



**EXECUTIVE SUMMARY OF DRAFT
ENVIRONMENTAL IMPACT ASSESSMENT AND
MANAGEMENT PLAN
FOR
EXPANSION OF INTEGRATED STEEL COMPLEX
(0.5 to 1.0 MTPA)
AT
VILLAGE EKLARI, WARTHI & SIRSI,
DISTRICT BHANDARA, MAHARASHTRA**

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Prepared by:



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EXECUTIVE SUMMARY OF EIA/EMP REPORT FOR EXPANSION OF INTEGRATED STEEL PLANT AT BHANDARA, MAHARASHTRA

1. INTRODUCTION

1.1 General background

M/s Sunflag Iron and Steel Company Limited (SISCL) has set up 0.5 MTPA Integrated Steel Plant at Bhandara, Maharashtra. Environmental Clearance for the existing 0.5 MTPA Integrated Steel Plant was received vide MoEF letter F. No. J-11011/355/2004-IA.II(I) dated 21st February 2006. SISCL now proposes expansion of this plant to 1.0 MTPA by expansion of facilities such as Direct Reduced Iron plant (0.28 to 1.0 MTPA), Pig Iron / Hot Metal plant (0.25 to 0.6 MTPA), Ingots / Billets (0.525 to 1.025 MTPA), Rolled Steel Products (0.5 to 1.0 MTPA), Sinter Plant (0.25 to 0.85 MTPA), Power Plant (30 to 90 MW) and by proposing new Coke oven plant (0.25 MTPA).

Cost of the proposed expansion project will be Rs. 1510 crores. TOR was issued vide Letter No. J-11011/355/2004-IA II (I) dated 29th October 2014 by MoEF, where after an EIA/ EMP report has been prepared.

1.2 Location and communication

The existing 0.5 MTPA Integrated Steel Plant is established in 200 Ha in villages Eklari, Warthi and Sirsi, Tehsil Mohadi, District Bhandara, Maharashtra. Expansion units have been proposed within the premises of existing plant over an area of 26.34 ha without acquiring additional land area. The location of plant and study area can be seen in Survey of India Toposheet No. 55 O/11 and 55 O/12 and location is shown in **Fig 1**. The coordinates of the plant are:

