MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

Registered Office & Works:
At- Hehal, Post - Barkakana - 829103, Dist.- Ramgarh (Jharkhand)
CIN:U26941JH2004PTC010665
ramgarh jh@rediffmail.com

O/C

MCCIPL/046/2023-24

27/06/2023

To,
The Additional Principal Chief Conservator of Forests (C),
Government of India,
Ministry of Environment, Forest & Climate Change,
Integrated Regional Office (Eastern Central Zone),
2nd Floor, Headquarter-Jharkhand State Housing Board,
Harmu Chowk, Ranchi, Jharkhand- 834002

Sub:-Regarding compliance for the period October, 2022 to March, 2023 to the conditions of Environment Clearance for Expansion of Sponge Iron Plant to mini Steel plant for production of 67,500 TPA rolled product by installation of 2X12 Ton induction furnace with billet caster, Iron ore crushing & beneficiation and 15 MW Captive Power Plant.

Ref: - Environment Clearance Letter No. F.NO.J – 11011/215/2016 – IA.II (I) dated 07/08/2019.

Dear Sir,
In reference to the above subject matter & reference letter, the point wise Half Yearly compliance status for the period of October, 2022 to March, 2023 is being submitted for your kind perusal please.

Hope you will find this in order and oblige.

Thanking you.
Yours faithfully
For Maa Chhinnmastika Cement & Ispat Pvt Ltd.

Santosh Kumar Gupta
Director

Enclosures: Compliance status Report.

Cc to:-

1) The Zonal office Incharge, Central Pollution Control Board, Southernd Conclave, Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700 107 (W. B.).
2) The Member Secretary, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), HEC Campus, P.O. Dhurwa, Ranchi - 834004, Jharkhand.
3) Regional Officer, Regional Office, State Pollution Control Board, Hazaribagh, Jharkhand.

- Apply For Consent
- Change Password
- Industry Profile
- Compliance Management
- Laboratory Monitoring Report
- Online Payment Verification
- Fee Calculator
- e-Wallet Management
- Delete InProgress Applications
- Delete InProgress LAB Applications
- View Notices 0

Welcome MAA CHHINNMASTIKA CEMENT N ISPAT PRIVATE LIMITED

Date : 2

Your Compliance details has been Submitted. Your Acknowledgement Number is 16666710. Thank You!.

General

General Details

Industry Name:	**MAA CHHINNMASTIKA CEMENT N ISPAT PRIVATE LIMITED**
Industry Address:	**VILL- HEHAL, P.O- BARKAKANA, RAMGARH**
Industry Pin:	**829103**
Industry S.T.D. Code(Phone):	**06553**
Industry Phone No:	**226846**
Industry E-Mail Address:	**cementispat@rediffmail.com**
Occupier Name:	**SANTOSH KUMAR GUPTA**
Occupier Designation:	**Director**
Occupier Address:	**HEHAL, BARKAKANA, DIST-RAMGARH (JHARKHAND)**
Occupier Pin:	**829103**
Occupier Mobile No:	**0000000000**
Occupier Email Address:	**cementispat@rediffmail.com**
Industry Category:	**RED**
Industry Type:	**Iron & Steel (involving processing from ore/ integrated st plants) and or Sponge Iron units**
Last Consent Granted App. No:	15354540
Last Consent Granted Uploaded Certificate:	View Uploaded Certificate
Last Consent Granted App. Type:	**CTO**
Authorization to file Compliance:	View File

Proposal No.	State	Proposal Name	Category	User Agency Name	Proposal Recieved on	File No	Date of grant

Environment Clearance letter issued vide F. NO. J-11011/215/2016 (I) Dated- 07/08/2019 from MOEF&CC, New Delhi.

General Condition: View

Specific Condition: View

Environment Clearance Compliance Status
Period from October 2022 to March 2023

Name of Project:	Maa Chhinnmastika Cement & Ispat Pvt. Ltd.
Capacity:	Expansion of Sponge Iron Plant to mini Steel plant for production of 67,500 TPA rolled product by installation of 2X12 Ton induction furnace with billet caster, Iron ore crushing & beneficiation and 15 MW Captive Power Plant.
Location:	Village - Hehal, P.O – Barka kana, Distt. – Ramgarh, Jharkhand.
EC letter No.	F. NO. J-11011/215/2016-IA.II (I) Dated- 07/08/2019.

A. SPECIFIC CONDITION:

Sl.No	CONDITION	COMPLIANCE
1.	Particulate matter in the Stack emissions shall not exceed 30 mg/Nm3.	Being complied.
2.	Water for its plant operations shall be sourced by the project proponent from Damodar River, and no ground water shall be abstracted by them.	Being complied.
3.	Project proponent shall undertake rain water harvesting and recharge, and the quantum of water so channelized shall be more than the water consumption in the project area.	Being complied. Unit has constructed 2 nos of Rain Water Harvesting pits within plant area. Report enclosed as **Annexure – 1.**
4.	The CER activities shall be implemented within a period of 3 years utilizing the earmarked funds of Rs. 1.45 crores.	Being complied on regular basis. Unit has installed 2 nos of hand pumps in Hehal village & purchases one number of Ambulance (24X7) for nearby villagers. Photographs of Hand pump & Ambulance is enclosed as **Annexure – 2.**

B. GENERAL CONDITION:

Sl.No	CONDITION	COMPLIANCE
I	Statutory compliance :	
1.	The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollutions) Act, 1981 and the Water (Prevention & Control Pollution) Act, 1974 from the concerned State Pollution Control Boards/Committee.	Being complied.

2.	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water/from the competent authority concerned in case of drawl of surface water required for the project.	Agree with. Water drawl agreement executed with DVC for drawl of water from Damodar River.
3.	The project proponent shall obtain authorization under the Hazardous and other Waster Management Rules, 2016 as amended from time to time.	Being complied. Copy of authorization under the Hazardous and other Waster Management Rules, 2016 is enclosed as **Annexure – 3**.
II.	**Air Quality monitoring and preservation:**	
1.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time ; S.O. 3305(E) dated 7TH December 2015(Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Being complied. Online monitoring systems are installed for monitoring of PM & SO2 emission of stack and it is connected online with Central Pollution Control Board and Jharkhand State Pollution Control Board URL server.
2.	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Being complied on regular basis. Fugitive monitoring report is enclosed as **Annexure – 4.**
3.	The project proponent shall install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOX in reference to SO2 and NOX emissions) within and outside the plant area(at least at four locations one within and three outside the plant area at an angle of 120º each), covering upwind and downwind directions.	As per direction of Jharkhand State Pollution Control Board vide letter no B-19 issued on 28/02/2019, we have installed Continuous Ambient Air Quality Monitoring Station for PM 10 parameter and it is connected online with Jharkhand State Pollution Control Board URL server. JSPCB submitted copy regarding installation with commissioning of PM10 analyzer is enclosed as **Annexure – 5.** Further Unit has successful installed PM2.5, SO2 & NOx parameter to vendor M/s Vasthi Instrument Private Limited on 23/05/2023. Data of above AAQMS parameters

		are being updated on JSPCB server & CPCB server data will be uploaded within 1-2 weeks. Photographs enclosed as **Annexure – 6.**
4.	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality/fugitive emissions to Regional Office of MoEF& CC, Zonal office of CPCB and Regional Office of SPCB along with six monthly monitoring report.	Noted.
5.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.	Being complied. Unit has installed 4 nos of ESP, 10 nos of Bag filters at each transfer points and Fifty nos of water sprinklers at various places within plant premises to control fugitive emission & stack emission. Unit has already installed bag filter at raw material handling area and all conveyor belts are covered.
6.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Being complied.
7.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clan plant roads, shop floors roofs, regularly.	Adequate arrangement of cleaning and sprinkling of water has been made.
8.	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/agglomeration.	Agree with.
9.	The project proponent shall use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	Being complied.
10.	The project proponent shall provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.	Units has provided covered storage shed have been provided for all raw materials like coal, Iron ore etc.
11.	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.	Complying with.
12	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.	Complying with.

III.	**Water quality monitoring and preservation :**	
1.	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment(Protection)Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305(E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Complying with.
2.	The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment(Protections) Act, 1986 and NABL accredited laboratories.	Being Complied on regular basis. Ground water quality monitoring testing & Piezometer reading report are enclosed as **Annexure – 7.**
3.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF& CC, Zonal office of CPCB and Regional Office of SPCB along with six monthly monitoring report.	Noted, Report is enclosed as **Annexure – 7.**
4.	Adhere to 'Zero Liquid Discharge'	Agree with.
5.	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	For domestic waste, we are using septic tank with soak pit.
6.	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277(E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.	Noted.
7.	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	Noted.
8.	The project proponent shall practice rainwater harvesting to maximum possible extent.	Being complied. Unit has constructed 2 nos of Rain Water Harvesting pits within plant area. Report enclosed as **Annexure – 1.**
9.	The project proponent shall made efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	Being complied.

IV.	**Noise monitoring and prevention:**	
1.	Noise level survey shall be carried as per the prescribed guidelines and report in this regards shall be submitted to Regional Officer of the Ministry as a part of six monthly compliance report.	Being complied. Noise Monitoring Report is enclosed as **Annexure – 8.**
2.	The ambient noise levels should conform to the standards proscribed under E(P) A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	Being complied.
V.	**Energy Conservation measures**	
1.	The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.	Complying with.
2.	Practice hot charging of slabs and billets/blooms as far as possible.	Complying with.
3.	Ensure installation of regenerative type burners on tall reheating furnaces.	Complying with.
4.	Practice hot charging of slabs and billets/blooms as far as possible.	Complying with.
5.	Ensure installation of regenerative type burners on all reheating furnaces.	Complying with.
6.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.	Noted.
7.	Provide the project proponent of LED lights in their offices and residential areas.	Complying with.
VI.	**Waste management:**	
1.	Used refractories shall be recycled as far as possible.	Being complied.
2.	Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces.	Noted.
3.	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufactures for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	Noted.
4.	The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Trans boundary Movement) Rules, 2016.	Being complied.

VII.	**Green Belt :**	
1.	Green belt shall be developed in an areaequal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	Being complied in regular basis.
2.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programed for reduction of the same including carbon sequestration including plantation.	GHG emission inventory report is enclosed as **Annexure – 9.**
VIII.	**Public hearing and Human health issues :**	
1.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Being complied.
2.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.	Agree with.
3.	Provision shall be made for the housing of construction labour within the site which all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the for of temporary structures to be removed after the completion of the project.	Noted.
4.	Occupational health surveillance of the worker shall be done on a regular basis and records maintained as per the Factories Act.	Periodical health check-up are being carried and record are maintained on regular basis.
IX.	**Corporate Environment Responsibility**	
1.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.	Noted.
2	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper check and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildfirenorms/conditions and/or shareholders/stake holders. The copy of the boards resolution in this regards shall be	The copy of the boards resolution is enclosed as **Annexure – 10.**

	submitted to the MoEF& CC as a part of six monthly report.	
3.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Being complied. Organization chart of environment cell is enclosed as **Annexure – 11.**
4.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	Noted.
5.	Self – environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Environment audit report is enclosed as **Annexure – 12.**
6.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the pants shall be implemented.	Being Complied on regular basis.

X. MISCELLANEOUS:

1.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	Advertised in two local newspapers of the District, Prabhat Khabar and Danik Bhaskar published on 18/08/2019. Environmental conditions and safeguards will be complied in due course. EC letter has been put on our web site www.mccipl.in

2.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Copy of environment clearance letter has been sent to the followings:- 1) The Member Secretary, Jharkhand State Pollution Control Board, Ranchi, Jharkhand dated 12/08/2019. 2) The Regional officer, Jharkhand State Pollution Control Board, Hazaribagh, Jharkhand dated 12/08/2019. 3) The District Industries Centre, District - Ramgarh, Jharkhand dated 10/08/2019. 4) The Deputy Commissioner, District-Ramgarh, Jharkhand dated 12/08/2019. 5) President, Ramgarh Nagar Parishad, District-Ramgarh, Jharkhand dated 22/08/2019.
3.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Noted, being complied on regular basis.
4.	The project proponent shall monitor the criteria pollutants level namely; PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the projects and display the same at a convenient location of disclosure to the public and put on the website of the company.	Being complied on regular basis. Ambient Air Monitoring report is enclosed as **Annexure – 13.** Display board has been displayed on main gate.
5.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Noted, being complied on regular basis.
6.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment(Protection) Rules, 1986, as	Being complied on regular basis. Environment Statement Report has been uploaded on the company web site

	amended subsequently and put on the website of the company.	www.mccipl.in Environment Statement Report enclosed as **Annexure -14.**
7.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Noted.
8.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Noted.
9.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Noted.
10.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF& CC).	Agree with.
11.	Concealing factual data or submission of false / fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted.
12.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agree with.
13.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agree with.
14.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	Agree with.
15.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air(Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986 , Hazardous and Other wastes(Management and Tranbsounary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other order passed by the Hon'ble Supreme Court of India/ High Courts and any other order passed by the Hon'bleSupreme Court of India/High Court and any other Court of Law relating to	Noted.

	the subject matter.	
16.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.

Annexure - 1

M/S M.L. CONSULTANCY
ADDRESS: - WARD NO :32, RAM NAGARI,
MOTI NAGAR, BALAGHAT (M.P.)
Email: mlconsultency@gmail.com
Mobile: 8839929248, 9691835970

Ref No.: 101/Jabalpur

Date – 29/07/2022

RAIN WATER HARVESTING COMPLETION CERTIFICATE

This is Certify that I have installed rain water harvesting system at premises of M/S MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED, VILLAGE-HEHAL, POST-BARKANAKA, DISTRICT-RAMGARH, STATE-JHARKHAND, PINCODE-829103, Through 03 no. of recharge well (5feet Dia×8feet Depth) from those recharge system they have saved Approx. Per structure 25830 liter/ hour of rain water. Now the system is working properly.

Necessary Precautions-

- First two and three Flushes of rain water are not for se of recharging. It mustbe flushed out.
- This system works in Rainy Season and He will also have fresh water from industries.
- The System is designed For Purely Rain Water Harvesting. Please ensure that Run-off Water is Purely Rain Water/Fresh Water only & Contaminated free.
- Save Water Save Life.

M.L. CONSULTANCY BALAGHAT (M.P.)

VIKAS TIDKE
(Regd. Hydro Geologist Jabalpur zone)
Regd. No.609/2022
Mobile - 8839929248

COMPLETION REPORT

CONSTRUCTION OF GROUND WATER RECHARGE (ARTIFICIAL RECHARGE) WELL At MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

WORK DONE REPORT WITH PHOTOGRAPHS

Prepared By

M/S M.L. CONSULTANCY

CSEB ROAD, RAMNAGAR BHAWANI NAGAR, RAIPUR CHHATTISGARH
PINCODE- 492001
Email: mlconsultancy@gmail.com, Mobile: 7000377676

Submitted to

MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

AT

HEHAL, POST – BARKAKANA – 829103, DIST. – RAMGARH, STATE – JHARKHAND CIN: U26941JH2004PTC010665
Email: ramgarhjh@rediffmail.com

M.L. CONSULTANCY * BALAGHAT (M.P.) *

1. INTRODUCTION:

MAA CHINNMASTIKA CEMENT AND PVT LTD was taken over by RC Rungta group in the year 2010. This project is to be set up as a mini-integrated Steel plant including Sponge Iron, Induction furnaces, Re-Rolling mills, Iron Ore Crushing Plant and captive Power Plant in Phases. Right now, the company is running its 90,000 TPA Sponge Iron plant at Village – Hehal, P.O.- Barakanaka, Ramgarh District Jharkhand.

2. OBJECTIVE:

The broad objectives of the study are:

- To observe Hydro geological conditions and availability of ground water of in the area.
- To work out scope of Rooftop & Storm water harvesting within the premises and suitable rainwater harvesting systems.
- To study more recharge possibilities in and around the plant.

3. RAIN WATER HARVESTING:

Rain water harvesting is collection and storage of rain water that runs off from roof tops, parks, roads, open grounds, etc. This water runoff can be either stored or recharged into the ground water. A rainwater harvesting systems consists of the following components:

1. Catchment from where water is captured and stored or recharged,
2. Conveyance system that carries the water harvested from the catchment to the storage/recharge zone,
3. First flush that is used to flush out the first spell of rain,
4. Filter used to remove pollutants,
5. Storage tanks and/or various recharge structures.

3.1 ADVANTAGE:

The benefits of the rainwater harvesting system are listed below.

- Less cost.
- Helps in reducing the water bill.
- Decreases the demand for water.
- Reduces the need for imported water.
- Promotes both water and energy conservation.
- Improves the quality and quantity of groundwater.
- Does not require a filtration system for landscape irrigation.
- This technology is relatively simple, easy to install and operate.
- It reduces soil erosion, storm water runoff, flooding, and pollution of surface water with fertilizers, pesticides, metals and other sediments.

M.L. CONSULTANCY BALAGHAT (M.P.)

- It is an excellent source of water for landscape irrigation with no chemicals, dissolved salts and free from all minerals.

3.2 DISADVANTAGE:

In addition to the great advantages, the rainwater harvesting system has a few disadvantages like unpredictable rainfall, unavailability of the proper storage system, etc.

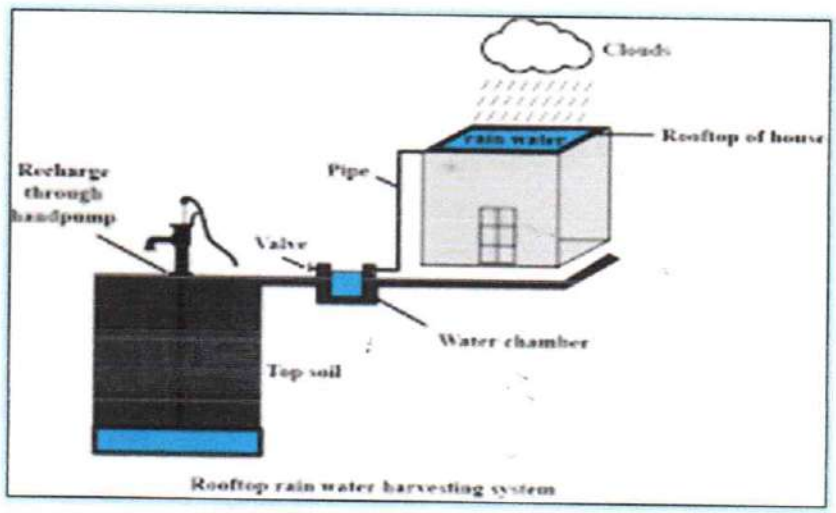
Listed below are a few more disadvantages of the rainwater harvesting process.

- Regular maintenance is required.
- Requires some technical skills for installation.
- Limited and no rainfall can limit the supply of rainwater.
- If not installed correctly, it may attract mosquitoes and other waterborne diseases.
- One of the significant drawbacks of the rainwater harvesting system is storage limits.

3.3 METHODS OF RAIN WATER HARVESTING SYSTEM

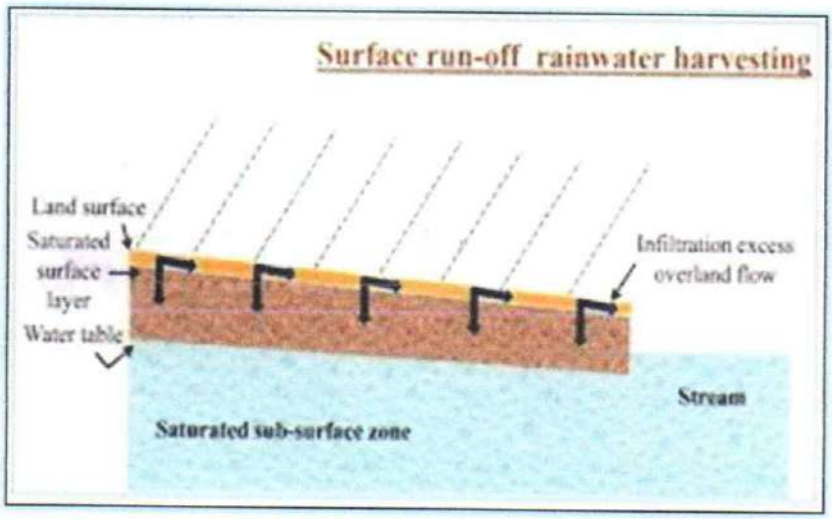
Rooftop rainwater harvesting – The rooftop becomes the catchments, and the rainwater from the building and houses are collected. The components of the rooftop rainwater harvesting are:

1. First, flush.
2. Transportation.
3. Catchment.
4. Filter.



Rooftop rain water harvesting system

Surface runoff harvesting – It is the system that collects rainwater, which flows away as surface runoff. The runoff rainwater is caught and used to recharge aquifers by adopting appropriate techniques.

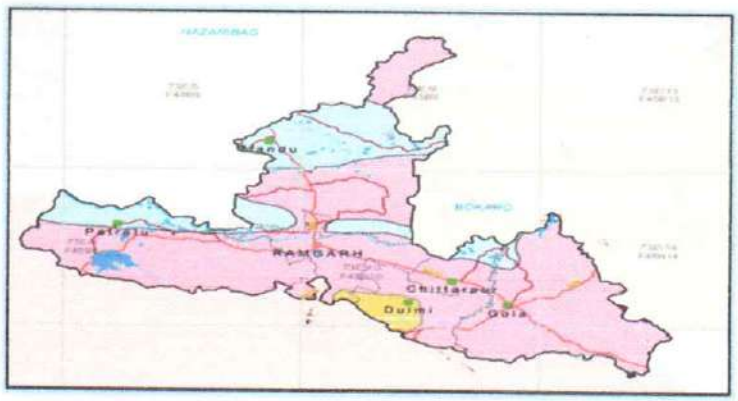


3.4 FACTORS AFFECTING THE AMOUNT OF RAIN WATER HARVESTING

- Catchment features
- Quantum of runoff
- The capacity of storage tanks

4.GEOLOGY OF RAMGARH:

Alluvium, soil/Boulders, Conglomerate, Older alluvium & Laterite. Lower Gondwana system/ Carbonaceous shale/ Sandstone/ Coal Seam, Chotanagpur Gneiss & Granophyre, Basic & ultrabasic.



5. HYDROGEOLOGY OF RAMGARH:

The district is having varied hydrogeological characteristics due to which ground water potential differs from one region to another. It is underlain by Chotanagpur granite gneiss of pre-Cambrian age in three-fourth of the district.

Aquifer systems Two types of aquifers are found. Weathered aquifer and fractured aquifers. Thickness of weathered aquifers varies from 10-20 m in granite terrain and 30-60m in lateritic terrain. In weathered aquifer ground water occurs in unconfined condition while in fractured aquifer ground water occurs in semi confined to confined condition.

6. CLIMATE & RAINFALL OF RAMGARH:

The area lies in the sub-humid region of Chotanagpur Plateau and enjoys semi-extreme type of climate. The day temperature rises around 40°C during the summers and drops down to around 10°C during the winter.

The average annual rainfall of the district is 1251.2 mm more than 80% of the precipitation is received during the monsoon months.

7. PHOTOGRAPHS OF RAINWATER HARVESTING STRUCTURE CONSTRUCTED ON BUILDING PREMISES

NUMBER OF STRUCTURE – **3 NOS** (Size: 5 feet × 8 feet)
Feeling material of recharge well: Stone, Coal, Sand.
Two Structure with Bore well Depth 120 feet & Casing Depth 60 feet and one structure of without Bore well

S. No.	Location	Latitude	Longitude
1	Near of Piezometer Station	23.620813	85.430525
2	Near of new water reservoir	23.619372	85.430347
3	Near of Electric Control Room (SMS Area)	23.625022	85.430626

Average surface run-off coefficients considered for different surfaces as per CGWB norms aregiven below in table:

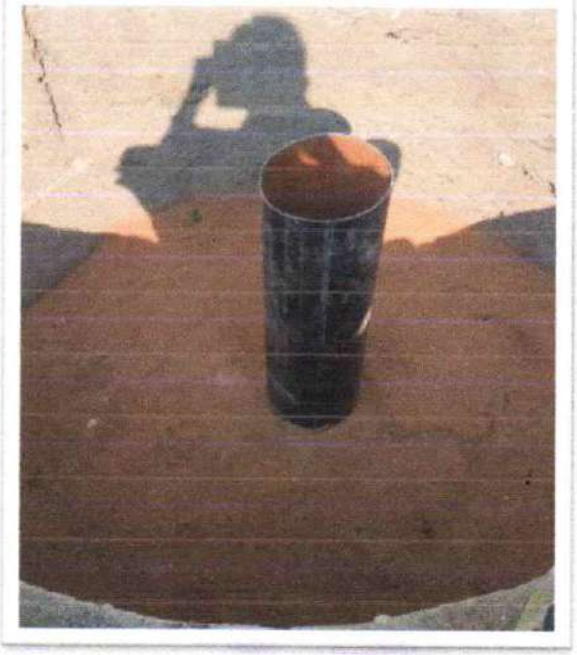
S. No.	Details	Values
1	Runoff coefficient for roof top	0.85
2	Runoff coefficient for yard & paved area	0.65
3	Runoff coefficient for green belt	0.15
4	Runoff coefficient for open area	0.20

Reference: Manual of Artificial Recharge of Ground Water (CGWB, 2007).

M.L. CONSULTANCY BALAGHAT (M.P.)

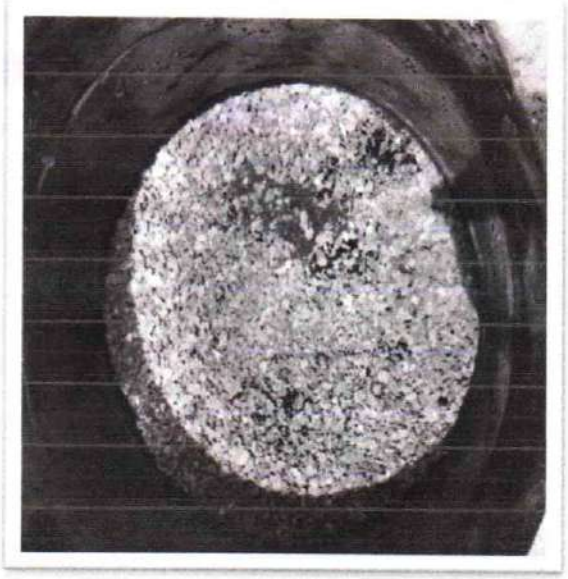
PHOTOGRAPHS

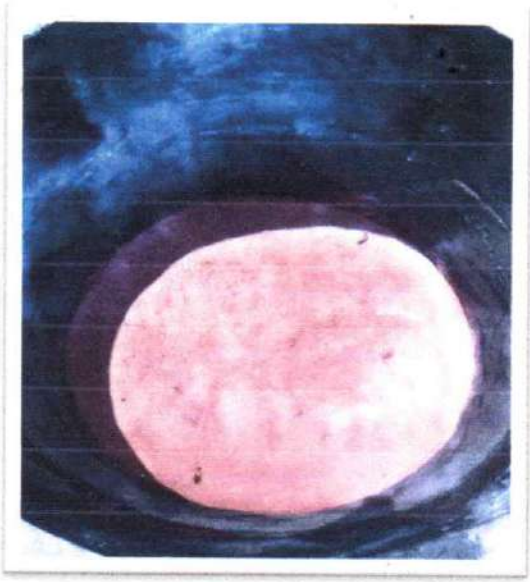
1. Structure: Near of Piezometer Station

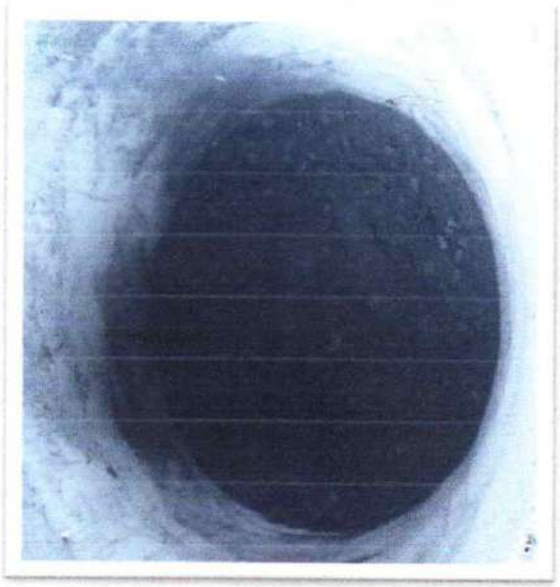


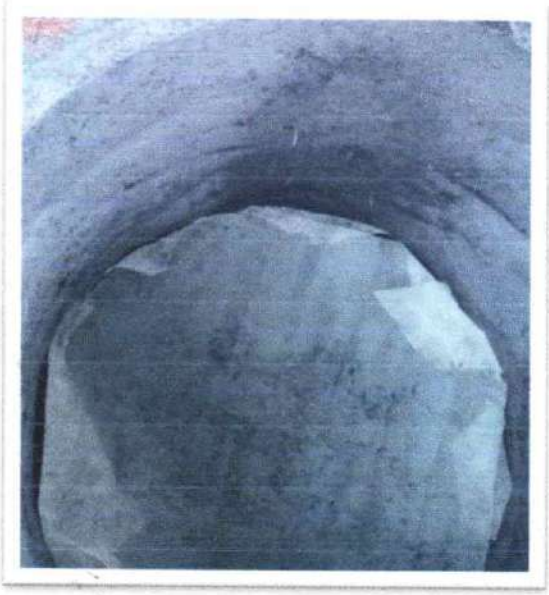
M.L. CONSULTANCY
BALAGHAT (M.P.)

