SUMMARY ON

ENVIRONMENTAL IMPACT ASSESSMENT

REPORT

OF

Agroha Iron & Steel Industries

[Expansion of Steel Plant – Establishment of 3 x 15 T Induction Furnaces for manufacturing of 1,48,500 TPA Steel Ingots / Billets, expansion of Rolling Mill from 30,000 TPA to 1,46,250 TPA (LDO / Producer Gas as fuel) for manufacturing of TMT / Wire Rod / Angle / Channel / Steel Structures / Patra and Coal Gasifier 7000 Nm^3/Hr.]

at

Khasra No. 25/1, 25/4, 25/5, 25/6, 26/1 & 26/3,
Village Pali, Tehsil & District Raigarh, Chhattisgarh

Submitted to

CHHATTISGARH ENVIRONMENT CONSERVATION BOARD
Chhattisgarh

1.0 PROJECT DESCRIPTION

Agroha Iron & Steel Industries has obtained Consent from Regional Office, Chhattisgarh Environment Conservation Board (CECB), Raigarh vide letter no. 1963/RO/TS/CECB/2019 dt. 19.03.2019 for establishment of 30,000 TPA Rolling Mill to manufacture TMT bars at Khasra No. 25/1, 25/4, 25/5, 25/6, 26/1 & 26/3, Village Pali, Tehsil & District Raigarh, Chhattisgarh. Consent to Operate (CTO) for existing plant has been issued by CECB vide letter No. 138/RO/TS/CECB/2020 Raigarh dt. 02.06.2020, and same is valid till 28.02.2025.

Now, it is proposed forestablishment of 3 x 15 T Induction Furnaces for manufacturing of 1,48,500 TPA Steel Ingots / Billets, expansion of Rolling Mill from 30,000 TPA to 1,46,250 TPA (LDO / Producer Gas as fuel) for manufacturing of TMT / Wire Rod / Angle / Channel / Steel Structures / Patra and Coal Gasifier 7000 Nm^3/Hr. in the existing plant premises only.

As per the Ministry of Environment, Forest & Climate Change, New Delhi, EIA notification dated 14th September, 2006 & its subsequent amendments, all the non –toxic secondary metallurgical processing industries are falling under Sl. No. 3 (a), classified as Category 'B' for the grant of Environmental Clearance at State Level.

In order to obtain Environmental Clearance for the proposed expansion, Form – I along with proposed TOR & Pre-Feasibility Report have been submitted to the Honourable State Environment Impact Assessment Authority (SEIAA), C.G. Presentation has been made before the State Expert Appraisal Committee, Chhattisgarhon 16th May 2019for the approval of TORs (Terms of Reference) for EIA study. Subsequently TOR letter has been issued vide letter No. 551/SEAC-CG/Raipur/843A Naya Raipur, Atal Nagar dt. 27thJuly 2019.Accordingly, Draft EIA report has been prepared incorporating the Terms of Reference.

Pioneer Enviro Laboratories & Consultants Private Limited, Hyderabad, which is accredited by NABET, Quality Council of India, vide certificate No. NABET/ EIA/ 1922/ RA 0149, for preparing Environmental Impact Assessment (EIA) report for Metallurgical Unit, have prepared EIA report for the proposed expansion project by incorporating the TOR approved SEAC-CG. The report contains detailed description of the following:

- Characterization of status of environment with in an area of 10 km radius from the plant for major environmental components including air, water, noise, soil, flora, fauna and socio-economic environment.
- Assessment of air emissions, liquid waste and solid waste from the proposed expansion project along with the noise level assessment.
- Environmental Management Plan comprising of emission control measures proposed to be adopted in the proposed expansion project, solid waste management, Greenbelt development.
- Post Project Environmental Monitoring & Budget for Environmental Protection Measures.