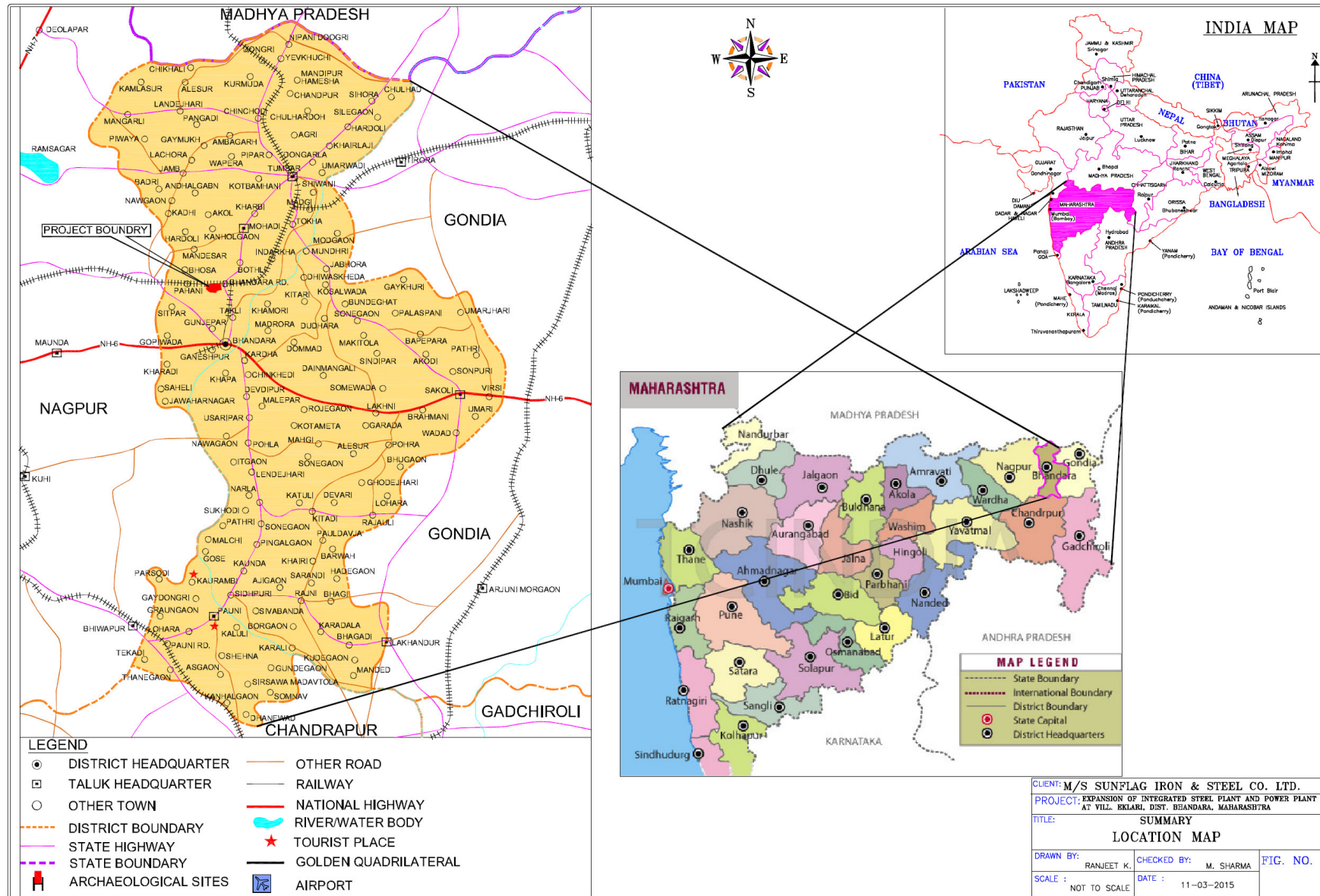
Latitude : 21°13'30" to 21°14'16" E

Longitude : 79°37'11" to 79°38'26" N

The proposed expansion plant is accessible by all weather roads from the district head quarter Bhandara which is located at a distance of 7.4 km, SSE. The site is located near to the SH-252 Ramtek to Bhandara road, which is at an aerial distance of 2.7 km, SW.

The nearest National Highway No. 6 is at located 7.5 km, S aerially. The nearest Railway station is Bhandara Railway Station, at a distance of 0.5 km, ENE aerially.

FIG 1: LOCATION MAP



2. PROJECT DESCRIPTION

2.1 Plant layout

The existing plant occupies an area of 200 ha covering factory, colony and amenities. No additional land is required for the proposed expansion.

2.2 Process description

DRI plant: The direct reduced iron process reduces the iron oxide in the iron ore using non-coking coal, air and fluxes like dolomite. The direct reduced iron contains 94% iron and iron oxide, the balance being gangue materials like oxides of aluminium, silicon and manganese.

Rotary Kilns producing direct reduced iron comprises Dust Settling Chamber, After Burning Chamber, Waste Heat Recovery Boiler & Electrostatic Precipitator. The flue gases from the kiln are burnt in the Waste Heat Recovery Steam Generator.

Coal Washing: In order to refine the crushed coal, a coal washery is also installed wherein crushed coal undergoes sieve screening for removal of stones etc, water washing for removal of dust and coal powder, separation of coal and water by centrifugal force in centrifuge, thickner & filter press. The washed coal is then conveyed to coal bunkers of DRI plant for its use as fuel and coal fines/ rejects recovered at coal washery are taken to CPP for use as fuel.

