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# **EXECUTIVE SUMMARY**

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## ***DRAFT EIA REPORT***

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### 1.0 Introduction

M/s. Baba Akhila Sai Industries Pvt. Ltd., (BASJIPL), Bengaluru, Karnataka has grown to be one of the leading miners in the country by its presence for more than 10 decades. The company is well known for systematic and scientific outlook towards all aspects of activities.

The key elements that distinguish BASJIPL from other resource companies are the quality of assets, deep inventory of growth projects, customer-focused marketing, on-time deliveries and business ethics. Progressive mechanization and modernization of plant operations with a responsible approach to the eco-system have yielded rich dividends.

BASJIPL has developed steel plant to cater to the needs of infrastructure & development activities. Today, BASJIPL are seen as quality products that display the ability to combine consistency in grades with seamless on-time delivery capabilities. This has made BASJIPL the preferred vendor for leading Steel Mills across Asia.

The team led by experienced and professional managers has been the first to intensively adopt latest technologies for extraction, beneficiation & logistics operations. This has brought down extraction costs well below the industry benchmarks. This well-charted approach has aided BASJIPL in maintaining uncompromising quality of ore products offered to its global customers.

Sponge Iron plant being operated by the company for more than 10 decades is located at Village Chikkabaganal, Post Kerikihalli and District Koppal, Karnataka State over an extent of 41.50 Acres.

The activity is categorized as '**Category – A**' project as per Environmental Impact Assessment (EIA) Notification 2006 vide S.O. 1533 dated 14<sup>th</sup> September 2006 and subsequent amendments.

## 1.1 Present Proposal

Project Proponent intended to expand with modify in the existing integrated steel plant located at Village Chikkabaganal, Post Kerikihalli and District Koppal, Karnataka State. The facilities are given in **Table 11.1**.

**Table 11.1: Proposed Manufacturing Facilities**

Sr. No.	Particulars	Existing Facilities	Proposed Facilities
1.	Sponge Iron	1X 100 TPD	1 X 125 TPD
2.	Sponge Iron	1 X 75 TPD	1 X 125 TPD
3.	Sponge Iron	--	1 X 125 TPD
3.	Induction Furnace	1 X 20 TPD	No Change
4.	Rolling Mill	--	72,000 TPA
5.	Captive Power Plant	12 MW (WHRB - 8MW & AFBC - 4MW)	12 MW (WHRB – 6 MW + AFBC – 6 MW)

## 1.2 Description of Environment

As a part of Environmental Impact Assessment Study, baseline environmental monitoring was carried-out for Post-monsoon 2019 season covering October - December 2019.

## 1.3 Anticipated Environmental Impacts and Mitigation Measures

### 1.3.1 Air Environment

The summary of anticipated adverse environmental impacts due to the expansion in production capacity, Captive Power plant & WHRB of the existing project and mitigation measures are given below;

Resultant ground level concentrations for the prevailing meteorological conditions using the EPA approved AERMOD Model were estimated.

**Mitigation Measures:** *the environmental control measures which are adopted to control fugitive emission released is as below;*

- ⊙ Regular spraying of water and/or water mist at mine workings, loading points and roads are done to suppress dust.
- ⊙ Trucks transporting ore to destinations outside the mine, by road are covered with Tarpaulin.

- Green belt development all along the haul roads with avenue tree species, local bio-diversified species has been developed to suppress noise and dust pollution.
- Transfer points are provided with appropriate hoods/chutes to prevent dust emissions.
- Avoiding over loading of tippers and consequent spillage on the roads.
- Good maintenance of roads by using motor grader.
- Transport vehicles are regularly checked for their environmental fitness like pollution check and fitness etc.
- For safety of workers at site, engaged at strategic locations/dust generation points Personnel Protective Equipments (PPEs) are provided and ensured for using the same.
- Monitoring of air quality periodically to take necessary steps to keep the pollution within the permissible limits.

### **1.3.2 Noise Environment**

The major sources of noise during the construction phase are vehicular traffic, construction equipment like dozers, scrapers, concrete mixers, cranes, generators, pumps, compressors, rock drills, pneumatic tools, saws, vibrators etc. The operation of this equipment will generate noise ranging between 70-85 dB (A). The noise produced during the construction will have significant impact on the existing ambient noise levels. The major work will be carried out during the daytime. The construction equipment may have high noise levels, which can affect the personnel operating the machines. Use of proper personal protective equipment will mitigate any significant impact of the noise generated by such equipment.

#### **Mitigation Measures for Noise Control**

The following noise abatement measurements are implemented for control noise pollution.