1.1 ENVIRONMENTAL SETTING WITHIN 10 Km. RADIUS OF THE PLANT SITE

The following is the environmental setting within the 10 Km. radius of the Plant site:

Table No. 11.1.1: Environmental Features within the 10 Km. Radius of the Plant Site

S.No.	Salient Features / Environmental features	Distance w.r.t. site / Remarks
1.	Type of Land (for Expansion)	Existing plant is converted for Industrial Purpose. Proposed expansion will be taken up in the existing plant premises only.
2.	Type of Land (Study Area)	As per LULC the land use within 10 Km. is as follows: Settlements – 3.8%, Industrial Area – 8.2%, Tank/River/Reservoir etc. – 7.3 %, Scrub Forest & Dense Forest – 41.1%, Single Crop – 19.4%, Double Crop – 5.4%, Land with scrub – 11.1%, Land without scrub – 2.2%, Mining Area – 1.1%, Ash Pond – 0.4 %)
3.	National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve / Elephant Corridor / migratory routes for Birds	There are no notified National Park/ Wild life sanctuary / Biosphere reserve / Tiger Reserve/ migratory routes for Birds with in 10 Km. radius of the plant. However, movement of Elephants is observed within 10 Kms. radius of the plant, as per the secondary source. Conservation plan is prepared.
4.	Historical places / Places of Tourist importance / Archeological sites	Banjari Maata temple - 4.8 Kms. (Aerial) Ram Jharna & Singhanpur Caves - 8.4 Kms. (Aerial)
5.	Industrial areas / cluster (MoEF&CC office memorandum dated 13thJanuary 2010)	Nil And also Project area does not fall under the areas notified under NGT order dt. 10th July 2019
6.	Defence Installations	Nil
7.	Nearest village	Pali village is the nearest habitation - 0.7 Kms.

S.No.	Salient Features / Environmental features	Distance w.r.t. site / Remarks
8.	No. of Villages in the Study Area	52 Nos.
9.	Nearest Hospital	PHC is present near to the O.P. Jindal Industrial Park (7.6 Kms) & Hospitals are situated in Raigarh Town
10.	Reserved forests	Taraimal RF (2.4 Kms.), Rabo RF (5.6 Kms), Urdana RF (1.2 Kms.) Pajhar PF (8.8 Kms.), Kharidungri PF (3.6 Kms.), Keradungri PF (5.4 Kms.), Dungapani PF (4.0 Kms.), Lakha PF's (1.6 Kms.), Barkachhar RF (3.0 Kms.), Punjipathra PF (6.4 Kms.) exist within 10 Km. radius of the plant site.
11.	Water body	Kelo river (2.3 Kms.) & Few seasonal nalas, ponds exist within 10 Km. radius of the plant site
12.	Crops in the Study Area	Major Crops - Paddy, Arhar, Mung, Groundnut Minor crops - Wheat, Maize, gram, Masur, Urad etc. Horticulture crops – Lemons, Papaya, Banana, Leechie, Potato, Mango, Tomato, Onion, Cabbage, Chilly, Ginger etc.
13.	Nearest Railway station	Kirodimalnagar RS -7.7 Kms. (Aerial)
14.	Nearest Highway	Raigarh – Ambikapur State Highway – 1.2 Kms.
15.	Nearest Port facility	Nil
16.	Nearest Airport	Jindal Air strip – 6.2 Kms. (Aerial)
17.	Nearest Interstate Boundary	No interstate boundary within 10 Km radius of the plant site.
18.	Seismic zone as per IS-1893	Seismic zone – II
19.	R & R	There is no Rehabilitation and Resettlement issue, as the proposed expansion will be carried out in the existing plant premises.

