

Executive Summary

of

VINAY ALLOYS

(Proposed to Set-up Ferro Alloys Plant for production of either or Combination of High Carbon Ferro Manganese (24000TPA) OR Silico Manganese (15500TPA) OR Ferro Silicon (7750 TPA) OR Pig Iron (24000 TPA) with installation of 2 X 6 MVA Capacity Submerged Arc Furnace Unit)

Category A project

At

Plot No. D -17, MIDC, Umred, District Nagpur

[Based on TOR letter vide No. F. No. No.J-11011/14/2021-IA.II(I)]

Monitoring Period

1st February 2021 to 30th April 2021

Prepared by

Environmental Consultant

Pollution Ecology and Control Services

Accreditation no.: QCI/NABET/ENV/ACO/21/162

1.0 INTRODUCTION

M/s Vinay Alloy has proposed project to install 2 x 6 MVA capacity Submerged Arc Furnace (SAF) at D-17, Umred MIDC, Umred, Dist Nagpur. The total plot area is 19800 sq.mt. Standard Terms of Reference (TOR) has been issued vide letter F No.J-11011/14/2021-IA.II (I) dated 9th January 2021 for preparation of EIA/EMP report of Manufacturing of either or Combination of High Carbon Ferro Manganese (24000 TPA) OR Ferro Silicon (7750 TPA)OR Silico Manganese (15500 TPA) OR Pig Iron (24000 TPA) with installation of 2 X 6 MVA Capacity Submerged Arc Furnace. Details of Project are given in following table.

Project Highlights

Name of the Unit	:	Vinay Alloys
Regd. Office	:	43 A, General Merchant market, Gandhibagh, Dava bazar, Nagpur 440002
Plant Location	:	D-17, Umred MIDC, Umred, Dist Nagpur
Contact person	:	Mr. Vinay Kumar Bhattad
Tel No.	:	09823165746
Email	:	vinaynitrates@rediffmail.com
Present Proposal	:	Manufacturing of either or Combination of High Carbon Ferro Manganese (24000 TPA) OR Ferro Silicon (7750 TPA)OR Silico Manganese (15500 TPA) OR Pig Iron (24000 TPA) with installation of 2 X 6 MVA Capacity Submerged Arc Furnace
Land Area	:	19800 sq.mt.
Raw Materials for proposed project	:	Manganese Ore , Coke, Dolomite, Carbon Paste, Quartz, Ferro slag, Mill Scale, coal, coke breeze, Fluorspar etc.
Project Cost		27.0 Cr.

S.N.	Particulars	Details
1.	Nature & Size of the Project	1. High Carbon Ferro Manganese : 24000 TPA OR 2. Silico Manganese: 15500 TPA OR 3. Ferro Silicon: 7750 TPA OR 4. Pig Iron: 24000 TPA
2.	Location Details	
i	Village	Umred MIDC
ii	District	Nagpur
iii	State	Maharashtra
iv	Co-ordinates	A- 20°49'5.21"N 79°18'59.24"E B- 20°49'4.51"N 79°19'2.70"E C- 20°48'58.17"N 79°19'1.75"E D- 20°48'58.51"N 79°18'58.42"E
v	Toposheet No.	55 P/1, 55 9/5,55 P/6
vi	Elevation above MSL	274 m
vii	Nearest Highway	SH 258 : 200m (E)
viii	Nearest Airport	Dr. Babasaheb Ambedkar International Airport : 39.5 Km (NW)
ix	Nearest Railway Station	Umred Railway Station : 4.0 Km (NNE)
x	Nearest Village	Dhurkheda : 0.5 Km (S)
xi	Nearest major water body	Pandhrabori Talav : 2.0 Km WSW Amb Nadi : 5.0 Km NW Nadi : 2.0 Km E
xii	Forest	Chichala Reserved Forest : 5.0 Km SSE Muniya Reserved Forest : 6.0 Km SSW
xiii	Ecologically Sensitive Zones like wild life sanctuaries, national parks and biospheres	Karhandla Wildlife Sanctuary Existing Boundary : 10.60 Km E Proposed Boundary : 10.30 Km E
xiv	School	1. ZP Primary School : 1.5 Km (W) 2. ZP Upper Primary School: 1.5 Km (NNW) 3. Regent High School : 2.0 Km (N)
xv	Hospital	Bhiwapurkar Hospital : 3.5 Km (NNE) Sub, District Hospital : 4.0 Km (NNE)

