Executive Summary

for

Proposed Iron Ore Beneficiation Plant of 6,00,000 TPA (0.6 MTPA) & Iron Ore Pellet Plant of 4,00,000 TPA (0.40 MTPA)

Proponent

M/s. Dinanath Allied Steel Manufacturing Pvt. Ltd.

Plot No B-3/1, Mul MIDC,Mul, District Chandrapur

By

Pollution & Ecology Control Services
NAGPUR
Accreditation no.: QCI/NABET/ENV/ACO/21/162
Extension Letter: QCI/NABET/ENV/ACO/21/1730 dated 13th May 2021

EXECUTIVE SUMMARY

1. Project Name and Location

M/s. Dinanath Allied Steel Manufacturing Pvt. Ltd. has Proposed Iron Ore Beneficiation Plant of 6,00,000 TPA (0.6 MTPA) & Iron Ore Pellet Plant of 4,00,000 TPA (0.40 MTPA) in an area of 14.0 Ha at Plot No B-3/1, Mul MIDC, District Chandrapur.

The detailed of project site are given in below table

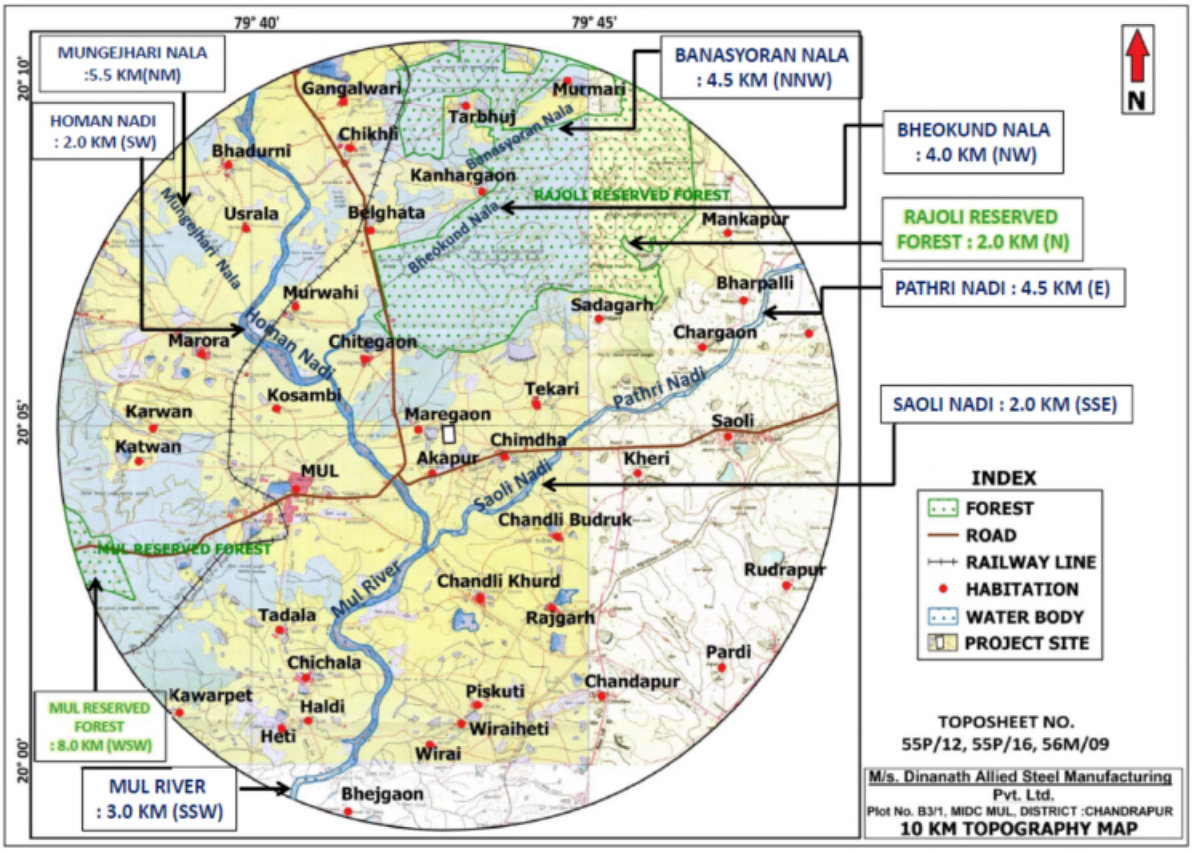
DETAILS OF THE PROJECT

Name of Project	**:**	M/s.Dinanath Allied Steel Manufacturing Pvt. Ltd.
Project Location	**:**	Plot No B-3/1, Mul MIDC, Taluka Mul, District Chandrapur
Present Proposal	:	Iron Ore Beneficiation Plant of 6,00,000 TPA (0.6 MTPA) & Iron Ore Pellet Plant of 4,00,000 TPA (0.40 MTPA)
Total Land Area	**:**	14. 0 Ha
Project cost		90 .0 Crore