1.2 Plant Configuration and Production Capacity

The following table shows the existing & proposed production capacities

Table No. 11.1.2: Plant Configuration & Production Capacity (Existing & Proposed)

S.No.	Unit	Existing (TPA)	Proposed Expansion (TPA)	After Proposed Expansion (TPA)
1.	Induction Furnaces (Steel Ingots / Billets / Hot billets)	---	1,48,500 TPA (3 x 15 T)	1,48,500 TPA
2.	Rolling Mill (TMT / Wire Rod / Angle / Channel / Steel Structures / Patra)	30,000 TPA	1,16,250 TPA [LDO / Producer Gas as fuel]	1,46,250 TPA
3.	Coal Gasifier	---	7000 NM^3/Hr	7000 NM^3/Hr

1.3 Raw Materials

The following will be the raw material requirement for the proposed expansion project:

Table No. 11.1.3: Source of Raw Material, Quantity & Method of Transport

S.No.	Raw Material		Quantity	Sources	Mode of Transport
1	**For Induction Furnace (Steel Ingots / Billets / Hot Billets) - 1,48,500 TPA**				
a)	Sponge Iron		1,24,000 TPA	Chhattisgarh & Orissa	By Road (through covered trucks)
b)	Scrap		53,000 TPA	Chhattisgarh & Orissa	By road (through covered trucks)
c)	Ferro Alloys		2,200 TPA	Chhattisgarh & Orissa	By road (through covered trucks)
2	**For Rolling Mill (TMT / Wire Rod / Angle / Channel / Steel Structures / Patra) – 1,16,250 TPA**				
a)	Steel Ingots / Billets / Hot Billets		1,24,300 TPA	Own generation	----
b)	LDO		5000 Kl/Annum	Nearby HPCL / IOCL depots	Tankers
c)	Coal (for Gasifier 7000 NM^3/Hr)	Indian	23,200 TPA	SECL, Chhattisgarh / MCL Odisha	By rail & road (through covered trucks)
		Imported	14,900 TPA	Indonesia / South Africa / Australia	Through sea route & Rail

1.4 Manufacturing Process

Manufacturing of Steel Ingots / Billets / Hot Billets through Induction Furnace

In Steel Melting Shop (SMS) consisting of 3x 15 MT Induction Furnaces, Sponge Iron will be melted along with melting scrap and other fluxes to make pure liquid steel and then to mould it in required size billets. The SMS will consist ofInduction furnace, Ladles, Cranes & Continuous Casting Machine (CCM). Either the Hot Billets produced from LRF and CCM will be directly sent to Rolling Mill through Direct Charging OR Billetsthat gets cool after casting through CCM which will be sent to Rolling Mill through Re-heating the Billets in Re-heating Furnace by Conventional Rolling Mill method.

It is proposed to produce a total of 1,48,500TPA ofSteel Ingots / Billets / Hot Billets through 3 x15 MT Induction.

Manufacturing of Rolled products through Rolling Mill

The Hot Billets produced from Induction Furnaces (3 x15 MT) i.e. from will be directly sent to Rolling Mill to produce Rolled Products called as Hot Charging method. In the other method the Hot Billets generated will be sent through CCM to produce Steel Ingots / Billets, which will be sent to Reheating furnace for the heating and will be sent to Rolling Mill. Furnace will

be heated with Producer Gas / LDO. A bar and round mill will be installed in the plant to produce 1,46,250 TPA of TMT / Wire Rod / Angle / Channel / Steel Structures / Patra after expansion.

1.5 Water Requirement

Water required for the existing project is 20 KLD and same is being from Ground water resources. Water required for the expansion project will be 75 KLD and same will be sourced through Ground water resources. Water requirement after proposed expansion will be 95 KLD.

We have applied to Central Ground Water Authority for obtaining NOC for drawl of water from ground water sources. Break up of water requirement is shown in Table No. 11.1.4.