Coke Oven Plant: Sunflag has envisaged installing coke oven plant of 2,50,000 TPA capacity. The technology used will be clean and pollution free operating process, freedom to use non-coking and weakly coking coal, low capital investment and option to use waste heat for generation of electricity.

Sinter Plant Process: Sintering involves mixing the iron-bearing material such as ore fines, flue dust; concentrate with fuel. The resulting product is lumpy material known as sinter.

Mini Blast Furnace: The mini blast furnace consists of raw material handling and storage system, burden preparation system, top pressurizing and sealing system, hot blast supply, blast pre-heater, gas scrubbing and cleaning system, cast house slag granulation, hot metal handling and casting system, utilities, power supply and instrumentation and control system.

Steel Melt Shop (Continuous Casting Machine): The Continuous Casting Machine is required for casting of Billets in solid cross section of square & rectangle from the liquid steel. These billets are then used for hot rolling in various shapes and sizes.

Stainless Steel Converter: Stainless Steel Refining Converter accepts molten metal transfer not only from EAF of SMS but also from Induction

Furnaces, LD or BOP converters and Submerged Arc Smelting Furnaces. On an intermittent basis, metal from hot metal sources including Blast Furnaces (BF) and Cupolas can be refined in Stainless Steel Refining Converter.

Captive Power plant (WHRB & AFBC): The existing captive power plant is based on 64 Kg/cm² and 485 °C steam. Same technology will be used for the proposed expansion phase also.

Oxygen plant: Atmospheric air is the main input to the Oxygen Plant and it is sucked by air compressors through filter media and supplied to cold box. In cold box, air is passed through activated alumina and pure oxygen is segregated. Pure oxygen so obtained is compressed to 30 bars and sent to Steel melt shop furnaces and maintenance purpose. Production capacity of the Oxygen Gas Plant is 1 x 1200 m³/hr and Oxygen Liquid Plant is 120 TPD.

Rolling Mill: Rolling capacity of 0.5 Million MT per annum is in operation. Sunflag proposed to have another rolling mill to meet the rolling requirement 1 Million MT per annum by augmented production capacity of another 5,00,000 MT/Annum.

Bright Bar Units: In order to impart the finishing to the Alloy steel, Spring steel, Carbon steel, stainless steel bars before final dispatch to the clients these are processed through bright bar section. The activities involved are straightening, peeling, centre less grinding, crack checking, cutting as necessary, inspection and final dispatch.

Annealing Furnaces: In annealing furnaces, steel rods & coils are heated to specified high temperature which adds to the desired properties thereby improving quality of steel to meet specifications of the buyers. Any one of the fuel viz. Electricity, LDO, FO & LPG is in use for maintaining the specified temperature in particular annealing furnace.

Centralise Pickling plant: Centralized pickling plant is installed in phases. Selected process for pickling is standard for individual type of material.

2.3 Raw material, power and water

The major raw materials required for the plant are iron ore (Haematite), dolomite, manganese ores, coke, coal & high carbon ferro chrome. For the proposed expansion of integrated steel plant, raw material for DRI plant includes Iron ore (1440000 TPA), Coal (1440000 TPA), dolomite (216000 TPA); for pig iron/hot metal MBF are Iron ore (350000 TPA), Coke (250000 TPA), dolomite (21000 TPA), limestone (14000 TPA), Quartzite (16800 TPA), manganese ore (10000 TPA), Sinter (600000 TPA); for Steel Melting Shop are Sponge iron (300000 TPA), Pig iron/ steel scrap (420000 TPA) and ferro alloy (As available) and for Sinter Plant includes hematite iron ore fines (564000 TPA), EAF GCP Dust and Mill scale (83600), dolomite (84000

TPA), limestone (84000 TPA) and Lime (46000 TPA), etc. The transportation shall be done by trucks, tippers and rail.