2. Structure: Near of new water reservoir



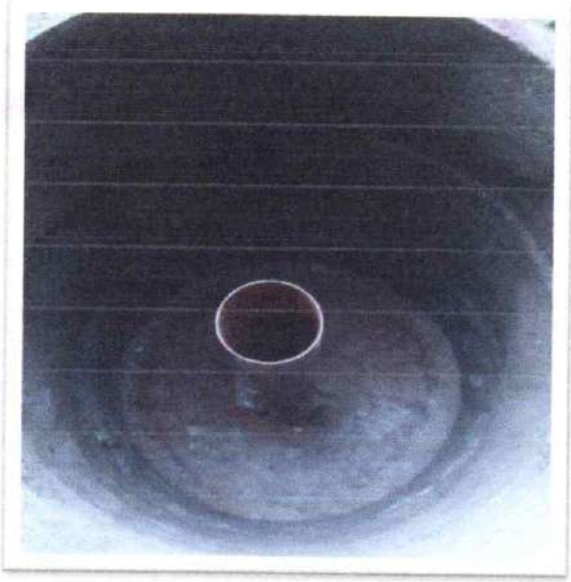


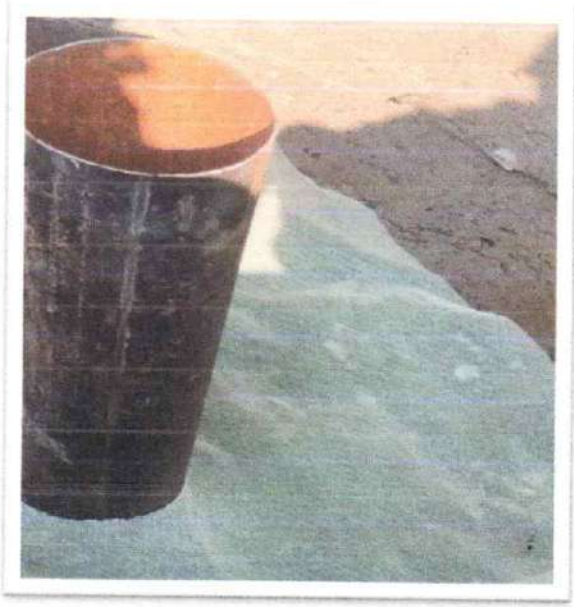




M.L. CONSULTANCY
BALAGHAT (M.P.)

3. Structure: Near of Electric Control Room (SMS Area)





M.L. CONSULTANCY
BALAGHAT (M.P.)

8. CALCULATION OF RECHARFE FOR PER STRUCTURE.

DETAILS OF ARTIFICIAL RECHARGE STRUCTRE & ITS RECHARGE QUANTUM MEASURES

We have implemented total 03 nos. of recharge structure in which all of recharge well is of 5 feet Día× 8 feet Depth.

QUANTUM OF RAIN WATER RECHARGE THROUGH RECHARGE WELL OF 5 FEET DIA × 8 FEET DEPTH:

1. Volume of water within free Board (Settlement Chamber) = $\pi r^2 h$ = 4. 44 Cubic meter

2. Volume of water in Gravel filled part, i.e., Volume of water within the pore spaces of sand, gravel filled part @45% =3.14× $(0.75)^2$×0.5×0.45 = 0.3974 Cubic meter

3. Volume of water in recharge well through which recharge will be done Intake capacity of recharge well = 20000 lph = 20 m^3/hour

4. Settlement chamber of 1 cubic meter of capacity

Therefore, total volume to be recharge through an individual structure will be = (4. 44+0.3974+20+1) = 25.83 Cubic meter / hour = 25830 liter / hour

Thus, the Rain water recharging well can accommodate 25.83 cubic meter/hour of the Rain water.

9. DECLERATION:

Recharge of ground water table is a gradual process; we cannot suddenly increase the ground Water table after constructing recharge structures, by constructing any type of recharge structure, And we can give our contribution in aquifer recharge. This will help to rejuvenate the depleting Ground water resources. Also help to save the little amount of rain water which used to drain Away from many years. Thus, it is concluded that implementation of RWH: **MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED** would result in the form of the best approach to deal with present scenario of water scarcity and storing huge quantity of 25830 liters / hour.

M.A. CONSULTANCY BALAGHAT (M.P.)

Annexure - 2


सौजन्य से,
MAA CHHINNMASTIKA CEMENT & ISPAT PVT LTD
माँ छिन्नमस्तिका सिमेंट एवं इस्पात प्रा० लि०
Vill - Hehal
ग्राम- हेहल
Post- Barkakana
पोस्ट- बरकाकाना
Dist- Ramgarh(Jharkhand)
829103
जिला-रामगढ़ (झारखण्ड)
८२९१०३


सौजन्य से,
MAA CHHINNMASTIKA CEMENT & ISPAT PVT LTD
माँ छिन्नमस्तिका सिमेंट एवं इस्पात प्रा0 लि0
Vill - Hehal
ग्राम- हेहल
Post- Barkakana
पोस्ट- बरकाकाना
Dist- Ramgarh(Jharkhand)
जिला-रामगढ़ (झारखण्ड)
829103
८२९१०३

* आइटा सस्करण

17 मार्च, 2023
पौष, कृष्ण पक्ष, दशमी
संवत 2079
पृष्ठ : 12, मूल्य : ₹3.00

रांची
शुक्रवार, वर्ष 08, अंक 146

कलम कलम बढ़ाये जा

आजाद सिपाही

भारतीय बलों की बढ़ेगी ताकत सरकार ने दी 70,000 करोड़ रुपये के हथियार खरीदने के प्रस्तावों को मंजूरी

ग्रामीणों की जरूरत व वार्ड पार्षद की मांग पर हेहल प्लांट प्रबंधन ने ग्रामीणों को एंबुलेंस सौंपा

क्षेत्र का विकास एवं ग्रामीणों की खुशहाली प्रबंधन की पहली प्राथमिकता : दुर्गा पासवान

निःशुल्क एंबुलेंस सेवा देने पर ग्रामीणों ने प्लांट प्रबंधन का जताया आभार

लंबे दिनों से ग्रामीणों की मांग के प्रति प्लांट प्रबंधन ने दिखाई दरियादिली

निःशुल्क एंबुलेंस सेवा के लिए संपर्क नंबर- 7004475485

आजाद सिपाही संवाददाता

बरकाकाना। नगर परिषद क्षेत्र वार्ड संख्या उन्नीस हेहल के वार्ड पार्षद प्रदीप शर्मा की मांग एवम ग्रामीणों की जरूरत को देखते हुए हेहल स्थित छिन्मस्तिका सीमेंट व इस्पात प्लांट प्रबंधन ने ग्रामीणों को एंबुलेंस सौपा। प्लांट एचआर प्रवीण कुमार एवं पीआरओ दुर्गा पासवान ने संयुक्त रूप से एम्बुलेंस की चाभी वार्ड पार्षद श्री शर्मा को सौपा। चाभी सौपते पार्षद प्रदीप शर्मा ने प्लांट प्रबंधन के प्रति आभार प्रकट किया। मौके पर उपस्थित पार्षद प्रदीप ने बताया प्लांट प्रबंधन द्वारा ग्रामीणों के हितों को ध्यान में रखते हुए ग्रामीणों के लिए एंबुलेंस सेवा दिया जो ग्रामीणों के लिए सुखदायी पल है। एंबुलेंस मिलने से आसपास के लाखों ग्रामीण होंगे लाभान्वित। उन्होंने बताया एंबुलेंस नहीं रहने के कारण सड़क दुर्घटना में घायल लोगों को अस्पताल पहुंचने में देरी हो जाता हैं जिसके कारण ज्यादातर मौते हुआ करती थी लेकिन अब एम्बुलेंस की उपलब्धता से लोगो को लाभ मिलेगा। प्लांट पीआरओ दुर्गा पासवान ने बताया प्लांट प्रबंधन जनहित मुद्दों पर विशेष ध्यान रखती है, जिसके तहत ग्रामीणों की जरूरत को देखते हुए निःशुल्क एंबुलेंस सेवा ग्रामीणों के लिए सुरु की गयी है जिसका संचालन स्थानीय वार्ड पार्षद प्रदीप शर्मा करेंगे। बताते चलें कि बीते ग्यारह मार्च को वार्ड पार्षद प्रदीप शर्मा के द्वारा एम्बुलेंस सहित अन्य मांगों का मांगपत्र प्लांट प्रबंधन को सौपा था। जिसपर प्लांट प्रबंधन ने तत्परता दिखाते हुए ग्रामीणों को एंबुलेंस सौपा है एवं अन्य मांगों पर भी प्लांट प्रबंधन जल्द ही निर्णय लेगी। वर्तमान में एम्बुलेंस सेवा के लिए वार्ड पार्षद प्रदीप शर्मा का मोबाइल नंबर 7004475485 को सार्वजनिक किया गया है, भविष्य में और नंबर भी जारी किया जायेगा जिससे आमलोगों तक यह सुविधा उपलब्ध हो सके। मौके पर समाजसेवी रंजीत राम, महेश कुमार मुंडा, मो इस्त्राएल, मो रुस्तम अंसारी सहित दर्जनों लोग मौजूद रहे।

GST NO. : 20AYCPM5560D1ZX

TAX INVOICE

Mob.: 9334435164
7979704434

NATIONAL CAR WORKSHOP
SERVICE CENTER

Engine Work Diesel/ Petrol, Electrical Works, Denting/Painting Works, Camera Works, Center Locking Works, A/C Works, Car-Scaning, Check Engine Light Problem, Codding Problem, Key Problem

To. M/s. MAA SHHINNA CE.ME AND ISP P. LD IC. ANIL KUMAR PATHAK

Address HEHAL RAMGARH PATRATU ROAD, HEHAL RAMGARH HAZARIBAGH 829103

GST IN ..... Vehicel No. .....

Sl. No	Description	HSN CODE	Amount Rs.	P.
①	Cylinder Stand, Oxygen Cylinder setup Making		2200/-	
②	Sliding Staches Complete set		4200/-	
		Total	6400/-	
		SGST@9%	576/-	
		CGST@9%	576/-	
		G.Total	7552/-	

Sl. No 101

Date 15-01-2023

Rupees In Words Seven thousand five Hundred fifty Two only

Bariyatu Basti, Ranchi

NATIONAL CAR WORKSHOP SERVICE CENTER Bariatu Basti, Ranchi

F.O. NATIONAL CAR WORKSHOP

Signature

Rel 2.5.26

We prefer and accept through Electronic mode i.e. RTGS/NEFT/IMPS/Internet Banking
Our Bank Details are : Beneficiary : Premsons Motor Udyog Private Limited
Bank Name : **SBI Bariatu Road Ranchi** A/c No. **40299311766** IFSC **SBIN0017473**

Premsons Motor

PREMSONS MOTOR UDYOG PRIVATE LIMITED

Next to Raj Apartments, Bariatu Road, Ranchi - 834009
Ph. : 9386256421, 9386256836, 9308212121, E-mail : premsonsmotor@gmail.com
GSTIN : 20AADCS8337C1ZR CIN : U51109WB1996PTC078593

GST NO. : 20AYCPM5560D1ZX

TAX INVOICE

NATIONAL CAR WORKSHOP
SERVICE CENTER

Mob.: 9334435164
7979704434

NCW

Engine Work Diesel/ Petrol, Electrical Works, Denting/Painting Works, Camera Works, Center Locking Works, A/C Works, Car-Scaning, Check Engine Light Problem, Codding Problem, Key Problem

To... M/S MAA CHHINNA CEME AND ISP P LD IC ANIL KUMAR PATHAK

Address .. MEHAL RAMGARH PATRATU ROAD MEHAL RAMGARH HAZARIBAGH 829103

GST IN .... Vehicel No. ....

Sl. No	Description	HSN CODE	Amount Rs.	P.
1	Oxygen cylinder including Meter and opener		11500/-	

Sl. No 102

Date 15-01-2023

Total	11500/-	
SGST@		
CGST@		
G.Total		

Rupees In Words.... Eleven thousand five Hundred only

Bariyatu Basti, Ranchi

NATIONAL CAR WORKSHOP SERVICE CENTER Bariatu Basti, Ranchi

For NATIONAL CAR WORKSHOP

Signature

20AYCPM5560D1ZX TAX INVOICE Mob.: 9334435164
7979704434

NATIONAL CAR WORKSHOP
SERVICE CENTER

Engine Work Diesel/ Petrol, Electrical Works, Denting/Painting Works, Camera Works, Center Locking Works, A/C Works, Car-Scaning, Check Engine Light Problem, Codding Problem, Key Problem

To M/s Maa Chhinna Ceme and ISP P LD ic. Anil Kumar Pathak

Address Hehal Ramghar Patratu Road Hazaribag

GST IN ..... Vehicel No. .....

Sl. No	Description	HSN CODE	Amount Rs.	P.
①	LH side Patient seat Stacher slides Coloumn With full frame and Covers sheet/seat		5930—	
			Total	5930/—
			SGST@9%	533/—
			CGST@9%	533/—
			G.Total	7000—

Sl. No 194 Date 21-01-2023

Rupees In Words Seven thousand only

Bariyatu Basti, Ranchi

NATIONAL CAR WORKSHOP SERVICE CENTER Bariatu Basti, Ranchi

For NATIONAL CAR WORKSHOP

Signature

Bariyatu Basti, Ranchi

NATIONAL CAR WORKSHOP SERVICE CENTER Bariatu Basti, Ranchi

Signature

MARUTI SUZUKI ARENA

ORIGINAL FOR RECIPIENT/DUPLICATE FOR TRANSPORTER/TRIPLICATE FOR SUPPLIER
TAX / VEHICLE & CHARGES INVOICE

Sold To : M/S. MAA CHHINNA CEME AND ISP P LD IC ANIL KUMAR PATHAK
Address : HEHAL,RAMGARH PATRATU ROAD
HEHAL,RAMGARH HAZARIBAGH
Pin:829103,(M):7016136703 JHARKHAND (20)
Customer ID : 2249288625 PAN No : AADCM9547Q
Customer Aadhar No. :
Place of Supply : JHARKHAND(20)
Vehicle ID : MA3JDT08WNMB30298
Customer Mobile No. : 7016136703

Invoice No. : 1/VSL/22001847
Invoice Date : 05/01/2023 07:05 PM
Order No. : SOB22003024
Order Date : 05/01/2023
Key No. : 5685
Booking Dealer :
Delivery Dealer : 5106
Customer GST No. : 20AADCM9547Q1ZY
Dealer GST No. : 20AADCS8337C1ZR
Dealer PAN No. : AADCS8337C

IRN : 673d73911176f5919f2d0a925d41752e0c6828f5acfda81a0fef7a261f31ddcc

Price				Dr Amount	Cr Amount
1 PRICE OF ONE MARUTI EECO AMBULANCE SHELL 1.2L 5MT-VRMPEH1				4,96,083.77	
CHASSIS NO.	ENGINE NO.	COLOR	HSN	EMISSION NORM	
MA3JDT08WNMB30298	K12NN 4016513	Superior White-26U	87032291	Bharat Stage 6	
2 Exchange / Loyalty Bonus Discount				0.00	0.00
3 CGST @ 14%				69,451.72	
4 SGST @ 14%				69,451.72	
5 Cess @ 1 %				4,960.83	
Sub Total Amount (Assessable Value + Tax) :				6,39,948.04	

Total Round Off Amount : 0.04
Total Invoice Amount : 6,39,948.00
Invoice Amount in words : Rupees Six Lakh Thirty Nine Thousand Nine Hundred And Forty Eight Only
Loyalty Exchange Benefit :
Loyalty Points Redemption :

Terms & Conditions

Customer Name & Signatory

(M/S. MAA CHHINNA CEME AND ISP P LD IC ANIL KUMAR PATHAK)

Created By : VIKASH KUMAR

For PREMSONS MOTOR UDYOG PVT. LTD.

(Authorized Signatory)

Created Date : 05-JAN-2023 19:05:25

We prefer and accept through Electronic mode i.e. RTGS/NEFT/IMPS/Internet Banking
Our Bank Details are : Beneficiary : Premsons Motor Udyog Private Limited
Bank Name : **SBI Bariatu Road Ranchi** A/c No. **40299311766** IFSC **SBIN0017473**

Rel 2.5.26

Premsons Motor

PREMSONS MOTOR UDYOG PRIVATE LIMITED
Next to Raj Apartments, Bariatu Road, Ranchi - 834009
Ph. : 9386256421, 9386256836, 9308212121, E-mail : premsonsmotor@gmail.com
GSTIN : 20AADCS8337C1ZR CIN : U51109WB1996PTC078593

MARUTI SUZUKI ARENA

DEBIT NOTE

Debit Note No : VOU22003711

Date : 14-JAN-23

M/S MAA CHHINNA CEME AND ISP P LD IC ANIL KUMAR PATHAK
HEHAL,RAMGARH PATRATU ROAD, HEHAL,RAMGARH
HAZARIBAGH
Pin:829103

Model	:	EECO
Chassis No	:	B30298
Vehicle ID	:	MA3JDT08WNMB30298
Engine No	:	4016513
Invoice No	:	VSL/22001847
Invoice Date	:	05-JAN-23

Sr.No	Particulars/Remarks	Amount
1	INSURANCE AMOUNT	19782
2	TEMPORARY REGISTRATION	3072
	Total	22854

Financer :
Sales Executive : VIVEK SINGH

Prepared by

Checked by

Authorised Signature

Rel 1.1.2

We prefer and accept through Electronic mode i.e. RTGS/NEFT/IMPS/Internet Banking
Our Bank Details are : Beneficiary : Premsons Motor Udyog Private Limited
Bank Name : **SBI Bariatu Road Ranchi** A/c No. : **40299311766** IFSC **SBIN0017473**

Premsons Motor

PREMSONS MOTOR UDYOG PRIVATE LIMITED
Next to Raj Apartments, Bariatu Road, Ranchi - 834009
Ph. : 9386256421, 9386256836, 9308212121, E-mail : premsonsmotor@gmail.com
GSTIN : 20AADCS8337C1ZR CIN : U51109WB1996PTC078593

JHARKHAND STATE POLLUTION CONTROL BOARD

T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI -834004

Phone.:2400852, 2400851, Fax:0651- 2400850 www.jspcb.org

FORM 2

[See rule 6(2)]

FORM FOR GRANT OR RENEWAL OF AUTHORIZATION BY STATE POLLUTION CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER AND OPERATORS OF DISPOSAL FACILITIES

1. No. of authorization and date of issue: JSPCB/HO/RNC/HWM-13309410/2023/21 09/04/2023

2. Reference of appication(No. and date): 13309410 26/05/2022

3. MAA CHHINNMASTIKA CEMENT N ISPAT PRIVATE LIMITED of SANTOSH KUMAR GUPTA is hereby granted an authorisation based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilisation, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at VILL- HEHAL, P.O- BARKAKANA, RAMGARH

Details of Authorisation

Sl.No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity(ton/annum)
1	Schedule-I; 5.1	Used/Spent Oil; Kept in steel drums; Recovery and reuse captive	Used/Spent Oil- 0.850 KL/Annum

(1) The authorisation shall be valid for a period of upto 20.08.2027 years

(2) The authorisation is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A General conditions of authorisation:

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.
2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.

5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.

6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”

7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.

8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.

9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.

10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.

11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.

12. An application for the renewal of an authorisation shall be made as laid down under these Rules.

13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

B Specific conditions:

1. That, the occupier shall take prior permission of the Board to close down the plant.

2. That, the renewal of authorization will be subject to compliance of the conditions laid down in this authorization.

3. That, the occupier shall comply with the conditions as per the guidelines prescribed by the MoEF for CPCB.

4. That, the occupier shall comply with all the conditions laid down in this authorization.

5. That, the occupier shall submit quarterly report on hazardous wastes generated and consumed in its sources, products generated or resources conserved (specifying the details like type and quantity of resources conserved) to the Board.

6. That, the occupier shall maintain a log book containing
information on quantity on generation, date wise utilization of the same and its disposal, etc.

7. That, the occupier shall maintain record of Hazardous Waste utilized, Hazardous Waste generated and disposal as per form-3 and shall submit the annual returns in form-4 as per Rule 20 (1) and (2) of the Hazardous and other waste (Management & Transboundary Movement) Rules, 2016 to the Board.

8. That, the occupier shall comply with all the directions given by standard operating procedure.

9. That, the occupier shall be responsible for safe and environmentally sound management of hazardous and other wastes.

10. That, the hazardous and other wastes generated in the
establishment of an occupier shall be sent or sold to an authorised actual user or shall be disposed of in an authorised disposal
facility.

11. That, the hazardous and other wastes shall be transported from an occupier's establishment to an authorised actual user or to an authorised disposal facility in accordance with the provisions of these rules.

12. That, the occupier shall take all the steps while managing hazardous and other wastes to-
(a) contain contaminants and prevent accidents and limit their consequences on human beings and the environment; and
(b) provide persons working in the site with

13. That, the occupier shall comply with all the conditions laid down in this authorization mentioned in general and specific conditions.

14. That, the occupier shall install a display Board outside its plant showing details such as
(a) status of CTO;
(b) Status of authorization granted ;
(c) Disposal/reuse of hazardous waste generated in the plant and other relevant information as per prescribed guideline and update the same as required.

Yatindra Kumar Das
Digitally signed by Yatindra Kumar Das
Date: 2023.04.09 12:56:08 +05'30'

Memo No:JSPCB/HO/RNC/HWM-13309410/2023/21
Date: 09/04/2023

Y K Das
Member Secretary

Copy To:

Regional office-Cum-Laboratory, Hazaribagh for information and necessary action.

Yatindra Kumar Das
Digitally signed by Yatindra Kumar Das
Date: 2023.04.09 12:56:28 +05'30'

Y K Das
Member Secretary

YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)
Certified by : - An ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Certificate

Discipline	Chemical	**Group**	Atmospheric Pollution	**Sample Description**	Fugitive Dust Emission
Report Release Date		25th January, 2023		**Report ID**	YBAEEL-230120-122409-F01
W. Order/ JSPCB App. No.		MCCIPL/110/2022-23		**Work Order Date**	06.01.2023
Type of Industry (If any)		Sponge Iron Unit		**Job code/ Ref. no.**	YBAEEL/WA/L/A/Jan-23/41
Report Issue to		M/s Maa Chhinnamastika Cement & Ispat Private Limited At.- Hehal, PO- Barkana, Dist.-Ramgarh, Jharkhand			
Sampling Period		21/01/2023		**Mode of sample collection**	By YBAEEL Team
Sampling Protocol		IS:5182			
Sampling Locations		A. Material Handling Area		23°37'03"N, 85°25'34"E	
		B. Product Handling Area		23°37'08"N, 85°25'39"E	
Meteorological Cond. of Field		W.C.– Clear	RH % - 53	Temp. - 26°C	W.D.– NE-SW
Sample receipt Date		23/01/2023	**Analysis Started on** 23/01/2023	**Analysis completed on**	25/01/2023

******Test Results ******

Parameters	Test Methods	Units	Sampling Location		Limits
			Site A	Site B	
Particulate matter (RSPM)	Gravimetric Method	µg/m³	482.8	515.2	2000

******End of Report******

Limit is specified as	G.S.R. 414 (E), 30th May, 2008
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility
	This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
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	The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise
	The liability of the laboratory is limited to the invoiced amount.
	All disputes are subjected to the Ranchi Jurisdiction.
Remarks	**Samples comply with prescribed limits.**

Sample Drawn By – Niraj Kumar
Tested By – Sumit Kant Srivastava (Lab Analyst)

Akash Khalkho 25/1/23	25/01/23
Verified by	Issued by
Akash Khalkho	Sanjeev Kumar Singh
(Sr. Lab Analyst)	(Technical Manager)

Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical & Environmental Engineering Laboratory

Annexure - 5

MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

Registered Office & Works:
At- Hehal, Post - Barkakana - 829103, Dist.- Ramgarh (Jharkhand)
CIN: U26941JH2004PTC010665
ramgarh_jh@rediffmail.com

O/C

MCCIPL/626/2019-20 02/01/2020

To
The Member Secretary,
Jharkhand State Pollution Control Board,
T.A. Division Building (Ground Floor),
H.E.C., Dhurwa, Ranchi – 834004
Jharkhand

Sub: Regarding installation, commissioning and data transmission to Jharkhand State Pollution Control Board URL server of Online Continuous Ambient Air Quality Monitoring Station (CAAQMS) for PM 10 parameter.

Ref: Your letter no B-19, Dated 28/02/2019.

Respected Sir,

Kindly refer to above, we would like to inform your good self that online Continuous Ambient Air Quality Monitoring Station for PM 10 parameter are installed by M/s Environment SA India Pvt. Ltd., Navi Mumbai and it is connected online with Jharkhand State Pollution Control Board URL sever on 02/01/2020.

The location co-ordinate of CAAQMS for PM 10 parameter is given below:-

Sr. No.	CAAQMS location	CAAQMS location Co-ordinate
1	Near Store office area	Lat – 23°37'14 (N) Long – 85°28'40 (E)

This is for your information.

Thanking you.

Yours faithfully,

For **Maa Chhinnmastika Cement & Ispat Pvt. Ltd.**

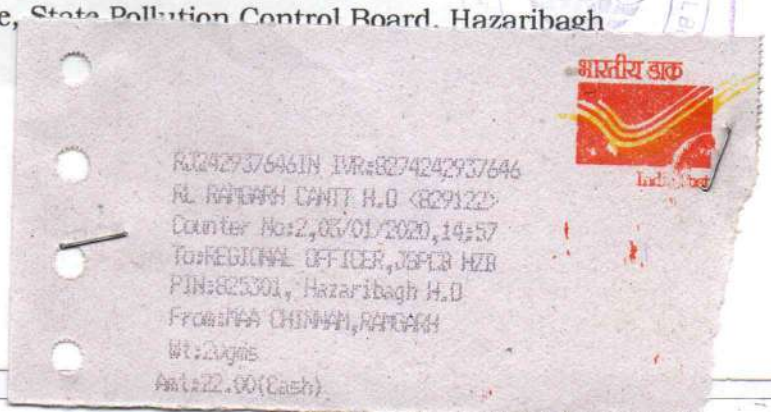
02/01/2020

Authorized Signatory

03/1/20

Cc to: - Regional Officer, Regional Office, State Pollution Control Board, Hazaribagh (Jharkhand)

Encl.:- PM 10 analyser photograph.