2.0 PROJECT LOCATION

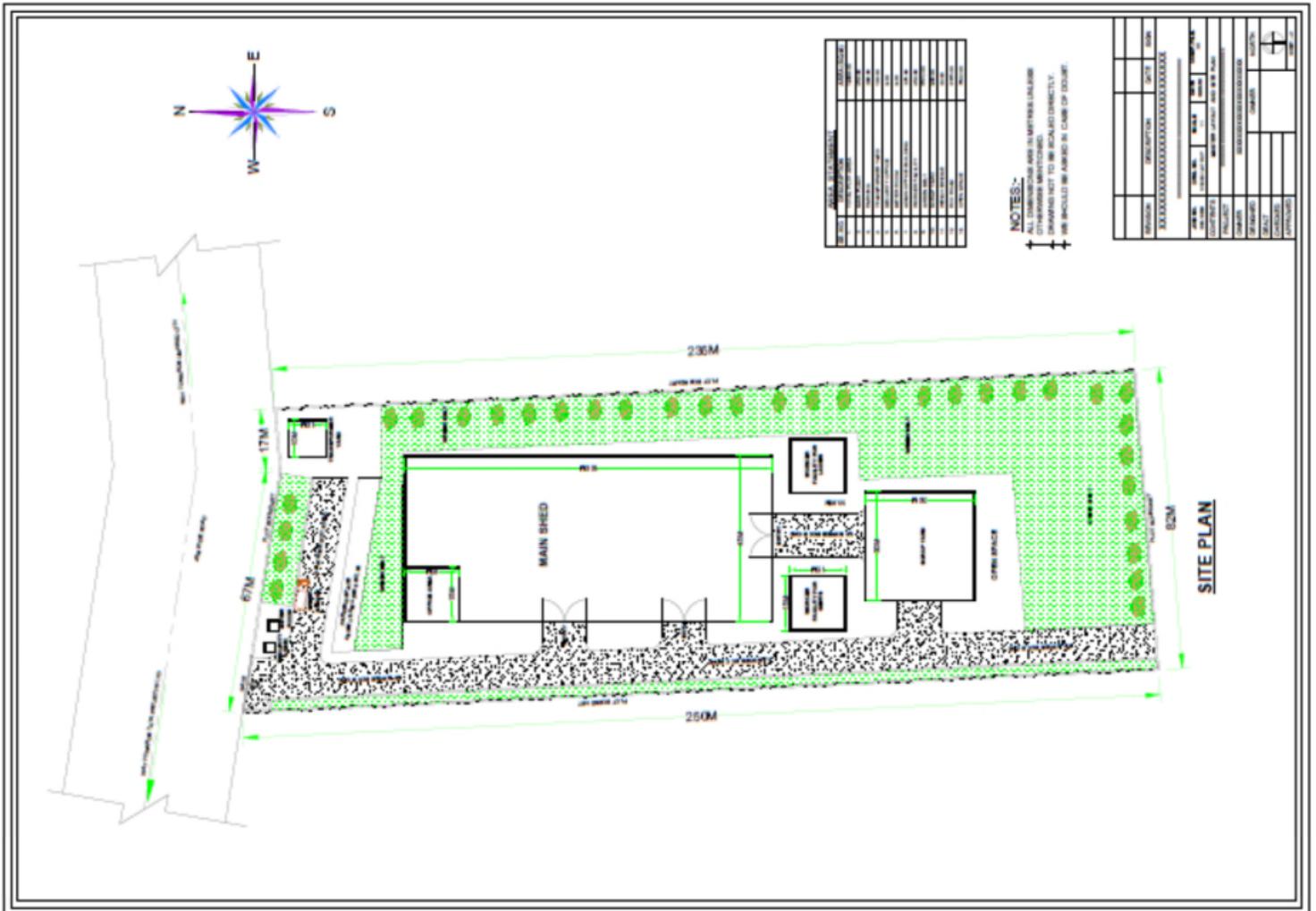
The proposed activities are located at D-17, Umred MIDC, Umred, District Nagpur. Following are the coordinates of the plant site are: The google image is shown in following figure

Coordinates of the Plant site

Point	Coordinates
1	20°49'5.21"N 79°18'59.24"E
2	20°49'4.51"N 79°19'2.70"E
3	20°48'58.17"N 79°19'1.75"E
4	20°48'58.51"N 79°18'58.42"E



Google Image Showing Plant Location



Layout Plan

SIZE OR MAGNITUDE OF OPERATION

Details of proposed new units with configuration are as follows :-

Sr. no.	Plant Configuration	Product	Maximum Production (TPA)
1.	Submerged Electric Arc Furnace (SAF) [2 x 6 MVA]	High Carbon Ferro Manganese OR	24000
2.		Silico Manganese OR	15500
3		Ferro Silicon OR	7750
4		Pig Iron	24000

Raw Material and Fuel Requirement

Raw material and fuel details along with mode of transport is given in the following Table