Total power requirement for the existing plant and expansion plant is 30 and 60 MW respectively. The power requirement will be met from Captive Power Plant and balance requirement is being will be met from Maharashtra State Electricity Distribution Company Ltd.

The project presently requires 6500 m³/day water which is drawn from the Wainganga river. The proposed water requirement for the expansion phase will be 8598 m³/day. The company has a water reservoir with a capacity of about 1,43,000 m³ and will be sufficient to meet 9-10 days water requirement of the plant.

2.4 Manpower

Currently, 1240 persons on Company Roll & 850 persons on Contract are employed at the plant. During operation of expansion phase, around 500 persons additionally will be under direct employment of the company. Many more persons will be indirectly engaged either on contract basis or in transportation of materials in provision of different services associated with the project. As majority of unskilled and semi-skilled persons will be from the surrounding villages, benefits will extend to the local population.

2.5 Site services

Infrastructure facilities such as sanitation facilities, fuel, rest rooms, canteen etc are present in the existing plant which will also be used for the expansion phase. These facilities can also be used by the labour force during construction of expansion phase.

3. PRESENT ENVIRONMENTAL SCENARIO

3.1 Topography and drainage

Core zone: The proposed plant location is a flat land devoid of any significant topographical features. The elevation of the plant area varies from 261 to 275 m above mean sea level (amsl). There is a canal and two seasonal nalas through the project site which are largely undisturbed except for straightening of some portion of one seasonal nala. There is no other natural water body within the plant site area. Rain water run off is through sheet flow joining the natural drainage. As the plant is constructed, storm water drains have been made in the plant area to ensure the evacuation of rain water.

Buffer zone: The study area depicts undulating terrain. The elevation of study area ranges from 246 m to 403 m amsl. The general slope is towards south.

3.2 Climate and micro-meteorology

The climate of the study area is, general, is hot and dry with moderately cold winters. The nearest meteorological station of IMD from where data was available is at Nagpur. The annual rainfall during 2000 to 2008 in the area varied from 0.2 mm in 2002 to 900.6 mm in 2006 with the average of 1127.0 mm. The monsoon season is spread over the months from June to September. The annual mean of minimum temperature ranges from 11.2°C in 2000 to 28.7°C in 2002. The annual mean of maximum temperature ranges from 28.1°C in 2004 to 44.2°C in 2002. The mean monthly average relative humidity was found to be 62% at 8:30 hrs and 48% at 17:30 hrs.

The micro-meteorology was monitored at site from December 2014 to February 2015. Temperature was recorded between 6.8°C to 32.8°C, relative humidity between 16.9% to 95.9%. The wind speed varied between calm to 11.5 km/hr and the predominant wind direction was observed from N with 53.47% of occurrences.

3.3 Ambient air quality

Ambient air quality was monitored at eight locations, one in the core and seven in the buffer zone at Beed village (1.0 km, SW), Ashok Nagar (8.7 km, SSW), Mohgaon (4.0 km, NNE), Eklari (0.5 km, NNW), Neri (2.6 km, NW), Sirsi (1.6 km, SSE) and Kesalwara (4.9 km, S). Twenty four hour average PM₁₀ was found between 48.3 to 94.7 µg/m³, PM_{2.5} was found between 26.6 to 52.8 µg/m³, SO₂ from 7.1 to 23.3 µg/m³ and NO_x from 8.0 to 27.8 µg/m³. All the values are on the lower side at all the locations.

3.4 Water resources

The nearest river is Sur river which flows at about 2.9 Km in North direction ultimately meeting Wainganga River at about 7.0 km in SE direction. Local nalas are present in the study area which generally remain dry except during monsoon season.

The static water level ranged from 3.75 to 12.10 m Below Ground Level while yields are from 2.50 to 8.98 litres per second (lps). The transmissivity ranged from 10.43 to 59.54 m²/day while the storativity ranged from 1.5 x 10⁴ to 8.70 x 10⁴ m³. The specific capacity ranged from 0.26 to 0.59 lpm/m of drawdown for discharge of 2.49 to 12.00 lps.