Maa Chhinnmastika Cement & Ispat Pvt Ltd

PM 10 Analyser

02/01/2020

Annexure - 6


PM 2.5 MONITOR
VASTHI
GUNTUR - 522 002. Andhra Pradesh. India
E-mail : info@vasthi.com, sales@vasthi.com
Contact : +91 7382708685, +91 9581578583

YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032
Certified by : - Jharkhand State Pollution Control Board (JSPCB)
ISO 9001:2015 & ISO 45001:2018

TC-4032

Test Certificate

ULR (Unique Lab Report) No.				T C 4 0 3 2 2 2 0 0 0 0 0 1 8 6 3 F			
Discipline	Chemical	Group	Water	Sample Description		Ground Water	
Report Release Date		13th November, 2022		Report ID		YBAEEL-221111-131221-GW01	
W. Order/ JSPCB App. No.		MCCIPL/090/2022-23		Work Order Date		11.11.2022	
Type of Industry(If any)		Sponge Iron Unit		Job code/ Ref. no.		YBAEEL/WA/L/C/Nov.-22/05	
Report Issue to		M/s Maa Chhinnmastika and Ispat Pvt. ltd. At-Hehal PO - Barkakana-829103 Dist-Ramgarh, Jharkhand.					
Sample Received Date		10/11/2022		Mode of sample collection		By Customer	
Sampling Protocol		N/A		Sample Code		221110-GW-X01	
Sampling Location		Borewell		Sampling Source		Ground Water	
Sample pkg. Condition		Sealed Pack in PP Bottle		Sample Quantity		3000 ml	
Meteorological Cond. of Field		W.C.– N/A		RH % - N/A		Temp. – N/A	
Sample receipt Date		10/11/2022	Analysis Started on	10/11/2022	Analysis completed on		13/11/2022

******Test Results ******

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	6.95	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	--	5	5-15
3.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.90	388.0	--
4.	Turbidity	IS 3025 (P-10):2002	NTU	3.63	2.0	1-5
5.	Total Alkalinity (as $CaCO_3$)	IS 3025 (P-23):2003	mg/l	3.68	180.0	200-600
6.	Total Hardness (as $CaCO_3$)	IS 3025 (P-21):2009	mg/l	1.35	164.0	200-600
7.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	232.0	500-2000
8.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	30.64	BDL (MDL 0.07)	0.2-1
9.	Chloride (as Cl^-)	IS 3025 (P-32):2003	mg/l	3.41	6.0	250-1000
10.	Fluoride (as F^-)	APHA 4500 F-C 23rd edition 2017	mg/l	12.22	1.0	1.0-1.5
11.	Nitrate (as NO_3^-)	APHA 4500 NO_3^- (B) 23rd edition 2017	mg/l	11.33	0.56	45-No relaxation
12.	Calcium (as Ca^{2+})	IS 3025 (P-40): 2003	mg/l	4.19	36.0	75-200
13.	Magnesium (as Mg^{2+})	APHA 3500 Mg B : 2017	mg/l	1.90	18.0	30-100
14.	Sulphate (as SO_4^{2-})	IS 3025 (P-24):2003	mg/l	5.42	8.0	200-400

******End of Report******

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility
	This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
	This report cannot be reproduced, except when in full, without the written permission of the CEO.
	The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise
	The liability of the laboratory is limited to the invoiced amount.
	All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By – Customer
Tested By – Akash Khalkho (Lab Analyst)

13.11.2022	13/11/22
Verified by	Issued by
Shivani Kumari Singh	Umesh Das
Authorized Signatory	Authorized Signatory

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

Test Certificate

Discipline	Chemical	**Group**	Water	**Sample Description**	Ground Water
Report Release Date		13th November, 2022		**Report ID**	YBAEEL-221111-131221-GW01
W. Order/ JSPCB App. No.		MCCIPL/090/2022-23		**Work Order Date**	11.11.2022
Type of Industry(If any)		Sponge Iron Unit		**Job code/ Ref. no.**	YBAEEL/WA/L/C/Nov.-22/05
Report Issue to		M/s Maa Chhinnmastika and Ispat Pvt. ltd. At-Hehal PO - Barkakana-829103 Dist-Ramgarh, Jharkhand.			
Sample Received Date		10/11/2022		**Mode of sample collection**	By Customer
Sampling Protocol		N/A		**Sample Code**	221110-GW-X01
Sampling Location		Borewell		**Sampling Source**	Ground Water
Sample pkg. Condition		Sealed Pack in PP Bottle		**Sample Quantity**	3000 ml
Meteorological Cond. of Field		W.C.– N/A		RH % - N/A	Temp. – N/A
Sample receipt Date		10/11/2022	**Analysis Started on**	10/11/2022	**Analysis completed on** 13/11/2022

******Test Results ******

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Odour	IS 3025 (P-05):2002	--	--	Agree.	Agreeable
2.	Taste	IS 3025 (P-07):2002	--	--	Agree.	Agreeable
3.	Cyanide(as CN^-)	IS 3025 (P-27)	*mg/l*	--	BDL (MDL 1.0)	0.05-No relaxation
4.	Phosphate (as PO_4^{3-})	IS 3025 (P-31):2003	mg/l	--	BDL (MDL 0.003)	--

******End of Report******

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility
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	All disputes are subjected to the Ranchi Jurisdiction.
Remarks	**Sample complies with prescribed limits.**

Sample Drawn By – Customer
Tested By – Akash Khalkho (Lab Analyst)

13.11.2022	13/11/22
Verified by	Issued by
Shivani Kumari Singh	Umesh Das
Authorized Signatory	Authorized Signatory

Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 1 8 6 6 F			
Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date		13th November, 2022		Report ID	YBAEEL-221111-131221 -GW01
W. Order/ JSPCB App. No.		MCCIPL/090/2022-23		Work Order Date	11.11.2022
Type of Industry(If any)		Sponge Iron Unit		Job code/ Ref. no.	YBAEEL/WA/L/R/Nov.-22/03
Report Issue to		M/s Maa Chhinnmastika and Ispat Pvt. ltd. At-Hehal PO - Barkakana-829103 Dist-Ramgarh, Jharkhand.			
Sample Received Date		10/11/2022		Mode of sample collection	By Customer
Sampling Protocol		N/A		Sample Code	221110-GW-X01
Sampling Location		Borewell		Sampling Source	Ground Water
Sample pkg. Condition		Sealed Pack in PP Bottle		Sample Quantity	1000 ml
Meteorological Cond. of Field		W.C.– N/A		RH % - N/A	Temp. – N/A
Sample receipt Date		10/11/2022	Analysis Started on	10/11/2022	Analysis completed on 13/11/2022

******Test Results ******

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23rd edition 2017	mg/l	10.34	BDL (MDL 0.003)	0.01-No relaxation
2.	Copper (as Cu)	APHA 3111 B 23rd edition 2017	mg/l	11.11	BDL (MDL 0.01)	0.05-1.5
3.	Iron (as Fe)	APHA 3111 B 23rd edition 2017	mg/l	2.34	0.16	1.0-No relaxation
4.	Lead (as Pb)	APHA 3111 B 23rd edition 2017	mg/l	10.64	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 23rd edition 2017	mg/l	15.35	BDL (MDL 0.1)	5-15
6.	Cadmium (as Cd)	APHA 3111 B 23rd edition 2017	mg/l	5.0	BDL (MDL 0.02)	0.003-No relaxation
7.	Mercury (as Hg)	APHA 3112 B 23rd edition 2017	mg/l	8.47	BDL (MDL 0.003)	0.001-No relaxation
8.	Chromium (as Cr)	APHA 3111 B 23rd edition 2017	mg/l	12.53	BDL (MDL 0.02)	0.05-No relaxation

******End of Report******

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility
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	All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Customer

Shivani 13.11.2022	13/11/22
Tested by	Verified & Issued by
Shivani Kumari Singh	Umesh Das
(Lab Analyst)	Authorized Signatory

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

Test Certificate

Discipline	Chemical	**Group**	Water	**Sample Description**	Residue & Contaminants in Water
Report Release Date		13th November, 2022		**Report ID**	YBAEEL-221111-131221 -GW01
W. Order/ JSPCB App. No.		MCCIPL/090/2022-23		**Work Order Date**	11.11.2022
Type of Industry(If any)		Sponge Iron Unit		**Job code/ Ref. no.**	YBAEEL/WA/L/R/Nov.-22/03
Report Issue to		M/s Maa Chhinnmastika and Ispat Pvt. ltd. At-Hehal PO - Barkakana-829103 Dist-Ramgarh, Jharkhand.			
Sample Received Date		10/11/2022		**Mode of sample collection**	By Customer
Sampling Protocol		N/A		**Sample Code**	221110-GW-X01
Sampling Location		Borewell		**Sampling Source**	Ground Water
Sample pkg. Condition		Sealed Pack in PP Bottle		**Sample Quantity**	1000 ml
Meteorological Cond. of Field		W.C.– N/A		RH % - N/A	Temp. – N/A
Sample receipt Date		10/11/2022	**Analysis Started on**	10/11/2022	**Analysis completed on** 13/11/2022

******Test Results ******

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Aluminium (as Al)	IS 3025 (P-55):2003	*mg/l*	--	BDL (MDL 0.02)	0.03-0.2

******End of Report******

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility
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	The liability of the laboratory is limited to the invoiced amount.
	All disputes are subjected to the Ranchi Jurisdiction.
Remarks	**Sample complies with prescribed limits.**

Sample Drawn By – **Customer**

Shivani 13.11.2022	13/11/22
Tested by	Verified & Issued by
Shivani Kumari Singh	Umesh Das
(Lab Analyst)	Authorized Signatory

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032
Jharkhand State Pollution Control Board (JSPCB)
Certified by : - ISO 9001:2015 & ISO 45001:2018

TC-4032

Test Certificate

ULR (Unique Lab Report) No.				T	C	4	0	3	2	2	2	0	0	0	0	1	8	5	4	F	

Discipline	Biological	Group	Water	Sample Description	Ground Water
Report Release Date		12th November, 2022		Report ID	YBAEEL-221111-131221-GW01
W. Order/ JSPCB App. No.		MCCIPL/090/2022-23		Work Order Date	11.11.2022
Type of Industry(If any)		Sponge Iron Unit		Job code/ Ref. no.	YBAEEL/WA/L/M/Nov.-22/03
Report Issue to		M/s Maa Chhinnmastika and Ispat Pvt. ltd. At-Hehal PO - Barkakana-829103 Dist-Ramgarh, Jharkhand.			
Sample Received Date		10/11/2022		Mode of sample collection	By Customer
Sampling Protocol		N/A		Sample Code	221110-GW-X01
Sampling Location		Bore well		Sampling Source	Ground Water
Sample pkg. Condition		Sealed Pack in PP Bottle		Sample Quantity	250ml
Meteorological Cond. of Field		W.C.– N/A		RH % - N/A	Temp. - N/A
Sample receipt Date		10/11/2022	Analysis Started on	10/11/2022	Analysis completed on 12/11/2022

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 23rd Edition 2017	MPN/100 ml	BDL (MDL 1.1)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 23rd Edition 2017	MPN/100 ml	BDL (MDL 1.1)	

******End of Report******

Limit is specified as	IS 10500: 2012
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit. <1.8 / < 1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.
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	The liability of the laboratory is limited to the invoiced amount.
	All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limit.

Sample Drawn By - Customer

Madhuri Sinha	Mukesh Kumar 12.11.22
Tested by	Verified & Issued by
Madhuri Sinha	Mukesh Kumar
(Lab Analyst)	Authorized Signatory

Authorized Signatory
Microbiological Section
Yugantar Analytical & Environmental Engineering Laboratory

Test Certificate

Report Release Date	13th November, 2022	**Report ID**	YBAEEL-221111-131221-WL01
W. Order/ JSPCB App. No.	MCCIPL/090/2022-23	**Work Order Date**	11.11.2022
Type of Industry(If any)	Sponge Iron Unit	**Job code/ Ref. no.**	YBAEEL/WA/L/C/Nov.-22/05
Report Issue to	**M/s Maa Chhinnmastika and Ispat Pvt. ltd. At-Hehal PO - Barkakana-829103 Dist-Ramgarh, Jharkhand.**		
Sampling Date	11/11/2022	**Mode of sample collection**	By YBAEEL Team
Meteorological Cond. of Field	**W.C.**– Clear	**RH %** - 56	**Temp.**– 29

********Test Results ********

Sl	Location	Ground Water Level (mbgl)
1.	**Near Weight Bridge**	5.5

********End of Report********

Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit, MBGL : Meter below ground level.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility
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	The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise
	The liability of the laboratory is limited to the invoiced amount.
	All disputes are subjected to the Ranchi Jurisdiction.
Remarks	----------

13/11/22	13/11/22
Verified by	Issued by
Sanjeev Kumar Singh	Umesh Das
Deputy Technical Manager	Technical Manager

Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

Sabz Care
Environmental Consultancy Pvt. Ltd.

lets start thinking about nature for tomorrow

Recognized by JSPCB, Ranchi
Accredited by NABL, ISO/IEC 17025:2017

TEST REPORT

Unique Lab Report No. (ULR No.)		**TC994822000001205F**	
Name of Industry	**M/s Maa Chhinnmastika Cement & Ispat Private Limited**	**Work order No.-**	**15043832(Date-19.12.2022)**
Address	**Vill-Hehal, P.O.-Barkakana District- Ramgarh, State-Jharkhand**	**Type of Industry**	**Sponge Iron Plant**
Discipline	**Chemical**	**Group**	**Atmospheric Pollution**
Date of Study	**20.12.2022 to 21.12.2022**	**Sample Collected By**	**Ranjeet Yadav**
Sample ID	**SCECPL/TR/22/380/NR-228**	**Time of Duration**	**24 Hours**
Sample Drawn by	**Sabz Care Lab**	**Plant Status**	**Operational**
Sample details	**Ambient Noise**	**Report Release Date**	**23.12.2022**
Method No.	**IS:9989-2014**		

Metrological information	**Average Ambient Temperature- 18°C**	**Barometric Pressure-752 mmHg**	**Relative Humidity-48%**	**Weather Condition - Clear**

Limit in Leq dB(A)

(CENTRAL POLLUTION CONTROL BOARD, MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE, GOVERNMENT OF INDIA)

S.N.	CATEGORY OF AREA	DAY TIME	NIGHT TIME
1.	Industrial Area	75	70
2.	Commercial Area	65	55
3.	Residential Area	55	45
4.	Silence Zone	50	40

***Day time is reckoned in between 6:00 A.M. & 10:00 P.M.**
*** Night time is reckoned in between 10:00 P.M. & 6:00 A.M.**

PERMISSIBLE NOISE EXPOSURE FOR INDUSTRIAL WORKERS

Exposure time (in hours per day)	Limit in dB(A)
8	90
4	93
2	96
1	99
½	102
¼	105
1/8	108
1/16	111
1/32	114

AMBIENT NOISE QUALITY REPORT

Sampling Location	NOISE LEVEL IN dB(A)				
	Minimum	Ld-Mean (Day)	Ln-Mean (Night)	L_{eq}Mean	Maximum
1. Near Main Gate (Coordinates- 23°37'15.35"N to 85°25'51.80"E)	53.1	71.5	58.9	70.8	76.5
2. North East Side of the Unit (Coordinates- 23°37'8.73"N to 85°25'40.13"E)	54.9	74.6	60.8	73.7	79.2
3. West Side of the Unit (Coordinates- 23°36'59.40"N to 85°25'33.87"E)	53.4	73.7	60.1	72.8	78.0

***** END OF REPORT *****

Remarks-

- dB(A) L_d & L_n denotes the time weighted average of the level of sound in decibels on scale(A) in day and night respectively and L_{eq} denotes average of 24 hours which is relatable to human hearing.

Authorized Signatory
Quality Manager
(Piyush Ranjan)

Annexure - 9

Report
on
GHG Emissions inventory & Its Reduction Including Carbon Sequestration Through Plantation for Sponge Iron Plant

MAA CHHINMASTIKA CEMENT & ISPAT PVT. LTD.

Vill: Hehal, P.O.: Barkakhana, Dist.: Ramgarh, Jharkhand

Prepared By

REDUCE • REUSE
RECYCLE • RESPECT

Institute for Environmental Management
Ranchi, Jharkhand, 834002

November – 2022

Preface

A report on GHG emission Inventory and its reduction including Carbon Sequestration through plantation for sponge iron plant has been prepared existing sponge iron plant of M/s Maa Chhinnmastika Cement & Ispat Pvt. Ltd. (MCCIPL) operating a Sponge Iron Plant having three (3) Nos .of coal based Rotary Kilns, each of 100 TPD capacity, with an annual capacity of 90,000 Metric Tons at village: Hehal, District: Ramgarh in the state of Jharkhand since 2005. The report is prepared based on the secondary data provided by MCCIPL

Name and address of manufacturing facility:

Maa Chhinnmastika Cement & Ispat Pvt. Ltd.

At- Hehal, Post- Barkakana - 829 103,

Dist. - Ramgarh (Jharkhand)

E-mail: ramgarhjh@rediffmail.com

Within the ambit of this study, the following units were considered:

GHG emissions have been estimated considering a system boundary from gate-to-gate which is from raw materials entering a sponge iron plant producing sponge iron or DRI used for manufacturing of steel. The system boundary in this study include the

- Sponge Iron process

The purpose of this study is to highlight the potential areas of GHG emission of sponge iron production for reducing GHG emissions. The main sources of GHG emissions during sponge iron manufacturing are considered and the key groups of measures that can reduce the GHG emissions are identified.

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Chapter – 1

Introduction

The production of iron through direct reduction (Direct-Reduced Iron; DRI) involves the use of natural gas or coal to reduce iron ore to iron through carbothermic reactions at a temperature below its melting point, negating the need for a blast furnace as otherwise required. In India, around 25% of iron is produced through direct reduction. However, there is a high reliance on coal (79% of DRI production capacity) causing significant energy use and emissions from production. Also, a large portion of raw materials (especially coal) is imported due to low quality of domestic resources. Weighted average specific energy use and emissions is calculated for seven such clusters (using total cluster capacity), based on regional raw material qualities and transport distances from various mines, ports and beneficiation plants. The results suggest an overall specific (per tonne DRI) energy consumption of 27.24 GJ with an emission of 2.8 tCO_2eq, 2.6 kgNOx, 1.8 kgSOx and 1.4 $kgPM_{2.5}$. The specific energy and emission values are used to calculate the total annual emissions by multiplying with the 2019 DRI production amount of 27.8 million tonnes. The annual midpoint and endpoint impacts as per ReCiPe 2016 (country-wise factors where applicable) are then calculated. The DRI industry causes 77.31 million tCO_2eq/year in global warming potential, 59.02 thousand tSO_2eq/year in acidification potential and 287.2 thousand $tPM_{2.5}eq$/year in fine dust formation potential. It is estimated to cause approximately 270,000 years of reduction in overall human life and 230 species years of species loss (mainly in terrestrial ecosystems). Different sensitivities are carried out to understand the impact of some key influencing parameters (effect of ore quality and coal quality, effect of imports of ore and coal). Some development scenarios, such as increasing coal washery capacity, shifting land transport from road to rail, increasing waste-heat recovery penetration, effect of stricter regulations, etc. are discussed, along with pathways for fuel-switching from coal to natural gas, and then from natural gas to hydrogen.

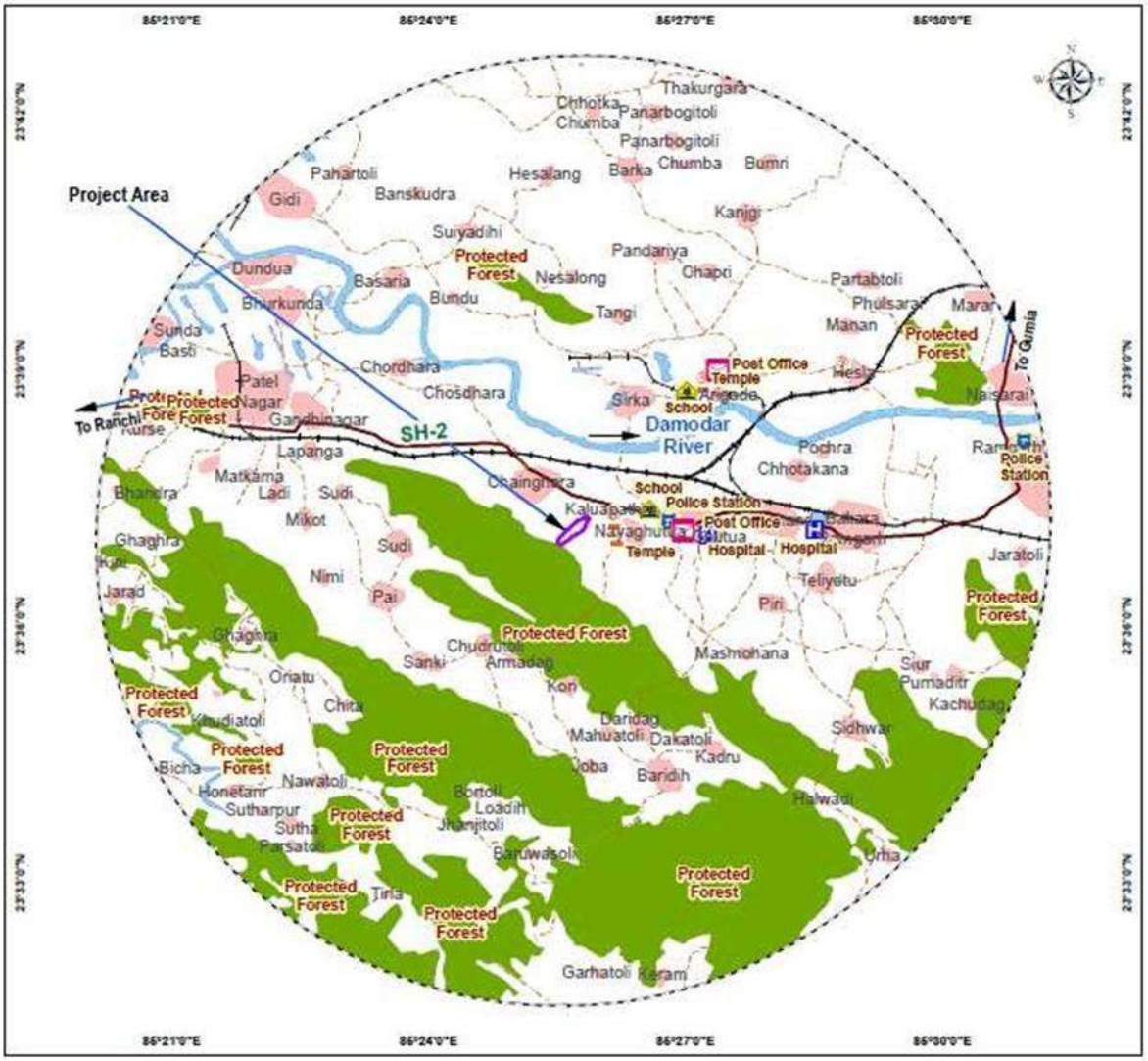
M/s Maa Chhinnmastika Cement & Ispat Pvt. Ltd. (MCCIPL) is a registered company under the Company's Act. It is operating a Sponge Iron Plant having three (3) Nos .of coal based Rotary Kilns, each of 100 TPD capacity, with an annual capacity of 90,000 Metric Tons at village: Hehal, District: Ramgarh in the state of Jharkhand since 2005. Sponge Iron is presently sold to other steel producers for making finished steel products.

GHG emission inventory is comprised of carbon footprint analysis where it is historically been defined as "the inventory of greenhouse gas (GHG) emissions caused by an organization, event, product or person". In this report the estimation of carbon emission for sponge iron production, carbon budgeting/balancing, carbon sequestration activities and carbon offsetting strategies are discussed. GHG emission calculation has been carried out using IPCC guidelines as overall principal and following standard methodology of GHG protocol for GHG estimation. Estimations for this green field project are majorly for scope 1 where direct use of materials and energy for the plant is considered.

MCCIPL has installed 3x100TPD (Sponge Iron plants) DRI Units with annual production capacity of 90,000 Metric Tons at village: Hehal, District: Ramgarh in the state of Jharkhand in 2005 after getting NOC from Jharkhand Pollution Control Board (JSPCB) and subsequently Consent to Operate from JSPCB.

Now MCCIPL intends to use the waste heat energy from the DRI units in Waste Heat Recovery Boilers and dolochar produced in plant in AFBC Boiler, supplemented by coal, for production of 15MW power. A new 2 x 12T Induction furnace with 67,500 MTPA Rolling Mill and Iron Ore Cushing & Beneficiation facility, 201,000 TPA (throughput) and 12,000 TPA capacity Slag Crushing Plant are also proposed at Plot No: 563, 386, 383, 384, 385, 387, 388, 362 Khata No: 86, 69, 33, 24, 86, 30, 83, 86 in village Hehal, P.O.- Barkakhana, Ramgarh District, Jharkhand State. Maa Chhinnmastika Cement & Ispat Pvt. Ltd. Village: Hehal, District: Ramgarh, State: Jharkhand Expansion of Sponge Iron plant with addition of Power plant, SMS, Rebar Rolling Mill & Iron ore crushing & Beneficiation Facility

Fig.:1 Digitized Key plan of project site



Chapter - 2

Project Description

Overview of direct reduction process

The basic mechanism behind iron production involves two main pathways,

i. Using a blast furnace (heated using coal or natural gas) for reduction of iron ore (iron oxides) into pig iron by reaction with coke and fluxes (usually limestone) (SAIL, 2012). The molten pig iron is then converted to steel (through the steelmaking process, usually with a basic oxygen furnace) or processed and sold as such. In 2019, 46.7% of India's steel industry utilized the blast furnace-basic oxygen furnace (BF-BOF) method (World Steel Association, 2019b).

ii. Using coal (solid or gas) or reformed natural gas to perform a direct reduction of the iron ore into Direct-Reduced Iron (DRI) or Sponge iron at high heat (but below melting point) (Sarangi and Sarangi, 2011). The sponge iron is then converted to steel (with an electric arc or electric induction furnace) or processed and sold. The share of electric induction/arc furnace processes in India constituted 53.3% in 2019 (World Steel Association, 2019b).

The SL/RN process (developed by **S**teel Company of Canada, **L**urgi Chemie, **R**epublic Steel Company and **N**ational Lead Corporation in 1964) forms the basis of rotary kiln technologies used in India (Sarangi and Sarangi, 2011); the process uses a rotary kiln into which iron ore pellets, non-coking coal (for reduction) and limestone/dolomite (flux) is supplied. From the other end, air and coal (for combustion) are supplied. The resulting high temperatures (900 to 1020 °C) form a reducing atmosphere of CO which reduces the iron ores to sponge iron. The sponge iron is subsequently separated out of the remaining reaction products through magnetic separation. The kiln is inclined at an angle of ~2.5° to facilitate movement of the charge

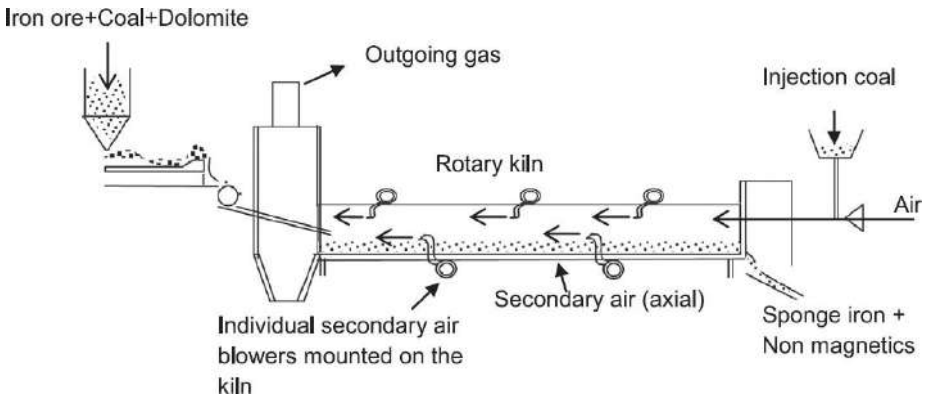


Figure 2: Rotary kiln *(SL/RN process) (Source: Dey et al, 2015)*

From the feed end to the exit. The rotary motion encourages even reaction of the charge through mixing with the reducing gases (Dey et al, 2015). The basic process is shown in Figure 2.

Around a third of the kiln length is typically required for preheating the charge consisting of iron ore, coal and dolomite. The dolomite flux is added to control sulphurisation. The coal supplied along with the ore is mainly meant to produce reducing gas by reacting with atmospheric oxygen at high temperature. In this stage, the iron ore (predominantly hematite - Fe_2O_3) is partially reduced to ferrous oxide. After reaching the ideal reaction temperature of 900-1100 °C, the ore is reduced to metal in the latter portion of the kiln through further reduction. The following are the main reactions taking place within the kiln, at a temperature of 1067 °C (Sarangi and Sarangi, 2011).

$$3Fe_2O_3 + CO \rightarrow 2Fe_3O_4 + CO_2 - 44.46\ kJ/mol \quad (1)$$

$$Fe_3O_4 + CO \rightarrow 3FeO + CO_2 + 3.07\ kJ/mol \quad (2)$$

$$FeO + CO \rightarrow Fe + CO_2 - 11.12\ kJ/mol \quad (3)$$

The CO required for the above reduction reactions is produced when fixed carbon of the feed-end coal reacts with CO_2 produced by the reductions, in a perpetual, reversible reaction called Boudouard reaction.

$$C + CO_2 \leftrightharpoons 2CO + 167.52\ kJ/mol \quad (4)$$

This reaction is crucial to maintaining the reducing atmosphere and kiln temperature. The ratio of CO/ ($CO+CO_2$) depends on the temperature inside the kiln; ideally a CO concentration of ~50-60% is maintained (Dey, Prasad and Singh, 2015) to ensure optimum reduction of ore. Since the forward reaction (4) is highly endothermic, it serves to maintain kiln temperature for a regulated combustion of injection coal. By combining the above reactions, we get

$$2Fe_2O_3 + 3C \rightarrow 4Fe + 3CO_2 + 432.52\ kJ/mol \quad (5)$$

Note that only one part of CO produced in (4) is used for the reduction, whereas the other part is combusted into CO_2 resulting in a net output of CO_2 from the kiln. Various other reactions take place due to the combustion of injection coal fixed carbon and volatiles, causing the formation of additional CO and CO_2 along with H_2O and CH_4. The sulphur present in coal is removed by dolomite, as the $CaCO_3$ and $MgCO_3$ decompose into CaO and MgO to act as desulphurising agents. The addition of dolomite is crucial to control the sulphur content in the DRI (to prevent embrittlement in steel production), and also to control SOx emissions (Sarangi and Sarangi, 2011).

After the reduction process, the metal (now known as sponge iron or DRI) is separated from the remaining slag (consisting of coal char, unreacted coal, sulphurated dolomite) through magnetic separation. The product CO_2 reacts further with incoming/excess coal to produce more CO. Thus, for a low ash coal with high reactivity, the reduction efficiency will be higher as the quantity of coal input would be reduced. Also, the retaining time of the ore within the kiln can be lower, thus improving output (Dey et al, 2015).

Maa Chhinnmastika Cement &Ispat Pvt. Ltd. has installed 3x100TPD (Sponge Iron plants) DRI Units at Village: Hehal, Barkakana, Ramgarh Cantt, Jharkhand in the year 2005 after getting NOC from Jharkhand State Pollution Control Board (JSPCB).

MCCIPL management has realized that for its business to survive, the Company should stop selling sponge iron and should produce TMT Reinforcement Bars as value added product and also take measures to reduce cost of production. The project is a stand alone project for creating Steel Making facility at one location without dependence on other projects.

1. Installation of a Captive Power Plant of 15 MW Capacity to produce cheaper electrical power by utilizing;
   - Waste Heat from Sponge Iron Kiln Flue Gases.
   - Utilizing char produced as solid waste from Sponge Iron Production Process, toserve as a part of fuel for the proposed Power Plant.
   - Use of coal from captive mines of the group to meet the balance requirement of fuel for the Power Plant.
2. Install a Steel Melting Shop having Two (2) Nos. Induction Furnaces each of 12 Ton capacity and a 2-Strand 6/11 M Radius Continuous Casting Machine with an annual capacity of 72,000 Metric Tons of Billets using 80% Sponge Iron and 20% Scrap /Pig Iron as charge-mix.
3. Install 14 Strand Rolling Mill downstream of Continuous Casting of Steel Melt Shop to carry out direct rolling of hot billets without any additional heating in a Reheating Furnace. This will save on fuel cost of reheating the billets which has to be incurred if billets produced are cooled, transported and rolled in a rolling millfar away.
4. Iron Ore Crushing & Beneficiation Facility to process 201,000 T/year throughout of iron ore is proposed to be installed for providing beneficiated iron ore to the DRI Kilns for their optimum operation.
5. Slag Crushing Facility for crushing of SMS Slag and recover metallic componentfrom Slag.