Proposed Raw Requirement for Ferro Manganese

Sr. No.	Name of Raw Material	Quantity/Ton of FeMn	Requirement (TPA)	Distance	Transportation
1	Manganese Ore	2.1 tons	57600	~ 100-150 km.	By road (covered trucks)
2	Coke	0.8 ton	19200	~ 50 km.	By road (covered trucks)
3	Dolomite	0.25 ton	6000	~ 100-150 km.	By road (covered trucks)
4	Carbon Paste	0.03 ton	720	~ 100-150 km.	By road (covered trucks)
5	Quartz	0.1 ton	2400	~ 100-150 km.	By road (covered trucks)
	Total	-	85920		

Proposed Raw Requirement for Silico Manganese

Sr. No.	Name of Raw Material	Quantity/Ton of SiMn	Requirement (TPA)	Distance	Transportation
1	Manganese Ore	1.6 tons	24800	~ 100-150 km.	By road (covered trucks)
2	Coke	0.8 ton	12400	~ 50 km.	By road (covered trucks)
3	Dolomite	0.25 ton	3875	~ 100-150 km.	By road (covered trucks)
4	Carbon Paste	0.03 ton	465	~ 100-150 km.	By road (covered trucks)
5	Ferro Slag	0.7 ton	10850	In house	-
	Total	-	52390		

Proposed Raw Requirement for Ferro Silicon

Sr. No.	Name of Raw Material	Quantity/Ton of FeSi	Requirement (TPA)	Distance	Transportation
1	Quartzite	1.8 ton	13950	~ 100-150 km.	By road (covered trucks)
2	Mill Scale	0.3 ton	2325	~ 100-150 km.	By road (covered trucks)
3	Coal	0.9 ton	6975	~ 50 km.	By road (covered trucks)
4	Coke Breeze	0.5 ton	3875	~ 50 km.	By road (covered trucks)
5	Scrap	0.1 ton	775	~ 100-150 km.	By road (covered trucks)
	Total	-	27900		

Proposed Raw Requirement for Pig Iron

Sr. No.	Raw Material	Specific Consumption T/T	Quantity	Distance	Transportation
1.	Mill Scale	0.1	2400	~ 100-150 km.	By road (covered trucks)
2.	Iron Ore Sinter	1.0	24000	~ 100-150 km.	By road (covered trucks)
3.	Quartz	0.03	720	~ 50 km.	By road (covered trucks)
4.	Dolomite/ Limestone	0.35	8400	~ 100 km.	By road (covered trucks)
5.	Coke	1.0	24000	~ 50 km.	By road (covered trucks)
6.	Flur Spar	0.04	960	~ 100-150 km.	By road (covered trucks)
7.	Electrode Paste	0.015	360	~ 100-150 km.	By road (covered trucks)
	Total	-	60840		

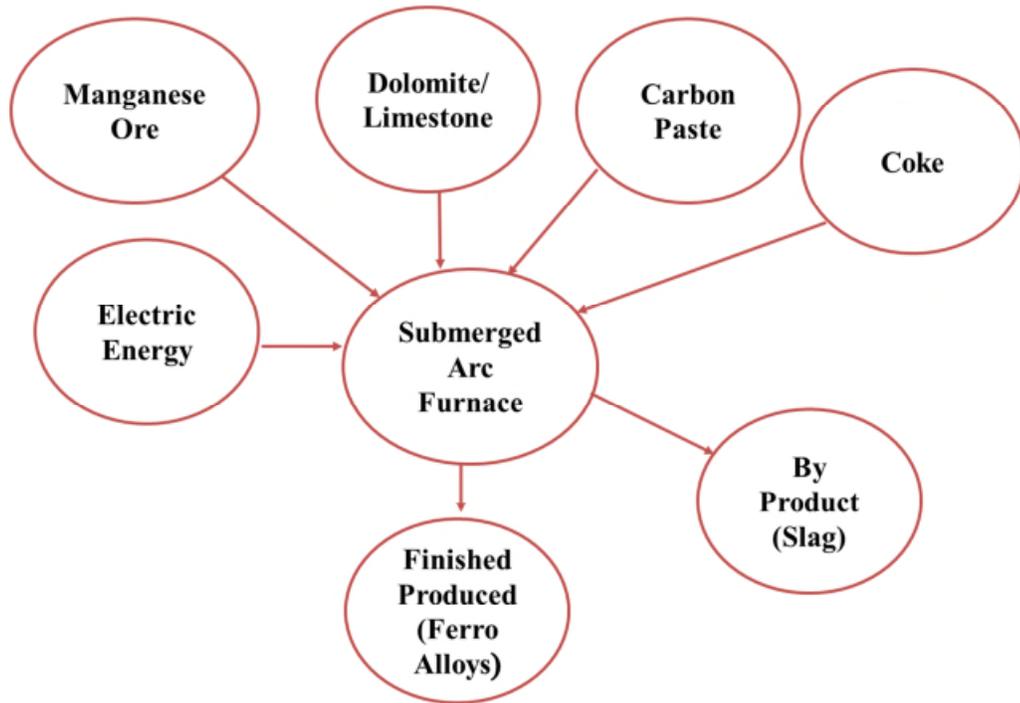
Source

The raw material required for the proposed project will be procured from Karnataka, Madhya Pradesh etc.