- A green belt has been developed by selecting thick foliage and tall growing plants around the mine lease area which will act as acoustic barriers in arresting noise transmission.
- Providing PPE (Personal Protective Equipment) to the personnel who are exposed continuously to the high noise zone/ operation area.
- Display of sign boards at high noise generation zones.

- Corrective & preventive maintenance of Vehicle & machinery including transport vehicles.
- Providing rubber lining at screening decks to reduce noise generation.

### **1.3.3 Water Environment**

Impact on water quality during construction phase may be due to non-point discharge of solids from soil loss and sewage generated from the construction work force stationed at the site. However, as the construction will be carried out on the flat area, the soil losses will be negligible. Further, the construction will be more related to mechanical fabrication, assembly and erection; hence the water requirement will be less. The overall impact on water environment during construction phase due to proposed project is likely to be short term and insignificant. During the construction phase, water will be required for civil works and for the domestic activities.

There is no waste water generated from plant, except domestic wastewater which is being treated in CPCB designed Septic Tank followed by soak Pit.

### **Mitigation Measures of Water Pollution**

The chemical analysis of the iron ore does not show any toxic substance, which can dissolve and pollute water quality.

- Water is mainly used for preparation & mixing of concrete, cooling of construction equipment, spray and sprinklers for dust suppression, curing the structures, etc.
- Ground water will not be drawn for the construction activities; hence impact on ground water resources is not anticipated.
- The identified impacts on water during the construction phase will be insignificant by proper conservation and sanitation practices. These impacts will be temporary and limited to the construction phase only.
- Proper and effective Environmental Management Planning will be implemented to minimize the temporary effects.
- Systematic drainage system for diverting the surface run-off during monsoon is in place.
- Plantation of local varieties of species is carried-out, so that there will be fast and healthy growth of vegetation.
- Regular monitoring and analyzing of the quality of water is carried-out.

### **1.3.4 Land Environment**

The existing land is duly Brownfield for industrial purpose. The proposed expansion with modification is coming up within existing plant premises within an area of 41.50 Acre. Hence, no additional land is required for the present expansion. The open land earmarked for future expansion in the existing plant will be utilized for the proposed expansion. Visual impact of the building form on the landscape is envisaged and will be confined to the project area. Hence, the impact on land use and land cover will not alter significantly as it is an existing project.

### **1.3.5 Afforestation**

In order to minimize the impact from the plant activity on environmental components outside the plant, greenbelt development has been done all along the boundary of the plant premises, width inside and outside the plant in 6 rows, as stipulated by MOEF. The greenbelt will act as a barrier to trap the suspended dust particles and also suppresses noise and air pollutants.

*Afforestation shall be done accordingly:*

- ⊙ Propagates (seeds, tubers, corms, bulbs, rhizomes and roots) stored in top soil.
- ⊙ Planting nursery-raised seedlings
- ⊙ By seed dibbling
- ⊙ Transplants of individuals from natural areas without disturbing the area.

### **1.3.6 Socio Economic Environment**

The expansion with modification activities is coming in the existing plant, does not cover any habitation. Hence the steel and allied activity does not involve any displacement of human settlement. No public buildings, places, monuments etc exist within the plant. The plant operation will not disturb / relocate any village or resettlement. Thus, no adverse impact is anticipated.

The impact of the plant activity on the surrounding community will be positive in nature in improving the Quality of Life (QoL), economic status of the local people and infrastructure in buffer zone.

### 1.3.7 Occupational Health and Safety

- ⊙ Preliminary screening of all the employees for their baseline health condition.
- ⊙ Medical evaluation of workers condition before joining to the duty.
- ⊙ Educating the workers w.r.t the safety conditions & occupational health diseases.
- ⊙ Regular health checkups for all the employees.
- ⊙ Database is created for individual worker and will be updated regularly to compare health status.
- ⊙ Doctor and his team specialized in Occupational health visits the project site, twice a year once for carrying-out the tests and other visit to educate on ill effect of bad habits & preventive care/check-ups.

### 1.4 Analysis of Alternatives (Technology & Site)

The plant will continue to be operated by open cast fully mechanized method while hard strata will be tackled by using Ripper dozer and hydraulic Rock Breaker for loosen Medium Hard rock. No other alternative technology can be practiced.

As the project is connected to winning of resources available naturally, is site specific operation. Hence, iron ore deposit, so formed is granted under a mining lease. Therefore, no alternative site was selected.

### 1.5 Environmental Monitoring Programme

BASJIPL is adhering to the implementation of the environmental management measures within the mine lease area & its near vicinity. It has been carrying-out efficient monitoring as per the KSPCB/MoEF&CC guidelines/environmental parameters continually by engaging MoEF&CC / NABL Accredited Laboratory. If necessary, alternative measures will be adopted to ensure that, the environment parameters are all well within the notified prescribed norms.