Table 2.1: Salient Features of the Project

S. No	Particulars	Details
1.	Latitude	23˚37’07.56” N
2.	Longitude	85˚25’ 42.82” E
3.	Altitude	260 m above MSL
4.	Toposheet	73 E/6 & 73 E/10
5.	Plot/Survey/Khasra No.	Plot No: 563, 386, 383, 384, 385, 387, 388, 362 Khata No: 86, 69, 33, 24, 86, 30, 83, 86
6.	Seismicity	Area falls under least affected earthquakes zone II Source-as per IS 1893 – 2002
7.	Present land use	Within existing industrial premises
8.	Climatic condition (Annual Average)	Ambient Air temp 10o C to 37o C Avg. annual rainfall 1462.8 mm
9.	Nearest village/Habitation	Nayaghutua- 01 Km (E)
10.	Nearest Town	Ramgarh- 9.5 km, East
11.	Nearest Police Station	Ghutu Police Station, 1.5 Km in E
12.	Nearest Post office Ghutu Post office	1.8 Km in E direction from the project site.
13.	Nearest River	Damodar River -2 km.
14.	Nearest Railway station	Barkakhana Ramgarh– 1.5 km
15	Nearest Temple	Sankat Mochan Mandir - 0.5 km in E direction
16.	Nearest College	MaaBanjari ITI college Ghutwa-1.1 km in E direction
17.	Nearest Bus Stop	Jharkhand state highway 2 bus stop 1.7 km in NW direction
18.	Nearest Medical	Ghutua Hospital 2.3 Km in E
19.	Nearest airport	Ranchi Airport, 50 km
20.	Sanctuaries /National Parks/ Biospheres, etc	Nil
21.	Topography	Gently undulating
22.	Defense Installations	RamgarhCantt. - 15 km
23.	Historical Places	Chinnamastika Temple which is located 69.3 Km in E direction
24.	Reserve Forest/ Protected Forest	No reserve forest within 15 kms. from the project site, PF Forest – 0.6 Km (S), Bundu PF Forest – 4.5 Km (N).
25.	Total Land Area	30.692Acres (12.42 ha.)
26	Total Water Requirement	Existing (m3/day) Proposed (m3/day)

		Total (m3/day) 247 2088 2335 Surface water will be sourced through Damodar River for industrial, domestic and other allied uses in the plant.
27.	Total Power Requirement	15 MW Power requirement at present is 950 KVA which is being met from JVUNL Grid. After the commissioning of power plant the integrated unit will fulfill its power requirements from the 15 MW Captive power plant Company has also installed 1×1010 KVA 1×500 KVA & 1×320 KVA DG sets.
28.	Total Manpower	Existing Proposed Total 95 396 491
29.	Total capital cost	Existing (Crores) Proposed (Crores) Total (Crores) Rs. 35.76 Rs. 156.92 Rs.192.68

Table 2.2: Summary of the Project (Existing & Proposed)

PRODUCTION FACILITY	PLANT SIZE	ODUCTION (TPD)	ODUCTION(TPA)
EXISTING			
Sponge Iron Plant	3x 100 T /day of DRI	300 TPD	90,000T
PROPOSED			
Steel Making Shop, Induction Furnaces and Billet Caster	2 x 12 T	240 T	72,000 T
Rolling Mill – TMT Rebar Mill	15 Stand Mill with Direct Hot Charging	225 T	67,500 T

Power Plant Waste Heat Boilers AFBC Boiler	Total 15 MW 3 x 2 MW 1 x 9 MW	15 MW	15MW (Captive use)
Iron Ore Crushing & Beneficiation Plant	80 – 100 TPH single stream(throughput)	670 T	201,000 T
Slag Crushing Plant for SMS Slag	Single stream 5 TPH	40 T	120,00 T

SPONGE IRON PLANT (Existing)

Sponge Iron Plant is having three (3) Nos. Coal Based Rotary Kilns each of 100 TPD Capacity, with an annual capacity of 90,000 Metric Tons. Sponge Iron Plant has its own material storage and handling facilities and other auxiliary plant units.

Process Description:

To produced sponge iron, sized lump ore is fed along with coal, and flux in to the Rotary Kiln wherein iron ore gets converted to metallic iron. Flux helps in scavenging Sulphur content from coal. Brief features of the process are as follows:

- Kiln process of DRI production involves tumbling of iron ore with select grade of non- coking coal and dolomite in a rotary kiln.
- The kiln is supported on roller stations and rotated by means of a variable speed AC motor and girth gear mechanism. Refractory lined rotary kiln of suitable size is placed on two or four support stations and is kept inclined at 2.5 % slope.
- The transport rate of materials through the kiln can be controlled by varying its slope and speed of rotation. There are inlet and outlet cones at opposite ends of the kiln that are cooled by individual fans.
- The kiln shell is provided with small sampling ports, large ports for rapid removal of the contents in emergency or for lining repairs. Longitudinal positioning of the kiln on its riding rings is controlled hydraulically.
- The coal and iron ore are metered into the high end of the inclined kiln. A portion of the coal in pulverized form is also injected pneumatically from the discharge end. The burden first passes through a pre-heating zone where coal de-volatilization takes place and iron ore is heated to pre-

heating temperature for reduction.

- Temperature and process control in the kiln are carried out by installing suitable no. of air injection tubes made of heat-resistant steel. These are spaced evenly along the kiln length and countercurrent to the flow of iron ore. Tips of the air tubes are equipped with special internal swirls to improve uniformity of combustion.
- A central burner located at the kiln discharge end is used with LDO for heating the cold kiln. After initial heating, the fuel supply is turned off and the burner is used to inject air for coal combustion.
- The kiln temperatures are measured with fixed thermocouples and Quick Response Thermocouples (QRT). Fixed thermocouples are located along the length of the kiln to monitor temperature profile of kiln. Fixed thermocouples, at times, may give erratic readings due to coating with ash, ore or accretion. In such a case QRT are used to monitor the kiln temperatures.
- The product (DRI) is discharged from the kiln at about 1000°C. An enclosed chute at the kiln discharge end is used to transfer the hot DRI to a rotary cooler. The cooler is a horizontal revolving cylinder of appropriate size, wherein DRI is cooled indirectly by water spray on the cooler upper surface. The cooling water collected in troughs below is pumped to the cooling tower for recycling along with make-up water.
- DRI is cooled to about 100°C without exposure to atmospheric air. A grizzly in the chute removes accretions that are large enough to plug up or damage the cooler discharge mechanisms.
- The product is screened to remove the plus 30 mm DRI. The undersize – a mix of DRI, dolochar and coal ash are screened into +/- 3mm fractions. Each fraction passes through a magnetic separator. The non-magnetic portion of the plus 3 mm fraction is mostly char and can be used in AFBC Boiler for power generation.
- The nonmagnetic portion of –3mm fraction, mostly spent lime, ash and fine char is discarded.
- Magnetic portion of each fraction is DRI. Of this the +3mm fraction can be used directly for steel making and the finer fraction is either briquetted or collected in bags.
- The kiln waste gases leave at about 850-900°C. These are passed through dust settling chamber where heavier particles settle down due to sudden decrease in velocity of gases. The flue gases are then passed through an After Burning Chamber (ABC) where un-burnt combustibles are burnt by blowing excess air. The temperature of the

after burner chamber, at times, is controlled by water sprays.

- Burnt gases are passed through a down duct into an evaporation cooler where its temperature is brought down and balance dust particles are separated through a pollution control equipment namely ESP / Bag filter/ scrubber. The gas is let off into the atmosphere through stack via ID fan.
- The thermal energy in outgoing flue gases is recovered through Waste Heat Recovery Boiler (WHRB) where sensible heat of the gases is extracted and then let off into the atmosphere after passing through pollution control equipment like ESP, ID fan and stack.

Table2.3: Raw Material Requirement for Existing Sponge Iron Plant

Unit	**Installed Capacity**	**Working Days**	**Annual Production**
Sponge Iron Plant	3x100 TPD	300	90,000 MT of Sponge Iron
Water Requirement	Make Up Water	300	247 m^3/day
Power Requirement		300	950 KVA
Raw Material Requirement	**Raw Material**	**Size (mm)**	**Quantity (MT/Annum)**
	Iron Ore	5-18	1,71,000
	Coal	20 & below	1,44,000
	Dolomite/Limestone	2-4	2300

Process flow diagram of sponge iron plant is given below in **Figure 2.4**. **Raw Material Handling System**

Main Raw materials Iron Ore, Coal & Dolomite are fed to the ground hoppers with the help of Pay Loaders and Tippers and carried by belt conveyors to the Crusher House having Crusher for crushing and Vibrating Screen. Screened and Crushed Material carried out by belt Conveyers to the stock house having 2 days bins for Iron Ore, Feed coal, Dolomite, and Injection coal (Lumps and Fines). Injection Coal is screened in –5 mm. and –18mm sizes and stored in separate bins. The main raw material handling consists of iron ore crusher, vibrating screen and conveyor belts for preparation of raw material as mentioned above.

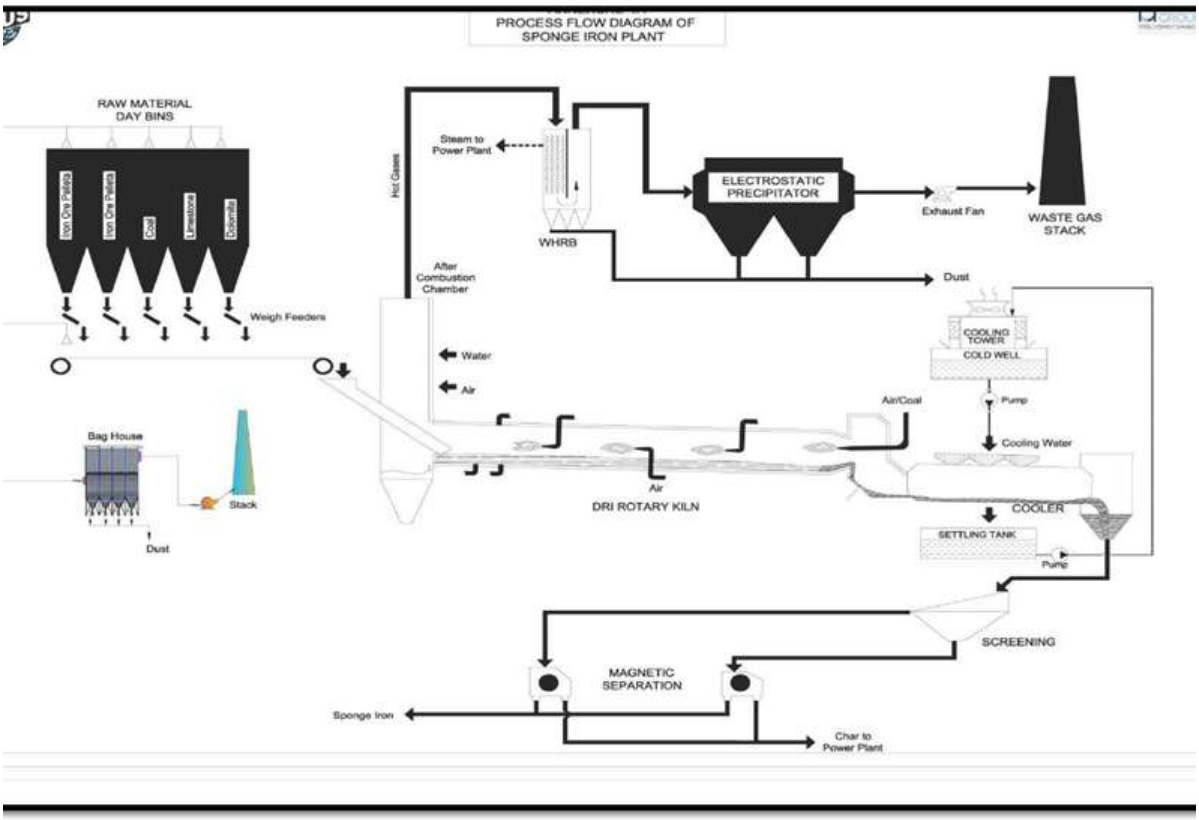


Figure3: Process flow diagram of Sponge Iron Plant

Brief outline for resource utilization

Resource utilization by optimization has been envisaged from design stage itself for plant related activities. The various resources likely to be used are detailed below.

i) Iron ore
ii) Coal
iii) Dolomite
iv) Water &
v) Power

These resources are effectively used in the plant. Rainwater harvesting is being envisaged on large scale to utilize the rain water and reduce the water requirement from external sources. The effluent generated from various units will be treated and recycled back into system to ensure zero discharge.

3.0. Greenhouse Gas Emission

In this section emission of Green House Gases (GHG) has been calculated for the existing Sponge iron plant. GHG emissions have been estimated for the units involves in sponge iron production. GHG emission calculation has been done understanding the IPCC guidelines and following standard methodology of GHG protocol for GHG estimation. Calculations are done majorly for scope 1 where direct use of materials and energy for the proposed plant is considered.

Figure 4: Material flow for sponge iron plant

Section	Technology	Process flow
Sponge Ironplant	Coal Based RotaryKiln Process	Feeding of RM to the Rotary Kiln through feed tube Cooling in the rotary cooler Screening magnetic separation of the product spongeiron Other outputs - Char

Table 3.1: Raw Material Requirement

Sponge Iron Plant (300 TPD / 90000 TPA) – EXISTING						
1	Iron Ore	1.9	570	171,000	In-house from Beneficiation plant	---
2	Coal	1.6	480	144,000	Different Collieries of CCL	Mode: Road, Rail Approx. – 150 KM
3	Dolomite	0.025	7.66	2300	Daltonganj, Jharkhand. Katni, M.P.	Mode: Road Daltonganj – 250 KM(appx.) Katni – 700 KM (appx.)
	TOTAL	**3.525**	**1057.66**	**317,300**		

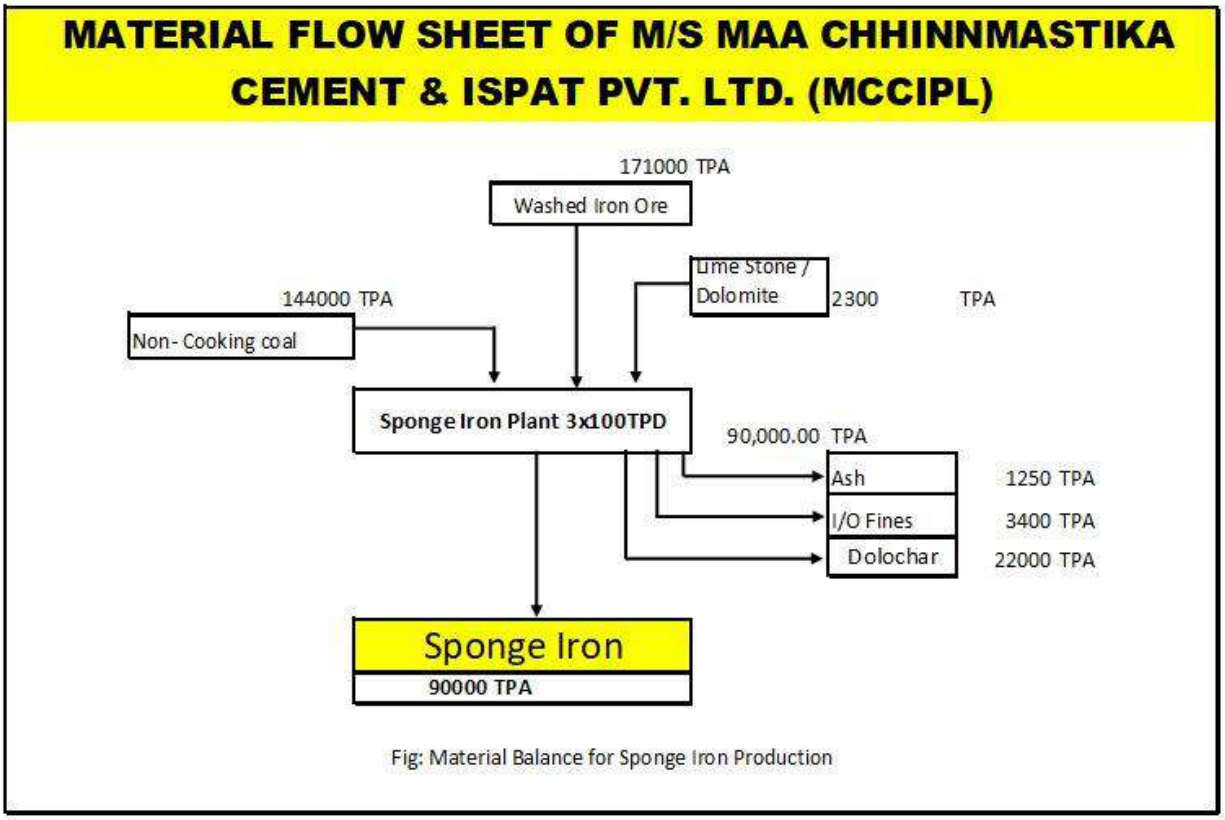


Figure5: Material Flow Sheet

LAND USE

The total project area is about 30.629 acres (12.42 Ha.). The area will be used for construction and development of Production lines, Warehouses & Stores, Utilities, R&D, QC, Administrative Blocks and Common facilities etc., apart from the above, internal road sand green belt will be development as per the norms. About 10 acres (4.1 Ha.), after earmarking 1.0 acre for temporary ash store yard, will be developed as greenbelt.

This greenbelt will serve as a buffer between the peripheries and the industry, thereby controlling the air emissions and noise levels. The probable land use is given below in Table:

Table 3.2: Land Use of Plant Layout

SL No	TYPE OF USE	Area	
		Acres	Hectares
1	Existing Units (3 nos. Kiln of Sponge Iron)	7.01	2.84
2	Power Plant with WHRB	1.62	0.66
3	Steel Melting Shop	2.73	1.11
4	Rolling Mill	2.5	1.01
5	Iron Ore Beneficiation Plant	1.0	0.40
6	Slag Crushing Plant	0.8	0.32
7	Area Tailing Pond	0.69	0.28
8	Green Belt	10.78	4.36
9	Area for Parking	0.5	0.20
10	Vacant land	3.062	1.24
	Total Land Area	**30.692**	**12.42**

Table3.3: Emission factors of GHG gases from different energy fuel sources

Energy sources	kg CO_2/kg fuel	kg CH_4/kg fuel	kg N_2O/kg fuel
Coal	2.42	2.82E-04	4.00E-05
Electricity	0.43 kg CO2/kwh	0.0223 kg CH4/kwh	0.00342kg N2O/kwh
Natural gas	2.69	2.40E-04	5.00E-06

Methodology for Estimationg GHG Emissions

In this report, the system boundary is gate-to-gate which is from raw materials entering a coke oven to the steel leaving the continuous casting machine (Figure 4). The system boundary in this study includes the Coke oven, sintering, pelletizing, beneficiation, blast furnace, basic oxygen furnace, continuous casting, lime and dolo plant and captive power plant. The major GHG emissions i.e. CO_2, CH_4, and N_2O have been calculated and reported in the form of CO_2-equvalent. Within the defined system boundary, mass and energy inputs for the processes within the boundary are included.

CO_2 Emission:

The GHG emissions has been estimated based on the mass and energy used in the individual process of steel manufacturing. The mass and energy data used in this study are specified for the major steel manufacturing processes including Coke oven, sintering, pelletizing, beneficiation, blast furnace, basic oxygen furnace, continuous casting, lime and dolo plant and captive power plant. CO_2 emissions have been calculated using carbon content data that are expressed on a mass or volume basis. (Equation no___)

Mass basis: $$E = A_{f,v}.F_{c,v}.F_{ox}.\frac{44}{12}$$ ---- 1

Volume basis: $$E = A_{f,m}.F_{c,m}.F_{ox}.\frac{44}{12}$$ ---- 2

Equation No. 1 &2: Calculating CO_2 emissions using carbon content data that are expressed on a mass or volume basis

Where:

E = Amount of CO_2 emitted (metric tons)

$A_{f,v}$ = Volume of fuel consumed (e.g., liters, gallons, m^3, etc.)

$A_{f,m}$ = Mass of fuel consumed (e.g., kg, short ton, etc.)

$F_{c,v}$ = Carbon content of fuel on a volume basis (e.g., short tons carbon / gallon)

$F_{c,m}$ = Carbon content of fuel on a mass basis (e.g., short tons carbon / short ton)

F_{OX} = Fraction oxidation factor

44/12 = The ratio of the molecular weight of carbon to that of CO_2

$$E = A \,.\, HV_f . F_{c,h} . F_{ox} . \frac{44}{12} \qquad \text{---- 3}$$

Equation No. 3: Calculating CO_2 emissions from stationary combustion sources using carbon content data expressed on an energy basis

Where:

E = Amount of CO_2 emitted (metric tonnes)

A = Mass of fuel consumed (e.g., metric tonnes)

HV_f = Heating value of fuel (e.g., MJ/Kg or thousand Btu/lb)

$F_{c,h}$ = Carbon content of fuel on a heating value basis (e.g., short tons C/million Btu or metric tonnes C/GJ)

F_{OX} = Fraction oxidation factor

44/12 = The ratio of the molecular weight of carbon to that of CO_2.

CH_4 and N_2O emissions:

The N_2O and CH_4 emissions from Electricity Generation and Reheating Furnaces can be calculated using Equation 4.

$$E = A_f . HHV_f . EF \,.\, GWP \qquad \text{---- 4}$$

$$E = A_f . HHV_f . ESEF \,.\, GWP \qquad \text{---- 5}$$

Equation :: Calculating N_2O and CH_4 emissions

Where:

E = Amount of either N_2O or CH_4 emitted (metric tonnes CO_2-equivalent)

A_f = Amount of fuel combusted on a mass or volume basis

EF = fuel-specific emission factor

ESEF = Equipment-specific emission factor

GWP = 21 for CH_4 or 310 for N_2O

Table 3.4: Carbon contents for materials consumed in process sources

Process Materials	**Carbon Content*** (kg C/kg)
Blast Furnace Gas	0.17
Charcoal[a]	0.91
Coal	0.67[1]
Coal tar	0.62
Coke	0.83
Coke Oven gas	0.47
Coking Coal	0.73
Direct reduced Iron (DRI)	0.02
Dolomite	0.13
EAF Carbon Electrodes	0.82[2]
EAF Charge Carbon	0.83[3]
Fuel Oil	0.86[4]

Gas Coke	0.83
Hot Briquetted iron	0.02
Limestone	0.12
Natural Gas	0.73
Oxygen Steel Furnace Gas	0.35
Petroleum Coke	0.87
Purchased pig Iron	0.04
Scrap Iron	0.04
Steel	0.01

Table 3.5: Typical Values for CH_4 & N_2O contents for materials consumed in process sources

Fuel		**Lower Heating Value(LHV)/Net Calorific Value (NCV) Basis**				**Higher Heating Value(HHV)/Gross Calorific Value (GCV) Basis**			
		kg GHG / TJ fuel		kg GHG / ton fuel		kg GHG / TJ fuel		kg GHG / ton fuel	
		CH_4	N_2O	CH_4	N_2O	CH_4	N_2O	CH_4	N_2O
Crude oil and	Crude oil	3.000	0.600	0.134	0.027	2.850	0.570	0.127	0.025

derived substances	Orimulsion	3.000	0.600	0.087	0.017	2.850	0.570	0.083	0.017
	Natural Gas Liquids	3.000	0.600	0.140	0.028	2.850	0.570	0.133	0.027
	Motor Gasoline	3.000	0.600	0.140	0.028	2.850	0.570	0.133	0.027
	Aviation Gasoline	3.000	0.600	0.140	0.028	2.850	0.570	0.133	0.027
	Jet Gasoline	3.000	0.600	0.140	0.028	2.850	0.570	0.133	0.027
	Jet Kerosene	3.000	0.600	0.139	0.028	2.850	0.570	0.132	0.026
	Other Kerosene	3.000	0.600	0.138	0.028	2.850	0.570	0.131	0.026
	Shale oil	3.000	0.600	0.120	0.024	2.850	0.570	0.114	0.023
	Gas/.Diesel oil	3.000	0.600	0.136	0.027	2.850	0.570	0.129	0.026
	Residual Fuel oil	3.000	0.600	0.128	0.026	2.850	0.570	0.121	0.024
	Liquified Petroleum Gases	1.000	0.100	0.053	0.005	0.900	0.090	0.047	0.005
	Ethane	1.000	0.100	0.052	0.005	0.900	0.090	0.046	0.005

	Naphtha	3.000	0.600	0.141	0.028	2.850	0.570	0.134	0.027
	Bitumen	3.000	0.600	0.127	0.025	2.850	0.570	0.121	0.024
	Lubricants	3.000	0.600	0.127	0.025	2.850	0.570	0.121	0.024
	Petroleum coke	3.000	0.600	0.103	0.021	2.850	0.570	0.098	0.020
	Refinery feedstocks	3.000	0.600	0.136	0.027	2.850	0.570	0.129	0.026
	Refinery Gas	1.000	0.100	0.055	0.006	0.900	0.090	0.050	0.005
	Paraffin waxes	3.000	0.600	0.127	0.025	2.850	0.570	0.121	0.024
	White Spirit & SBP	3.000	0.600	0.127	0.025	2.850	0.570	0.121	0.024
	Other petroleum products	3.000	0.600	0.127	0.025	2.850	0.570	0.121	0.024
Coal and derived products	Anthracite	1.000	1.500	0.028	0.042	0.950	1.425	0.027	0.040
	Coking coal	10.000	1.500	0.297	0.045	9.500	1.425	0.282	0.042
	Other bituminous coal	10.000	1.500	0.272	0.041	9.500	1.425	0.258	0.039

Sub-bituminous coal	10.000	1.500	0.199	0.030	9.500	1.425	0.189	0.028
Lignite	10.000	1.500	0.125	0.019	9.500	1.425	0.119	0.018
Oil shale and tar sands	10.000	1.500	0.094	0.014	9.500	1.425	0.089	0.013
Brown coal briquettes	10.000	1.500	0.218	0.033	9.500	1.425	0.207	0.031
Patent fuel	10.000	1.500	0.218	0.033	9.500	1.425	0.207	0.031
Coke oven coke & lignite coke	10.000	1.500	0.297	0.045	9.500	1.425	0.282	0.042
Gas coke	1.000	0.100	0.030	0.003	0.950	0.095	0.028	0.003
Coal tar	10.000	1.500	0.295	0.044	9.500	1.425	0.280	0.042
Gas works gas	1.000	0.100	0.043	0.004	0.900	0.090	0.039	0.004
Coke oven gas	1.000	0.100	0.043	0.004	0.900	0.090	0.039	0.004
Blast furnace gas	1.000	0.100	0.003	0.000	0.900	0.090	0.002	0.000
Oxygen steel furnace gas	1.000	0.100	0.008	0.001	0.900	0.090	0.007	0.001

Natural Gas	Natural Gas	1.000	0.100	0.053	0.005	0.900	0.090	0.051	0.005
Non-biomass waste	Municipal wastes (non-biomass fraction)	30.000	4.000	0.316	0.042	28.500	3.800	0.300	0.040
	Industrial wastes	30.000	4.000	N/A	N/A	28.500	3.800	N/A	N/A
	Waste oils	30.000	4.000	1.269	0.169	28.500	3.800	1.206	0.161
Peat	Peat	2.000	1.500	0.021	0.015	1.900	1.425	0.020	0.015
Biomass waste	Wood/Wood waste	30.000	4.000	0.493	0.066	28.500	3.800	0.468	0.062
	Sulphite lyes (Black liqour)	3.000	2.000	0.037	0.025	2.850	1.900	0.035	0.024
	Other primary solid biomass fuels	30.000	4.000	0.366	0.049	28.500	3.800	0.348	0.046
	Charcoal	200.000	4.000	6.211	0.124	190.000	3.800	5.900	0.118
	Biogasoline	3.000	0.600	0.085	0.017	2.850	0.570	0.081	0.016
	Biodiesels	3.000	0.600	0.085	0.017	2.850	0.570	0.081	0.016

Other liquid biofuels	3.000	0.600	0.087	0.017	2.850	0.570	0.082	0.016
Landfill gas	1.000	0.100	0.056	0.006	0.900	0.090	0.050	0.005
Sludge gas	1.000	0.100	0.056	0.006	0.900	0.090	0.050	0.005
Other biogas	1.000	0.100	0.056	0.006	0.900	0.090	0.050	0.005
Municipal wastes (biomass fraction)	30.000	4.000	0.366	0.049	28.500	3.800	0.348	0.046

Chapter-4

Action plan for Carbon off-setting

Re-use of Steel Scrap in Basic Oxygen Furnace

Scrap is a term used to describe steel that has generated during the manufacture of steel products. While the term 'scrap' may lead one to believe this is a waste product, it is actually a valuable raw material used in every steelmaking process. In blast furnace (BF) steelmaking, each charge of the basic oxygen furnace, in which carbon carbon-rich pig iron is refined into crude steel, typically contains 8%-10% scrap. Scrap acts as a cooling agent, absorbing excess heat from the exothermic decarbonisation process, and also as a source of iron units. Reuse of scrap in BOF helps reducing greenhouse gas emissions.

Table4.1: Heating and cooling reactions of BOF

Heating Reactions	Cooling Reactions
$c + \frac{1}{2}\, o_2 \rightarrow co$	
	$Fe_2O_3 + 3C \rightarrow 2Fe + 3CO$
$co + \frac{1}{2}\, o_2 \rightarrow co_2$	
$Si + o_2 \rightarrow SiO_2$	$Fe_2O_3 + 3CO \rightarrow 2Fe + 3CO_2$
$Fe + \frac{1}{2}\, o_2 \rightarrow FeO$	
$2Mn + o_2 \rightarrow 2MnO$	
$4P + 5o_2 \rightarrow 2P_2O_5$	

Reuse of internal heat for power generation

The proposed plant is designed for optimum use of the recovered energy of hot off gases from major units such as Blast furnace, Basic oxygen furnace and coke oven plant. A plant is designed to integrate 74 % of the heat generated from coke oven gas to sinter plant, pellet plant & continuous casting machine. Approx. 52 % of the total heat generated from blast furnace will be reused in blast furnace & 20 % of the generated heat will be integrated to sinter plant, pellet plant & continuous casting machine. The surplus gases available in these units will be re-used for power generation. Out of 600 MW, 293 MW power will be generated from internal process heat.

CO_2 capture

The uses of coal for generation of 600 MW electricity produce approximately 5 MT of CO_2 annually. CPP's are one of the major contributors of CO_2 emissions in any steel plant. In view to limit the release of CO_2 in atmosphere it is necessary to capture CO_2. There are several approaches for CO_2 capture out of which amine based CO_2 absorption systems are the most suitable for combustion based power plants. The amine based CO_2 absorption is easy to use and can be retrofitted to existing power plants. Absorption processes are based on thermally regenerable solvents, which have a strong affinity for CO_2. They are regenerated at elevated temperature. In view to limit the CO_2 release, It is suggested to install amine based CO_2 absorption unit at 600 MW CPP.