Table No.11.1.4: Break-Up of Water Requirement (Existing & Proposed)

S.No.	Unit	Quantity in KLD		
		Existing	Proposed Expansion	After Proposed Expansion
1.	Induction Furnaces	--	20	20
2.	Rolling Mill	18	45	63
3.	Gasifier	---	5	5
4.	Domestic	2	5	7
	Total	**20**	**75**	**95**

1.6 Waste Water Generation

In the existing plant, wastewater generated from the Rolling mill sent to settling pond and after that it is being recycled again as closed-circuit cooling system is provided. Sanitary waste water (1.6 KD) generated is being treated septic tank followed by soak pit. Zero Discharge is being maintained in the existing plant.

In the expansion project, there will be no wastewater discharge from the proposed SMS unit as closed-circuit cooling system will be adopted. The wastewater generated from the proposed Rolling Mill unit will be sent to Settling pond after it will be recycled again as closed-circuit cooling system is provided. Oil & grease traps will be provided, to treat if water is getting mixed with oil, grease and cleaning agents. Sanitary wastewater generation due to expansion will be 4.0 KLD. Sanitary wastewater generated from the entire plant will be treated in STP after the proposed expansion proposal. The treated sewage will be utilized for

Greenbelt development. Zero Liquid effluent Discharge will be maintained in the in the proposed expansion also.

1.7 Wastewater Characteristics

Table No.11.1.5: Waste Water Characteristics

Parameter	Sanitary waste water untreated
pH	7.0 – 8.5
BOD (mg/l)	200 – 250
COD (mg/l)	300 – 400
TDS (mg/l)	800 – 900

2.0 DESCRIPTION OF ENVIRONMENT

Base line data has been collected on ambient air quality, water quality, noise levels, soil quality, flora and fauna and socio-economic details of people within 10 km radius of the plant.

2.1 Ambient air quality

Ambient air quality was monitored for $PM_{2.5}$, PM_{10}, SO_2, NOx & CO at 8 stations including project site during 1st October 2019 to 31st December 2019. The following are the concentrations of various parameters at the monitoring stations:

Table No. 11.2.1 : AAQ Data Summary

S.No.	Parameter		Concentration
1.	$PM_{2.5}$	:	26.9 to 47.7 $\mu g/m^3$
2.	PM_{10}	:	47.3 to 88.2 $\mu g/m^3$
3.	SO_2	:	9.4 to 26.6 $\mu g/m^3$
4.	NO_X	:	12.2 to 39.2 $\mu g/m^3$
5.	CO	:	516 to 1497 $\mu g/m^3$

2.2 Water Quality

Surface Water Quality

Kelo river (2.3 Kms.), Kokritarai Pond near Kirodimal (6.4 Kms.) &Gerwani Nala (2.5 Kms.) are present within the study area. 2 no. of surface water samples from Kelo River i.e. 60 m Uptream (SW1) & 60 m Down Stream& 1 no. of Sample fromGerwani Nala, 1 no. of Sample from Kokritarai Pond near Kirodimal have been collected and analyzed for various parameters. The analysis of samples shows that all the parameters are in accordance with BIS-2296 specifications.

Ground Water Quality

8No. of ground water samples from open wells / bore wells were collected from the nearby villages to assess ground water quality impactsand analyzed for various Physico-Chemical parameters. The analysis of samples shows that all the parameters are in accordance withBIS: 10500 specifications.

2.3 Noise Levels

Noise levels were measured at 8 locations during day time & Night time. The noise levels at the monitoring stations are ranging from 45.31 dBA to 61.67 dBA.

3.0 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

3.1 Prediction of impacts on air quality

The likely emissions from the proposed expansion project are PM_{10}, NOx & CO. The predictions of Ground level concentrations have been carried out using Industrial Source Complex (ISC-3) model. Meteorological data such as wind direction, wind speed, max. and min. temperatures collected at the site have been used as input data to run the model.

The predicted max. Incremental PM_{10}concentrations (24 hourly) due to the proposed expansion project will be 0.53μg/M^3 at a distance of 735 m from the stack in the down wind direction over the baseline concentrations.