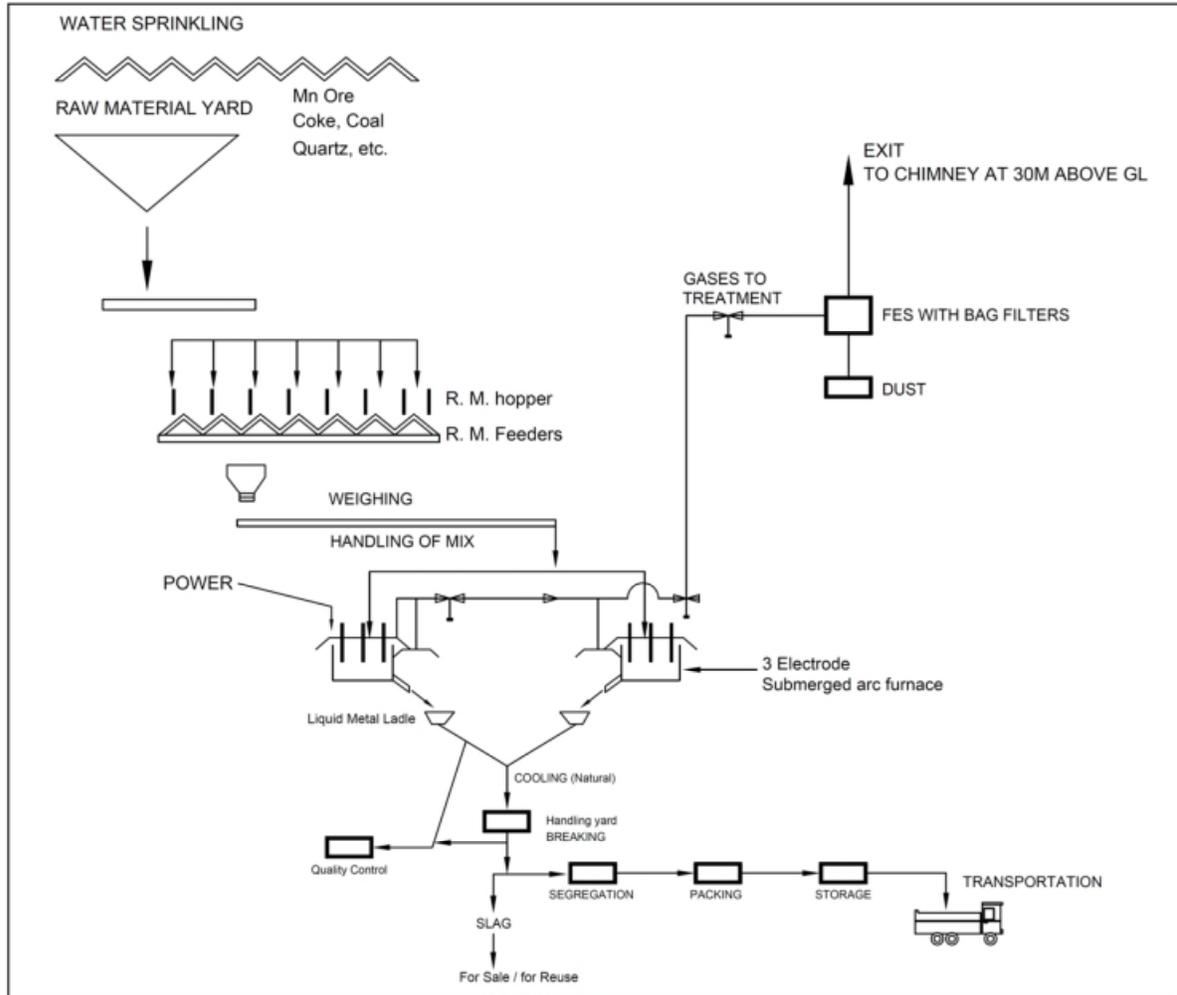
MANUFACTURING PROCESS

The submerged arc process is a reduction smelting operation. The reactants consist of metallic ores (ferrous oxides, silicon oxides and manganese oxides) and a carbon-source reducing agent, usually in the form of coke, charcoal, high and low-volatility coal. Dolomite may also be added as a flux material. Raw materials are crushed, sized, and, in some cases, dried, and then conveyed to a mix house for weighing and blending. Conveyors, buckets,

skip hoists, or cars transport the processed material to hoppers above the furnace. The mix is then gravity-fed through a feed chute either continuously or intermittently, as needed. At high temperatures in the reaction zone, the carbon source reacts with metal oxides to form carbon monoxide and to reduce the ores to base metal.