Sr No	Particulars	Details
1	Project Site	Plot No B-3/1, Mul MIDC, Taluka Mul, District Chandrapur
2	Latitude Longitude	A 20° 4'49.28"N 79°42'53.71"E B 20° 5'4.49"N79°42'52.65"E C 20° 5'5.09"N79°43'2.90"E D 20° 4'49.75"N79°43'3.80"E
3	Elevation above MSL	198 MSL
4	Toposheet	55 P/12, 55 P/16, 56 M/9
5	Nearest National Highway/State Highway	SH – 7 : 750 m (S) SH – 9 : 1.5 Km (W)

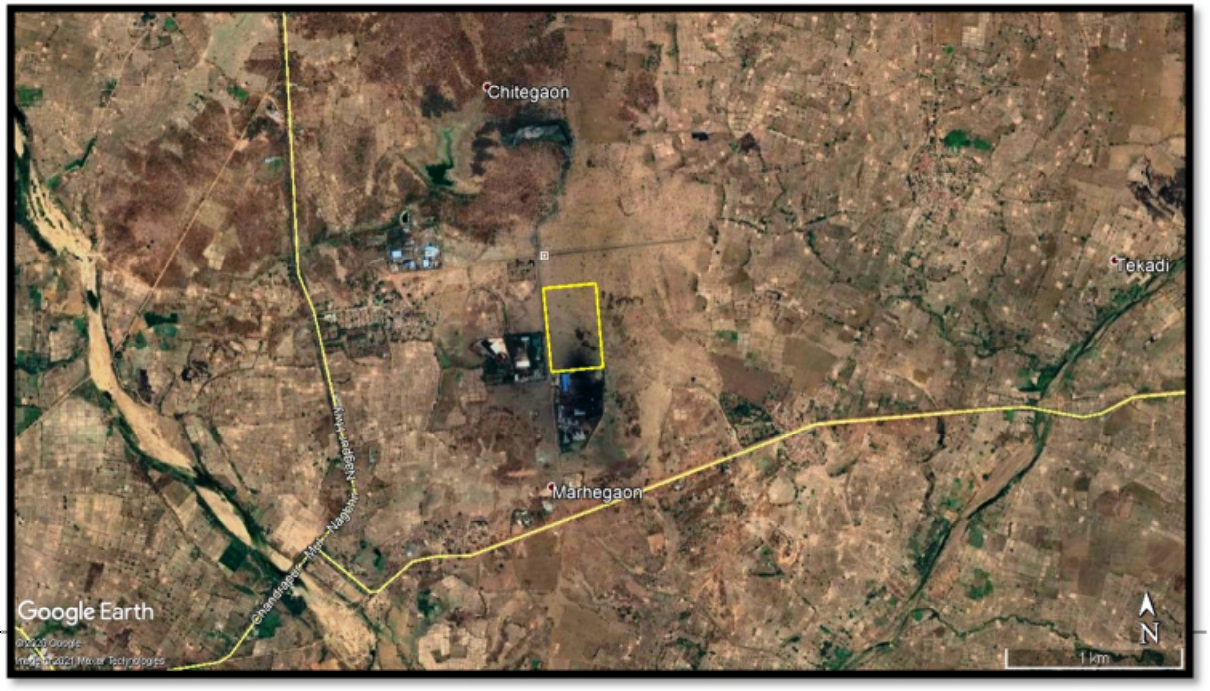
6	Nearest Airport/ Air Strip	Dr. Babasaheb Ambedkar International Airport Nagpur : 128.00 Km (NNW)
7	Nearest Railway Station	Mul Railway Station : 6.5 Km (WSW)
8	Nearest Village	Chitegaon : 500 m (W)
9	Forest	Rajoli Reserved Forest : 2.0 Km (N) Mul Reserved Forest : 8.0 Km (WSW)
10	Ecologically Sensitive Zones like wild life sanctuaries, national parks and biospheres	As per OM F.No. 22-43/2018 –IA.III dated 8th August 2019 para 4 (ii) , the proposed location is located within 10 km of extended boundary of Tadoba Andhari Tiger Reserved wildlife sanctuary
11	Water Bodies	Mul River : 3.0 Km (SSW) Homan Nadi : 2.0 Km (SW) Saoli Nadi : 2.0 Km (SSE) Pathri Nadi : 4.5 Km (E) Banasyoran Nala : 4.5 Km (NNW) Bheokund Nala : 4.0 Km (NW) Mungejhari Nala : 5.5 Km (NW)
12	School	1) Subhash Primary School : 4.0 Km (SW) 2) Ballarpur Public School : 6.0 Km (SW) 3) Government School Rajgad : 4.5 Km (S)
13	Hospital	1) Shirpurwar Hospital, Mul : 4.0 Km (SW) 2) Mansmit Hospital : 7.0 Km (E)