The equilibrium reactions describing the solution chemistry of CO_2 absorption with MEA

$$MEA + H_3O^+ \rightleftharpoons \mathrm{MEA} + H_2\mathrm{O} \quad \text{(amine protonation)}$$

$$CO_2 + 2H_2O^+ \rightleftharpoons + H_3O^+ + HCO^{3-} \quad \text{(bicarbonate formation)}$$

$HCO_3^- + H_2O \rightleftharpoons + H_3O^+ + CO_3^{2-}$ (carbonate formation)

$MEA + HCO_3^- \rightleftharpoons + \mathrm{MEACO}O^- + H_2O$ (carbamate formation)

$2H_2O \rightleftharpoons + H_3O^+ + OH^-$ (water hydrolysis)

Chapter - 5

Terrestrial Sequestration

Terrestrial sequestration involves the capture and storage of carbon dioxide by plants and the storage of carbon in soil. During photosynthesis, carbon from atmospheric carbon dioxide is transformed into components necessary for plants to live and grow. As part of this process, the carbon present in the atmosphere as carbon dioxide becomes part of the plant: a leaf, stem, root, etc. Long-lived plants like trees might keep the carbon sequestered for a long period of time.

The existing greenbelt sure sequesters some amount of the carbon emitted through then industrial process. The greenbelt is spread over an area of 9 acres with total plantation of 5500 consisting of trees and shrubs. As the industry falls under the heavily polluted area, greenbelt needs to be enhanced and more trees are to be planted. Hence more carbon can be sequestered. New trees are suggested for plantation to cover approx. 40% of the total Plant Area.

Table 5.1: shows the existing greenbelt and its required expansion during the expansion phase:

1.	Total Area	30.692 acres
2.	Existing Greenbelt	9 Acres
3.	Existing no.of plants	5500
4.	Greenbelt Enhancement	3.25 Acres
5.	No. of trees to be planted	1800

Formula used for determination of Carbon sequestered by Trees

Step 1: Determine the total green weight of the tree:

The green weight is the weight of the tree when it is alive. First, you have to calculate the green weight of the above-ground weight as follows:

$W_{above\text{-}ground} = 0.25\ D^2\ H$ (for trees with D<11)
$W_{above\text{-}ground} = 0.15\ D^2\ H$ (for trees with D>11)
$W_{above\text{-}ground}$ = Above-ground weight in pounds
D = Diameter of the trunk in inches
H = Height of the tree in feet

The root system weight is about 20% of the above-ground weight. Therefore, to determine the total green weight of the tree, multiply the above-ground weight by 1.2:

$W_{total\ green\ weight} = 1.2 * W_{above\text{-}ground}$

Step 2: Determine the dry weight of the tree

The average tree is 72.5% dry matter and 27.5% moisture. Therefore, to determine the dry weight of the tree, multiply the total green weight of the tree by 72.5%.

$W_{dry\ weight} = 0.725 * W_{total\ green\ weigh}$

Step 3: Determine the weight of carbon in the tree

The average carbon content is generally 50% of the tree's dry weight total volume. Therefore, in determining the weight of carbon in the tree, multiply the dry weight of the tree by 50%.

$W_{carbon} = 0.5 * W_{dry\ weight}$

Step 4: Determine the weight of carbon dioxide sequestered in the tree

CO2 has one molecule of Carbon and 2 molecules of Oxygen. The atomic weight of Carbon is 12 (u) and the atomic weight of Oxygen is 16 (u). The weight of CO2 in trees is determined by the ratio of CO2 to C is 44/12 = 3.67. Therefore, to determine the weight of carbon dioxide sequestered in the tree, multiply the weight of carbon in the tree by 3.67.

$W_{carbon\text{-}dioxide} = 3.67 * W_{carbon}$

Selection of the trees is based on:

1. Tolerance towards pollution.
2. Fast Growth
3. High sequestration potential.
4. Indigenously growing species.
5. No exotic species has been suggested.
6. Average Growth period to be three years.
7. No vulnerable or endangered species has been chosen.

As per the study conducted the total carbon emissions mounts to 75,603 ton for the year 2021-2022. In this respect the sequestered carbon is calculated to be 2.3% approximately. List of existing plant is attached as Annexure1, Annexure 2, and Annexure 3 for >10 years, 5-10 years, < 5 years respectively. Therefore a suitable plan has been suggested for plantation attempting to take this sequestration to the rise of 4.5% approximately in an average period of 3 Years. Plantation plan is attached as Annexure 4. When it comes to sequestration through afforestation, it is the best possible way to sequester carbon and reap other benefits as well. However sequestration has its limits, plantation within the plant limits the area of plantation and therefore sequestration is limited. However developing thicker greenbelt outside the plant boundaries around 10-20 m allows more sequestration. Keeping in mind the existing plantation also adds significantly to the sequestration. Maintenance of the Greenbelt is another important aspect that can significantly impact the health of the plants, leading to maximum healthy growth. During construction phase due to excessive dust, a decline in survival rate was observed. It is hence suggested to go for expansion post construction.

Chapter - 6

Conclusions

The Indian DRI industry consumes 8.8% of national annual industrial energy use and emits 11% of national annual CO2 emissions. This represents a significant portion of the national contribution in terms of emissions and energy use. it is crucial to carefully examine the DRI industry for energy use and emissions abatement measures. The growing iron and steel industry in India is one of the key sectors to reform in order to meet the country's NDCs to the Paris Agreement, and the anticipated doubling of DRI capacity from 50 MTPA in 2018-19 to 114 MTPA by 2030-31 is further indication of the importance of this sector.

The ironmaking process is of key focus for reducing energy use, GHG, SOx and PM2.5 emissions. There is a large contribution of NOx emissions from transport at present.

The DRI process metrics suggest that in terms of efficiency, there is a potential for 20-30% improvement on average when considering the best technologies available. This can be brought about by improving the raw material quality, proper selection of materials and process parameters and waste-heat recovery, among others. To improve raw material quality, it is suggested to explore the expansion of domestic beneficiation capacity (particularly for coal) and reduce the import share to bring a gross benefit of up to 5% in GHG emissions and 6% in energy use. Newer and more efficient beneficiation technologies could be adopted to ensure sustainable growth. Land transport using trucks can be reduced in favour of railways to improve transport efficiency and reduce overall emissions by 1-2%. Improving regulations by revising the 12-year old emissions norms and bettering the monitoring framework by inducting CEMS can go a long way in preventing plants from flouting norms without detection and reprehension. Extending the PAT scheme with stricter targets and encouragement of adopting higher productivity, WHR systems and also for fuel switching could be greatly beneficial in accelerating development.

Over the next decade, however, considering the broad limitations of raw material quality/availability, technoeconomic uncertainties, etc., the development of a robust and

affordable natural gas network may be of significant potential for reduction in GHG emission from the DRI industry. In addition, capacity building must be taken up early on for accelerated hydrogen steel adoption. By enhancing research and development and deploying pilot production facilities, the overall infrastructure for a hydrogen economy can be stably built for ensured introduction of hydrogen-based steel in the coming decades. The hydrogen economy can revolutionize the industry by reducing GHG emissions by up to 94%.

In conclusion, short-term measures can be taken to increase coal-DRI performance to BAT standards. Over the medium term, natural gas adoption can be explored, whilst a suitable long-term goal is to introduce hydrogen and negate 300 million tonnes of GHG emissions, to enable truly sustainable development. A robust policy must be developed, and relevant stakeholders must be engaged in a timely manner to accelerate the GHG emission of this important industry and thus sustaining the economy over the long term.

CO_2 emissions data submission form for world steel sectoral approach

*Please do not change downloaded form

Mandatory to fill-in
Stainless steel only
Fill-in if available
Protected calculation
Fixed value

Site:	MCPL022
Organization:	MCMJ
Year(Report period):	2022

Site structure (the number of operated units)

Coke battery		BF > 1000 m^3		Open hearth		Cold rolling		A&P lines	
Sinter plant		100<BF<1000		Hot rolling		HDG lines		Bright A lines	
Pellet plant		BF < 100 m^3		Lime kilns		EG lines		Batch Annealing	
Gas DRI		BOF shops		Oxygen plant		Tining lines		Argon/Oxy Decarb	
Coal DRI		EAF units		Power plant		Smelting Reduction		Vacuum Oxy Decarb	

BASIC information

Total coke production (dry t)	
Sinter production (t)	
Pellet production (t)	
Hot metal production (t)	
DRI production (t)	69,284
BOF crude steel production (t)	
Open Hearth crude steel production (t)	0
EAF crude steel production (t)	0
Carbon crude steel production (t)	0
Hot rolled steel production (t)	
Austenitic stainless steel production (t)	
Ferritic stainless steel production (t)	
Martensitic stainless steel production (t)	
Other stainless steel production (t)	
Stainless steel production (t)	0
Total Steel Production (t)	**0**
Total Ironmaking slag production (t)	
Total steelmaking slag production (t)	
Granulated Ironmaking slag production (t)	
Granulated Steelmaking slag production (t)	
Total Granulated slag production (t)	11,880
Hot rolled stainless steel production (t)	
Cold rolled stainless steel production (t)	
Iron supply from upstream (t)	
Purchased carbon steel scraps (t)	
Purchased stainless steel scraps (t)	
Home carbon steel scraps (t)	
Home stainless steel scraps (t)	
Cr-Ni type scraps (%)	
Cr type scraps (%)	
Burnt lime production (t)	
Power generation (MWh)	0
Data verified by external body	Yes

Electricity grid Information

Source of information	Energy Equivalent GJ/MWh	Upstream CO_2 value t CO_2/MWh
Global average grid mix	9.800	0.504
IEA yearly update global grid mix	9.800	0.476
National or regional regulator mix		
Site power supply contract mix		

			Site data				Conversion factors		Calculation results				
	Materals /Energies	Unit	Purchased Procured	Sold Delivered	C content Site measurement	Energy Equivalent	Emission Factor	Upstream CO_2 value	Scope 1 Direct emissions	Scope 1.1 emissions	Scope 2 emissions	Scope 3 emissions	Total Energy
					t C/unit	GJ/unit	t CO_2/unit	t CO_2/unit	t CO_2	t CO_2	t CO_2	t CO_2	TJ
	Iron ore	dry t	1,17,300		0.010		0.037		4,340			-	-
	Coking coal	dry t			0.835	32.200	3.060		-			-	-
	BF injection coal	dry t			0.806	31.100	2.953		-			-	-
	Sinter/BOF coal	dry t			0.760	29.300	2.785		-			-	-
	Steam coal	dry t	88,000		0.672	25.900	2.462		2,16,656			-	2,279
	EAF coal	dry t			0.889	30.100	3.257		-			-	-
	SR/DRI coal	dry t			0.806	31.100	2.953		-			-	-
	Coke	dry t			0.889	30.100	3.257	0.224	-			-	-
	Charcoal	dry t		53,300		18.800			-			-	- 1,002
New	Petroleum coke	t			0.850	31.935	3.115		-			-	-
New	Used plastic	t				46.000	2.416		-			-	-
New	Used tires	t				35.000	2.199		-			-	-
	Heavy oil	m^3				37.700	2.907	0.276	-			-	-
	Light oil	m^3				35.100	2.601	0.247	-			-	-
	Kerosene	m^3				34.700	2.481	0.247	-			-	-
	LPG	t				47.300	2.985		-			-	-
	LNG	k.m^3N			0.550	35.900	2.015	0.665	-			-	-
	Natural gas	k.m^3N			0.550	35.900	2.015	0.000	-			-	-
New	Green hydrogen	t				120.000		0.000	-			-	-
New	Blue hydrogen	t				120.000		1.800	-			-	-
New	Grey hydrogen	t				120.000		19.800	-			-	-
New	Fossil free biogas	t			0.751	50.400		0.000	-			-	-
	Limestone	dry t			0.120		0.440		-			-	-
	Burnt lime	t				4.500		0.950	-			-	-
	Crude dolomite	dry t	23,000		0.130		0.476		10,948			-	-
	Burnt dolomite	t				4.500		1.100	-			-	-
	Sinter	t				2.450		0.262	-			-	-
	Pellets	t	50,000			2.100		0.137	-			6,850	105
	EAF electrodes	t					3.663	0.650	-			-	-
New	Low carbon iron units	t			0.047	20.900	0.172	1.855	-			-	-
	Pig Iron	t			0.047	20.900	0.172	1.855	-			-	-
	Cold Iron	t			0.047	20.900	0.172	1.855	-			-	-
	Ni pig iron	t			0.005		0.018	5.200	-			-	-
New	Charcoal based pig iron	t			0.047	20.900	0.172	1.855	-			-	-
New	Biomass	t			0.476	15.600		0.000	-			-	-
	Gas based DRI	t			0.020	14.100	0.073	0.780	-			-	-
	Coal based DRI	t		0	0.020	17.900	0.073	1.210	-			-	-
New	Low carbon DRI	t			0.020	14.100	0.073	0.780	-			-	-
	Ferro-Nickel	t			0.010		0.037	8.676	-			-	-
	Nickel oxides	t			0.001		0.004	20.279	-			-	-
	Nickel metal	t			0.001		0.004	13.579	-			-	-
	Ferro-Chromium	t			0.075		0.275	5.987	-			-	-
	Molybdenum oxides	t			0.001		0.004	6.500	-			-	-
	Ferro-Molybdenum	t			0.005		0.018	8.500	-			-	-
	Ferro-Manganese	t			0.050		0.183	2.789	-			-	-
New	Ferro-Silicon	t			0.001		0.004	4.000	-			-	-
New	Silico-Manganese	t			0.005		0.018	1.400	-			-	-
New	Silicon (Metal)	t			0.001		0.004	5.000	-			-	-
	Electricity	MWh	3,405			9.800		0.504	-		1,716		33
	Steam	t				3.800		0.195	-		-		-
	Oxygen	k.m^3N				6.900		0.355	-			-	-

	Nitrogen	$k.m^3N$				2.000		0.103	-			-	-
	Argon	$k.m^3N$				2.000		0.103	-			-	-
	Coke oven gas	$k.m^3N$			0.228	19.000	0.835	0.977	-	-	-		-
	Blast furnace gas	$k.m^3N$			0.243	3.300	0.890	0.170	-	-	-		-
	BOF gas	$k.m^3N$			0.413	8.400	1.513	0.432	-	-	-		-
New	Waste heat	GJ				1.000		0.051	-		-		-
New	Ethanol	m^3			0.410	23.575		1.494	-			-	-
New	Methanol	m^3			0.293	15.662		1.369	-			-	-
New	Ammonia	t				37.500		1.600	-			-	-
	BF slag	t		11,880				0.550	-			- 6,534	-
	BOF slag	t		11,880				0.300	-			- 3,564	-
New	EAF slag	t						0.300	-			-	-
	CO2 to external use	t					1.000		-			-	-
New	Permanently sequestered CO2	t					1.000		-			-	-
	Coal tar	t				37.000	3.389		-			-	-
	Benzole	t				40.570	3.382		-			-	-
	w/o undecided credits	CO2 Intensity	-	tCO2/tCrudeSteel	Grand Total	**2,40,510**	tCO2	Sub Total	**2,31,944**	**-**	**1,716**	**6,850**	
	w/ undecided credits	CO2 Intensity	-	tCO2/tCrudeSteel	Grand Total	2,30,412.00	tCO2	Sub Total	2,31,944	-	1,716	- 3,248	1,415
		CI by Slags	-	tCO2/tCrudeSteel	Slags	- 10,098.00	tCO2	Slags	-	-	-	- 10,098	
		CI External CO2	-	tCO2/tCrudeSteel	External CO2	-	tCO2	External CO2	-	-	-	-	
		Sequestered CI	-	tCO2/tCrudeSteel	Sequestered CO2	-	tCO2	Sequestered CO2	-	-	-	-	
		CCU Products	-	tCO2/tCrudeSteel	CCU Products	-	tCO2	CCU Products	-	-	-	-	
	Energy Intensity		-	GJ/tCrudeSteel									

Useful unit conversions

Volume	1	scf	0.026862	m3N
Volume	1	gal	0.003785	m3
Weight	1	lb	0.453592	kg
Weight	1	nt	0.907184	mt
Energy	1	mmBTU	1.054349	GJ
Energy	1	mBTU/scf	39.251136	MJ/m3N
Energy	1	mBTU/nt	1.162222	MJ/mt
Energy	1	BTU/gal	0.278530	MJ/m3

3.274

GREENBELT PLANTATION PLAN FOR MCCIPL AND ITS SEQUESTRATION POTENTIAL

Common Name	Plant Spieces	Family	Number	Average Height above the ground (feet)	Average Diameter of the trunk (inches)	Weight of the tree above ground (pounds)	Total Weight of the tree (pounds)	Dry weight of the tree (pounds)	Weight of the carbon present (pounds)	Weight of carbon dioxide sequestered (pounds)	Weight of the carbon sequestered (tonne)	Weight of the carbon sequestered (tonne/annum)
TREES												
Ashoka Tree	Monoon Longifolium	Annonaceae	300	49	20	1470000	1764000	1278900	639450	2346781.5	1066.718864	355.5729545
Akashmoni	Acacia auriculiformis	Fabaceae	50	78	25	609375	731250	530156.25	265078.125	972836.7188	442.1985085	147.3995028
Mimosa	Acacia farnesiana	Fabaceae	50	82	18	332100	398520	288927	144463.5	530181.045	240.9913841	80.33046136
Chiku	Achrassapota	Sapotaceae	50	75	20	375000	450000	326250	163125	598668.75	272.1221591	90.70738636
	Ailanthus excels	Simaroubaceae	40	65	26.3	449598.5	539518.2	391150.695	195575.3475	717761.5253	326.2552388	108.7517463
Siris	Albizia amara	Fabaceae	50	64	45	1620000	1944000	1409400	704700	2586249	1175.567727	391.8559091
Frywood	Albizia lebbeck	Fabaceae	30	70	27	382725	459270	332970.75	166485.375	611001.3263	277.7278756	92.57595852
Karoi	Albizia procera	Fabaceae	30	42	54	918540	1102248	799129.8	399564.9	1466403.183	666.5469014	222.1823005
Milkwood	Alstonascholaris	Apocynaceae	30	36	12	38880	46656	33825.6	16912.8	62069.976	28.21362545	9.404541818
Neem	Azadirachtaindica	Meliaceae	200	55	19	992750	1191300	863692.5	431846.25	1584875.738	720.3980625	240.1326875
Bidi leaf	Bauhinia recemosa	Fabaceae	25	16	10	10000	12000	8700	4350	15964.5	7.256590909	2.418863636
White Orchid	Bauhinia acuminata	Fabaceae	25	7	12	6300	7560	5481	2740.5	10057.635	4.571652273	1.523884091
Butterfly Tree	Bauhinia purpurea	Fabaceae	20	15	6	2700	3240	2349	1174.5	4310.415	1.959279545	0.653093182
Shisham	Dalbergia sisoo	Fabaceae	75	76	70	6982500	8379000	6074775	3037387.5	11147212.13	5066.914602	1688.971534
Mango	Mangifera indica	Anacardiaceae	150	60	25	1406250	1687500	1223437.5	611718.75	2245007.813	1020.458097	340.1526989
Chinaberry	Melia azadirachta	Meliaceae	50	50	24	360000	432000	313200	156600	574722	261.2372727	87.07909091
Yellow Flame	Peltophorumpterocarpum	Fabaceae	50	60	35	918750	1102500	799312.5	399656.25	1466738.438	666.6992898	222.2330966
Manila Tamarind	Pithecellobium ducle	Fabaceae	55	45	20	247500	297000	215325	107662.5	395121.375	179.600625	59.866875
Java Plum	Syzygium cumini	Myrtaceae	25	47	25	183593.75	220312.5	159726.5625	79863.28125	293098.2422	133.2264737	44.40882457
Tulip Tree	Thespesia populnea	Malvaceae	25	62	32	396800	476160	345216	172608	633471.36	287.9415273	95.98050909
Teak	Gmelina arborea	Lamiaceae	350	100	14	1715000	2058000	1492050	746025	2737911.75	1244.505341	414.8351136
Indian Bael	Aegle marmelos	Rutaceae	25	26	8	10400	12480	9048	4524	16603.08	7.546854545	2.515618182
Banyan	Ficus benghalensis	Moraceae	20	87	112	5456640	6547968	4747276.8	2373638.4	8711252.928	3959.660422	1319.886807
			1725		8						18058.31837	6019.439458
					Flowering trees							
Golden Shower	Cassia Fistula	Fabaceae	20	40	36	259200	311040	225504	112752	413799.84	187.6643265	62.55477551
Champak	Michelia champaca	Magnoliaceae	20	85	62	1633700	1960440	1421319	710659.5	2608120.365	1182.821027	394.2736757
Coral Tree	Erythrina Blakei	Fabaceae	20	65	45	658125	789750	572568.75	286284.375	1050663.656	476.4914541	158.8304847
Mango-pine	Barringtonia Acutangula	Lecythidaceae	20	82	26	277160	332592	241129.2	120564.6	442472.082	200.6676109	66.88920363
Bottlebrush	Melaleuca citrina	Myrtaceae	20	25	24	72000	86400	62640	31320	114944.4	52.12897959	17.37632653
			100								2099.773398	699.9244661
												6719.363924

MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

Registered Office & Works:
At - Hahal, Post - Barkakana - 829103, Dist.- Ramgarh (Jharkhand)
ramgarh_jh@rediffmail.com

EXTRACT OF THE MINUTE OF THE MEETING OF BOARD OF DIRECTORS OF M/S MAA CHHINNMASTIKA CEMENT & ISPAT PRIVATE LIMITED HELD ON THURSDAY 15th DAY OF FEBRUARY 2018 AT 02:30 P.M AT REGISTERED OFFICE OF THE COMPANY

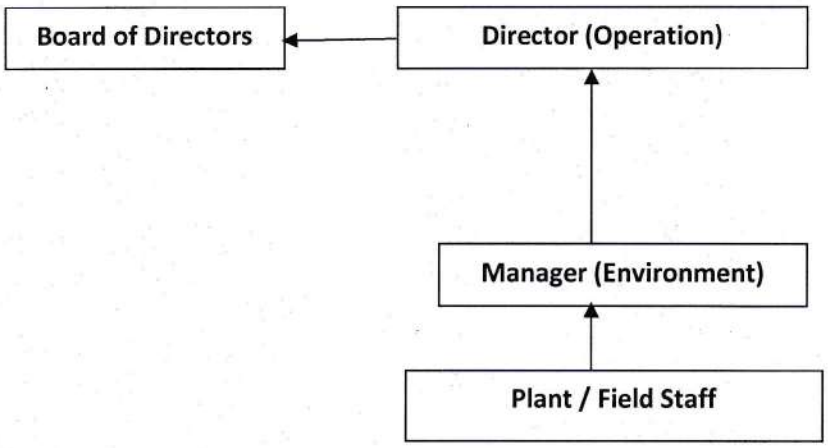
The Chairman informed the board a healthy and sustainable environment is important to our citizen, our economy & our future. Based on the principle of managing environment resources for the benefit & enjoyment of both current & future generation, the board decided to frame and adopt an Environmental Policy. After due deliberation following resolutions was passed in this regard:-

"RESOLVED THAT" the board hereby adopts the Environmental Policy (as discussed below). The mission of MCCIPL is to produce Steel & Steel product in an environment friendly manner and is strive to;

- Integrate sound environmental management practices in all our activities
- Conduct our operations in environmentally responsible manner to minimize pollution and its' impact on environment
- Comply with applicable legal and other requirements related to environmental aspects of our operations and strive to go beyond. The environment management cell will be headed by EHS Manager, a well qualified and experienced environment engineer.
- MCCIPL shall ensure that deviations from this policy and cases of violations/non-compliances of Environment or Forest Laws, if any, shall be reported to the Board of Directors through EHS Manager and shall identify designate responsible person for ensuring compliance with the Environmental Laws and Regulations.
- Conserve energy, and other natural resources, minimize waste generation and promote recovery, recycle and reuse.
- Increase greenery in and around the plant.
- Ensure continual improvement in environmental performance by setting & reviewing objectives & targets.
- Encourage environmental awareness amongst employees working for and on behalf of MCCIPL and the general populace around the plant.

Hierarchical systems - environmental issues and for ensuring compliance

Company EHS cell is responsible for the compliance of the environmental conditions. The Environmental Manager will functionally report to Director (Operation), and the environmental matters are placed to the Board of Directors through Director (Operation).



"**RESOLVED FURTHER THAT** Mr. Parashuram Singh of the Company be and is hereby severally authorized to make, sign and execute on behalf of the Company such all necessary document required in framing & adoption of "Environment Policy."

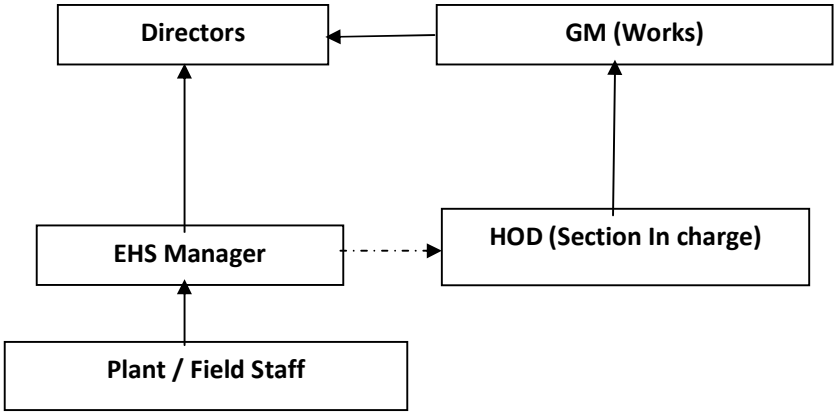
"**RESOLVED FURTHER THAT** the Board be and is hereby recommended to adopt Environment Policy, as the draft placed before the board, initiated by the chairman for the sake of identification".

Date: 15/02/2018

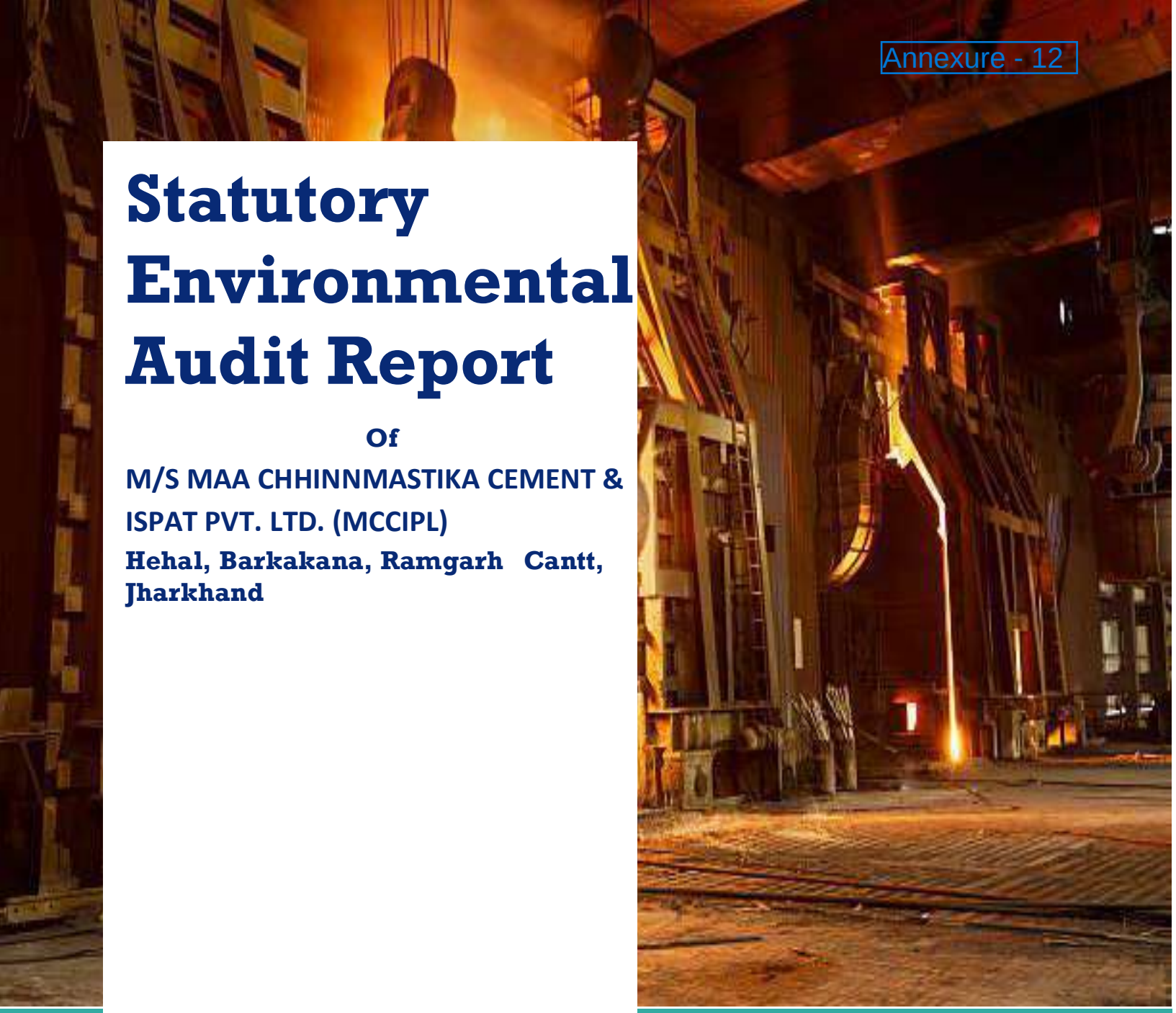
ALOK RUNGTA
(Director)
DIN: 01596258

Annexure – 11

Organization of Environment Management Cell



Annexure - 12



Statutory Environmental Audit Report

Of

M/S MAA CHHINNMASTIKA CEMENT & ISPAT PVT. LTD. (MCCIPL)

Hehal, Barkakana, Ramgarh Cantt, Jharkhand

NOV 2022

PREPARED BY:-

INSTITUTE FOR ENVIRONMENTAL MANAGEMENT

A-13, Saket Vihar, Harmu Housing Colony, Ranchi, Jharkhand-834002

AUDIT DETAILS

Purpose of the Audit – review of legally required permits/consents/authorization to operate the plant.

