


M/S. SRI SAI SAPTHAGIRI SPONGE PVT. LTD.	
ENVIRONMENTAL IMPACT ASSESSMENT REPORT	
REPORT NO.:- GCI/V/EIA/SSSSPL/2015-2016/MAY/R00	

Executive Summary

1.0 Introduction

M/s. Sri Sai Sapthagiri Sponge Pvt. Ltd. is located at Sr. no. 83 A & 76, Belagallu Village, Bellary Taluka & District, State Karnataka. This unit is doing development, manufacturing one of the most useful and versatile material, steel. As the steel industry has tremendous forward and backward linkages in terms of material flow and income and employment generation, the growth of an economy is closely related to the quantity of steel used by it. The industry proposes for the establishment of Sponge Iron Unit 90,000 TPA along with installation of Rolling Mill: 60,000 TPA, Induction Furnace: 60,000 TPA and Captive Power Plant: 6 MW

1.1 Type of Project

As per the latest EIA notification of Ministry of Environment and Forests, Govt. of India (MoEF) dated 14th September 2006 for establishment of Sponge Iron Unit, Induction Furnace, Rolling Mill Unit and Captive Power Plant, Environmental clearance from MoEF under Schedule 3(a), Category A is to be obtained


1.2 Location of Project Site

M/s. Sri Sai Sapthagiri Sponge Pvt. Ltd. is located at Sr. no. 83 A & 76, Belagallu Village, Bellary Taluka & District, State Karnataka.

1.3 Product Details

Sr. No.	Name of Products	Proposed	
		Unit Configuration (TPD)	Production Capacity (TPA)
1	Sponge Iron	300 TPD	90000 TPA
2	TMT Bars	200 TPD	60,000 TPA
3	Induction furnace (Ingots).	200 TPD	60,000 TPA
4	Captive Power Plant	6 MW (5 WHRB and 1 AFBC)	

Note: Products are selected based on Volatile market demands, at any given time production facility it will capable of manufacturing three - four products as in above list and some of them are seasonal.

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1.4 Land Break-Up Details

Sl. No.	Land Use	Extent of land area	
		Sq.mt.	%
1.	Area of land required for Plant and Future expansion	27677	57
2.	Area of land required for Roads	4655	10
3.	Area of land required for Green belt	16024	33
	TOTAL	48562.32	100

1.5 Power and Fuel Requirements

The maximum power demand for the facilities is 750 KVA which will be drawn from GESCOM.

Description Of Existing Utilities.

S. No.	Source	Consumption
1.	GESCOM	750 KVA
2.	D.G Set (Stand By)	320 KVA

Fuel Requirement Details


S. No.	Stack Attached to	Type of Fuel	Stack Height (m)	Fuel Consumption (TPD)
1	ROTARY KILN	RB2 COAL	60	270
2	BOILER	Dolachar	40	135
3	CPP	Coal	60	

1.6 Solid and Hazardous Waste Management

Domestic waste generated during the operation phase will be handed over to Authorized parties. Hazardous waste generated from process will be sold to preprocessors authorized by KSPCB site.

Solid waste generation & disposal details (Hazardous)

Sl. No.	Description of Waste	Quantity	Method of collection	Mode of disposal
1	Spent Oil	0.5 KLPA	Stored in leak proof Containers	Sold to preprocessors authorized by KSPCB

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Solid waste generation & disposal details (Non-Hazardous)

Sl. No	Description of Waste	Quantity (TPA)	Mode of Disposal
1	Sponge Iron fines	2700	Sold to Agarbatti and brick manufacturing unit
2	Fly Ash	13,500	Sold to brick manufacturing unit
3	Scrap	1800	Reused in processes
3	Dolochar	36,000	Disposed off to Brick Manufacturing unit & to power plant

1.7 Details of Stack

S. No.	Stack Attached to	Dia. of Stack (m)	Temp. of Flue Gas (°C)	Velocity of Flue Gas (m/s)	SO ₂ (g/s)	NO _x (g/s)	PM (g/s)	Air Pollution Control system (APCS)
1	Rotary Kiln	1.2	100	14.5	15.26	14.52	67.8	Bag Filters
2	Boiler	1	156	5.2	12.24	17.68	52.6	ESP
3	Cooler Discharge	0.2	52	9.8	14.18	22.46	35.8	Bag Filter

1.8 Manpower requirement

The total manpower requirement will be 100 inclusive of staff and security. They will comprise of Engineer's Diploma's ITI's and casual labour. Available manpower at the local level will be utilized to the maximum possible extent.