Map showing the location of the project site is given in the Figure below,

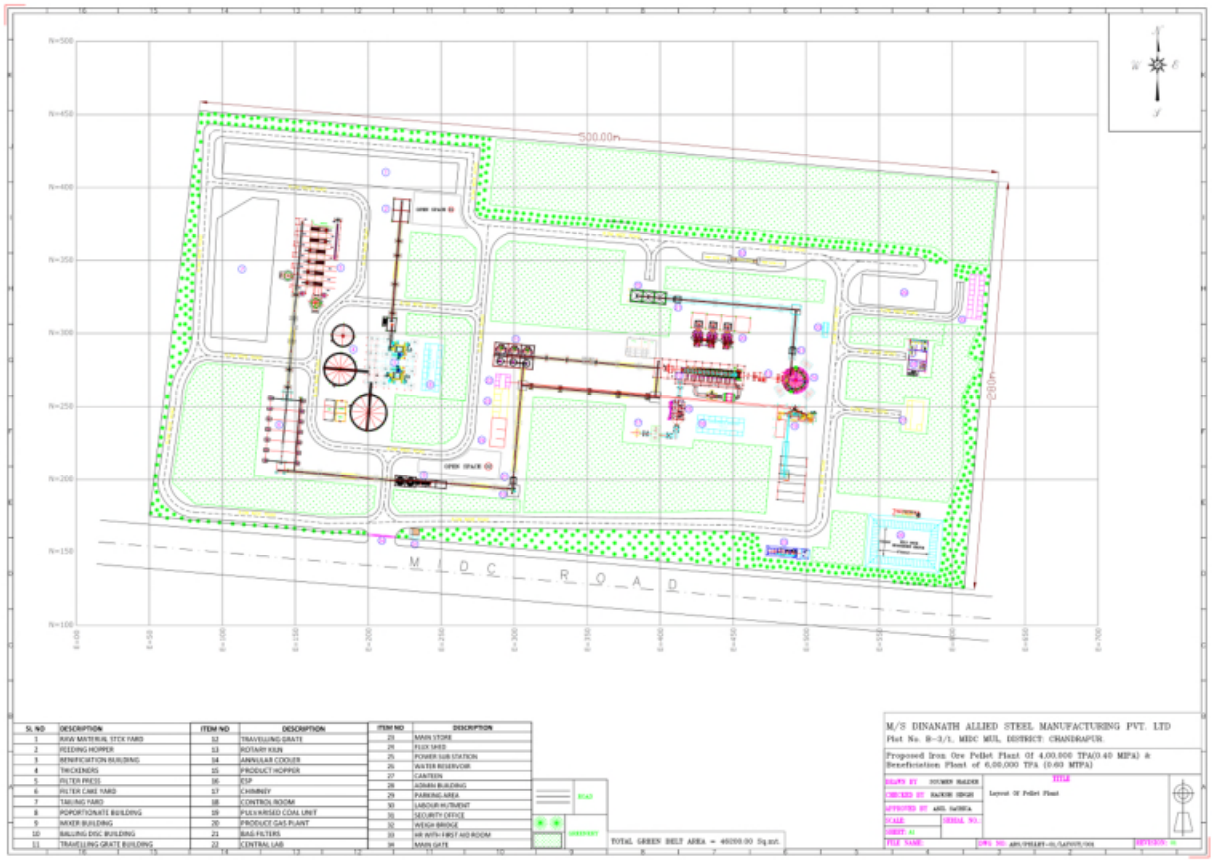


Source: Google Earth

Google Image



Plant Layout.



2. Products and Capacities

M/s. Dinanath Allied Steel Manufacturing Pvt. Ltd has proposed Iron Ore Beneficiation Plant of 6,00,000 TPA (0.6 MTPA) & Iron Ore Pellet Plant of 4,00,000 TPA (0.40 MTPA) at Accordingly, the Ministry prescribed Standard ToRs vide letter No.J-11011/60/2021-IA.II(I) dated 20/02/2021 for proposed project of Iron Ore Beneficiation of 6,00,000 TPA (0.6 MTPA) & Iron Ore Pellet Plant of 4,00,000 TPA (0.40 MTPA).at Plot No B-3/1, MUL MIDC, District Chandrapur

Requirement of Land, raw material, water, power, with source of supply

Requirement of Land

The total project area is 14.0 Ha. All the land is in possession of the proponent for Industrial set up as well as Green belt development.