The predicted incremental rise in Particulate Matter concentration due to the Vehicular emission will be 0.13μg/m^3.

The predicted max incremental SO_2concentrations (24 hourly) due to the proposed expansion project will be 6.6μg/m^3 at a distance of 735 m from the stack in the down wind direction over the baseline concentrations.

The predicted max incremental NOx concentrations (24 hourly) due to the proposed expansion project will be 3.2μg/m^3 at a distance of 735 m from the stack in the down wind direction over the baseline concentrations.

The predicted incremental rise in NOxconcentration due to the Vehicular emissions will be 0.93μg/m^3.

The predicted incremental rise in CO concentration due to the Vehicular emission will be 0.54μg/m^3.

The net resultant concentrations (Maximum baseline conc. + predicted incremental rise in conc.) of PM, NO_X& CO are shown in Table No. 11.3.1are well within the National Ambient Air Quality Standards (NAAQS) when the expansion project commences the operation. Hence there will not be any adverse impact on air environment due to the proposed expansion.

Table No. 3.1: Net Resultant maximum concentrations due to the proposed expansion project

Item	PM_{10} (μg/m^3)	SO_2 (μg/m^3)	NO_X (μg/m^3)	CO (μg/m^3)
Maximum baseline conc. in the study area	88.2	26.6	39.2	1497
Maximum predicted incremental rise in concentration due to proposed expansion project (Point Sources)	0.53	6.6	3.2	Nil
Maximum predicted incremental rise in concentration due to proposed expansion project (Vehicular emissions)	0.13	Nil	0.93	0.54
Net resultant concentrations during operation of the expansion project	**88.86**	**33.2**	**43.33**	**1497.54**
National Ambient Air Quality Standards	**100**	**80**	**80**	**2000**

3.2 Prediction of impacts on noise quality

The major noise generating sources are Furnace & DG set. Silencer will be provided to the DG Set. The ambient noise levels will be within the standards prescribed by MoEF i.e., the noise levels will be less than 75 dBA during day time and less than 70 dBA during night time. 0.9 Ha. of extensive greenbelt will be developed covering 1/3rd of the total area helpsin further attenuating the noise levels. Hence there will not be any adverse impact due to noise on population in surrounding areas due to the proposed expansion project.

3.3 Prediction of impacts on Water Environment

In the existing plant, wastewater generated from the Rolling mill sent to settling pond and after that it is being recycled again as closed-circuit cooling system is provided. Sanitary waste water (1.6 KD) generated is being treated septic tank followed by soak pit. Zero Discharge is being maintained in the existing plant.

In the expansion project, there will be no wastewater discharge from the proposed SMS unit as closed-circuit cooling system will be adopted. The wastewater generated from the proposed Rolling Mill unit will be sent to Settling pond after it will be recycled again as closed-circuit cooling system is provided. Oil & grease traps will be provided, to treat if water is getting mixed with oil, grease and cleaning agents. Sanitary wastewater generation due to expansion will be 4.0 KLD. Sanitary wastewater generated from the entire plant will be treated in STP after the proposed expansion proposal. The treated sewage will be utilized for Greenbelt development. Zero Liquid effluent Discharge will be maintained in the in the proposed expansion also.

3.4 Prediction of Impacts on Land Environment

Zero effluent discharge will be adopted. All the required air pollution control systems will be provided to comply with CPCB / CECB norms. All solid wastes will be disposed / utilized as per CPCB / SPCB norms. 0.9 Ha. of greenbelt will be developed as per guidelines. Hence there will not be any adverse impact on land environment due to the proposed expansion project.