Available Local talent in & around Bellary will be employed

Construction Phase: 40 members

Operation Phase: 60 members

Total no. of workers

S. No	Description	No of person
1	No. of Direct Workers for Project	100
2	No. of Indirect Workers for Project	150
	Total	250

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1.9 Green Belt Development

Unit will be developed greenbelt area in 16024 Sq.m. within plant premises. Suitable plant species of local varieties will be planted with adequate spacing and density for their fast growth and survival.

About 33% of Green belt will be developed around the proposed project site is an effective way to check pollutants and their dispersion into surrounding areas. The degree of pollution attenuation by a green belt depends on its height and width, foliage surface area and density.

1.10 Waste Water generation and treatment

The waste water generated from domestic use is 12 M³/day and it will be disposed into soak pit and septic. Effluent generated from process/industrial use is 13 M³/day. There is no generation of wastewater from the proposed project. Cooling tower water will be continuously re-circulated in the cooling water circuits, heat exchangers and discharged to the holding tank through cooling towers where evaporation loss, drift losses and spillages will be encountered. DM backwash, cooling tower and boiler blow down will be neutralized in a neutralization tank and used for gardening. Domestic effluent will be sent to septic tank followed by soak pit.

2.0 DESCRIPTION OF THE ENVIRONMENT

2.1 Study Area

Studies were carried out in about 10 km radius area from the proposed site for study of meteorology, air, water, flora, fauna, land, geology, hydrogeology and socio-economics of the area. Monitoring was conducted by scientists and field executives and sample analyzed at MoEF recognized Environmental Laboratory. The base line data were collected for the period of **October to December 2014**.


2.2 Climate of the Study Area

The climate of Bellary district is quite moderate shows dryness in major part of the year and a hot summer from March to May months where mean maximum temperatures ranges from 23.2°C to 40.4°C. June to September is the southwest monsoon period where the temperature 19.7°C to 35.1°C, October and November is the post monsoon retreating monsoon season with clear bright weather with the mean daily temperature ranges from 14.4°C to 31.1°C.

2.3 Ambient Air Quality

Ambient air quality was monitored at 8 locations to generate representative ambient air quality data.

- a. PM₁₀ was found in the average range of 51-101 µg/m³.
- b. PM_{2.5} in the study area has been found to be in the range of 15-31 µg/m³.

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- c. SO₂ observed in the study area has been found in the range of 9.56 to 19.29 µg/m³.
- d. NO_x observed during the baseline monitoring was in the range of 11.25 to 28.03 µg/m³
- e. CO observed during the baseline monitoring was in the range of 0.01 to 0.17 mg/m³.

2.4 Noise Environment

- a. Noise level was measured in day time and night time at 8 different locations.
- b. Comparison of the ambient noise levels with the standards specified by CPCB reveals that the noise level at all locations is below the specified limit. The day time noise level in the study area was in the range of 40.7 - 66.3 dB(A)Leq and Night time noise was in the range of 37.9 to 57.4 dB(A)Leq.

2.5 Land Use of the Study Area covering 10 Km radius

Sl. No	Land classification	Area (in hectares)	Percentage total area
1.	Forest	97,017	11.9
2.	Land not available for cultivation	1,21,972	15.0
3.	Other un-cultivated land	33,875	4.2
4.	Fallow Land	62,982	7.7
5.	Area sown (net)	4,97,346	61.2
Total		8,13,192	100.00

2.6 Soil Quality


Soil samples were collected from 8 different locations and analyzed to assess the soil quality prevailing in the study area. All parameters were found to be satisfactory. Details are given in chapter 3 of the EIA report.

2.7 Biological Environment

Ecological survey is aimed to assess the existing flora and fauna components in the study area. Considering the rich bio-diversity of organisms and their role in productivity and their importance in human livelihood, it is vital to project and safeguard this dynamic ecosystem. No endemic or threatened plant species were observed during the survey in the vicinity of the Project. Details are given in the EIA report.

2.8 Demographic and Socio-economic Profile

- The socio-economic profile of the study area is based on Census of India 2011.
- Total 22 villages come under 10 km radius of the study area.
- Total population of study area is 43208. Out of this male population is about 21757 and female

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population is about 21451.

- Total literate population is 26189.
- In the study area SC population is about 11316 and ST population is 4877.
- Villages in study area have fairly good infrastructural, health, Drinking water, Electricity and communication facilities.

3.0 ANTICIPATED IMPACTS AND MITIGATION MEASURES

3.1 Impact on Air Environment

- The predicted ground level concentrations of PM₁₀, SO₂, NO_x are estimated using EPA approved ISCST-3 version 98356.
- VOCs and other NAQQS parameters are observed with below detectable limit.
- Adequate mitigation measures will be proposed for control of air pollution.