Raw Material

The raw material requirement for the proposed unit is given inTable below:

Details of Raw Materials Required

Sl. No.	Raw material	Annual Requirement	Probable Source
BENEFICIATION PLANT			
1	Iron ore fines	6,00,000TPA	Mines & Local Market
PELLET PLANT			
1.	Iron Ore Fines	460000 TPA	Captive Beneficiation Plant
2.	Pulverised Coal	6000 TPA	Imported Coal, WCL
3.	Bentonite	4500 TPA	Gujarat
4.	Limestone/Dolomite	4800 TPA	Local Market
5.	Coal for Gasifier	15000 TPA	Indian Coal, WCL

Water Requirement

The total water required will be 515 KLD and will be supplied by MIDC.

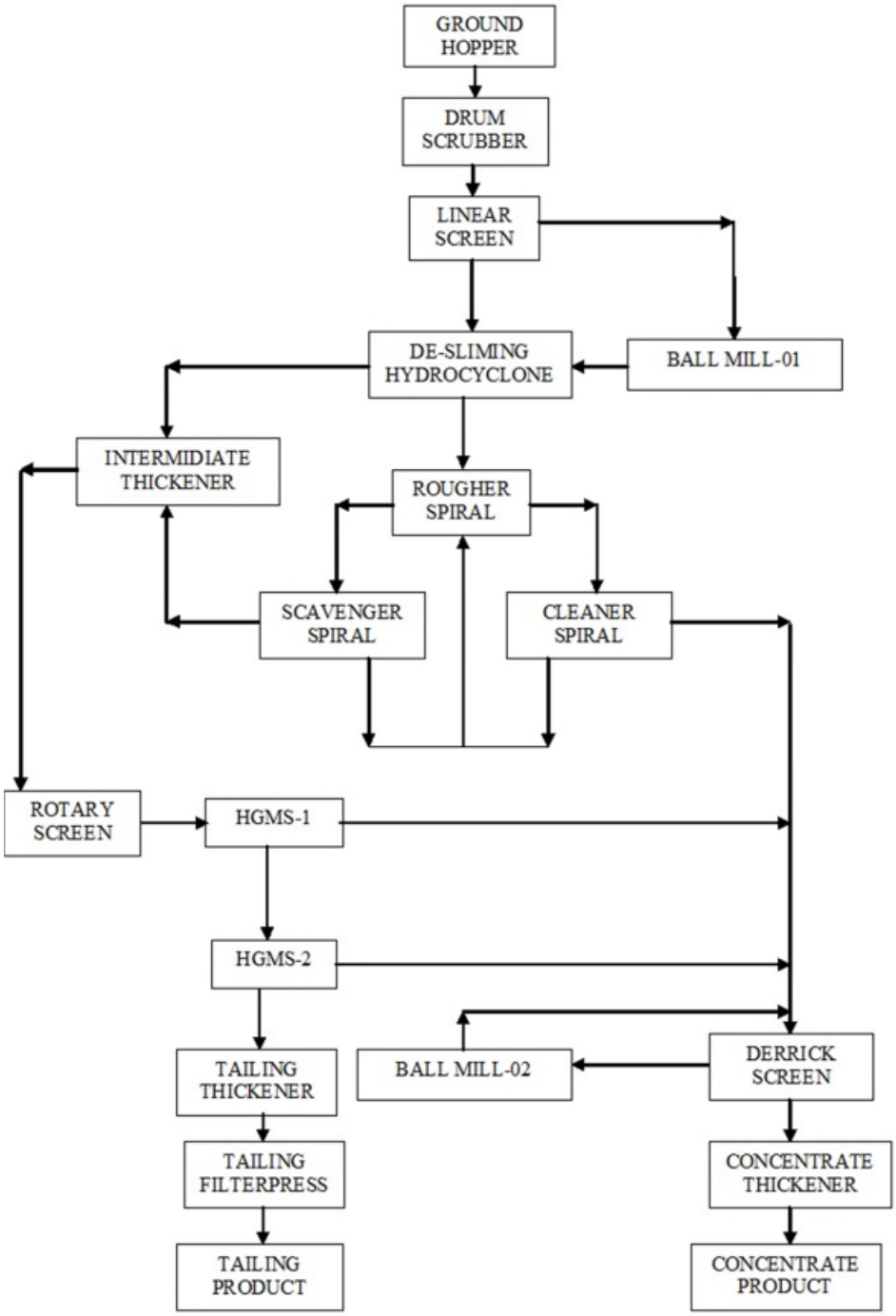
Water Requirements during Operation Phase (m^3/day)

S. N.	Purpose	Required Quantity (m^3/day)	Wastewater Generation	Loss	Remarks
1	Pelletization process (Kiln, TG, Balling Disc, Cooling etc.)	150	120	30	Recycle and reused in process.
2	Beneficiation Plant	350	280	70	Recycle and reused in process.
2	Domestic use and Drinking	10	8	2	8m^3/day will be treated and reused.
3	Plantation	5	-	5	-
	Total	**515**	**408**	**107**	

