0.37 % to 0.90 %) in the soil samples. All the essential nutrients were observed to be present in a higher amount than the other micro nutrient and macro nutrient such as Nitrogen ranges between 163.89 to 258.56 kg/ha, Phosphorous ranges between 9.10 to 22.18 kg/ha, Potassium 167.14 to 588.84 kg/ha, Magnesium 8.23 to 1113.02 mg/kg, Calcium 2631.70 to 6315.25 mg/kg and Zinc 34.51 to 64.78 mg/kg. The above discussion indicates that the soils in study area, in general, physical and chemical quality is good and fertile. The soil is suitable for plantation and greenbelt.

3.0 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Air Environment

The proposed expansion project includes various opencast mining operations involving development of benches, approach roads, excavation and transportation of mineral. In underground mining project includes various mining operations involving drilling, blasting and beneficiation process that takes place on surface includes transportation of ore to beneficiation plant, tailings disposal and vehicular movement are the sources to air pollution. These operations generally result in generation of dust and thereby pose health hazards.

Gaseous pollutants are anticipated from blasting operation, small D.G. Sets, HEMMs like excavator, loaders, dumpers, and other vehicles. The generation of dust is anticipated from various mining activities like excavation, loading, unloading, and transportation, and other mining related activities.

No drilling and blasting operations shall be carried in opencast mining. In Underground Mining Wet drilling is being/ will be used to suppress dust generation. Ensuring flow through ventilation in stoping & forcing ventilation in development headings. Dumpers will not be overloaded to avoid any spillage of loaded materials. Operator cabins of major HEMM equipment will be closed to minimize dust exposure. PUC certified vehicles are being/ will be used and Regular maintenance of HEMMs & transportation vehicles will be done. Fugitive dust emissions from all sources will be controlled regularly, Water spraying on haul roads, loading, unloading and transfer points shall be provided and maintained. Vehicular emissions are being kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations. Personal Protective Equipment like dust masks, ear plugs, ear-muffs will be provided to mine employees. Development of green belt/plantation all around in the vicinity to trap fugitive dust is being/will be carried out.

Water Environment

Surface Water

Koradhari Nalla which originates from Kanhan River passes through the central part of the lease area. There are six water bodies viz. Kanhan River (~1.0 km in NE direction), Kolar River (~3.0 km in SW direction), Pench Right Bank Canal (~3.5 km in SE direction), Kapleshwar Nala (~4.5 km in NW direction), Chandra Bhaga Nadi (~7.7 km in South direction), and Kesar Nala (~8.5 km in WSW direction) within the study area. These Rivers will not be adversely impacted as these are distantly located.

No waste water is being/ will be discharged outside ML Area which may contaminate any surface water body. Garland drain having siltation pits will be provided at the toe of the dumps, to channelize the runoff water. To control the surface run-offs, garland drain and retaining wall around OB dump have been/ will be constructed. The water will be utilized for watering the mine area, roads, green belt development etc.

Ground Water

General ground level in the area noted as 295.0250 m AMSL. Water table level is 35 m bgl. In underground Mining, ultimate working depth will be – 108 mRL. Therefore, ground water will be intersected due to mining activities. The depth to water in buffer zone ranges from 5 to 20 m bgl the land surface near the river courses. The water levels during post monsoon period ranges from 2 to 6 m bgl. With the underground mining of Manganese, the water regime is not likely to be affected, disturbed or polluted. The surface and ground water resources of the area, which are being utilized for drinking and irrigation purposes will be continued to be exploited despite underground mining operations and the present hydrological, hydrogeological and hydro geochemical setting of the core and buffer zone will not be affected.

Waste water generated from the office toilets and canteen will be treated in the existing Sewage Treatment Plant (5 KLD). Effluent Treatment Plant (150 KLD) is being/will be provided at the workshop and treated water is being/ will be reuse in HEMM washing after treated from ETP. At the conceptual stage of opencast mining, 4.0 ha will be converted into water reservoir which will be developed. Garland drain having siltation pits will be provided at the toe of the dumps, to channelize the runoff water. The recharging pit and Intercepting chambers have been provided for recharge the ground water table level of the area. Rooftop Rainwater harvesting structures have been provided having capacity of 8685 KL (Total 50 blocks of roof area of 150 m2) techniques are being implemented for conservation of water. To control the surface run-offs, garland drain and retaining wall around OB dump will be constructed. The water will be utilized for watering the mine area, roads, green belt development etc.