3.5 Prediction of Impacts on Biological Environment

- There are no National Parks, Wild life Sanctuaries and Bird Sanctuaries within 10 Km. radius of the plant site.However, movement of Elephants is observed within 10 Kms. radius of the plant, as per the secondary source. Conservation plan is prepared. Budgetary allocation (Rs. 30.0 Lakhs) for conservation of Schedule – 1 species is also approved by Principle Chief Conservator of Forests (PCCF), Raipur, Chhattisgarhtowards implementation of Conservation plan.
- Taraimal RF (2.4 Kms.), Rabo RF (5.6 Kms), Urdana RF (1.2 Kms.) Pajhar PF (8.8 Kms.), Kharidungri PF (3.6 Kms.), Keradungri PF (5.4 Kms.), Dungapani PF (4.0 Kms.), Lakha PF's (1.6 Kms.), Barkachhar RF (3.0 Kms.), Punjipathra PF (6.4 Kms.) exist within 10 Km. radius of the plant site.
- All the required Air emissions control systems in the expansion project will be installed and operated to comply with MoEF&CC/CPCB/CECB norms.
- Zero liquid effluent discharge is being maintained in the existing plant and similar practice will be maintained after expansion also.
- All solid waste disposal will be in accordance with the norms.

- Extensive Greenbelt of0.90 Ha.will be developed in the plant premises.

When all norms are complied and with proper implementation of Environment Management Plan, there will not be any adverse impact on flora & Fauna due to the proposed expansion.

3.6 Socio - Economic Environment

There will be lot of opportunities in employment to local people during construction as well as in operation phase. There will be further upliftment in Socio Economic status of the people in the area. Hence there will be further development of the area due to the proposed expansion project.

4.0 ENVIRONMENTAL MONITORING PROGRAMME

Post project monitoring will be conducted as per the guidelines of CECB and MoEF&CC are tabulated below:

Table No.11.4.1: Monitoring Schedule for Environmental Parameters

S.No.	Particulars	Frequency of Monitoring	Duration of sampling	Parameters required to be monitored
1. Water &Waste water quality				
A.	Water quality in the area	Monitored on quarterly basis.	Grab sampling	As per IS: 10500
B.	STP inlet & Outlet	Once in a month	Grab sampling	As per EPA Rules1996
2. Air Quality				
A.	Stack Monitoring	Online monitors Once in a month		PM PM, SO_2& NOx
B.	Ambient Air quality	Once in a month	24 hours continuously	$PM_{2.5}$, PM_{10}, NOx & CO
C.	Fugitive emissions	Quarterly basis	8 hours	PM
3. Meteorological Data				
A	Meteorological data to be monitored at the plant.	Daily	Continuous monitoring	Temperature, Relative Humidity, rainfall, wind direction & wind speed.
4. Noise level monitoring				
A	Ambient Noise levels	Twice in a year	Continuous for 24 hours with 1-hour interval	Noise levels

5.0 ADDITIONAL STUDIES

No rehabilitation and resettlement is required as the proposed expansion will be carried out in existing plant premises only.

6.0 PROJECT BENEFITS

With the establishment of the proposed expansion project employment potential will increase. Land prices in the area will increase. The economic status of the people in the area will improve due to the proposed project. Top priority will be given to locals in employment. A separate budget will be allocated for Social & Infrastructure development under EMP which will be implemented in the nearby villages.These activities will help in contributing to the development of villages in the nearby areas.

7.0 ENVIRONMENT MANAGEMENT PLAN

7.1 Air Environment

The following are air emission control systems proposed in the expansion project:

Table No.11.7.1: Air Emission Control Systems Proposed

S.No.	Stack attached to	No. of Stacks	Control Equipment	Particulate emission at the outlet
1.	Induction Furnaces (2 x 15 T)	1 no. (twin flue)	Fume extraction system followed by Bag filter	< 30 mg/Nm^3
2.	Induction Furnaces (1 x 15 T)	1 no.	Fume extraction system followed by Bag filter	< 30 mg/Nm^3
3.	Rolling Mill (1,46,250 TPA)	1 no.	Scrubber (will be upgraded after proposed expansion)	< 30 mg/Nm^3

- All conveyors will be completely covered with G.I. sheets to control fugitive dust.
- All bins will be totally packed and covered so that there will not be any chance for dust leakage.
- All discharge points and feed points, wherever the possibility of dust generation is there a de-dusting suction point will be provided to collect the dust.