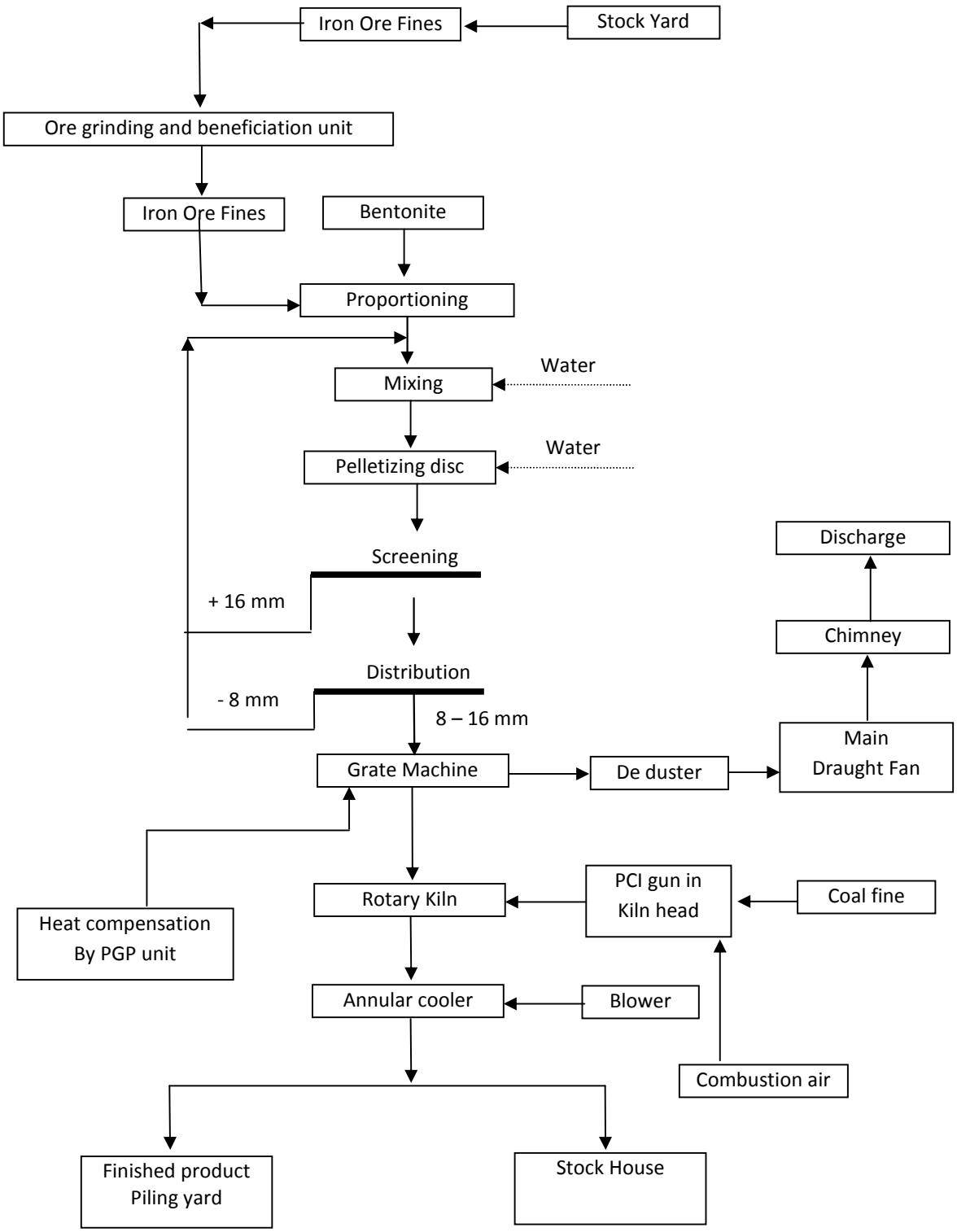
Power Requirement

The power required will be supplied by Maharashtra State Electricity Board. The total power requirement for proposed project will be 5.0 MVA.

3. Process Description



Flow chart of process of Iron Ore Beneficiation



Flow chart of process of Pellet Plant

4. Mitigation Measures

Air Pollution Control

- There will be two major source of air pollution in the plant, fugitive emissions from various material handling and transfer points and flue gases generated from various combustion units. ESP, will be provided as air pollution control system of specified size followed by 55 m. stack height and cleaned air will be discharged through stack, so that the dust concentration will be well within the prescribed standard. At material transfer point, Bag filters are suggested to minimize fugitive dust
- Proper Dust Suppression is proposed in stock yard of Iron Ore Fines, sprinkling on internal roads, regular check up& maintenance of vehicles, it will be ensured that all trucks/dumper caring Iron Ore Fines Ore covered by Tarpaulin.

Noise Pollution Control

- During the operation of the plant, noise level will be increased and is maintained at less than 75dB at the plant boundary.
- Necessary protective measures will be taken to minimize the noise level as per the requirement of OSHA (Occupational Safety and Health Administration) Standards.