Noise & Vibration

Various mining activities i.e., Excavation, loading, transportation and unloading will increase the noise level in surrounding environment. No drilling and blasting operations shall be carried out in opencast mining operations. In underground mining, all the mining activities is being/ will take place below ground, except the ore crushing, beneficiation and transportation on the surface. The noise levels due to drilling; blasting and operation of mining equipment is being/ will be confined to underground operation. All DGMS guidelines will be followed strictly to reduce the impact of

blasting on nearby habitation. No drilling and blasting operations shall be carried in opencast mining activity.

In underground mining, all the mining activities is being/ will take place below ground, except the ore crushing, beneficiation and transportation on the surface. The noise levels due to drilling; blasting and operation of mining equipment is being/ will be confined to underground operation. Majority of mining activities are restricted to underground only. Installation of ventilation fans with silencer is designed in such a manner to control the noise levels. Drilling will be carried out with the help of sharp drill bits. Controlled blasting techniques through proper blast design and explosive selection will be used to reduce the vibrations to a greater extent. PPEs like earplugs/earmuffs will be provided to mine workers. HEMMs equipped with acoustic cabins will be provided for the operators. Proper maintenance, oiling and greasing of HEMMs will be done. Development of green belt/plantation along the mine periphery and mining activity help in reducing noise level.

Crushing process will generate noise. Proper mitigation measures i.e. Insulators & sheet cladding will be provided in the crusher to control the noise pollution. Plantation will be done along the mine boundary & around the vicinity of crusher.

Land Environment

At the conceptual stage of both underground and opencast mining, 26.0 Ha area will be covered under greenbelt and plantation (7.5 m lease periphery) and plantation (Safety zone of road, utility area and unworked area). At conceptual stage of opencast mining Out of total mined out area, 4.00 ha will be converted into water reservoir and 3.06 ha will be rehabilitated. Till date 17.88 ha area has been covered with greenbelt and plantation. Local and fruit bearing species will be planted after consultation with local forest officer and as per CPCB guidelines. Greenbelt will be done with 1000 no. of saplings with 90 % survival rate.

Top Soil & Solid Waste Generation & Management

Top Soil:

No top soil will be generated during plan period and conceptual stage.

OB/IB/Waste:

As on date 93750 Tonnes of waste has been generated and dumped over 0.75 ha area with dump height of 5 m. During plan period, 223416.25 tonnes of waste will be generated which will be dumped over an area of 5.28 ha.

4.0 POST PROJECT ENVIRONMENTAL MONITORING PROGRAMME

Table - 1.4
Post Project Monitoring Programme

S. No.	Description	Frequency of Monitoring
1.	Micro-Meteorological Data	Hourly
2.	Ambient Air Quality Monitoring	Monthly
3.	Ground Water Quality & Level Monitoring	Half Yearly as per CGWA guidelines
4.	Surface Water Quality Monitoring	Half Yearly

S. No.	Description	Frequency of Monitoring
5.	Noise Level Monitoring	Monthly
6.	Ground Vibration Monitoring	On every blast
7.	Medical Checkup of employees	3 to 5 Year Interval ➢ Age of workers <45 years: After every 5 years ➢ Age of workers >45 years: After every 3 years

5.0 ADDITIONAL STUDIES

Additional Studies i.e. Hydro–Geological Study, Biological Study & Wildlife Conservation Plan, Rehabilitation and Resettlement Plan, Risk Assessment & Disaster Management Plan are covered in this Draft EIA/EMP Report as per the Terms of Reference granted by SEIAA, Maharashtra vide letter no. SIA/MH/MIN/516618/2024 dated 11.01.2025.