Flow Chart of Ferro Alloys Manufacturing



Schematic diagram showing process flow diagram of Ferro Alloys Manufacturing

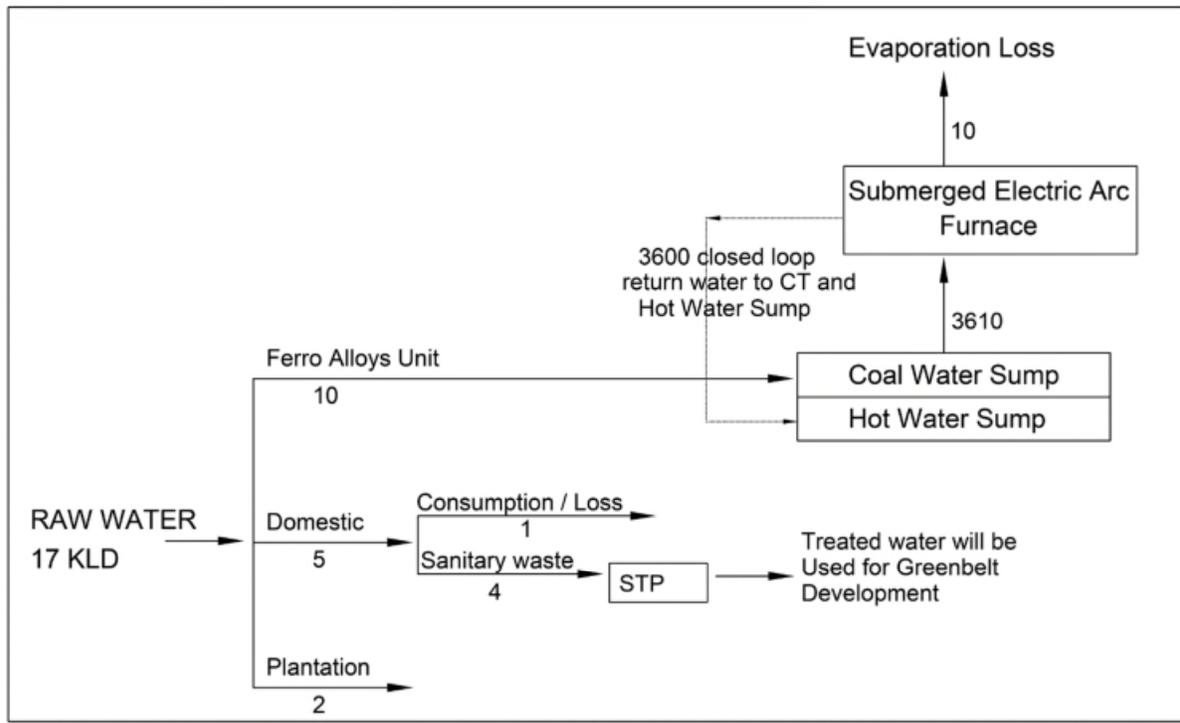
Water Requirement

The total water requirement will be 17 KLD which will be sourced MIDC Umred.

Water Requirement

Sr. No.	Purpose	Quantity m ³ /day	Source
1	Ferro Alloy Unit	10	MIDC, Umred
2	Domestic	5.0	
3	Plantation	2.0	
Total		17	

M/s Vinay Alloys is committed for ZERO Discharge of waste water. The waste water generated from various processes will be suitably treated and recycled for reuse within the plant premises.



Water Balance Diagram

Vinay alloys will be committed to ZERO Discharge of waste water. During plant operation no waste water will be generated from Plant. Cooling water completely recycled in a closed loop. The entire treated waste water will be recycled and reused. The domestic wastewater generated will be treated in Packaged Type STP

Power Requirement

Total Power required for proposed project is 15 MW. Electric power will be supplied from State Electricity Board.

Employment Generation (Direct and Indirect) due to Project

The proposed project will create direct and indirect employment to 150 people. Out of which 50 nos. are directly employed officials, skilled staff, semi-skilled & unskilled labour.

The remaining are those indirectly employed in contract works & transport. The local persons will be given preference in employment as per their qualification.

3.0 DESCRIPTION OF THE ENVIRONMENT

The impact identification always commences with the collection of baseline data such as ambient air quality, ground water quality, surface water quality, noise levels, land environment, land use pattern, flora & fauna and socio economic aspects with in the study zone of 10 Km. radius during February to April 2021. Baseline data has been collected pertaining to Ambient Air, Noise, Water & Soil by an external laboratory which is MoEF&CC recognized Laboratory. Due care has been taken by PECS to ensure that calibrated samplers / equipment /instruments have been utilized for sampling & analysis. Adequate care has also been taken to ensure proper Preservation & Transportation methods in accordance with the standard procedures.