7.2 Water Environment

In the existing plant, wastewater generated from the Rolling mill sent to settling pond and after that it is being recycled again as closed-circuit cooling system is provided. Sanitary waste water (1.6 KD) generated is being treated septic tank followed by soak pit. Zero Discharge is being maintained in the existing plant.

In the expansion project, there will be no wastewater discharge from the proposed SMS unit as closed-circuit cooling system will be adopted. The wastewater generated from the

proposed Rolling Mill unit will be sent to Settling pond after it will be recycled again as closed-circuit cooling system is provided. Oil & grease traps will be provided, to treat if water is getting mixed with oil, grease and cleaning agents. Sanitary wastewater generation due to expansion will be 4.0 KLD. Sanitary wastewater generated from the entire plant will be treated in STP after the proposed expansion proposal. The treated sewage will be utilized for Greenbelt development. Zero Liquid effluent Discharge will be maintained in the in the proposed expansion also.

7.3 Noise Environment

The major sources of noise generation in the proposed expansion project will be Furnace & DG set, etc. Silencer will be provided to D.G. set. All the machinery will be manufactured in accordance with MoEF&CC norms on Noise levels. The employees working near the noise generating sources will be provided with earplugs. The extensive greenbelt will be developed within the plant premises and will help in attenuating the noise levels further.

7.4 Land Environment

There will be no effluent dischargefrom the manufacturing processas closed circuit cooling system will be adopted. Sanitary waste water will be treated in STP.

Solid wastes will be disposed off as per norms. Extensive greenbelt will be developed in the plant premises. Hence there will not be any impact due to the proposed expansion project.

Solid waste generation and disposal

The following will be the solid waste generation from the proposed expansion project & proposed method of disposal.

Table No.11.7.2: Solid Waste Generation & Method of Disposal

S.No.	Waste	Existing (TPD)	Expansion (TPD)	Method of Disposal
Induction Furnace				
1	Slag	---	45.0	Slag from SMS will be crushed and iron will be recovered & remaining non-magnetic material being inert by nature will be given to Road Contractor (used as sub base material in road construction) / will be given to brick manufacturers.
Rolling mill				
2	Mill scales	1.2	4.6	Mill scales will be given to nearby Ferro alloys manufacturing units or casting units.
3	End cutting	3.8	14.7	Recycled back as raw material in own induction

				Furnaces
Gasifier				
1	Cinder	---	1.4	Will be given to brick manufacturing units
2	Tar	---	0.1	Will be given to authorized recyclers or agencies engaged in road construction

Note:

Solid wastes such as slag will be stored in designated storage yard. All stock piles will be made on top of a stable liner to avoid leaching of materials to ground water.

7.5 Greenbelt Development

About 1/3rd of total land is allocated for developed of greenbelt i.e 0.9 Ha. of land is allocated Greenbelt development

- Local DFO will be consulted in developing the green belt.
- Greenbelt of 33% of the area will be developed in the plant premises as per CPCB guidelines.
- 7 m to 26 m wide greenbelt will be maintained all around the plant.
- The tree species to be selected for the plantation are pollutant tolerant, fast growing, wind firm, deep rooted. A three-tier plantation is proposed comprising of an outer most belt of taller trees which will act as barrier, middle core acting as air cleaner and the innermost core which may be termed as absorptive layer consisting of trees which are known to be particularly tolerant to pollutants.

7.6 Cost for Environment Protection

Capital Cost for Environment Protection for proposed plant	: Rs. 2.20 Crores
Recurring Cost per annum for Environmental protection	: Rs.26.2 Lakhs

7.7 Implementation of CREP Recommendations

All the CREP recommendations will be strictly followed.