Water samples were collected from eight surface water sources (Sur river u/s near Panjra village and d/s near Navitakri village, Pond in village Pahuni, near Plant, Satona village, Chorkhamari village, Wainganaga river u/s near Takri village and d/s near Surewara village) and eight ground water sources (villages Bhojapur, Lawesar, Neri, Mohgaon, Sirsi, Mahdura, Mandesar and Warthi) in the study area. Almost all the parameters of water samples are well within the prescribed limits as per IS 10500: 2012 except turbidity, lead and nickel which are on a higher side in few water samples.

3.5 Noise and traffic density

Noise levels at eight stations (1 within the core area and seven within buffer area) were observed. The noise levels ranged from 54.30 to 62.4 dB (A) during day time and at night time it varied from 37.70 to 50.1 dB (A).

The traffic density survey was conducted 27-28/01/2015 and 30-31/01/2015 at 2 locations one on road between Warthi to Bhandara road and second at Eklari to Satona road. Total number of vehicles was found to be 8056 and 1921 respectively.

3.6 Land use pattern and soil quality

The total land requirement for the existing and proposed expansion plant are 200.0 Ha. For the expansion phase, no additional land will be acquired since the entire land is in possession of the company.

The study area comprises 13 villages and towns in Nagpur district and 81 villages and towns of Bhandara District. Land use pattern of study area is available in 2011 Census data which shows that the agricultural land (net sown + current fallows + other fallows) account for a major portion (64.91%) followed by areas under non agricultural uses (23.59%), barren and uncultivable land (3.79%), Permanent Pastures and Other Grazing Land (2.61%), culturable waste land (2.65%) and forest land (2.37%).

The soil samples were collected and analyzed from 5 locations one at core and 4 at buffer zone. The soil samples test results shows that the pH is nearly neutral. Conductivity is normal, and organic matter is deficient in soils.

3.7 Ecology

Koka wildlife sanctuary (WLS) is at 8.7 Km, E within the study area. The total forest land in the study area is 940.53 ha, which is 2.37% of the total study area. The forest type found in the study area are Southern Tropical Dry Deciduous Forests. Company has planted about 3,50,000 trees covering 25 species such as Neem, Pipal, Cassia, Mango, Subabul, Gulmohor, Eucalyptus, khair, Chichwa, Shisam, Ashoka, Karanj, Teak, Jamun, Palas, Hiwar, Dhaora, Bamboo, Royal palm, Coconut, Guava, etc. and the survival rate is about 90%. Flora in the study area constitutes about 140 plant species, comprising 72 trees, 23 shrubs, 17 herbs, 16 climbers / lianas, 05 bamboo and grasses and further including 01 epiphyte, 02 parasite and 06 aquatic species.

Fauna in the study area constitutes about 40 faunal species, comprising 18 species of mammals, 04 species of Reptiles, 03 species of Amphibian & 17 Avifaunal species. Due to presence of sparse vegetation in the buffer zone there is low density of fauna.

No Schedule I species is found in the study area except in Koka WLS, which are already in a protected area. 5 Schedule II species are found.

3.8 Socio-economic condition

There is no habitation within the core zone. There are 94 inhabited villages within the study area. The total population within the study area is 242889. There are 119735 females and 123154 males. SC constitute 15.93% while ST constitute 3.73% of the total population.

The average literacy rate is 78.72%. 32.57% of total population are main workers and 9.1% of population is marginal worker in rural area. More than half of the total population (58.33%) are non workers.

3.9 Places of archaeological/historical/tourist/religious importance

No monument or centre of archaeological importance exists within the study area except a few places of local worship. There is Shiva temple at a distance of about 7.2 km on SW and Chuandeshwari temple at a distance of about 8.1 km towards NNE.