Water Pollution Control

- Dinanath Allied Steel Manufacturing Pvt. Ltd have proposed to install Thickeners and filter press to recover the water.
- The optimum use of fresh make up water shall be practiced and maximum recycling for washing shall be done.
- The domestic wastewater generated will be treated in Packaged Type STP.

PELLET PLANT WITH GASIFIER

The dust from de-dusting equipment is reused in the process. The solid wastes to be generated and their Management/disposal are given below :-

Ash	2490 TPA	Utilized for fly ash brick making and reclamation of low laying areas.
Tar	450 KL/A	Tar Generated from Coal Gasification plant will be reused in Pellet Kiln Burner
Tailings	90,000 TPA	Tail slurry would be transported to a designated site inside the plant boundary for a few days till it will be used in embankments, road formation, filling of low-lying areas and as additives in cement manufacturing.

Green Belt Development

The plantation helps to capture the fugitive emissions and attenuate the noise apart from improving the aesthetics quality of the region Avenue plantation within the plant and green belt development will be done. An area about 4.50 Ha along the boundary wall and some open space will be developed as green belt in the Plant premises. Locally available type of trees will be planted for the development of green belt.

5. Capital Cost

Total Project cost for proposed will be Rs. 90 Crores.

6. Site Selected for the Project

The location of proposed project is identified for following reason:

The proposed project is located at Plot No B-3/1, Mul MIDC,Mul, District Chandrapur . The location of proposed project is identified for following reason:

- Proposed project Land is in MIDC
- No forest land is involved in project.
- No Rehabilitation/Resettlement required.
- No archaeological monument and defense installation.
- No nallah/water body, public roads, forests within the project site.
- Access to availability of Raw Material.

- Availability of Water.
- Assured Power Supply.
- Market available for finished products.
- Availability of man power.

7. Baseline Environmental Data

Baseline monitoring has been carried out during February to April 2021.

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.

PM_{10}: : 37.4 -61.3 $\mu g/m^3$.

$PM_{2.5}$: 17- 33.4 $\mu g/m^3$

SO_2 : 6.8 – 22.5 $\mu g/m^3$

NO_x : 12.0- 35.6 $\mu g/m^3$

Industrial, Residential (CPCB Norms)	PM_{10}	$PM_{2.5}$	SO_2	NOx
	100 $\mu g/m^3$	60 $\mu g/m^3$	80 $\mu g/m^3$	80 $\mu g/m^3$

The concentrations of PM_{10}, $PM_{2.5}$, SO_2 and NO_x were found within the National Ambient Air Quality Standards (NAAQ).

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.

The data indicates that the ground water as well as the surface water quality are below the stipulated standard for drinking water (IS 10500 – 2012).

Noise Environment

Noise levels measured nine stations are within limit of 55.0 dB (A) for Residential Area or 75.0 dB (A) for Industrial Area as given in MoEF Gazette notification for National Ambient Noise Level Standard.

Land Environment

The characteristics of the soil sample were compared with different depths for respective parameters in three stations. The soil analysis report indicates that the soil in the area are capable of supporting plant growth.

Identification of Process Hazards

S. No.	Operation/ Process Equipment/Area	Possible Hazards	Precautionary Measure to be Done	Measures to be taken If Hazards Occurs
01	Belt Conveyor Systems for iron ore, coal etc., Raw material Handling Plant	a) Jamming of conveyor Belts b) Breakage of Conveyor Belts c) Splash of Material from Conveyor System	a) All conveyors belts must be provided with trip wire system must be removed b) Head & Tail end are provided by nip guard. c) Movement below the Conveyor belt during operation must be banned d) A 750mm wide walk way must be provided on both side for movement e) Drives are provided with coupling guards f) Stop switches with Lock must be provided for safety	The process to be stopped immediately and the cause of jam. The broken conveyor belt to be replaced or repaired. Reason for splash to be rectified.

S. No.	Operation/ Process Equipment/Area	Possible Hazards	Precautionary Measure to be Done	Measures to be taken If Hazards Occurs
02	Primary Crusher Hopper	Limestone or Coal jamming/ bridging in hopper	a) Red light indication to stop Feeding of Limestone / Coal from the yard. b) Information given to yard supervisor Not to allow supply of lime – stone /coal from the yard. c) Chain barrier to Stock dumping of ore in hopper d) Slide gate lowering in case of jamming/ bridging in over jaw crusher. e) Slings/ Anchors/ Wedges are used as a tool for realizing jams. The operation must be supervised by a competent supervisor. f) Stop switches with Lock must be provided for safety	Rock breaker for releasing jamming in hopper
03.	Mechanical Vibro-feeders	Removal of set clay in vibro feeder and Tail and Drum	a) Vibro feeder must be interlocked with other belt b) Line clearance is taken after checking the Trip wire system c) Use of safety appliances d) Minimum two work man deputed to take care of the man & material as safety measures.	Safety shoes, safety helmets, hands gloves & safety goggles are provided.
04.	Raw Coal Hopper at Coal	Removal of jams, Gantry & Coal Crusher Jamming	a) Hopper jam is mostly cleared with the help of Goliath Crane up to Grill & below the Grill	The crane movement is done only after obtaining the line