Baseline Environmental status in and around the proposed activities indicates the existing quality of Air, Noise, Water, Soil and Socio-economic environment. The schedule of environmental monitoring programme is presented in following **Table**

SCHEDULE OF ENVIRONMENTAL MONITORING PROGRAMME

Environmental Component	Monitoring period	Number of sampling Stations	Parameters
Micro -Meteorology	1 st February to 30 th April 2021	01	Temperature, Relative Humidity, Rainfall, Wind Speed, Wind direction
Air Quality	1 st February to 30 th April 2021	08	PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO
Water Quality	March 2021	08 Surface & 08 Ground	Parameters as per IS-10500:2012 and IS-2490:1982
Noise Level	March 2021	08	L _d , L _n & L _{dn}
Soil Quality	March 2021	08	Physico & Chemical characteristics as per Indian Standards (IS 2720)

AIR ENVIRONMENT

The ambient air quality with respect to the study zone of 10 km. radius around the plant site forms the baseline information. The various sources of air pollution in the region are vehicular traffic, dust arising from unpaved village roads & domestic fuel burning. The Prime objective of baseline air quality survey is to assess the existing air quality of the area. This will also be useful is assessing the conformity to standards of the ambient air quality during the operation of the proposed project.

The ambient air quality monitored at 8 locations selected based on predominant wind direction, indicated the following ranges;

PM₁₀: 31.2 -63.6 $\mu\text{g}/\text{m}^3$.

PM_{2.5} : 15.2-34.3 $\mu\text{g}/\text{m}^3$

SO₂ : 7.5- 23.3 $\mu\text{g}/\text{m}^3$

NO_x : 9.9- 31.8 $\mu\text{g}/\text{m}^3$

Industrial Area	PM ₁₀	PM _{2.5}	SO ₂	NO _x
Residential, Rural Area (CPCB Norms)	100 $\mu\text{g}/\text{m}^3$	60 $\mu\text{g}/\text{m}^3$	80 $\mu\text{g}/\text{m}^3$	80 $\mu\text{g}/\text{m}^3$

The concentrations of various parameters are within the NAAQS Standards. There is marginal increase in emissions due to the proposed project due to the emissions from Stack, Fugitive emissions, Vehicular Emissions the over baseline concentrations.

Water Environment

A total 16 samples including eight surface & eight ground water samples were collected and analyzed. The water samples were analyzed as per Standard Methods for Analysis of Water and Wastewater, American Public Health Association (APHA) Publication.

It was observed that the characteristics of the surface and ground water samples were found to be within the permissible limits stipulated standard for drinking water (BIS 10500 – 2012) except the total coliforms in surface water samples which may be due to the human activities observed during sampling and requires disinfection before use for drinking purpose.

Noise Environment

Noise levels are in the range of 40.7 to 45.8 dB (A)) at all eight stations. Maximum levels of noise have recorded in day hours which are natural as our most of activities have done in day hours. Noise levels measured at all eight stations (N-1, N-2, N-3, N-4, N-5, N-6, N-7 and N-8) are low and well within limit of either 65.0 dB(A) for Residential Area or 75.0 dB(A) for Industrial Area as given in MoEF&CC Gazette notification for National Ambient Noise Level Standard.

Land Environment

Samples collected from identified locations indicate pH value ranging from 7.2 to 7.9, which shows that the soil is neutral to moderately alkaline in nature. Soil texture is mostly sandy Clay loamy in the study area. Total Nitrogen ranges from 101.6 to 317.1 kg/ha., indicates that good amount of nitrogen is present in the soil and Phosphorous is present in the range of 15.8 to 35.2 kg/ha which is average to sufficient range required Phosphorous quantity. Potassium is found to be ranging from 115 to 175.5 Kg/ha which is medium to better range. It indicates the soil in the study area is fertile.

4.0 ANTICIPATED IMPACTS & MITIGATION MEASURES

The Maximum Cumulative GLC for PM₁₀ will be 0.173 $\mu\text{g}/\text{m}^3$ in East Direction. .The predicted ground level concentrations obtained when superimposed on the baseline concentrations will be within the prescribed NAAQ Standards. Pollutant concentration summaries from accidental release is presented in the section below and it was found that at that time of such type of release the maximum GLC will be 30.51 $\mu\text{g}/\text{m}^3$ for the plot of 1 hr.

The emissions due to transportation of vehicles in the study area were determined from fuel-based emission factors and number of vehicles plying on roads in the area. Loading and transportation of raw materials are the significant sources of emissions.

The majority of trucks (95%) plying in the study area are manufactured in India as per the standard norms hence it is assumed that emission from these trucks will be similar, as emission norms are same for the vehicle used in India and is mandatory for the manufactures to follow emission norms under the Motor Vehicle Act. .

Impact on Noise Levels and Mitigation Measures

During operation, the major noise generating sources are crushing mill, auto loading section, electric motors etc. These sources will be located far off from each other. Under any circumstances the noise level from each of these sources will not exceed 75 dB (A).