4. ENVIRONMENTAL IMPACT ASSESSMENT AND MITIGATION

4.1 Topography and drainage

Impact: Major change in topography has already occurred due to the construction of the buildings such as walls, buildings, stock yards etc. in earlier phases. The ground has already achieved a requisite level during previous construction phases. Only the additional buildings will bring some change. There will be no impact on topography of the buffer zone.

The sheet flow of rain water shall get additionally affected within the core zone due to installation of additional building. The canal passing through the project will be undisturbed and the first order stream from north side will be straightened at places without impacting the volume. Impact on the drainage in the buffer zone is not anticipated as no construction will be taking place outside plant boundary.

Mitigation: The additional change in topography in the core zone will lead to minor additional changes in the sheet flow pattern of rain water within the core zone since most of the construction has been carried out in the previous phases of construction. Rain water Harvesting will be carried out to reduce the load on fresh water uptake from river. It will also recharge & raise the ground water table.

4.2 Air environment

Impact: During the construction phase, sources of air pollution will be dust generation due to excavation work, shifting of construction materials (cement, sand and gravel), vehicle exhausts and movement of vehicles on

unpaved roads and exhaust from internal combustion engines of construction equipment. Primary impact will be high dust generation resulting into increased SPM levels in the surrounding areas. The secondary impacts of air emissions and dust can be on the health of humans exposed to it. During operation phase, the anticipated impact on air quality has been assessed using mathematical models. The stack emissions have been considered from additional stack only as well from all stacks together. The incremental ground level concentrations have been predicted (in micro.g/cum) for proposed stacks as 2.88 for PM₁₀, 1.66 for PM_{2.5}, 13.79 for SO₂ and 29.54 for NO_x.

Mitigation: During construction, the site will be leveled. The dust created by excavation, leveling and transportation activities will be minimised by sprinkling of water. Construction equipment and transport vehicles will be maintained regularly to minimize source emissions and spillages. All trucks being used for transportation of raw material and finished product will be covered with tarpaulin, maintained, optimally loaded and have PUC certificates. Electrostatic precipitators (ESP) with an efficiency of 99.9% will be installed to control the particulate emission within 50 mg/Nm³. The plant has planned to adopt latest technology for low NO_x burners. Kilns will be operated in controlled and steady manner to avoid emergency shutoffs of the electrostatic precipitators. Bag filters will be installed to control PM emission level within 50 mg/Nm³.

4.3 Noise and traffic density

Impact: The noise level during construction will be due to construction machinery. It will be of temporary nature and the unpleasant effects will be controlled by appropriate mitigation measures. During operation, the noise level at equipment within the plant are anticipated to go as high as 85 to 90 dB(A).

Mitigation: The equipments shall be provided with acoustic shields or enclosures to limit the sound level inside the plant. Vibration dampners shall be used during erection of machinery. Maintenance of machinery and vehicles will minimise noise generation. The proposed green belt will also help to prevent noise generated within the plant from spreading beyond the plant boundary. Ear muffs/plugs will be provided to the workers in the close vicinity of noise source. Noise from safety valves, start up vents, steam jet ejectors of condenser, etc. will be reduced by providing silencers at the outlet of down steam piping.

4.4 Water environment

Impact: During construction phase, the fresh water requirement would be on account of concrete mixing and curing and during operation for cooling water for various machinery, sprinkling for dust suppression, irrigation for plantation and landscape. During operation of the steel plant, there shall be various effluents generated. Effluents from the plants will be treated

properly and utilized or recycled quantitatively within the plant to avoid any unwanted impact on water quality of the area by achieving zero discharge.

Mitigation: During construction phase, the domestic wastewater will be treated in the septic tanks. During operation phase, there will be no discharge of waste water from the operations in the steel plant as entire waste water will be reutilized, except in monsoons.