6.0 REHABILITATION & RESETTLEMENT

This is an existing mine and expansion in Manganese production capacity from 3,05,200 TPA to 6,05,200 TPA is proposed within existing mining lease area. The total mining lease area is 212.736 ha which spreads in villages namely Gumgaon, Khodegaon, Tegai, Khapa, Khapapeth & Rajna. Out of total Mining Lease area, 36.29 ha. is Govt. Land, 16.16 ha. is forest area and 160.286 ha. is Private Land.

The expansion in Manganese Ore production will be within existing mining lease area and land has already been purchased through the State Government. Therefore, no additional land will be required and no relocation and rehabilitation of habitation has been proposed.

7.0 PROJECT BENEFITS

Proposed expansion project is/ will result in growth of the surrounding areas by increased direct and indirect employment opportunities in the region including ancillary development and supporting infrastructure. Besides this, Royalty and other levies like District Mineral Foundation, National Mineral Exploration Trust etc. are/ would be additional benefits and are being/ will be utilized by local administration for the development of socio-economic infrastructure and well-being of the local population.

The total manpower required for the Expansion of mining project will be around 355 persons. Unskilled /semi-skilled manpower is being/ will be sourced from the local area and skilled manpower is being/ will be sourced from outside. Preference is being/ will be given to the locals as per their eligibility. M/s MOIL Limited has spent for the upliftment of the living standards and development of nearby areas through CSR activities carried out in project vicinity area and nearby villages which has benefited many beneficiaries.

The overall effect has improved the buying power of employees and thus a higher standard of living viz. better education, improved health and sanitation facilities, housing etc. This is envisaged as a major positive benefit, which will ultimately lead to the sustainable development of the region.

8.0 ENVIRONMENT MANAGEMENT PLAN

In order to maintain the environmental quality, regular inspections, audits & monitoring of various environmental components is necessary. M/s. MOIL Limited has/ will have a full-fledged Environmental Management Cell (EMC) for environmental monitoring and control. A group of qualified and efficient engineers with technicians is being/ will be deputed for maintenance, up keeping and monitoring the pollution control equipment, to keep them in working mode at the best of their efficiencies.The EMC shall oversee and implement the various functions with mining team to ensure that environmental status of the area remains will within the statutory standard of MoEF&CC and SPCB. Total Cost of the project is Rs. 285.05 Cr (Existing - 118.05 Cr & Proposed for expansion - 167 Cr). Capital cost for EMP is Rs. 1.70 Cr (Rs. 1.20 Cr existing + Rs. 0.50 Cr proposed). and recurring cost for the EMP is Rs. 60 Lakhs (Rs. 50 Lakh existing + Rs. 10 Lakh proposed).

The study area as a whole possesses average of infrastructural facilities however more attention and care will be taken so that the needs and demand of the population of the influence area should be met and can get more exposure to modern facilities of education and development to a bright future.

9.0 POST MINING LAND USE PATTERN

At conceptual stage of opencast mining, out of total mining lease area 212.736 ha, the total excavated area will be 19.16 ha, out of which 4.00 ha will be converted to water reservoir and 3.06 ha will be reclaimed which will be rehabilitated with plantation and remaining 12.10 ha area will be reclaimed but not rehabilitated. 5.06 ha area will be under OB Dump which will be stabilized with plantation. 17.88 ha area will be under greenbelt and plantation. Remaining 139.616 ha area will be undisturbed.

10.0 CONCLUSION

The project has been/ will prove beneficial to the local people as direct and indirect employment opportunity has been/ will be generated. There is being/ will be increase in revenue generation to the government by way of royalty, excise and government taxes etc. Further improvement in infrastructure has been/ will take place like education, roads, availability of drinking water, medical facilities in adjacent villages. There is being/ will be increase in earnings of local villagers, as they will get employment in the Gumgaon and Khodegaon Manganese mine, which ultimately has been/will result in better standard of living of the villagers. There is/ will be no significant pollution of air, water, soil and noise. Regular monitoring of all the components of environment is being/ will be done. Social welfare measures have been/ will be taken by the company which has been/ will bring development in the near-by villages.