Noise levels generated in the project site will be confined to the noise generating plant units hence the impact of noise levels on surroundings will be insignificant

Mitigation Measures

The noise levels will not exceed the standards stipulated by Central Pollution Control Board at any point of time. The equipments will have inbuilt noise control devices. The measured noise level produced by any equipment will not exceed 75 dB(A) at a distance of 1.0-m from its boundary in any direction under any load condition. The noise produced in valves and piping associated with handling compressible and incompressible fluids will be attenuated to 75 dB(A) at a distance of 1.0 m from the source by the use of low noise trims, baffle plate silencers/line silencers, acoustic lagging (insulation), thick-walled pipe work as and where necessary. The general mitigation for the attenuation of the noise are given below:

- ❖ Encasement of noise generating equipment where otherwise noise cannot be controlled
- ❖ Providing noise proof cabins to operators where remote control for operating noise generating equipment is feasible.
- ❖ In all the design/installation precautions are taken as specified by the manufacturers with respect to noise control will be strictly adhered to;
- ❖ High noise generating sources will be insulated adequately by providing suitable enclosures;
- ❖ Use of lagging with attenuation properties on plant components / installation of sound attenuation panels around the equipment
- ❖ Other than the regular maintenance of the various equipment, ear plugs/muffs are recommended for the personnel working close to the noise generating units;

- ❖ All the openings like covers, partitions will be designed properly
- ❖ Inlet and outlet mufflers will be provided which are easy to design and construct.
- ❖ All rotating items will be well lubricated and provided with enclosures as far as possible to reduce noise transmission. Extensive vibration monitoring system will be provided to check and reduce vibrations. Vibration isolators will be provided to reduce vibration and noise wherever possible;
- ❖ The insulation provided for prevention of loss of heat and personnel safety will also act as noise reducers.

Impact on Water and Mitigation Measures

Total water requirement for the proposed project will be about 17 KLD, will be supplied by MIDC. Vinay Alloys is committed to ZERO Discharge of waste water. 4 KLD of Domestic waste water will be taken to adequately designed STP. The treated water will be recycled for utilization in Green Belt Development

Terrestrial Ecology

Biological Environment

There shall not be any loss or reduction of species and habitat due to the project site. During the EB study No Endemic, Rare, Endangered and Threatened (RET) species of flora and fauna were found in the study area. There is no National park, Wildlife sanctuary, Biosphere reserves and protected forest within 10 km of the plant area. No schedule- I species were recorded in the core and buffer zone of plant area during the biodiversity assessment. There may be an impact on the biological environment of the area due to operation of plant, if proper care will not be taken

Solid Waste Generation

Solid Waste Generation and Management in Submerged Arc Furnace from proposed plant is given in below table

Solid Waste generation	Quantity (TPA)	Method of Disposal
Slag from Ferro Manganese	9300	Ferro Manganese slag will be used in manufacturing of Silico Manganese and
Slag from Silico manganese	9300	Silico manganese slag will be used / sold for road making, hardening of working area etc.
Slag from Ferro Silicon	310	will be used / sold for road making, hardening of working area etc.
Slag from Pig Iron	960	will be used / sold for road making, hardening of working area etc.
Dust from Bagfilters of SAF and during tapping	20	It will be sold to authorized vendors
Other Solid waste like waste cottons, empty bags, rejected gaskets, empty bottles band jerry canes, steel structures and rejected spares of process equipment etc, generated may have scarp value and Hazardous waste will be used Oil		

Impact on Socio-Economic Environment Socio Economic Environment

M/s Vinay Alloys will provide employment to 150 workers. The 80-90% of local people will be given preference in employment as per the qualification and technical competencies. In order to mitigate the adverse impacts likely to arise in the proposed project activities and also to minimize the apprehensions to the local people, it is necessary to formulate an affective EMP for smooth initiation and functioning of the project. The suggestions are given below:

- ❖ Communication with the local people will be established regular basis by project authority to provide an opportunity for local youth.
- ❖ Project authorities will undertake regular environmental awareness program on environmental management
- ❖ Job opportunities are the most demanding factor, the local people as per their education will be employed.

- ❖ For social welfare activities to be undertaken by the project authorities, collaboration should be sought with the local administration, gram panchayat, block development office etc. for better coordination.

The overall impact on the socio economic environment will be significant

5.0 ENVIRONMENTAL MONITORING PROGRAMME

Source \ Stack Monitoring:

The emissions from the stacks will be monitored through MoEFCC/NABL Accredited Laboratory for exit concentration of Particulate Matters, SO₂ and NO_x as per statutory requirement for each stack by using stack sampler.

All the main stacks are equipped with Online Continuous Stack Emission Monitoring system along with remote calibration facilities for gaseous analyser for real time measurements of exit concentration from the stacks. The Online Continuous Stack Emission Monitoring systems will be connected with the server of the CPCB and MPCB.