S. No.	Operation/ Process Equipment/Area	Possible Hazards	Precautionary Measure to be Done	Measures to be taken If Hazards Occurs
			jam is removed manually by pocking with Pipe. b) All precautions are taken before sending worker on Grill for removing the Jaws c) A workman on crane is posted for emergency help and one more attendant. d) Crane is not run till line clear is given	clearance
05.	Coal storage Dump	Fire Hazard possible	a) No smoking zone declared b) Water hose provided near to the dump & stores c) Stored away from Electrical installation.	In case of fire water hoses are operated water. Un burnt heap is immediately removed. Fire alarm is activated.
06.	Coal belts, tunnels pits	a) Jamming with fine coals dust & spilled mate material b) Fire cause by welding spark electrical short circuit or throwing the lighted cigarette & excessive high temperature.	Regular cleaning is being ensured no welding job is started out when the area is not clean. Smoking is strictly prohibited Fire hydrants points are provided to spray water in case of fire.	The jam is to be cleared immediately before supplies are continued. In case of fire all the fire fighting steps to be taken immediately. Further movement of coal to be stopped immediately.
07.	Rotary Kiln	a) Jump out or fall out b) Rotary Kiln Jam or choked due to ring formation	a) Support rollers to be maintain properly b) Girth gear and Tyers are to be checked regularly and frequently. c) Structural barrier to be provided to avoid fallout. d) The temperature of the	The plant operation to be stopped immediately. The area to be sealed until cooled for reinstallation. In case of jam the kiln must be

S. No.	Operation/ Process Equipment/Area	Possible Hazards	Precautionary Measure to be Done	Measures to be taken If Hazards Occurs
			kiln to be maintained properly no overheating to be allowed.	stopped & allowed to cool down before breaking the ring. The kiln must be started only after breaking the ring.
08.	Control Rooms	Electrical shock possible due to leakage	a) Earth leakage Circuit breaker is installed. b) Shock precaution & treatment chart are displayed. c) Operator should be provided with insulated shoes. d) All instruments are properly earthed e) Electrification layout & diagram is displayed	In the event of electric leakage main supply should be immediately shut off. Shock Treatment &medical Aid shall be immediately provided.
09.	E.O.T Crane	Hoist Rope Breakage possible	a) No movement of strange people in crane bay will be permitted. b) Frequent check of the rope and other load bearing material shall be done c) Light indication movement of crane shall be provided. d) Prescribed load shall only be allowed e) Crane operator to give alarm before movement	Weak rope shall be immediately replaced.
10.	Electrical transformer	Electrical power	Shock proof insulated PCC Platform.	Immediate Cut off the power supply, treat the injured for electrical shock
		Fire	Firefighting equipment (i)Sand buckets. (ii) Fire extinguisher.	Immediately fight fire with available resources, summon outside help if necessary.

8. Impact of the Project

The impacts of the projects are tabulated below:-

S.N.	Impact Topics	Impact On	Impact Due to	Adopted Measures
1.	**Physical Resources**	Air Environment	Release of air pollutants	Incorporation & installation of stack with ESP as air pollution control systems and ensuring their effective functioning.
		Water Environment	Drawl of water and release of polluted waste water	Maximum recirculation of water and Incorporation & installation of water pollution control systems and ensuring their effective functioning.
		Soil	Release of polluted waste water, Deposition of PM released & Dumping of solid waste	Incorporation & installation of water and air pollution control systems, Handling & disposal of solid waste including hazardous waste in accordance with Statutory norms.
2	**Biological Resources**	Vegetation	Release of polluted wastewater, Deposition of Pollutants released.	Incorporation & installation of water and air pollution control systems
3.	**Land Acquisition**	Land environment, Aesthetics	Existing land use pattern	The total land procured requirement for the project is 14 Ha.
4.	**Noise**	Habitats	Use of equipment having operating sound level more than the statutory level.	Noise control measures as required have been envisaged. All noise levels will be maintained within the permissible statutory limits.
5.	**Solid Waste**	Habitats and Surrounding Environment	Release of toxic chemicals	2490 TPA of ash generated will be Utilized for fly ash brick making and reclamation of low laying

				areas. 450 KL/A of Tar generated from Coal Gasification plant will be reused in Pellet Kiln Burner. 90,000 TPAof tailings generated will be disposed properly as mentioned above.
6.	**Transportation**	Habitats and Surrounding Environment	Release of pollutant, Improper traffic Management.	Use of vehicles meeting the statutory norms related to emission, transport by railway, proper traffic management
7.	**Social & Economic**	Human, livelihood, Education etc	Influx of people, Settlement, Stress on existing infrastructure etc.	No negative impact envisaged. Moreover additional social improvement activities have also been planned by the project management in the region.
8.	**Cultural resources**	Human	Influx of people, Settlement	No negative impact envisaged

9. Additional Studies

The additional studies as per the ToR issued by MoEF&CC are Public Consultation, Risk Assessment, & Disaster Management Plan are carried out and detailed in EIA report.