Attributes	Methodology	Frequency of Monitoring	Place of Monitoring	Parameters
Meteorological Studies	--	Every month - 24 hourly.	Study Area of 10 km radius	Min, Max Temperature, Relative Humidity, Rainfall, Wind Speed and Direction.

Attributes	Methodology	Frequency of Monitoring	Place of Monitoring	Parameters
Fugitive Emission monitoring (Core Zone)	As per KSPCB Guidelines. Fugitive emissions shall be monitored at a distance of 10 m from the source.	Once in a fortnight	a. Raw Material Handling Area b. Crusher Area c. Raw Material feed Area d. Cooler Discharge Area e. Product Processing Area	Suspended Particulate matter (SPM)
Stack Monitoring	As per KSPCB Guidelines.	Once in a Month	Locations as per mentioned in CFO	1. Particulate Matter (PM) 2. Sulphur Dioxide (SO <sub>2</sub> ) 3. Oxygen of Nitrogen (NO <sub>x</sub> )
Ambient Air Quality Studies (Core Zone)	As per CPCB Guidelines.	8 hourly samples twice a week 8 hourly for SO <sub>2</sub> & NO <sub>x</sub> .	As per Approved ToR	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> & NO <sub>x</sub>
Ambient Air Quality Studies (Buffer Zone)	As per CPCB Guidelines.	24 hourly samples twice a week 8 hourly for SO <sub>2</sub> & NO <sub>x</sub> .	As per Approved ToR	PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> & NO <sub>x</sub>
Water Quality (Surface & Ground Water)	IS 3025 (Part 14), 2013	Once in a month	As per Approved ToR	Parameters are considered as per IS 10500.
Noise Level Measurement	Using integrated sound level meter in dB (A) – NABL Calibrated.	Once in season <b>Day Time:</b> 6 am – 10 pm <b>Night Time:</b> 10 pm – 6 am.	As per Approved ToR	Minimum, Maximum and Leq
Soil Sampling	--	Once in a season	As per Approved ToR	NPK and other parameters

## 1.6 Project Benefits

The company is committed to contributing to the economic development of the region through employment, business opportunities to the local people which in turn help in improving the quality of life of the local community and society at large.

### *Glimpse of CSR activates are listed below;*

- ⊙ Construction of school building & toilets
- ⊙ Providing RO water purification systems to villages/schools.
- ⊙ Laying of concrete roads



- ⊙ Donation towards organizing sports meets in association with Education in the villages.

### 1.7 Budget for Implementation of Environmental Management Plan

The project being operative mine with all subsisting valid clearance and all the required environment measure being adopted, the initial capital cost is not considered and 97.92 Lakhs (towards recurring expenditure per annum) for implementation of the environmental management plan for the existing working mine is proposed and budgeted.

Sr. No.	Activity	Initial cost (Lakh Rs.)	Recurring expenses proposed/ annum (Lakh Rs.)
1	Air Pollution Control Measures such as covering of belt conveyors, providing mist spray system at feed points, wind barricades etc.	150.0	3.65
2	Plantation and After Care Measures	30.0	28.0
3	Socio-Economic Welfare Measures as a corporate social responsibility (CSR) a. Provision of ambulance facility b. Construction of compound wall at nearby school.	--	45.0
4	Water Pollution Control Measures	50.00	8.21
5	Occupational Health & Safety (provision of first aid room and shelter)	10.00	3.36
6	Environmental Monitoring	--	7.20
7	Preventive and corrective maintenance of plant and machinery to reduce noise pollution and consumption of non renewable resources (2.5% of the plant & machinery cost).	--	2.50
<b>Total</b>		<b>240.0</b>	<b>97.92</b>

### 1.8 Conclusion

BASJIPL by its vast experience in steel and its allied activities have implemented the environmental management plan, to mitigate the impacts and with positive attitude involving local Stake holders / community has for more than 10 decades is operating the sponge iron plant. Implementing not only the environment safeguard measures but

Executive Summary for Expansion with Modification in the Existing Integrated Steel Plant of M/s. Baba Akhila Sai Jyothi Industries Pvt. Ltd., at Chikkabaganal Village, Koppal Taluk & District.

has carried-out many social activities under its CSR program to attain overall sustainable progress which has brought a positive impact on the surrounding.

It is predicted that socio-economic impact due to this project will positively increase the employment opportunities for local inhabitants. There are no Resettlement and Rehabilitation issues involved in this project. The contribution to the revenue of the State Govt. will be put in public welfare and augment growth. The entire project area is devoid of any endangered flora and fauna. Thus the modernization with process integration project is not likely to affect the environment or adjacent ecosystem adversely.

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