3.2 Impact on Noise Environment

The main sources of noise and vibration during operations will be various major and large pumps, air compressor, ventilation fans and miscellaneous equipments. Expected intermittent noise of 85 dB (A) due to vehicular movement during morning and evening hours is expected.


Every effort would be taken to minimize the noise levels including Periodic maintenance of machinery, mandatory use of equipment with operable mufflers, oiling and lubrication. Noise suppression measures such as enclosures, buffers, green belt development etc.

3.3 Impact on Water Environment

Total water requirement of the plant is 578 M³/day which will be met from borewells. There is no generation of wastewater from the proposed project. Cooling tower water will be continuously re-circulated in the cooling water circuits, heat exchangers and discharged to the holding tank through cooling towers where evaporation loss, drift losses and spillages will be encountered. DM backwash, cooling tower and boiler blow down will be neutralized in a neutralization tank and used for gardening. Domestic effluent will be sent to septic tank followed by soak pit.

3.4 Impact on Land Environment

Development of green belt and other landscape on the proposed site would enhance the visual aesthetics of the area. No construction activity will carried out during rainy season. There is no discharge of solid as well as liquid effluent in open land. Thus no adverse impact envisaged on land environment.

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3.5 Impact on Biological Environment

Flora: Analysis of abiotic factors reveals that ambient air and fresh water quality will remain practically unaffected. Thus, indirect adverse impact on flora is ruled out.

Fauna: The quality of ambient air and fresh water system will remain practically unaffected. Thus indirect impact on fauna, due to these abiotic factors is ruled out.

3.6 Socio - Economic Environment

- The project will contribute to the socio-economic development of the area at the local level.
- The direct and indirect employment to the local population during the operation of the project.
- All these will be beneficial to the local economy.

4.0 ENVIRONMENTAL MONITORING PROGRAM

Environmental Monitoring Network is designed for construction and operation phase of the project for monitoring of various environmental parameters like air, water, noise, soil and ecology etc. Compliance report will be submitted half yearly at KPCB, Zonal Office of CPCB and RO of MoEF.

5.0 PROJECT BENEFITS


- Growth in the industrial sector creates new opportunities for employment and can also help diversify the economy. The labour force required during construction and operation phase shall be sourced from nearby village.

5.1 Improvement in Social Infrastructure

From the very initial stage of the inception of the project, infrastructure development in and around the project site has kept in consideration. Infrastructure development will be done based on actual requirement socio-economic development of the region. The infrastructure development will be rolled out as part of company's CSR activity.

5.2 CSR Activities

- There will be more employment generated due to the proposed project both during the construction phase and operation phase. On the basis of technical knowledge acquired by the local village youths, they will be providing with suitable employment opportunity in the company.
- School uniforms, notebooks and scholarship will be provided to poor students.
- Special Health awareness camp and medical camps for primary check up will be arranged at least once in a year in nearby villages for health check-ups.
- Roads passing nearby the proposed plant will be maintained.
- Funds will be provided to arrange extracurricular activities for nearby school and colleges.

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- Free medical checkup for villagers.
- Tree plantation in rural areas.
- Provision of sanitation (toilets) facility
- Partnering with various NGOs to train underprivileged women housewives in hospitality, self-grooming, house-keeping and laundry.

6.0 ENVIRONMENT MANAGEMENT PLAN

The EMP presents the project specific guidelines on:

- Environmental management strategies
- Specialized engineering construction procedures in relation to environmental guidelines of the country
- Management of wastes and hazardous chemicals
- Air, water and soil quality protection
- Noise control
- Soil erosion control and slope stabilization
- Vegetation, wildlife and habitat protection
- Socio-economic and welfare considerations
- Risk and disaster management plan
- To prepare a checklist for statutory compliance
- Budget allocation for environment management plan.

7.0 CONCLUSION

- The project proponent will follow all the statutory norms and guidelines as per EPA, 1986 to safeguard environment.
- Ambient Air Quality of the project site will be within the permissible limit as per National Ambient Air Quality standard.
- Noise is expected to be on higher side during construction phase which will be temporary and site specific. In the operational phase noise shall be within industrial premises which will not exceed 75 dB(A).
- No significant impact is seen on flora and fauna as no reserve forest and eco-sensitive zones are present within 10 km.
- The project will generate employment opportunities during construction stage and also at operational stage. The standard of living of local people due to employment is likely to be better, so we may say that it is positive socio-economic impact. The region will get economic boost.
- Overall the project will have positive impact for socio-economic and cultural development.