10. Project Benefits and CER

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 20thOctober 2020 based on the issued raised at the time of public hearing the CER will be detailed in the Final EIA Report.

11. Occupational Health Measures

M/s. Dinanath Allied Steel Manufacturing Pvt. Ltd. will provide all necessary provisions under Factory Act. All personal protect equipment like Safety shoes, helmet & uniform will be issued to each employee based on the nature of job involved.

The only health hazards expected are heat, noise & dust. Following mitigation measures will be provided:-

i. HEAT:

- Workers working near the furnace may be exposed to heat.
- All workers will be provided PPE like gloves, helmets, gum boots, goggles etc.
- Fresh water shall be available near the working area.
- Heat near furnace area will be monitored regularly.
- Proper ventilation system will be provided.

ii. NOISE:

- Noise from the working of machinery is not of significant levels. However, ear plugs will be provided to all workers in the working area.
- Acoustics shall be provided in the generator room.

iii. DUST:

- Face masks and side covered glasses will be provided to all workers.
- Dust suppression system will be installed at dust generation source.
- Frequent check-up of the workers will be done. Necessary treatment shall be provided wherever required.
- Availability of Hospitals and nearby Public Health Centre for regular health check up of all the workers.

Plan of evaluation of health of workers

- Chest x rays
- Audiometry
- Spirometry
- Vision testing (Far & near vision, color vision and any other ocular defect)
- ECG
- Haemogram (examination of the blood)
- Urine (Routine and Microscopic)
- Complete physical examination
- Musculo-skeletal disorders (MSD)
- Backache
- Pain in minor and major joints
- Fatigue, etc.

- All workers shall be medically tested once in a year and at the end of his term of employment.
- Medical records of each employee will be maintained separately and will be updated as per finding during monitoring.
- Medical records of the employee at the end of his / her term will be updated.
- Periodic health checkups (spirometric tests) will be conducted periodically.

Frequency of Periodical Examination

Every employees will be examine once a year for common medical examination and full medical examination will be conduct as per below.

- For employees <30 Years, once in five years
- Between 31-50 Years, once in four years
- Between 41-50 Years, once in two years
- Above >50 years, once a year

- As per statutory requirement, all emission control systems will be installed and operated to comply with the norms. Secondary fugitive emissions will also be controlled as per EMP suggested. Hence there will not be any adverse impact due to dust on the human health.
- Audiometric tests will be carried out for employees working near the noise prone areas in the plant. The proposed extensive greenbelt development will help in attenuating the noise levels further.

12. Post Project Monitoring Plan

The environmental monitoring is important to assess performance of pollution control equipment installed in the proposed project of M/s. Dinanath Allied Steel Manufacturing Pvt. Ltd. The sampling and analysis of environmental attributes including monitoring locations will be as per the guidelines of the Central Pollution Control Board.

Environmental monitoring will be conducted on regular basis by M/s. Dinanath Allied Steel Manufacturing Pvt. Ltd through MoEF&CC Recognized Laboratory to assess the pollution level in the proposed plant. Therefore, regular monitoring program of the environmental parameters is essential to take into account the environmental pollutant of the study area.

The objective of monitoring is:

- To verify the result of the impact assessment study in particular with regards to new developments;
- To follow the trend of parameters which have been identified as pollutants;
- To check or assess the efficiency of the controlling measures;
- To ensure that new parameters, other than those identified in the impact assessment study, do not become critical due to the commissioning of proposed facilities;
- To check assumptions made with regard to the development and to detect deviations in order to initiate necessary measures. The attributes, which needs regular monitoring, are specified below:

- Air quality

- Water and wastewater quality;
- Noise levels;
- Soil quality;

13.0 ENVIRONMENTAL MANAGEMENT PLAN

Environment Cell will be dedicated for the protection of environment and the community and also to practice best environmental management practices, regular maintenance and consistent operation of pollution control systems, recycling of solid wastes and adoption of cleaner and environment friendly technologies by following steps

1) Environmental Monitoring (Third party monitoring) of the plant and surrounding area
2) Regular monitoring/inspection of Air pollution control equipment
3) Ensuring optimum usage of water
4) Control on Fire hazards and accidents
5) Health & Safety of workers
6) Maintenance of greenbelt and plantation
7) Submission of six monthly compliance report to MPCB
8) Proper implementation of Environment Management Cell

14.0 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.