In the plant, blow down water from the cooling tower meets the MPCB norms & recycle /reuse. Water from closed water circuit will be treated in ETP prior to reuse and recycling. Wastewater from the DM Plant will be neutralized in a neutralization tank and transferred to the ETP sump. Waste waters from MBF gas scrubber and washery is recycled after treatment in respective thickeners while Centralized Pickling Plant & Coinage Plant has a separate ETP.

There will be domestic effluent from the sanitation facilities in the plant which will be treated in septic tank followed by soak pit system while the colony sewage is treated in the sewage treatment plant. The treated waste water will be utilized for green belt and plantation in the area. Rain water harvesting is and will be carried out through surface water reservoir.

4.5 Land use

Impact: The total plant area of integrated steel plant will be spread over 200 hectares with 26.34 ha for the additional units within it. The construction in the project area such as internal roads, water reservoir, buildings, green belt and plantation, etc have taken place. Only few additional buildings and sheds of the new units will come up. The dumping of solid wastes like char, ESP dust, sludge from DRI/blast furnace, FES dust, BF slag, fly ash, etc. on land would also impact the land.

Mitigation: The topsoil generated during construction will be preserved and shall be spread over the area where additional plantation is proposed. Since the plant species are capable of checking soil erosion, the soil will be fully stabilised with minimal impact in erosion potential of the area. The coal, finished product, etc stock yards are covered and have impervious flooring to prevent rainwater to cause leaching.

4.6 Solid waste management

Impact: During construction phase, due to work force deployed for construction, there will be development of temporary establishment of residential and commercial nature which will generate garbage. In the integrated steel plant dust collected from dust collectors, empty barrels (metal and plastic), bags, fly ash, bed ash, ESP dust, Dolochar, EAF & IF slag, mill scale, scrap, rejected billets, grinder waste, coal fines & rejects, MBF slag, residue of MBF GCP, iron ore fines, sinter, ETP sludges, sweepings and other biodegradable wastes from the canteen are the solid waste generated.

Mitigation: DRI ESP dust and dolochar will be used as fuel in CPP. The MBF, EAF and IF slag will be used for road making, cement manufacturing, etc. Mill scales, GCP residue, coke fines, iron ore fines, Dust from SS refining convertor, sinter and part of bag filter dust (DRI & SMS) is used for sinter. Steel scraps and rejects are recycled by melting. Grinder waste is recycled to SMS. Coal fines and rejects are used for power generation in CPP. Fly ash from existing & proposed power plant shall be used for brick making in house and balance given to cement plants & other users. Bed Ash will be used for internal road, in-house brick manufacturing and balance will be supplied to nearby brick manufacturers, concrete products makers etc. All stock piles will be laid on top of a stable liner to avoid leaching of materials to ground water.

4.7 Ecology

Impact: During construction and operation phase, negligible impact is anticipated on the flora in the plant area. There is no forest land in the expansion area. No adverse impact of proposed project is anticipated on the fauna as the density is low in the area immediately surrounding the proposed project. The air quality modeling shows that negligible impact will be caused on the forests. No impact of present and proposed expansion phase on Koka WLS is anticipated due to the distance of 8.7 km from plant; the existence of natural barriers in form of Sur River between plant & WLS as well as Wainganga River, which also forms boundary of Koka WLS & its proposed eco-sensitive zone; and restriction of project activities including transportation to west side of the two rivers while WLS is on east of rivers.

Mitigation: Tree plantation has been done over 72 ha (36% of the plant area) with around 25 species and maintained within the plant premises. One third of the area is under plantation. The greenbelt acts as a micro-habitat for small sized mammals and birds. Company proposes extensive plantation and has built in expenditure into CSR for wildlife conservation.

4.8 Socio-economics

Impact: There are no land losers or displacees for expansion of steel plant. During construction, 500 persons are likely to get employment. During the operational phase of the expansion plant, about 500 additional workers would be employed. Currently, 1240 persons on Company Roll & 850 persons on Contract are employed at the plant. Since the plant has already commenced operation, amenities like education, school, health, hospital, entertainment, canteen, etc have been developed in and around the plant which are available to local people also besides those directly associated with the plant.