Auditing Agency	Institute for Environmental Management
Date of Audit	24 th September 2022
Time of Audit	11:00 AM – 15: 00 PM
Auditor's Name	**Dr. SC Jain**, Lead Auditor Director Consultant **Brij Nandan** Technical Manager **Soumajyoti Chakrobrty** Jr. Technical Manager **Khushi** Expert Environmental Management

Prepared By:
Khushi

Verified By:
Dr. SC Jain

INTRODUCTION

ANNEXURES

Sl.No	STATUTORY COMPLIANCE	REFERENCES
1.	Consent to Establish	Annexure – 1
2.	Consent to Operate	Annexure - 2
3.	Environmental Statement 21-22	Annexure – 3
4.	Environmental Clearance	Annexure – 4
5.	HW Authorization	Annexure – 5
6.	Raw Material Authorization	Annexure – 6
7.	Water Permission	Annexure – 7
8.	Power Permission	Annexure – 8
9.	Rainwater Harvesting Proposal	Annexure – 9
10.	Photographs	Annexure – 10

CHAPTER -1 INTRODUCTION

Statutory Environmental Audit is a management tool comprising a systematic, documented, periodic and objective evaluation of an Organization keeping its environmental permits/ consents/authorizations as well as its environmental performance of its operation remains in compliance with its mandate as per legal requirement.

Environmental auditing is a process whereby an organization's environmental performance is tested against its environmental policies, objectives and stipulated norms. Green audit is defined as an official examination of the effects an Industry has on the environment.

Environmental report provides you with an objective third-party evaluation of your operations environmental performance and a corrective action plan aimed at improving it. The environmental audit reports include an overview of the findings, detailed description of each inspection point, and corresponding evidence.

M/S Maa Chhinmastika Cement & Ispat Pvt. Ltd. (MCCIPL) is registered company under the Company's Act. It was formed on 02.06.2004 and is situated at Village: Hehal, Barkakana, Ramgarh Cantt, and Jharkhand. At present company manufactures Sponge Iron and other related facilities. MCCIPL has installed 3x100TPD (Sponge Iron plants) DRI Units with annual production capacity of 90,000 Metric Tons at village: Hehal, District: Ramgarh in the state of Jharkhand in 2005 after getting NOC from Jharkhand Pollution Control Board (JSPCB) and subsequently Consent to Operate from JSPCB. Recovery Boilers and dolochar produced in plant in AFBC Boiler, supplemented by coal, for production of 15MW power. A new 2 x 12T Induction furnace with 67,500 MTPA Rolling Mill and Iron Ore Cushing & Beneficiation facility, 201,000 TPA (throughput) and 12,000 TPA capacity Slag Crushing Plant are also proposed at Plot No: 563, 386, 383, 384, 385, 387, 388, 362 Khata No: 86, 69, 33, 24, 86, 30, 83, 86 in village Hehal, P.O.- Barkakhana, Ramgarh District, Jharkhand State.

M/S Maa Chhinmastika Cement & Ispat Pvt. Ltd. (MCCIPL) assigned a task to conduct a statutory environment audit to find out the gap in its environmental performance via-a vie legal requirement., Following were the goals:

- Whether the unit is complying with its legal requirement with respect to environment.
- A baseline survey to know the real status of green practices.
- Identification of the problems faced by unit in practicing green policies.

CHAPTER – 2 PROJECT DESCRIPTIONS

SL. NO	PARTICULARS	DETAILS
1.	Latitude	23°37'07.56" N
2.	Longitude	85°25'42.82" E
3.	Altitude	260 m above MSL
4.	Toposheet	73 E/6 & 73 E/10
5.	Plot/Survey/Khasra No.	Plot No: 563, 386, 383, 384, 385, 387, 388, 362 Khata No. 86, 69, 33, 24, 86, 30, 83, 86.
6.	Seismicity	Area falls under least affected earthquakes Zone II; Source –as per IS 1893 – 2002
7.	Present Land Use	Within existing industrial premises.
8.	Climatic Condition (Annual Average)	Ambient Air temp 10°C to 37°C Avg. annual rainfall 1462.8 mm
9.	Nearest Village	Nayaghatua – 01 km (E)
10.	Nearest Town	Ramgarh- 9.5 km, East
11.	Nearest Police Station	Ghutu Police Station, 1.5 Km in E
12.	Nearest Post Office	Ghutu Post office – 1.8 Km in E direction from the project site.
13.	Nearest River	Damodar River – 2 Km.
14.	Nearest Railway Station	Barkakhana Ramgarh – 1.5 Km.
15.	Nearest Temple	Sankat Moachan Mandir – 0.5 km in E

		direction.
16.	Nearest College	MaaBanjri ITI college Ghutwa- 1.1 km in E direction.
17.	Nearest Bus Stop	Jharkhand state highway 2 bus stop 1.7 km in NW direction.
18.	Nearest Medical	Ghutu Hospital 2.3 km in E.
19.	Nearest Airport	Ranchi Airport, 50 km.
20.	Sanctuaries/ National Parks/ Biosphere etc.	Nil
21.	Topography	Gently Undulating.
22.	Defense Installations	Ramgarh Cantt. – 15 Km
23.	Historical Places	Chinnamasta Temple which is located 69.3 km in E direction.
24.	Reserve Forest/ Protected Forest	No reserve forest within 15 Kms, from the project site, PF Forest – 0.6 km (S), Bundu PF Forest – 4.5 km (N).
25.	Total Land Area	30.692 Acres (12.42 ha).
26.	Total Water Requirement	(m^3/day) 2335
27.	Total Power Requirement	15 MW Power requirement at present is 950 KVA which is being met from JVUNL Grid. After the commissioning of power plant the integrated unit will fulfill its power

		requirement from the 15 MW Captive power plants. Company has also installed 1*1010 KVA 1* 500 KVA & 1*320 KVA DG Sets.
28.	Total Manpower	Nos. 491
29.	Total Capital Cost	(Crores) Rs. 192.68

2.1 Location of the Project

State - Jharkhand

District – Ramgarh

Mouza – Hehal

Plot Nos. – 563, 386, 384, 385.

Khata No. – 86, 69, 33, 24, 30, 83.

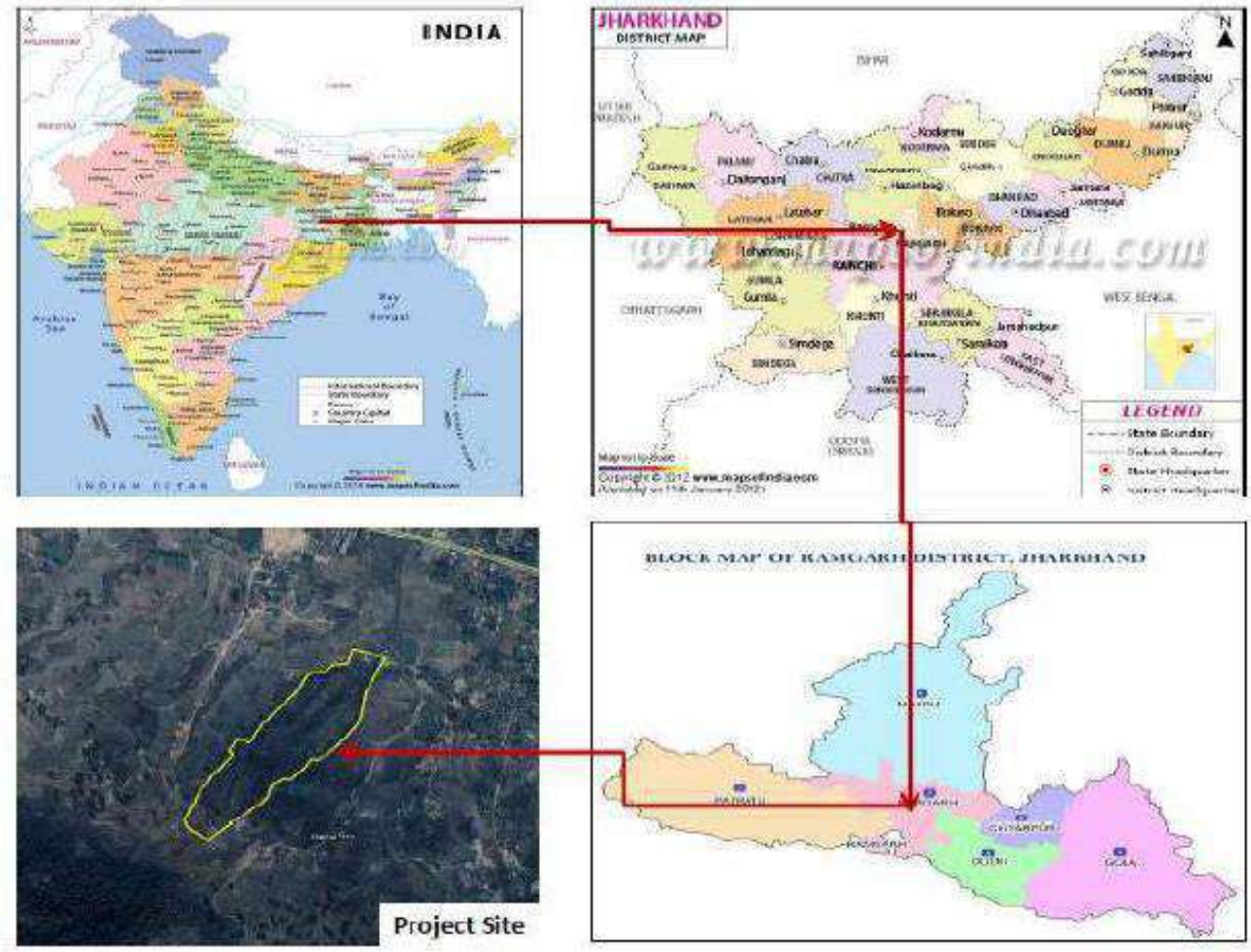


Fig 2.1 - Location of the Project

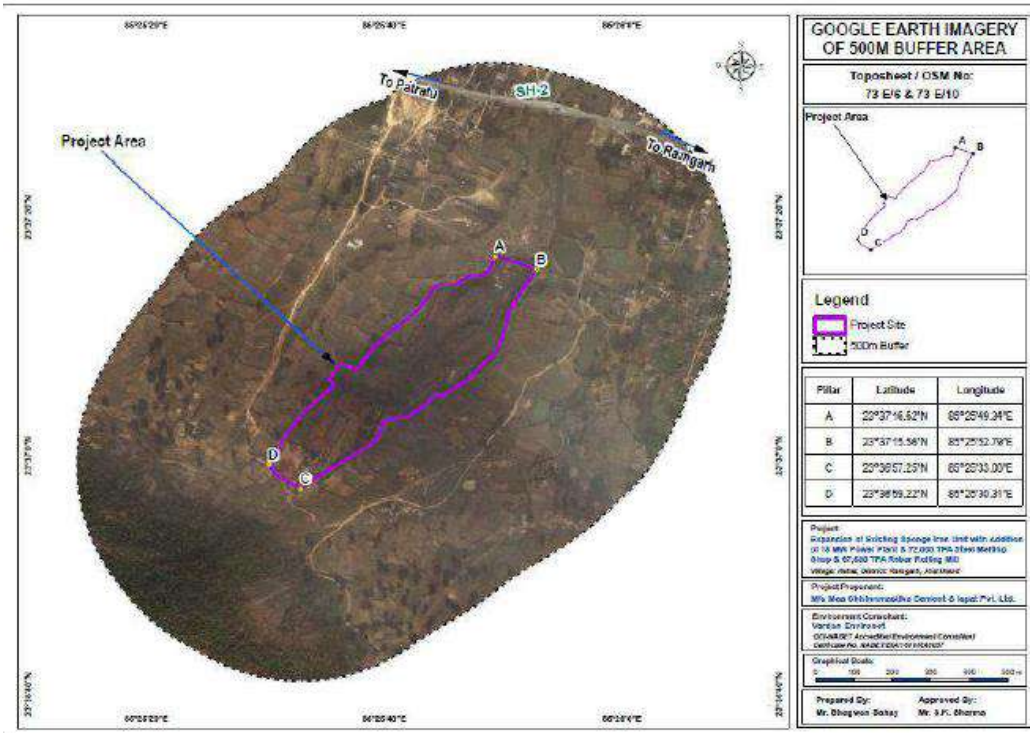


Fig 2.2 - Google imagery of Project Site

Fig 2.3 - Project Site Layout

2.2 Size of the Project

Name of unit	No.of units	Capacity of each unit	Production capacity TPA
EXISTING			
Sponge Iron unit	3 DRI Kilns	3x 100 T	90,000 T
PROPOSED			
Steel Making Shop, Induction Furnaces and Billet Caster	2	2x 12 T	72,000 T
Rolling Mill TMT bar mill	15 Stand Mill with Direct Hot Charging	225 T	67,500 T
Power Plant **Waste Heat Boilers** **AFBC Boiler**	 3 1	3x 2 MW 1x 9 MW	15 MW (Captive use)
Iron ore crushing & Beneficiation Plant	single stream(throughout)	80 – 100 TPH	167, 300
Briquette Plant	1	90 TPD	27,000
Slag Crushing Plant for SMS Slag	Single Stream	5 TPH	12,000

MCCIPL has installed 3x100TPD (Sponge Iron plants) DRI Units with annual production Capacity of 90,000 Metric Tons. Now MCCIPL intends to use the waste heat energy from the DRI units in Waste Heat Recovery Boilers and dolochar produced in plant in AFBC Boiler, supplemented by coal, for production of 15MW power. A new 2 x 12T Induction furnace with 67,500 MTPA Rolling Mill and Iron Ore Cushing & Beneficiation facility, 201,000 TPA (throughout) and12,000 TPA capacity Slag Crushing Plant are also proposed at Plot No: 563, 386, 383,384, 385, 387, 388, 362 Khata No: 86, 69, 33, 24, 86, 30, 83, 86 in village Hehal, P.O.- Barkakhana, Ramgarh District, Jharkhand State.

2.3 Parts of the Project

Section	Technology	Process Flow
Sponge Iron plant	Coal Based Rotary Kiln Process	Feeding of RM to the Rotary Kiln through feed Tube-> Cooling in the rotary cooler ->Screening ->magnetic separation of the product ->sponge iron Other outputs - Char
SMS Unit	Induction Furnace (IF)	Feeding of RM-> Melting in IF (adding alloys as per requirement)-> Metal in Liquid form-> casting & Cooling ->dispatch. Other outputs : Slag from IF
Rolling Mill	Direct Rolling of hot billets	Feeding of hot billets-> roughing strands-> rolling-> cutting & bundle-> dispatch
Power	Based on WHRB & AFBC	Steam from WHRB+AFBC (char used along with coal as fuel)-> TG set-> Power generation Other outputs : Ash from AFBC
Iron ore crushing & Beneficiation	Sizing of ore and washing Recovery of fines by hydro cyclone and thickener	Crushing & sizing using screens-> washing in wet Screens-> to DRI Slurry to hydro-cyclone-> dewatering-> under flow fines for sale Overflow slurry-> Thickener-> Tailing dam
Slag crusher	Jaw & Cone crusher with magnetic separator	Slag-> jaw crusher-> screen-> magnetic Separator-> cone crusher-> screen-> magnetic Separator -> recovered metallic part

2.4 Raw Material

Quantity of Raw Materials and their sources are indicated in Table below. Iron Ore and Coal which comprise major raw materials are received by road and stored in open storage yards within the plant. Crushing and screening facilities are proposed to prepare the material received from mines to make suitable for feeding in to production units. Some quantities of material which cannot be used within the plant are segregated and disposed-off as described in the subsequent para:

Sl.No.	Item	Per MT of Product	Requirement MT per day	Requirement MT per year	Source	Mode of Transport Distance from Plant
Sponge Iron Plant (300 TPD/ 90000 TPA) – Existing						
1	Iron Ore	1.9	570	171,000	In-house from Beneficiation plant	---
2	Coal	1.6	480	144,000	Different Collieries of CCL	Mode: Road Rail Approx – 150 KM
3	Dolomite	0.025	7.66	2300	Daltonganj, Jharkhand. Katni, M.P	Mode: Road Approx.- 700 KM
	Total	**3.525**	**1057.66**	**317,300**		
Iron Ore Beneficiation Plant (570 TPD/ 171,000 TPA) - Proposed						
1	**Iron Ore**	**1**	**670**	**201,000**	West Sighbhum Jharkhand &	Mode: Road, Rail Approx. -

					Barbil, Odisha	300 KM
	TOTAL	**1**	**670**	**201,000**		
SMS- Induction Furnace (245 TPD/ 73,500 TPA) – Proposed						
1	Sponge Iron	1.00	245	73,500	In House	---
2	Scrap/pig iron	0.194	47.33	14,200	Tata, Bokaro & other places of Jharkhand	Mode: Road Approx. – 200 KM
3	Revert Scrap	0.046	11.00	3,300	In House	---
	TOTAL	**1.24**	**303.33**	**91,000**		
SMS – CCM (240 TPD/ 72,000 TPA) – Proposed						
1	Liquid Steel	1.02	245	73,500	In House	---
	Total	1.02	245	73,500		
Rolling Mill Plant (225 TPD/ 67,500 TPA) – Proposed						
1	Steel Billets	1.07	240	72,000	In House	---
	TOTAL	1.07	240	72,000		
CPP (AFBC Boiler – 9 MW) – Proposed						
1	Coal	6.25 t/MW	150	45000	Different Collieries of CCL	Mode: Road, Rail Approx. – 150 KM
2	Char	3.05 t/MW	73.33	22000	In House	---
CPP (WHRB – 6 MW)- Proposed						

3	DRI Gas	2778 Nm3/ t of Steam	In House	

Since the total quantity of raw material to be transported is about 3.0 to 3.5 times the quantity of projected finished products, it affects the production cost substantially. The main mode of transportation is by rail till Barkakhana railway siding and then by road (approx. 4.00 Km). For transportation purpose the company shall arrange a few vehicles of their own. Also private carriers are available to take care of the transportation of iron ore. In fact a good number of industrial units of MBF, Sponge iron and Induction furnaces are already operating in the areas surrounding the proposed site and are operating successfully with the transportation facilities available in the market.

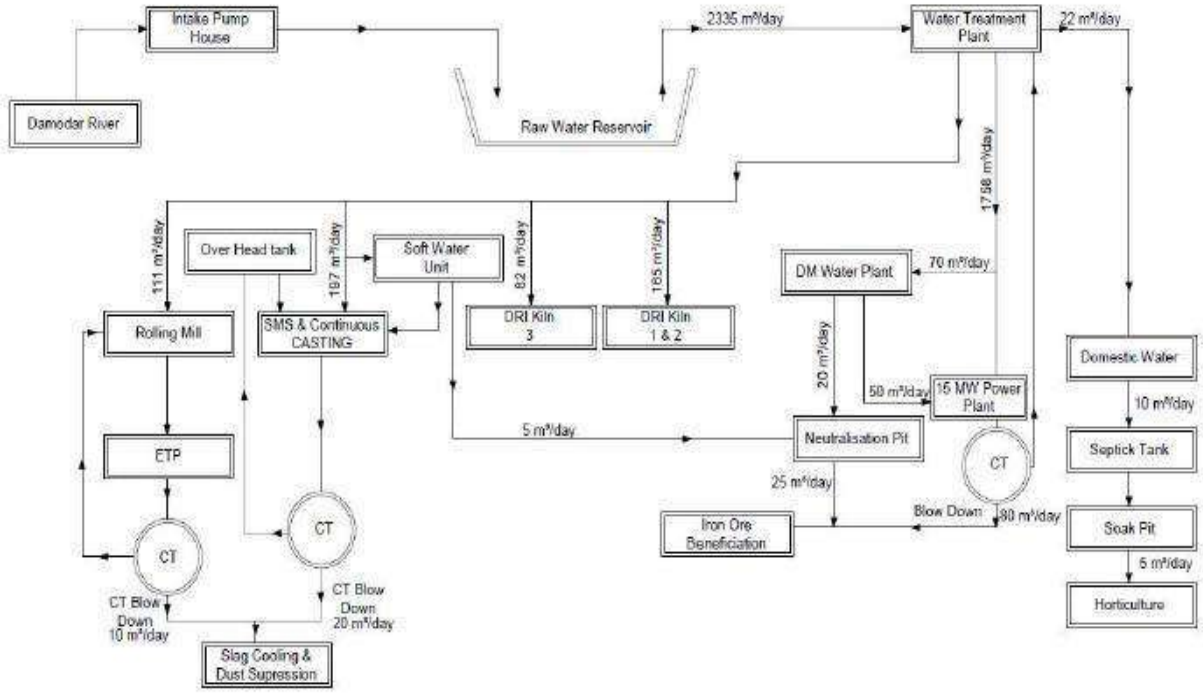
2.5 Water Requirement

The required water in the process will for Industrial and domestic use. In the cooling there will be requirement of makeup water. The required water will be available from nearby Damodar River, located 2.0 Km away from the plant. Required make-up water requirement will be 2335 KLD. Damodar River will be the source of water to cater the requirement of the existing sponge Iron plant and for expansion project. Since all the sections of Sponge Iron plant will be in closed circuit and in each section state of the art advanced technology to be adopted therefore, total water requirement in the entire plant will be limited to 97.3 m^3/hr. Total water Requirement breakup (unit wise) is given below:

Units	**Final Installed Capacity**	**Existing m3/day**	**For Expansion m3/day**	**Make – up water m3/day**
DRI Plant	300 TPD	247	---	247
SMS with CCM	240 TPD	---	197	197
Rolling Mill	225 TPD	---	111	111
CPP & Beneficiation	15 MW 670 TPD	---	1758	1758

plant				
For Domestic Use	---	3	9	12
Green Belt	---	5	5	10
			Treated waste water reused	
Total		255		2335

WATER BALANCE DIAGRAM



2.6 Power Requirement

The plant at present receives power from 33 KV Supply Line with a sanctioned demand of 950 KVA from Damodar Valley Corporation for its Sponge Iron Plant. It is now proposed to install a Captive Power Plant of 15 MW to produce electricity more economically by utilizing waste heat of gases from four Sponge Iron Kilns and also utilizing the solid waste produced as Char in the making of Sponge Iron, along with cheap low quality coal. The aim is to reduce the cost of electricity and improve the viability of the plant. Power will be generated at 11 kV and will be stepped up to 11 kV with interconnection to the existing panel and provision for receiving power from grid or feed power back to the grid when surplus.

Average hourly power requirement of various units is as follows:

S.No	Production Unit	Hourly requirement (MW)
1.	Sponge Iron Plant	1.0
2.	Steel Melt Shop	11.0
3.	Rolling Mill	1.3
4.	Crushing Plants	0.2
5.	Internal requirements of Power Plant	1.5
Total		15.0
Power available from 15 MW captive Power Plant, considering power consumption by auxiliaries losses in TG set, the size of the Power Plant		13.5
Balance Electric Power from Grid		1.5

2.7 Waste Produced

Activity	Environmental attributes	Cause	Significance and mitigative measures
Operation of AFBC Boiler	Air pollution	Stack Emission	ESP shall be provided to control stack emission
Operation of WHRB & AFBC Boiler	Solid waste generation	Burning of Coal and dolo-char	Fly-ash sold for utilization to respective buyers.
	Water Pollution	Treatments of Boiler blow down & Condenser blow down	Neutralization pit shall be provided to treat DM plant waste water. Treated water along with CT blow down water shall be used for slag cooling, dust suppression etc.
Coal Handling Area	Air Pollution	Fugitive Emission	Bag filter system shall be provided to control fugitive emissions in Coal Handling Area of CPP.
Operation of Induction Furnace	Solid waste generation	Slag	Crushed for metal recovery rest is used for road construction and development
Rolling Mill	Solid waste/hazardous waste/ Noise Pollution	End cut/cobbles; Used oil; generation of noise during rolling	Recycled in IF, oil shall be removed from ETP by oil skimmer. Ear Muffs
Domestic Waste	Water pollution	Operation of	The sewage will be disposed

		washroom, toilets – Wastewater generation	into septic tank and soak pits. No discharge from soak pits.

2.8 Greenbelt

Greenbelt consists of a total 2000 Plant species which includes trees, shrubs, saplings, herbs and grass. Covering the Boundary of the plant and surrounding the administrative building.

Species found mostly consist of

Common Name	**Scientific Name**
Sisam	Dalbergia sissoo
Neem	Azadirachta indica
Amrud	Psidium guajava
Mango	Mangifera indica
Jamun	Syzygium cumini
Katahal	Artocarpus heterophyllus
Gamhar	Gmelina arborea
Aawala	Phyllanthus emblica
Skhua	Shorea robusta
Karanj	Milletia pinnata
Jhangli nil	Tephrosia purpurea
Velai	Cleome gynandra

Environmental Regulatory Framework Applicable

Applicable Environmental Acts & Rules	Roles & Responsibilities of the Project Proponent
The Water (Prevention & Control of Pollution) Acts1974/ Rules1975	Not to discharge any effluent, not confirming to standards, prescribed by JSPCB into any stream, well, sewers or land. Not to discharge air pollutant(s) in excess of standards, prescribed by the State PCB.
The Air (Prevention & Control of Pollution) Acts1981/ Rules1982	Obtain 'Consent to Establish' prior to establish any process, operation or treatment system. Obtain 'Consent to Operate' prior to operation of system which is likely to discharge effluent. Apply for renewal of the 'Consent to Operate' before the expiry. Comply with conditions as prescribed under consents
The Water (Prevention & Control of Pollution) Cess Acts 1977/ Rules 1977	Pay Water Cess within specified time. To install Water meters. Provide access to JSPCB for implementing the provisions of the Act.
The Environment (Protection) Acts1986/Rules 1986 The Environmental Impact Assessment (EIA) Notification, 2006	Prevent discharge or emission of environment pollutants in excess of the prescribed standards. Submit 'Environmental Statement' every year. Obtain prior "Environmental Clearance' from MoEF&CC in case of new project or for Modernization / Expansion.
Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016	It is the responsibility of the occupier to identify the hazardous wastes in their units and ensure proper handling and disposal JIPL Stainless Limited to take all steps to contain contamination, prevent accident and limit consequences on

	human being and environment. Obtain authorization from JSPCB and comply with the conditions. Maintain records of Hazardous Waste generated in Form-3 and submit yearly return for generation, treatment, recycling, disposal etc., to SPCB in Form-4. Used Oil to be send / sold to the registered recycler, reprocess, registered authorized facility shall be transported in accordance with the rule. Site storage is allowed for 90 days only
Batteries (Management & Handling) Rules, 2001	It is the responsibility of the generator to ensure, used batteries are not disposed of in any manner other than depositing with dealer, manufacturer, importer, re-conditioner registered. Recycler or at designated collection Centre. Submit half yearly return for disposal of used batteries to State PCB by 30th June & 31st December, every year. In case of auction, ensure batteries are auctioned to the registered recycler only. File half yearly return for the auction Maintain record for such auction.
Bio-Medical Waste Management Rules, 2016	Not applicable. No Bio-medical waste is generated.
Fly Ash Notification, 1999 as amended in 2016	At least 20% of dry ESP fly ash shall be made available free of charge to units manufacturing fly ash or clay-fly ash bricks, blocks and tiles on a priority basis over other users and if the demand from such agencies falls short of 20% of quantity, the balance quantity can be sold or disposed of by the power stations may be possible. Ensure 100% utilization of Fly-ash
E-Waste (Management) Rules, 2016.	Shall make provisions for collection of e-waste generated from 'end of life' of their products and shall ensure that such e-wastes are channelized to registered dismantler or recycler, In

	line with the principle of 'Extended Producer Responsibility'. Set-up collection Centre or take back systems either individually or collectively. Finance and organize a system to meet costs involved in the Environmentally sound management of e-waste generated from the 'end of life' of its own products. Create Awareness.
The Manufacture, Storage & Import of Hazardous Chemical Rules, 1989 (Including amendment rules till date)	Identify major accident hazards and take adequate steps to prevent or limit such major accidents. Prepare on-site emergency plan and off-site emergency plan for certain chemicals. Information to person liability to be affected, Develop Material Safety Data Sheets (MSDS) Inform major accidents.
Ozone Depleting Substance (Regulation & Control) Rules, 2000	Not applicable to M/s JIPL Stainless Limited. No ODS substance is being used by JIPL. For cleaning of motor winding or electrical Parts Non-ODS solvent is being used.
The Factory Act 1948 (as amended till 1987)	Obtain and renew factory license and obtain permission for the Site from State Government or the Chief Inspector of Factories in case of new or extension of any Factory. Ensure health, safety and welfare of all workers while they are at Work in the Factory as far as reasonably practicable. Ensure effective and adequate ventilation of work place and Adequate measures to be taken to protect workers particularly in the processes involving excessive temperature. Ensure effective and adequate ventilation of work place and adequate measures to be taken to protect workers particularly in the processes involving excessive temperature.

The Central Motor Vehicle Rules 1989(Under Motor Vehicle Act 1988)	Ensure compliance to safety provisions in the transport vehicle carrying dangerous and hazardous substances inside works Display of emergency information panels at front, back and both side of vehicle. Every transporter to ensure safe transportation of dangerous/Hazardous goods. Earthling chain for grounding, any prevalent static charge. All motor vehicle entering the works shall have properly maintained brakes, lights, signal system for brakes, blinkers and registration number displayed, and valid Pollution Under Control Certificate.
The Boiler Acts 1923 & Rules 1950	Ensure availability and effective functioning of steam vents, safety valve, drain valve, monitoring instruments of critical parameter through regular checks and maintain records for the Same. Obtain authorization for boilers and their renewal prior to due date and / or when an accident occurs to the boiler / when any structural alteration / addition / renewal is made. Ensure mandatory registration of boilers. Ensure to obtain prior approval before taking any alteration and renewals to steam pipes after submitting plan and report. Ensure to obtain prior approval before taking structural alteration, addition and renewal to boilers from Chief Boiler Inspectors. Ensure prior examinations of boiler by Inspector during & after any repair/shut down and maintain record for the same. Report accident / incident or any severe damage to property, human life within 24 hours giving details of occurrence.