Performance Analysis of Pollution Control Equipment

The performance analysis of all the pollution control equipment is being carried out once in three months. The same monitoring frequency shall be maintained at all the pollution control equipment.

Ambient Air Quality Monitoring

Ambient air quality monitoring at 4 locations in and around the plant will be carried out by NABL accredited lab on regular basis and reports are being submitted to MPCB regularly.

Ground Water and Waste Water Quality Monitoring

Ground water quality & Waste water quality samples will be collected and analyzed by NABL accredited lab. Reports are being submitted to MPCB, CPCB and MoEF. Plant will be maintaining zero liquid discharge and as per guidelines issued by CPCB flow meter with camera is also installed and connected with CPCB server.

Monitoring of Rain Water Harvesting

Piezometer with Telemetry shall be provided within 100 m of water extraction structure on existing and on-going Rain Water Harvesting Project.

Noise Environment

Noise levels will be monitored at various locations of the plant for day and night time as per the CPCB guidelines.

Fugitive emission

Monitoring of Ground level dust concentration/Fugitive emission along with gaseous pollutants viz SO₂, NO_x will be carried out periodically. Dust concentration and gaseous emission levels from all the fugitive sources are well within prescribed limit and it is being regularly monitored.

Necessary control measures are being adopted to keep the secondary fugitive emission within limits.

6.0 ADDITIONAL STUDIES

The additional studies as per the ToR issued by MoEF&CC are Public Consultation, Social Impact Assessment, Risk Assessment, & Disaster Management Plan.

7.0 PROJECT BENEFITS

The proposed Project will result in improvement of infrastructure as well as upliftment of social structure will further strengthen the existing facilities. The people residing in the nearby areas will be benefited directly or indirectly as per their educational qualification. It will also help in development of infrastructure such as road transport, educational facilities, water supply and sanitation. Based on the social impact assessment study following activities will be carried out under CER. In addition to this, after public hearing, based on the requirement CER Fund will be spent. As per the Office Memorandum No. 22-65/2017-IA.III dated 20th October 2020 based on the issued raised at the time of public hearing the CER will be detailed in the Final EIA Report.

8.0 ENVIRONMENTAL MANAGEMENT PLAN

The following mitigation measures will be undertaken for the proposed project

Air pollution control measures:

The main sources of dust pollution are crushing operations of raw materials (such as, Mn Ore, Dolomite, Quartz, coke, etc.) and their transfer points. A separate de-dusting system will be provided to control the dust from various material transfer points by means of suitable ducting connected to an Induced Draught fan. The dust that is drawn from various points will pass through bag filters.

S.N	Stack attached to	Control Equipment	Stack Height (m)	Maximum Particulate emission at the outlet of Stack
1	Submerged Electric Arc Furnace (2 x 6 MVA)	4 th Hole extraction & cleaning system with Bag filters	30 m	30 mg/m ³

Action Plan for Control and Monitoring of Fugitive Emissions

- Material transfer points will be provided with Dust Extraction system and bag filters.
- Fugitive dust generated from Raw Material Handling, Transfer points will be collected using suction ducts and clean in Bag Houses.
- The plant will be further equipped with Natural Draft Exhaust Fans attached to shed for ventilation.
- Water sprinklers will be provided across the plant.
- All internal roads will be Concreted.
- All the stacks will be equipped with continuous emission monitoring system along with remote calibration facility for gaseous parameters and connectivity with MPCB & CPCB server.

Water pollution control measures

Vinay alloys will be committed to ZERO Discharge of waste water. During plant operation no waste water will be generated from Plant. Cooling water completely

recycled in a closed loop. The entire treated waste water will be recycled and reused. The domestic wastewater generated will be treated in Packaged Type STP

Plantation & Green belt

Out of 19800 sq mt (1.98Ha), 33% of land will be developed as green belt. Adequate green belt will be developed in plant premises. Locally available types of trees as specified by the Pollution Control Board will be planted, which are resistant to pollutants.

Rain Water Harvesting System

RWH structures will be provided to harvest the rain water around the plant area and roof top. The collected rain water shall be utilized for plant uses to minimize the raw water requirement from the source. The surface water run-off from the main plant area would be led to a sump for settling and the over flow would be collected in the common water basin for further uses in the plant to optimize the raw water requirement of the plant.

9.0 CONCLUSION

It can be concluded that there would be negligible impact in the buffer zone due to the proposed Project. The project shall contribute to the socio-economic development, strengthening of infrastructural facilities like medical, educational etc. The plant shall be operated keeping "Sustainable Development" of the region in mind. Further, management is committed to contribute towards improving socio-economic status of the surrounding local community.

Environmental monitoring is a successful tool for the management for implementation of adequate & effective environmental measures. It also helps the management to take mid-course correction, if required based on the environmental monitoring results. Considering the above overwhelming positive impact on the community, there shall be overall development of the area.