Mitigation: It is proposed to hire the manpower locally in the proposed plant, to the extent possible in order to have a positive socio-economic impact. For the purpose, training for capacity building shall be undertaken by the company. Other than direct and indirect employment leading to

economic growth, the major benefit to the community will be through CSR activities of the company.

5. ANALYSIS OF ALTERNATIVES

The proposed expansion of the Integrated Steel plant is located in Eklari, Warthi and Sirsi, Tehsil Mohadi, district Bhandara, Maharashtra. 0.5 MTPA. Integrated Steel Plant is already in operation at the site. The proposed expansion of integrated steel plant to 1.0 MTPA will be by expansion of existing unit's capacities and by addition of new coke oven plant. Since this is an operational plant, no site alternatives have been considered. It is intended to expand the plant without acquiring additional land. For steel melting the Electric arc furnace technology has been selected. The Non Recovery type Coke Oven plant has been proposed for use. For CPP WHRB & AFBC boiler is proposed.

6. ENVIRONMENTAL CONTROL AND MONITORING ORGANIZATION

An environmental management cell is existing in the plant to take care of pollution monitoring aspects and implementation of control measures headed by DGM, Environment. A schedule has been spelt out for periodical monitoring of the important environmental parameters. The total budgetary provision for implementation of Environmental Management is Rs. 33.98 crores capital and Rs. 10.60 crores/annum recurring.

7. DISASTER MANAGEMENT PLAN

All types of industries face certain types of hazards which can disrupt normal activities abruptly and lead to disaster like fires, inundation, failure of machinery, explosion, oil spillage, acid spillage, electrocution and hazardous waste spillage/ exposure, etc. The existing and proposed Integrated Steel Plant may also face such hazards which can disrupt normal activities abruptly. Disaster management plan is formulated with an aim of taking precautionary step to control the hazard propagation and avert disaster and also to take such action after the disaster, which limits the damage to the minimum.

To tackle the situation, for expansion phase also, the existing disaster control room will be having links with all control rooms of the plant. An up to date communication facility will be provided to control rooms. The emergency organization shall be headed by emergency leader called Site Main Controller (SMC) who will be plant manager.

8. PROJECT BENEFITS

The plant has been set up on the land belonging to villages Eklari, Warthi, Sirsi. During operation of expansion phase, around 500 persons will be under direct employment of the company. Many more persons will be indirectly engaged either on contract basis or in transportation of materials in provision of different services associated with the project. As majority of

unskilled and semi-skilled persons will be from the surrounding villages, benefits will extend to the local population. Better education facilities, proper health care, road infrastructure and drinking water facilities are basic social amenities for better living standard of any human being which are aimed to be improved through proposed Corporate Social Responsibility Program (CSR). SISCL has planned a total Budget Rs. 81.35 crores to be spent over ten years as a corporate social responsibility to contribute in improving the standard of living of the local population and strengthen the existing civic amenities through implementation of activities under CSR.

9. DISCLOSURE OF CONSULTANTS

The consultants engaged for the preparation of the EIA/EMP of the project are Min Mec Consultancy Pvt. Ltd. Company. It was registered in July 1983 with the Registrar of Companies, Delhi & Haryana, India. In 1994, Min Mec established a modern R&D Laboratory. Min Mec is ISO 9001: 2008 certified under ANZ-JAS. In June 2006, the laboratory received accreditation from NABL (certificate no. T-1157), which has been renewed as per procedure since. In 2012, lab has been accredited under Environment Protection Act (EPA) by Ministry of Environment & Forests, Government of India (Sl. No. 97). Min Mec has prepared the EIA/EMP based on the permission granted from Delhi High Court vide LPA 110/2014 and CM No. 2175/2014 (stay).