As per the norms the Industry falls under the scope of these environmental framework requirements, and has to be maintained and reported timely to the authority. The industry has to follow the guidelines and maintain these records \ and its frequency, to be in the legal framework.

AUDIT FINDINGS

CTE	Consent to Establish has been furnished by the industry. Attached as Annexure attached as 1 Dated: 2020-09-24 Application No.- 6089357
CTO	Consent to operate has been presented. Annexure attached as 2 Valid till: 2022-12-31
Land Details	Land Documents attached as Annexure 3.
Raw Material Authorization	Provided, attached as Annexure -6.
Manufacturing Process with Flow sheet	Manufacturing process with flow sheet is provided in the Audit.
Project Cost & Cost Break	Project cost break up is provided and included in the report.
Project Layout	Project Layout is provided by the unit and has been utilized in the audit and report.
Hazardous Waste Authorization	MoU from TSDF operator has been provided by the industry.

Ground Water extraction permission from CGWA or any other sort of permission	Water is taken from the DVC and groundwater is utilized for domestic purposes within the premises. Attached as Annexure - 7
Power Requirement Permission	Attached as Annexure – 8.
Man Power (Permanent and Contractual)	Manpower consists of total 491.
Product and Raw Material Transport Permission	Raw material and products are transported through road Highways and railway lines well connected to the site.
Greenbelt Plantation	4.36 Ha (10.78 Acres) is supposed to be developed as green belt. However greenbelt needs to develop more around the Administrative buildings.
Rain Water Harvesting System	Rain water Harvesting System is installed and certificate for the completion is attached as Annexure – 10
Ambient Air Quality Online Monitoring System	Ambient Air Quality Online Monitoring System is Installed and connectivity Is provided.

By Product Storage Facility	By product is stored in a shaded facility.
Piezometer	Piezometer is installed and the picture for the same furnished in the water certificate. Attached as Annexure – 9.
Sludge Pit/Soak Pit	Yes, sanitary waste is taken to septic tanks, followed by soak pits.

JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No.: JSPCB/HO/RNC/CTE-6089357/2020/366 Dated : 2020-09-24

Consent to Establish (CTE) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

1. Reference: Application (s) No.- 6089357 / dated : 27/09/2019 of MAA CHHINNMASTIKA CEMENT N ISPAT PRIVATE LIMITED, SHREE PARSURAM SINGH for consent under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

2. Documents Relied Upon:

(1) The contents of Environmental Clearance (EC) Ref. No. J-11011/215/2016-IA-II(I) dated 07.08.2019 by MoEF, New Delhi.

(2) The content of existing Consent to Operate (CTO) vide Ref no. JSPCB/HO/RNC/CTO-2204067/2018/958, dated Dated 06.06.2019 for the period upto 31.12.2022, JSPCB, Ranchi.

(3) The content of inspection report (IR) vide Ref. No. 1746 dated 13.11.2019, Regional Office, JSPCB, Hazaribagh.

(4) The content of affidavit regarding procurement of raw material from valid sources.

(5) The contents of Bank Guarantee
(i) BG No.- 0962018BG0000112 dated 25.05.2018 amounting Rs. 10.00 Lacs valid up to 31.12.2022 submitted against following compliances:
(a)Installation of AFBC/CFBC boiler will be completed within the consent period and report will be submitted to the Board by 1st week of April' 2019;
(b) CCTV cameras will be installed;
(c)Garland drain, toe wall, settling tank and raw material storage area will be completed before monsson;
(d) Dolochar generation and utilization detail will be submitted to the Board;
(e) Calibration of all APCD will be done as per CPCB norms;

(ii) The content of Bank Guarantee vide BG No. 0962020BG0000006, dated 08.01.2020 valid for the period upto 31.12.2022 submitted against following compliances:
(a) Iron Ore washery plant will be operated after grant of EC, CTE and CTO from the Board;
(b) Height of chimney will be raised to 30 meters attached with all dedusting equipments;
(c) Different type of dust will be stored in proper way;
(d) Pucca road will be constructed inside the premises for the major working area;
(e) Conveyor belt covered with MS sheet;
(f) Telescopic chute at loading point will be maintained properly.

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to establish the project in Mauza- HEHAL, P S -HEHAL, District-RAMGARH as follows:

Project	Site-Area	Investment (Rs)/ Year	Product & Capacity	Period of CTE

	Plot Nos.	Area			
In Expansion	563, 386, 383, 384, 384, 385, Khata No. 86, 69, 33, 24, 30, 83 (as per application)	12.42 Ha (as per EC)	161.42 Crores (as per EC)	S.M.S. Induction furnaces and Billet Caster-2 x 12T(72000 TPA); Rolling Mill TMT Rebar Mill 15 Stand Mill with Direct Hot Charging -225 TPD (67500 TPA); Power Plant-WHRB-3x2 MW, AFBC Boiler-1x9MW (15 MW);Iron Ore Crushing & Benificiation Plant-80-100 TPH (1,67,300 TPA);Briquette Plant-1x90 TPD (27,000 TPA);Slag Crushing Plant For Slag-5TPH (12,000 TPA) (as per EC)	As per EC

(A) Specific Conditions:

1. That, the proponent shall obtain consent to operate from State Pollution Control Board under section 25 & 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 prior to commissioning of the plant.

2. That, the proponent shall obtain authorization under the Hazardous Waste Management Rules, 2016.

3. That, the proponent shall abide by the provisions of the Environment (Protection) Act, 1986 and submit the reports of effluent, emission, ambient air quality and noise level monitored before and after commissioning of the plant in compliance of the standards prescribed in the Environment (Protection) Rules, 1986.

4. That, the proponent shall collect and treat the effluent in foolproof latest system and shall recycle treated effluent for re-use and shall ensure no discharge of effluent outside the premises.

5. That, the proponent shall make stack(s) of the height and with the provision(s) of emission monitoring port hole(s), ladder(s) and platform(s) as prescribed by Central Pollution Control Board.

6. That, the proponent shall ensure continuous and uninterrupted power supply with provision of separate

energy meters for the pollution control systems to enable the pollution control systems to function uninterruptedly.

7. That, the proponent shall make all inside and approach (within the control of the proponent) roads pucca and shall maintain a good housekeeping by regular cleaning and wetting of the premises and dust prone areas.

8. That, the proponent shall store all raw materials and products under shed and shall as far as practicable do their processing and transfer under foolproof cover(s).

9. That, the proponent shall use all solid wastes as resource as a raw material or a product.

10. That, the proponent shall make proper arrangement for disposal of all the solid wastes to be generated during production of pencil ingots.

11. That, the proponent shall comply all the conditions of CTO and EC conditions and submit the six monthly report to the Board.

12. That, the proponent shall install the CAAQMS as per the timeline prescribed in EC otherwise, CTO will not be considered.

13. That, the occupier shall comply fugitive emission standards of 2000 g/m3 at a distance of 10 metre from raw material crusher and product handling areas etc.

14. That, the occupier shall provide separate electricity meter and totaliser for continuous recording of power consumption with all APCD. A logbook shall be maintained for recording of daily meterage of electricity meter connected to all APCDs. The amperage of the ID fan shall also be recorded continuously. Non
functioning of APCD shall be recorded in the same logbook along with reasons for non-operation of the Pollution Control Equipment.

15. That, the safety cap/emergency stack of rotary kiln type plant, which is generally installed above the after burner chamber (ABC) of feed end column should not be used for discharging untreated emission, bypassing the air pollution control device.

16. That, the occupier shall provide software controlled interlocking facility keeping in view of on-linen emission and effluent monitoring system to ensure stoppage of feed conveyor, so that the feed to the kiln would stop automatically, if emergency/safety cap of the rotary kiln is opened or ESP is non - operational.

17. That, the occupier shall install mechanically operated fitted with water mixing (spiral pug mill) system for timely collection and removal of the flue dust generated in ESP or at any other pollution control devices for control of fugitive emission at the dust collection system.

18. That, the occupier shall keep the Iron Ore properly under shed and ensure Crushing and screening operation in shaded enclosed area.

19. .That, the occupier shall, use the fly ash generated from AFBC boiler as per notification released by MoEF & CC, New Delhi “Fly Ash Notification” dated 14th September, 1999 and as amended on 25th, January, 2016 till installation of AFBC/CFBC boiler.

20. That, the occupier shall in no case dispose of the solid waste including fly ash and bottom ash on any agricultural land and keep it within the plant premises.

21. That, the occupier shall make arrangement for operation of the plant in such a way that all pollution control devices shall start before start of conveyor belt/plant operation and similarly all pollution control devices shall be put off only after stopping the operation of the plant.

22. That, the occupier shall install and operate the on-line emission monitoring system uninterruptedly.

23. That, the occupier shall maintain zero trade effluent discharge and install a web cam at each outlets of the drain.

24. That, the occupier shall maintain logbook for daily record of Char generation and utilization till installation of AFBC boiler.

25. That, the proponent shall install pollution control devices such as fume extraction system, Wet Scrubber and Venturi Scrubber System for control of SO2 and dust from the chimney or as required and stack attached to it of a height of at least 110 ft from the ground level to control the dusts and gaseous emissions.

26. That, this consent to establish is subject to statutory and valid subject to obtaining other clearances from Govt. of Jharkhand or Ministry of Environment & Forest, Govt. of India as and where applicable.

27. That, the proponent shall maintain proper housekeeping within the premises.

28. That, the proponent shall comply all the conditions as mentioned in this CTE and previous CTO before applying CTO for the expanded capacity.

29. That, the occupier shall installation of PM 10 analyzer & CAAQMS within the stipulated timeline and maintain the same falling which EC will be imposed.

30. That, the occupier shall comply with all the provisions made for this type of plant by CPCB/MoEF/Other concerning organizations.

31. That, the proponent shall use fly ash and or fly ash bricks in construction of the project till installation of AFBC/CFBC boiler.

32. That, the occupier shall ensure operation of iron ore washery plant after grant of CTO from the Board.

33. That, the occupier shall ensure installation of AFBC/CFBC boiler within the stipulated timeline.

34. That, the occupier shall ensure calibration of all APCD as per CPCB norms.

35. That, the occupier shall maintain the height of chimney upto 30 meters attached with all dedusting equipment.

36. That, the occupier shall ensure covering of conveyor belt with MS sheet.

37. That, the occupier shall construct and maintain pucca road inside the premises for the major working area.

38. That, the occupier shall maintain the telescopic chute at loading point.

39. That, the occupier shall comply all the conditions as mentioned in EC, CTE and the conditions as mentioned in affidavit submitted with BG within the consent period i.e. before applying for CTO; otherwise,

(i) BG No.- 0962018BG0000112 dated 25.05.2018 amounting Rs. 10.00 Lacs valid up to 31.12.2022 and (ii) BG No. 0962020BG0000006, valid for the period upto 31.12.2022 will be forfieted and environmental compensation will also be levied.

(B) General Conditions :

(1) That, the occupier shall construct pucca (i) minimum ten feet high boundary wall and (ii) approach road and internal roads and shall keep the premises neat and clean and tidy.

(2) That, the occupier shall install comprehensive enclosure (s) to cover the places of unloading of raw materials, the equipments of their processing & transferring, the places of loading of products, by products and wastes for prevention of fugitive emission and shall install such automatic inbuilt system(s) that in house dust/ gases collect(s) and undergo (es) cleaning and clean air goes out.

(3) That, the occupier shall install such automatic inbuilt system(s) that process flue gas(es) / process gas(es) and undergo(es) cleaning and clean air go(es) out through the chimney(s), having height(s) as per Central Pollution Control Board norm.

(4) That, the occupier shall have D G Set(s) of the standard as laid in the Environment (protection) Rules, 1986 and shall install it (them) within acoustic enclosure (s) and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm .

(5) That, the occupier shall impart treatment as per Central Pollution Control Board text to wastewater and shall keep process effluent in close-circuit and effluent from other sources in conformity with the standard (s).

(6) That, the occupier shall install Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge.

(7) That, the occupier shall create new water body (ies) / remove deposit(s) of existing water body(ies) and nearby stream(s) and pond(s) and shall maintain the wholesomeness of water.

(8) That, the occupier shall grow greenery in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.

(9) That, this CTE is valid subjected to the validity of mining Lease / Mining Plan / Ecofriendly / Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.

(10) That, this CTE is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time being in force, rests with the industry/ unit/ occupier.

(11) That, this CTE shall not in any way, adversely affect or jeopardize the legal proceeding , if any, instituted in the past or that could be , instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.

(12) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules there under.

4. That, this CTE shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.

5. That, this CTE is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTE will be revoked if any of the information/ documents/ certificates/ undertaking given by the occupier is found false/fictitious/forged in future.

6. This order shall be valid subject to compliance of all other legal requirements applicable to the unit.

7. The State Board reserves the right to revoke, withdraw or make any reasonable variation / change / alteration in condition of this consent.

This is issued with the approval of the competent authority

[Rajeev Lochan Bakshi]
Member Secretary

Memo No. : JSPCB/HO/RNC/CTE-6089357/2020/366 Dated : 2020-09-24

Copy to : M/s Maa Chhinnmastika Cement N Ispat Private Limited, Vill- Hehal, Po- Barkakana, Ramgarh/ Chief Inspector of Factories, Govt. of Jharkhand, Doranda, Ranchi/ Director of Industries, Govt. of Jharkhand, Ranchi/ Deputy Commissioner, Ramgarh/ DFO, Ramgarh/ DMO, Ramgarh/ Regional Office, JSPC Board, Hazaribagh for information and necessary action.

[Rajeev Lochan Bakshi]
Member Secretary

JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No. JSPCB/HO/RNC/CTO-2204067/2018/958 Dated : 2018-06-06

Consent to operate (CTO) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

1. Application (s) dated 2018-03-30 of MAA CHHINNMASTIKA CEMENT N ISPAT PRIVATE LIMITED, Occupier Name :SHREE PARSURAM SINGH for consent under section 25 (1)(b)/25 (1)(c)/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention & Control of Pollution) Act,1981..

2. Documents Relied Upon:

(a) The content of Consent to Establish (CTE),Ref. No. N-502 Dated 16.09.2005, JSPCB, Ranchi;

(b) The Consent to Operate(CTO),Ref. No. JSPCB/HO/RNC/CTO-1146757/2017/1096 Dated : 01.08.2017, JSPCB, Ranchi;

(c) The content of Inspection Report (I/R),Ref No. 384 dated 11.04.2018 of Regional Office-Cum-Laboratory, JSPC Board, Hazaribagh;

(d) The content of ToR granted vide Ref. No. F No. J-11011/215/2016-IA.II(I), dated 11.08.2016.

(e) The contents of Bank Guarantee

(i) BG No.-0962017BG0000111 dated 22.06.2017 amounting Rs. 10 Lacs valid up to 31.03.2019 (EXISTING)
(ii) BG No.- 0962018BG0000112 dated 25.05.2018 amounting Rs. 10.00 Lacs valid up to 31.12.2022 (NEW);

(f) The content of affidavit regarding conditions to be complied within stipulated time period.

(g) The content of statement made in the affidavit "The BG vide BG No.-0962017BG0000111 dated 22.06.2017, will be revalidated before the expiry of the same for the period upto 31.12.2022.

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to operate the project in Mauza -HEHAL , P S -HEHAL , District -RAMGARH , as follows:

Project	Site-Area		Investment (Rs)	Product & Capacity	Period of CTO
	Plot Nos.	Area			
Before Expansion	563, 386, 383, 384, 385, 387, 388, Khata No.:86, 69, 33, 24, 86, 30, 83	30.5 Acre (As per previous CTO)	40.70 Crores	Sponge Iron - 3 X 100 TPD	Date of issue to 31.12.2022

(A) General Conditions :

(1) That, the occupier shall maintain the **National Ambient Air Quality Standard** given below:

S N	Pollutant	Time Weighted Average	Concentration in Ambient Air	
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Govt.)
(1)	(2)	(3)	(4)	(5)
1.	Sulphur Dioxide (SO2), µg/m3	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO2), µg/m3	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM10, µg/m3	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM2.5, µg/m3	Annual 24 hours	40 60	40 60
5.	Ozone(O3), µg/m3	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m3	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m3	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH3) µg/m3	Annual 24 hours	100 400	100 400
9.	Benzene (C6H6) µg/m3	Annual	05	05
10.	Benzo(a) Pyrene(BaP) Particulate Phase only ng/m3	Annual	01	01
11.	Arsenic (As) ng/m3	Annual	06	06
12.	Nickel (Ni) ng/m3	Annual	20	20

Note : Serial no. 1 to 4 – Mandatory
Serial no. 5 to 12 As applicable for specific type of industry.

(2) That, the occupier shall maintain the emission quality within the standard and the quantity, as follows:

S N	Parameter	Standard
1	Particulate Matter	100 µg/ Nm3
2	Sulphur Dioxide	80 µg/ Nm3
3	Oxides of Nitrogen	80 µg/ Nm3

(3) That, the occupier shall keep process effluent in close-circuit and the quality of effluent from other sources in conformity with the standard (s) and the discharge quantity as below:

S N	Parameter	Standard
1	Total Suspended Solids	100 mg/L
2	BOD	30 mg/L
3	COD	250 mg/L
4	Oil & Grease	10 mg/L

(4) That, the occupier shall dispose of solid wastes as follows:

S N	Waste Type	Mode of Disposal
1	Hazardous Carbonaceous Wastes	In co-processing in high temperature furnaces or kilns
2	Hazardous Non-Carbonaceous Wastes	In TSDF
3	Non-Carbonaceous Non-Hazardous solid wastes/ Mine Over Burden	As a substitute of Soil or Mineral

(5) That, the occupier shall keep D G Set(s) within acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.

(6) That, the occupier shall install and maintain Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge and submit the photographic view of the structures within a month.

(7) That, the occupier shall grow and maintain greenery of the project in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.

(8) That, the occupier shall submit environmental statement with supporting stoichiometric calculations analyses reports, every year latest by 30th September of the next financial year.

(9) That, the occupier shall submit report(s) duly monitored and issued by an NABL accredited / ISO 9001:2008 and OHSAS 18001:2007 certified laboratory in compliance sub-para (2), (3), (4) and (5) of paragraph 3 of this CTO yearly at required periodicity.

(10) That, this CTO is valid subjected to the validity of mining Lease/Mining Plan/Ecofriendly/Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.

(11) That, this CTO is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ occupier.

(12) That, this CTO shall not in any way, adversely affect or jeopardize the legal proceeding , if any, instituted in the past or that could be , instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.

(13) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules made there under.

(B) Specific Conditions:

1.That, the occupier shall maintain the height of all stacks attached with air pollution control devices (APCD) up to 30 metre.

2.That, the occupier shall comply fugitive emission standards of 2000 g/m3 at a distance of 10 metre from raw material crusher and product handling areas etc.

3.That, the occupier shall provide separate electricity meter and totaliser for continuous recording of power consumption with all APCD. A logbook shall be maintained for recording of daily meterage of electricity meter connected to all APCDs. The amperage of the ID fan shall also be recorded continuously. Non functioning of APCD shall be recorded in the same logbook along with reasons for non-operation of the Pollution Control Equipment.

4.That, the safety cap/emergency stack of rotary kiln type plant, which is generally installed above the after burner chamber (ABC) of feed end column should not be used for discharging untreated emission, bypassing the air pollution control device.

5.That, the occupier shall provide software controlled interlocking facility keeping in view of on-linen emission and effluent monitoring system to ensure stoppage of feed conveyor, so that the feed to the kiln would stop automatically, if emergency/safety cap of the rotary kiln is opened or ESP is non - operational.

6.That, the occupier shall install mechanically operated fitted with water mixing (spiral pug mill) system for timely collection and removal of the flue dust generated in ESP or at any other pollution control devices for control of fugitive emission at the dust collection system.

7. That, the occupier shall make the approach road and roads within premises of the plant and work areas asphalted or concreted.

8. That, the occupier shall keep the Iron Ore properly under shed and ensure Crushing and screening operation in shaded enclosed area.

9. That, the occupier shall make water sprinkling arrangement in areas around crushing and screening units, raw material heaps at unloading points, heavy vehicle movement areas, roads and waste dump sites etc.

10. That, the occupier shall have its conveyor belt for transporting the materials fully covered all along its way and transfer points of conveyor belt should also be covered and suction system should be connected to de-dusting equipment.

11..That, the occupier shall, use the fly ash generated from AFBC boiler as per notification released by MoEF & CC, New Delhi “Fly Ash Notification” dated 14th September, 1999 and as amended on 25th, January, 2016 till installation of AFBC/CFBC boiler.

12. That, the occupier shall in no case dispose of the solid waste including fly ash and bottom ash on any agricultural land and keep it within the plant premises.

13.That, the occupier shall make arrangement for operation of the plant in such a way that all pollution control devices shall start before start of conveyor belt/plant operation and similarly all pollution control devices shall be put off only after stopping the operation of the plant.

14.That, the occupier shall install and operate the on-line emission monitoring system uninterruptedly.

15. That, the occupier shall submit compliance of conditions of CTO half yearly to the Board.

16. That, the occupier shall maintain zero trade effluent discharge and install a web cam at each outlets of the drain.

17. That, the occupier shall install AFBC/CFBC boiler and start operationalization by 31.03.2019 and compliance/progress report of the same shall be submitted to the Board by 1st week of April'2019.

18. That, the occupier shall construct garland drain, toe wall, settling tank before coming monsoon (latest by 30.06.2018) and shall submit photographs taken from 2 different angles (duly self attested) of the same to the Board by 1st July, 2018.

19. That, the occupier shall install Closed Circuit Television (CCTV) camera for monitoring of operational status of APCDs by the end of June' 2018 and shall submit photographs taken from 2 different angles (duly self attested) of the same to the Board by 1st July, 2018.

20. That, the occupier shall maintain logbook for daily record of Char generation and utilization and the record shall be made available to the Board by 30.06.2018.

21. That, the Bank Guarantee submitted to the Board vide
(i) BG No.-0962017BG0000111 dated 22.06.2017 amounting Rs. 10 Lacs valid up to 31.03.2019 (EXISTING; To be re-validated in due course till 31.12.2022 by the PP and submit the compliance in time);
(ii) BG No.- 0962018BG0000112 dated 25.05.2018 amounting Rs. 10.00 Lacs valid up to 31.12.2022 (NEW) shall be forfeited if the above mentioned condition i.e. condition no. 17 will not be complied within the stipulated time.

22. That, this CTO will automatically be considered as revoked if the AFBC/CFBC boiler will not be installed within the said period i.e. 31.03.2019.

23.That, the occupier shall submit applications for renewal of consent under section 25 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 again 120 days prior to the date of expiry of this consent i.e. 31.12.2022 with documents showing compliance of all of the above conditions.

4. **That, this CTO shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.**

5. **That, this CTO is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTO will be revoked if any of the information/documents/certificates/undertaking given by the occupier is found false/fictitious/forged in future.**

6. **The Order shall be valid subject to compliance of all other legal requirements applicable to the unit.**

7. **The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alteration in conditions of this consent.**

This is issued with the approval of the Competent authority

(Rajeev Lochan Bakshi)
Member Secretary

Memo No. : JSPCB/HO/RNC/CTO-2204067/2018/958 Dated : 2018-06-06

Copy to: M/s MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED, VILL-HEHAL, P.O- BARKAKANA, Dist-Ramgarh / Director of Industry, Government of Jharkhand, Ranchi/ Deputy Commissioner, Ramgarh / Director of Mines, Government of Jharkhand, Ranchi/ Chief Inspector of Factories, Ranchi/ DFO, Ramgarh / DMO, Ramgarh/ R O,JSPCB, Hazaribagh for information & ensuring compliance of the above. He should also ensure that after four months from the grant of this CTO, the three member committee formed for inspection should inspect compliance of the CTO conditions and submit its report to the Board.

(Rajeev Lochan Bakshi)
Member Secretary

MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

Registered Office & Works:
At- Hehal, Post - Barkakana - 829103, Dist.- Ramgarh (Jharkhand)
CIN:U26941JH2004PTC010665
ramgarh jh@rediffmail.com
cementispat@rediffmail.com
ramgarh_jh@rediffmail.com

MCCIPL/029/2022-23 01e **22/06/2022**

To,
The Member Secretary,
Jharkhand State Pollution Control Board,
HEC Campus, TA Division Building,
Durwa, Ranchi - 834 004.
Jharkhand

Sub: Submission of Environmental Statement Report from the period of April 2021 to March 2022 for our Coal based Sponge Iron.

Ref.:- CTO Ref. No. – JSPCB/HO/RNC/CTO-2204067/2018/958, Dated 06/06/18.

Dear Sir,

With reference to the above, we are enclosing herewith the Environmental Statement Report for the period from April 2021 to March 2022 of our Sponge Iron.

Please find above in order and do the needful.

Thanking you,

Yours faithfully,
For MAA CHHINNMASTIKA CEMENT & ISPAT PVT.LTD.

22/06/22

Manoj Kumar
Manager (Environment)

Encl: As above.

CC to: - The Regional Officer, Regional Office, State Pollution Control Board, Hazaribagh (Jharkhand)

RJ218528561IN IVR:82742185285
RL RAMGARH CANTT HO <829122>
Counter No:1,23/06/2022,11:14
To:THE REGIONAL OFFICER,H BAGH
PIN:825301, Hazaribagh HO
From:Maa Chhinnmastika
Wt:25gms
Amt:27.00(Cash)
<Track on www.indiapost.gov.in>
<Dial 18002666868> <Wear Masks, Stay Safe>

भारतीय डाक
India Post

Received
Board
22/6/22
JHARKHAND STATE POLLUTION CONTROL BOARD
RANCHI

ENVIRONMENTAL STATEMENT
Maa Chhinnmastika Cement & Ispat Pvt. Ltd.
Period from: April 2021 to March 2022

FORM – V
PART – A

1.	Name and address of the Owner / Occupier of the Industry operation or process	Maa Chhinnmastika Cement & Ispat Pvt. Ltd. Occupier name – Santosh Kumar Gupta Village – Hehal, P.O – Barkakana, Dist. – Ramgarh, Jharkhand – 829103
2.	Industry Category Primary (S.T.C. Code) Secondary (S.T.C. Code)	Red Category
3.	Production Capacity	Sponge Iron – 300 TPD
4.	Year of Establishment	02.06.2004
5.	Date of the last Environmental Statement Submitted	22/09/2021

PART – B
WATER AND RAW MATERIAL CONSUMPTION

(I) Water consumption in m3/day:

Process & Cooling : 174.92 m3/day
Domestic : 5.41 m3/day

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year (2020-21)	During Current Financial Year (2021-22)
Sponge Iron	0.9215	0.9215

(II) RAW MATERIAL CONSUMPTION:

Name of Raw Material	Name of Product	Consumption of Raw Material Per Unit of Output	
		During Current Financial Year (2020-21)	During Current Financial Year (2020-21)
Iron ore/Iron Ore Pellets	Sponge Iron	2.108	2.446
Coal		1.242	1.272
Dolomite		0.089	0.034

(III) POWER CONSUPTION (KWH/MT of Sponge Iron):

During Previous Financial Year (2020-21)	During Current Financial Year (2021-22)
51.576	49.147

(IV) TOTAL PRODUCTION (MT):

During Previous Financial Year (2020-21)	During Current Financial Year (2021-22)
63,108.00	69,283.98

PART – C

DISCHARGED TO ENVIRONMENTAL / UNIT OF OUTPUT

Pollutants	Quantity of Pollutants Discharged (Mass/Day)	Concentration of Pollutants in Discharge (Mass/Valume)	Percentage of variation from prescribed standard with reasons
(a) Water	• No industrial effluent is generated. In compliance to Zero Liquid Discharge (ZLD), the web camera and flow meter are installed with online monitoring facilities. • The waste water generated from the office toilet and mess has been discharged via septic tank and soak pits.		
(b) Air	• Online monitoring of PM & SO2 are installed with web connectivity with CPCB & SPCB. • Continuous Ambient Air Quality Monitoring System (CAAQMS) PM 10 parameter is installed.		

PART – D

HAZARDOUS WASTE

(As specified under Hazardous Wastes (Management, Handling & Trans boundary Movement Rule, 2010)

Hazardous Waste	Total Quantity (Ltrs.)	
	During Current Financial Year (2020-21)	During Current Financial Year (2021-22)
a)From Process	Used gear oil and lubricant are stored in drum and used in different Chain Drive within plant campus. Hazardous waste authorization issued vide letter no JSPCB / HO / RNC / HWM-1692559 /2018/25 dated 14/06/2018 valid up to 30/09/2022.	Used gear oil and lubricant are stored in drum and used in different Chain Drive within plant campus. Hazardous waste authorization issued vide letter no JSPCB / HO / RNC / HWM-1692559/ 2018/25 dated 14/06/2018 valid up to 30/09/2022.
(b) From Pollution Control Facilities	Not applicable	Not applicable

PART – E

SOLID WASTE

		Total Quantity (MT)	
		During Previous Financial Year (2020-21)	During Current Financial Year (2021-22)
(a)	From Process		
	1) Dolachar (Coal Chai)	43603.080	53300.000
(b)	From Pollution Control Facility	Nil	Nil
(c)	Quantity recycled or re- utilized within the unit		
	1) Sold	23116.61	51449.22
	2) Dispose	Nil	Nil

PART – F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both the categories of wastes.

- Used gear oil and lubricant are stored in drum and used in different Chain Drive within plant campus.
- Coal Char (Chhai), the solid waste generated in process are being sold at present, the earlier stock of coal char are also being sold as per demand.

PART – G

Impact Of The Pollution Control Measures on Conservation of Natural Resources And Consequently On The Cost Of Production

- Unit has 3X100 TPD Sponge Iron kilns, installed three numbers of ESP attached to each kiln stack to control stack emission.
- Unit has installed seven numbers of bag filters at various material transfer points to control fugitive emissions.
- Unit has installed one hundred five numbers of water sprinklers at various places within plant premises to control dust emission / fugitive emission from haul roads.
- All conveyor belts are covered with M.S.Plate.
- All raw materials are kept in covered shed.

PART – H

Additional Measures/Investments Proposal for Environment Protection Including Abatement of Pollution

- Plantation are done surrounding the boundary wall area and road side within campus. We are also doing support for plantation in nearby village during rainy season every year. New plantations are also made every year in the plant during rainy season.

- EC issued vide letter no F.No.J-11011/215/2016-IA.II(I)dated – 07th August,2019.
- CTE issued vide letter no. JSPCB/HO/RNC/CTE-6089357/2020/366 dt 24.09.2020 from JSPCB. Project work is going on.

PART – I

Any other particulates for improving the quality of environment

- Unit has installed two numbers of online Continuous Emission Monitoring System (CEMS) for measurement of particulate matter (PM) & SO_2.
- The web camera & flow meter has installed with online monitoring facilities.
- Continuous Ambient Air Quality Monitoring System (CAAQMS) PM 10 parameter is installed with online monitoring facilities.
- Data of CEMS, Camera & flow meter are continuously updated on CPCB & SPCB server.
- 6 numbers of CCTV cameras has been installed within plant premises to monitor the operationalization status of Air pollution Control Devices.

F. No. J-11011/215/2016-IA-II(I)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

Indira Paryavaran Bhawan
Jor Bagh Road, Aliganj,
New Delhi – 110003

E-mail: dirind-moefcc@gov.in
Tel: 011-24695368

Dated: 7th August, 2019

To

Shri Alok Rungta,
Owner,
M/s. MAA Chhinnmastika Cement and Ispat Private Limited,
Village Hehal, P.O. Barakhana,
District Ramgarh,
Jharkhand.

Tel: 8989500578.; E-mail: ramgarhjh@rediffmail.com

Subject: Expansion of Sponge Iron plant to Mini Steel Plant for production of 67,500 TPA Rolled Product by installation of 2x12 Ton Induction Furnace with Billet Caster, Iron Ore Crushing & Beneficiation by **M/s. Maa Chhinnmastika Cement &Ispat Pvt. Ltd.** located at Village Hehal, P.O. - Barkakhana, Dist.- Ramgarh, **Jharkhand - Environment Clearance – regarding.**

1. This refers to the application of M/s. Maa Chhinnmastika Cement &Ispat Pvt. Limited made vide online proposal no. IA/JH/IND/84413/2004 dated 10th January, 2019 along with copies of EIA/EMP report and Form – 2 seeking Environmental Clearance (EC) under the provisions of the EIA Notification, 2006 for the project mentioned above. The proposed project activity is listed at Sl. No. 3(a) Metallurgical Industries (Ferrous and Non-ferrous) under Category "A" EIA Notification, 2006 and the project is appraised at the Central level.

2. The proposal cited above was considered during the 4th meeting of Re-Constituted Expert Appraisal Committee [EAC] (Industry-I) held on 20-22nd February, 2019 and further reconsidered in the 7th meeting of Re-Constituted Expert Appraisal Committee [EAC] (Industry-I) held on 29-31st May, 2019. The EAC proceedings of the proposal cited above is given as below.

Details submitted by the project proponent:

3. The proposed expansion project of M/s. Maa Chhinnmastika Cement and Ispat Private Limited is located at Village: Hehal, P.O.: Barkakana, District: Ramgarh, Jharkhand initially applied in the Ministry on 09.06.2016 for obtaining Terms of Reference (ToR) as per EIA Notification, 2006. The project was appraised by the Expert Appraisal Committee (Industry-1) during its 8th meeting held on 27-28th June 2016. Accordingly, the Ministry of

Environment, Forest & Climate Change (MoEF&CC had prescribed ToR to the project on 11.08.2016 vide Lr.No. J-11011/215/2016-IA.II(I).

4. The project of M/s. Maa Chhinnmastika Cement and Ispat Private Limited located in Village: Hehal, P.O.: Barkakana, District: Ramgarh, Jharkhand is for setting up of a new units; Steel Making Shop for production of 72000 TPA Billets, Rolling Mill for production of 67,500 TPA rolled products, Iron Ore Crushing & Beneficiation Plant of capacity 1,67,300 TPA throughput, Briquette Plant of capacity 27,000 TPA, Slag Crushing Plant for SMS Slag of capacity 12,000 TPA along with 15 MW Captive Power Plant. The existing project of DRI unit with for production of 90,000 TPA sponge iron through 3x100 TPD DRI Kiln was installed after getting NOC vide letter No. N-502 dated 16.09.2005 and subsequently CTO from JSPCB. The compliance of CTO was submitted to Jharkhand State Pollution Control Board (JSPCB), Ranchi. The proposed capacity for different products for site area as below:

Name of unit	No. of units	Capacity of each Unit	Production Capacity(TPA)
Existing Units			
Sponge Iron Unit	3 DRI Kilns	100 T	90,000
Proposed Units			
Steel Making Shop, Induction Furnaces and Billet Caster	2	12 T	72,000
Rolling Mill – TMT Rebar Mill	15 Stand Mill with Direct Hot Charging	225 T	67,500
Power Plant Waste Heat Boilers AFBC Boiler	3 1	3 x 2 MW 1 x 9 MW	15MW
Iron Ore Crushing & Beneficiation Plant	Single stream (throughput)	80 – 100 TPH	167,300
Briquette Plant	1	90 TPD	27,000
Slag Crushing Plant for SMS Slag	Single stream	5 TPH	12,000

5. No additional land shall be required for the project. The project shall be installed within existing plant area of 12.42 Ha. No forest land is involved. It has been reported that no water body exist around the project and modification/diversion in the existing natural drainage pattern at any stage has not been proposed.

6. The topography of the area is Gently undulating and reported to lies between 23° 36' 57.25" to 23° 37'16.62" N Latitude and 85° 25' 30.31" to 85° 25' 52.79" E Longitude in Survey of

India topo sheet 73 E/6 & 73 E/10 at an elevation of 260 m AMSL. The ground water table reported to ranges between 1.6 to 5.9 mbgl during the post-monsoon season and 2.25 to 11.19 mbgl during the pre-monsoon season.

7. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc. are reported to be located in the core and buffer zone of the project. The area also does not report to form corridor for Schedule-I fauna. List of flora & fauna issued by Ramgarh Forest Division mentions that there are no endangered flora and fauna or Schedule-1 species in the region.

8. The process of project showing the basic raw material used and the various processes involved to produce the final output, waste generated in process are given as below:
Basic Raw Material Used

S.No.	Raw Material	Quantity (TPA)	Source	Transport	
				Rail	Road
1	Iron Ore	167300	Kaliga Mining Corporation, Odisha Kamaljeet Singh Ahuwalia, Odisha Kay Pee Enterprise, Odisha Serajuddin & Company, Odisha Tarini Mineral Pvt. Ltd., Odisha Indrani Patnaik, Odisha	Odisha to railway siding of Barkakhana, Bhurkunda – approx. 350 km	Railway siding to plant site – 7 km
2	Coal (Central Coal fields Ltd.)	189000	Ashoka, Jharkhand Piparwar, Jharkhand Amrapali, Jharkhand Magadh, Jharkhand	--	Jharkhand to plant site -80 km
3	Dolomite	23000	Jai Maa Bhagabati Enterprise, Jharkhand	--	Jharkhand to plant site-60 km
4	Pig Iron / Scrap	14200	Electrosteels Ltd, Bokaro, Jharkhand Atibir Industries Company Ltd., Giridih, Jharkhand Tata Steel, Jamshedpur	--	Jharkhand to plant site -150 km

Process involved

Iron Ore Beneficiation, Briquette Plant, Sponge iron production through Coal based DRI Kiln (Existing), Billet Production through Induction Furnace & Billet Caster, Rolling of Billet in Rolling Mill for TMT Bar production and generation of 15 MW Power through 3 nos. of WHRB and 1 no. of AFBC Boiler.

Waste Generated in process (Unit - TPA)

Item	Generation	Utilization	
		Recycled / Reused	Sold
Power Plant			
Fly-Ash	18,000	-	18,000
Bottom Ash	7,000	--	7,000
Coal Fines	7,000	7,000	
Steel Making Shop			
Bag Filter Dust	2,200	2,200	--
Slag	13,200	1,320	11,880
Scale from Billet Caster	350	350	--
Rolling Mill			
Mill Scale	1,150	1,150	--
Iron Ore beneficiation plant			
Iron Ore fines	21,500	21,500	
Tailing waste (cake from Press Filter)	1,800	-	--
Total	**72,200**	**33,520**	**36,880**

9. The targeted saleable capacities of the TMT Bar, Billet and Sponge Iron will be 67,500 TPA, 1,500 TPA and 16,500 TPA respectively. The Iron ore for the plant would be procured from West Singhbhum, Barbil and other places of Jharkhand. The raw material transportation will be done through rail and road.

10. The water requirement of the project is estimated at 2080 m^3 /day will be met from Damodar River. Central Water Commission, DVRR Unit vide their letter dated 16.03.19 granted concurrence for drawl of 0.51 MGD water per year from Damodar River at Changarha, Barkakhana, Ramgarh.

11. The power requirement of the project is estimated 15 MW out of which 13.5 MW will be obtained from the Captive power plant and remaining balance power of 1.5 MW will be sourced from the Power Grid.

12. Baseline Environmental Studies were conducted during Post Monsoon Season i.e. from 01.10.2016 to 31.12.2016. Ambient air quality monitoring has been carried out at 8 locations during study period indicates: PM_{10} (45.20 to 96.40 $\mu g/m^3$), $PM_{2.5}$ (27.60 to 57.70 $\mu g/m^3$), SO_2 (7.7 to 16.10 $\mu g/m^3$) and NOx (22.10 to 27.90 $\mu g/m^3$). The results of the modeling study indicate that the maximum increase of GLC for the proposed project is 6.87 $\mu g/m^3$ with respect to the PM_{10}, 22.96 $\mu g/m^3$ with respect to SO_2 and 2.99 $\mu g/m^3$ with respect to the NOx.

13. Ground water quality has been monitored in 8 locations in the study area and analyzed. pH: 7.27 to 8.04, Total Hardness: 187.05 to 328.78 mg/l, Chlorides: 64.16 to 139.26 mg/L, Fluoride: 0.88 to 1.32 mg/L. Heavy metals are within the limits. Surface water samples were analyzed from 2 locations. pH: 7.78 to 7.80, DO: 5.5 to 5.9 mg/l and BOD: 11.60 to 13.09 mg/l. COD from 48.73 to 50.10 mg/l.

14. Noise levels are in the range of 52.18 to 55.36 dB(A) for day time and 40.16 to 44.84dB(A) for night time.

15. It has been reported that there are no people in the core zone of the project has been displaced. No R&R is involved.

16. It has been reported that a total of approx. 72,200 TPA waste will be generated due to the project, out of which 33,520 TPA will be reused and 36,880 TPA remaining will be sold. It has been envisaged that an area of 4.36 ha will be developed as green belt around the project site to attenuate the noise levels and trap the dust generated due to the project development activities.

17. It has been reported that the latest Consent to Operate from the Jharkhand State Pollution Control Board was obtained vide Lr. No JSPCB/HO/RNC/CTO-2204067 /2018/958 dated 06.06.2018 and consent is valid up to 31.12.2022.

18. The Public hearing of the project was held on 30.01.2018 at Rajkiyakrit Utkramit Madya Vidyalaya Village-Hehal, Sub Division: Patratu, P.O.- Barkakana, District-Ramgarh Jharkhand under the chairmanship of Mrs. Jyotsana Singh (Director-DRDA Ramgarh, an ADM Rank officer) for the expansion proposal.

19. The capital cost of the project is Rs 161.42 crores (including 1.45 Crs. for CER) and the capital cost for environmental management is proposed as Rs 962 Lakhs. The annual recurring cost towards the environmental management is proposed as Rs 101.40 Lakhs/year. The employment generation from the proposed project/expansion is 396. An amount of Rs 145 Lakhs (0.75% of Project cost) has been earmarked for CER based on public hearing issues and need based assessment. The detailed breakup of the activities is given as below:

Sl. No.	Area of Concern	Name of the Village Represented in PH / SIA	Action Plan	Budget Allocated (in Lakhs)	Time Frame for Implementation from the date of EC
1	Drinking Water	Hehal Chaingara Masmohna Durgi Barkakana	Installation of 4 nos. of Hand Pumps in each of Hehal, Chaingara, Masmohna, Durgi and Barkakana Villages = Rs.10 lacs Installation of Rain Water Harvesting in 5 villages = Rs 5 lacs. Construction of Ponds in 5 villages - Estimated Cost- Rs 20 lacs	35	1 year
2	Health Care	Hehal Chaingara Masmohna Durgi Barkhakhana	Ambulance 24x7 for 5 villages = (20 Lakhs + Misc. 2 lacs) = 22 lacs Up gradation of local PHC (Chaingara PHC and Hehal PHS) by providing	30	3-6months

Sl. No.	Area of Concern	Name of the Village Represented in PH / SIA	Action Plan	Budget Allocated (in Lakhs)	Time Frame for Implementation from the date of EC
			equipment and development in infrastructure - 8 lacs		
3	Educational Development	Hehal Chaingara Masmohna Durgi Barkakana Bhurkunda	Construction of Toilets in the following Schools (Rs. 50,000 x 6 Schools + Misc. 1 Lakhs = 4 Lakhs): Primary School Hehal Government Primary School, Masmohna Girls Middle School, Bhurkunda Government School, Barkakana Primary school, Durgi School, Chaingara Sponsoring Computers in Schools of 5 villages = 4 lacs Installation of Water coolers in 6 Schools = 4 lacs Infrastructure (Table, Chair etc.) + educational aids in Schools = 3 lacs	15	1 - 1.5 years
4	Infrastructure Facility	Hehal Chaingara Masmohna Durgi Barkakana Bhurkunda	Construction of approach road from Hehal Village to the Plant = 14 lakhs Installation of Street Lights in 4 Villages = 6 lacs Construction of Nallas for proper drainage in Hehal, Chaingara and Barkakana villages = 15 Lacs	20 15	1-2year 1 year
5.	Employment Opportunity	Hehal Chaingara	Vocational Training Center for Educated youth of villages Short term courses for skill up gradation for villagers	20	1 year
6.	Community Development & Support	Hehal Chaingara Durgi	Distribution of fruit bearing seedlings to the villagers of Hehal village	10	3-6 months
Total				**145**	

20. Greenbelt will be developed in 4.36 Ha which is about 35.1% of the total acquired area. A 10 m wide greenbelt, consisting of at least 3 tiers around plant boundary will be developed as greenbelt and green cover as per CPCB guidelines. Local and native species will be planted with a density of 2500 trees per hectare. Out of 4.36 ha. area earmarked for greenbelt development, at present 5000 nos. of trees have already been planted in 2.24 ha. area. Additionally, 6000 trees shall be planted covering area more than 2.12 Ha.

21. The proponent has mentioned that there is no court case or violation under EIA Notification to the project or related activity.

22. Name of Environment Consultant – **M/s. Vardan Environet, Gurgaon** [S.No. 156, List of QCI Accredited Consultant Organizations (Alphabetically) Rev. 73, February 08, 2019].

Recommendations of the EAC

23. The proposal cited above was considered during the 4th meeting of Re-Constituted Expert Appraisal Committee [EAC] (Industry-I) held on 20-22nd February, 2019 and further reconsidered in the 7th meeting of Re-Constituted Expert Appraisal Committee [EAC] (Industry-I) held on 29-31st May, 2019. After detailed deliberations, the Committee recommended the project cited above for grant of environmental clearance under the provisions of EIA Notification, 2006 subject to environmental safeguards.

Decision of MoEF&CC

24. The Ministry of Environment, Forest and Climate Change has considered the application based on the recommendations of the Expert Appraisal Committee (Industry-I) and hereby decided to grant Environmental Clearance for project cited above under the provisions of EIA Notification, 14th September, 2006, as amended, subject to strict compliance of the following Specific and General Conditions:

A. Specific conditions

i. Particulate matter in the Stack emissions shall not exceed 30mg /Nm^3.

ii. Water for its plant operations shall be sourced by the project proponent from Damodar River, and no ground water shall be abstracted by them.

iii. Project proponent shall undertake rain water harvesting and recharge, and the quantum of water so channelized shall be more than the water consumption in the project area.

iv. The CER activities shall be implemented within a period of 3 years utilizing the earmarked funds of Rs.1.45 crores.

B. General conditions

I. Statutory compliance:

i. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.

ii. The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.

iii. The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.

II. Air quality monitoring and preservation

i. The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015(Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through laboratories recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

iii. The project proponent shall install system carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM_{10} and $PM_{2.5}$ in reference to PM emission, and SO_2 and NOx in reference to SO_2 and NOx emissions) within and outside the plant area (at least at four locations one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.

iv. The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality / fugitive emissions to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

v. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources.

vi. The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.

vii. Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, roofs, regularly.

viii. Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/ agglomeration.

ix. The project proponent shall use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.

x. The project proponent shall provide covered sheds for raw materials like scrap and sponge iron, lump ore, coke, coal, etc.

xi. The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.

xii. Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.

III. Water quality monitoring and preservation

i. The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) as amended from time to time) and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognised under Environment (Protection) Act, 1986 or NABL accredited laboratories.

ii. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.

iii. The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.

iv. Adhere to 'Zero Liquid Discharge'.

v. Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.

vi. The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 (applicable to IF/EAF) as amended from time to time.

vii. Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off

viii. The projectproponent shall practice rainwater harvesting to maximum possible extent.

ix. The project proponent shall make efforts to minimise water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.

IV. Noise monitoring and prevention

i. Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.

ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures

i. The project proponent shall provide waste heat recovery system (pre-heating of combustion air) at the flue gases of reheating furnaces.

ii. Practice hot charging of slabs and billets/blooms as far as possible.

iii. Ensure installation of regenerative type burners on all reheating furnaces.

iv. Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.

v. Provide the project proponent for LED lights in their offices and residential areas.

VI. Waste management

i. Used refractories shall be recycled as far as possible.

ii. Oily scum and metallic sludge recovered from rolling mills ETP shall be mixed, dried, and briquetted and reused melting Furnaces

iii. 100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.

iv. The waste oil, grease and other hazardous waste shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016.

VII. Green Belt

i. Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant

ii. The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.

VIII. Public hearing and Human health issues

i. Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.

ii. The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.

iii. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

iv. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.

IX. Corporate Environment Responsibility

i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environment Responsibility.

ii. The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.

iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.

iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

v. Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

vi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants shall be implemented.

X. Miscellaneous

i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

iv. The project proponent shall monitor the criteria pollutants level namely; PM_{10}, SO_2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

v. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

vi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

vii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.

viii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

ix. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

x. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).

xi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

xii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.

xiii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

xiv. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

xv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

xvi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

25. This issues with the approval of the Competent Authority.

(A.K. Agrawal)
Director

Copy to:-

1. The Secretary, Department of Environment, Government of Jharkhand, Secretariat, Ranchi.
2. The Additional Director General (C), Ministry of Environment and Forest, Regional Office (ECZ), Bungalow No. A-2, Shyamali Colony, Ranchi-834002.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
4. The Chairman, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), HEC Campus, P.O. Dhurwa, Ranchi - 834004, Jharkhand.
5. The Member Secretary, Central Ground Water Authority, West Block –II, Wing -3, Sector I, R.K.Puram, New Delhi – 110086.
6. The District Collector, Ramgarh District, Jharkhand.
7. Guard File / Record File / Monitoring File.
8. MoEF&CC Website.

(A.K. Agrawal)
Director

M/s. Satguru Minerals

Works : Latia Road, Akaltara, Distt. Janjgir-Champa (C.G.)

Office : Jagmal Chowk, Bilaspur (C.G.), Cell : 09300531818, 07978071527, 09338990809

MANUFACTURER OF STONE CHIPS & HIGH GRADE LIME STOTE

GSTIN NO. 22ACHFS2734E1ZG

Original For Buyer

TAX INVOICE

Reverse Charge (Y/N) : N	Transportation Mode :
Invoice No. 4628	Vehicle Number : CG 14 MQ 6663
Invoice Date : 12-10-022	Date of Supply : 12-10-022
State CHHATTISGARH State Code : 22	Place of Supply : अकलतरा. छत्तीसगढ़
Details of Buyer / Billed to	**Details of Consignee / Shipped to :**
Name मे/s माँ छिन्नमस्तिका सीमेन्ट एण्ड स्पात	Name :
Address प्रा.लि. गाँव-हेहल बरकाकाना रामगढ़	Address :
GSTIN : 20AADCM 9547 Q1Z4	GSTIN :
State : झारखण्ड State Code : 20	State : State Code :

Sr. No.	Description of Goods	HSN CODE	GST RATE	SIZE	Qty. CFT/CM/MT	RATE	AMOUNT
1	स्टोन चिप्स		5%	16 mm	24620 mt	350/ प्रति टन	86170

Rupees in Word ....N.... नब्बे हजार चार सौ सतहत्तर मात्र	Total Amount Before Tax	86170
Bank Details :	Add : CGST	
Bank Name : Central Bank of India	Add : SGST	
Bank Account No. 3246375616	Add : IGST 5%	4307
Bank IFSC : CBIN0280791	Total Amount After Tax	90477

Terms & Condition :

1. All Subject to Bilaspur Jurisdiction only.
2. Goods Once Sold will not taken back or exchange.

For, Satguru Minerals

प्रारूप–1

[नियम 4 (1) देखिये]

द्वितीय प्रति

खनिज अभिवहन पास

(खनिज रियायत धारकों के लिए)

परिवहन में उपयोग हेतु

2380752

पुस्तक क्र. 23808 पास क्र.

टीप : प्ररूप भरने के पूर्व पीछे अंकित अभियुक्तियों को ध्यानपुर्वक पढ़े।

1. अनुज्ञप्ति/पट्टेधरी का नाम : विकास मिनरल्स
   अनुज्ञप्ति/खान क्षेत्र का विवरण : प्रो. इन्द्रजीत कुमार ग्राम खिशरी पा.ह.नं.17
   ग्राम/तहसील/जिला : खनिज चूना पत्थर [illegible]
   रकबा : अवधि 27.04.2011 (हेक्टेयर)
   अवधि : से
   खनिज का नाम :
2. परिवहन किये जा रहे खनिज की श्रेणी :
   साईज(लम्प/फाईन्स/स्टीम/स्लैक/अन्य) :
3. परिवहन किये जा रहे खनिज की मात्रा : 20mt (टन/घन मीटर)
   वाहन का ग्रॉस वेट(टन में) :
   वाहन का टेयर वेट(टन में) :
4. खनिज का विक्रय मूल्य : (रुपये प्रति टन/घन मिटर)
5. खनिज प्रेशण का दिनाँक : 12.10.022
   खनिज प्रेशण का समय (A.M./P.M.) : 10.10 p.m.
6. वाहन पंजीयन क्रमांक : C.G.14MQ0663
   वाहन का प्रकार (ट्रेलर/हाईवा/ट्रक/ट्रेक्टर/अन्य) :
7. 2[वाहन स्वामी का नाम, पता एवं मोंबाईल नंबर] :
   2[वाहन चालक का नाम, पता एवं मोंबाईल नंबर] :
8. खनिज क्रेता/प्राप्तकर्ता का नाम :
   डी. ओ. क्रमांक/दिनाँक (यदि लागू हो) :
9. खनिज गंतव्य स्थल : मॉ दि०-मोल्लकों सीमेन्टइण्डस्ट्रीज व्हाया
   1. [illegible] 2. [illegible] 3. [illegible]
10. अन्य विवरण :

PAID FOR VECHICLE CARRING CAPACITY ONLY
ROYALTY PAID FOR TWENTY M.T ONLY

अभिवहन पास जारी करने वाले व्यक्ति का नाम	वाहन चालक का नाम तथा हस्ताक्षर तारीख सहित	जाँचकर्ता का नाम तथा हस्ताक्षर तारीख सहित

M/s. Satguru Minerals

Works : Latia Road, Akaltara, Distt. Janjgir-Champa (C.G.)
Office : Jagmal Chowk, Bilaspur (C.G.), Cell : 09300531818, 07978071527, 09338990809
MANUFACTURER OF STONE CHIPS & HIGH GRADE LIME STOTE
GSTIN NO. 22ACHFS2734E1ZG

Original For Buyer

TAX INVOICE

Reverse Charge (Y/N) : N	Transportation Mode :
Invoice No. 4521	Vehicle Number : CG14MK1188
Invoice Date : 2/9/022	Date of Supply : 2/9/022
State CHHATTISGARH State Code : 22	Place of Supply : झारखंड
Details of Buyer / Billed to	**Details of Consignee / Shipped to :**
Name : मैं हिम मस्तीका सीमेन्ट एवं इस्पात	Name :
Address : ग्रा० रिया० इटा० डुमरिया	Address :
GSTIN : 20AADCM9547Q1ZY	GSTIN :
State : झारखंड State Code : 20	State : State Code :

Sr. No.	Description of Goods	HSN CODE	GST RATE	SIZE	Qty. CFT/CM/MT	RATE	AMOUNT
1	स्टोन चिप्स —		5%	1T6 mm	30,000 mt	350/ प्रति मी० टन	10,500/-

Rupees in Word : ग्यारह हजार पच्चीस रुपया	Total Amount Before Tax	10,500/-
	Add : CGST	
Bank Details :	Add : SGST	
Bank Name : Central Bank of India	Add : IGST 5%	525/-
Bank Account No. 3246375616 Bank IFSC : CBIN0280791	Total Amount After Tax	11025/-

Terms & Condition :
1. All Subject to Bilaspur Jurisdiction only.
2. Goods Once Sold will not taken back or exchange.

For Satguru Minerals

प्ररूप –1

[नियम 4 (1) देखिये]

खनिज अभिवहन पास

(खनिज रियायत धारकों के लिए)

द्वितीय प्रति

परिवहन में प्रयोग हेतु

2280624

पुस्तक क्र. 22607

पास क्र.

टीप : प्ररूप भरने के पूर्व, पीछे अंकित अभियुक्तियों को ध्यानपूर्वक पढ़ें।

विकास मिनरल्स

1. अनुज्ञप्ति/पट्टेधारी का नाम : ए. सुनील कुमार
   अनुज्ञप्ति/खान क्षेत्र का विवरण : ग्राम किवारी पट्टा नं.17
   ग्राम/तहसील/जिला : [illegible] रकबा 4.98 एकड़
   रकबा : अवधि 07.01.2010 से 06.01.(हेक्टेयर)
   अवधि : से
   खनिज का नाम :
2. परिवहन किये जा रहे खनिज की श्रेणी :
   साईज (लम्प/फाईन्स/स्टीम/स्लैक/अन्य) :
3. परिवहन किये जा रहे खनिज की मात्रा : 20mt (टन/घन मीटर)
   वाहन का ग्रॉस वेट(टन में) :
   वाहन का टेयर वेट (टन में) :
4. खनिज का विकय मूल्य : (रूपये प्रति टन/घन मीटर)
5. खनिज प्रेषण का दिनाँक : 2-9-022
   खनिज प्रेषण का समय (A.M./P.M.) : 10.00 PM
6. वाहन पंजीयन क्रमांक : CG 14 MK 1188
   वाहन का प्रकार (ट्रेलर/हाईवा/ट्रक/ट्रेक्टर/अन्य) :
7. 2[वाहन स्वामी का नाम, पता एवं मोबाईल नंबर] :
   2[वाहन चालक का नाम,पता एवं एवं मोबाईल नंबर] :
8. खनिज क्रेता/प्राप्तकर्ता का नाम :
   डी. ओ. क्रमांक /दिनाँक (यदि लागू हो) :
9. खनिज गंतव्य स्थल : [illegible]
   1. [illegible] 2. [illegible] 3. [illegible]
10. अन्य विवरण :

PAID FOR VECHICLE CARRING CAPACITY ONLY
ROYALTY PAID FOR TWENTY M.T. ONLY

अभिवहन पास जारी करने वाले व्यक्ति का नाम	वाहन चालक का नाम तथा हस्ताक्षर तारीख सहित	जाँचकर्ता का नाम तथा हस्ताक्षर तारीख सहित

M/s. Satguru Minerals

Works : Latia Road, Akaltara, Distt. Janjgir-Champa (C.G.)
Office : Jagmal Chowk, Bilaspur (C.G.), Cell : 09300531818, 07978071527, 09338990809
MANUFACTURER OF STONE CHIPS & HIGH GRADE LIME STOTE
GSTIN NO. 22ACHFS2734E1ZG

TAX INVOICE — Original For Buyer

Reverse Charge (Y/N) : N	Transportation Mode :
Invoice No. 4522	Vehicle Number CG-14 MK 1188
Invoice Date : 2/9/022	Date of Supply : 2/9/022
State CHHATTISGARH State Code : 22	Place of Supply : अकलतरा, सी.जी.
Details of Buyer / Billed to	**Details of Consignee / Shipped to :**
Name : मोदिन मस्तीका सीमेन्ट एन्ड स्मात	Name :
Address : ग्राम पो. हेराप, खुदारवाजिश्रमगढ़	Address :
GSTIN : 20AADCM 9547Q1Z4	GSTIN :
State : झारखंड State Code : 20	State : State Code :

Sr. No.	Description of Goods	HSN CODE	GST RATE	SIZE	Qty. CFT/CM/MT	RATE	AMOUNT
1	स्टोन चिप्स		5%	1T6 mm	15240 mt	350/ प्रति टन	5464 =

Rupees in Word ..... पांच हजार चार सौ .....

Bank Details :
Bank Name : Central Bank of India
Bank Account No. 3246375616
Bank IFSC : CBIN0280791

Total Amount Before Tax	5464 =
Add : CGST	
Add : SGST	
Add : IGST 5%	276 =
Total Amount After Tax	5674 =

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For, **Satguru Minerals**

M/s. Satguru Minerals

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Office : Jagmal Chowk, Bilaspur (C.G.), Cell : 09300531818, 07978071527, 09338990809
MANUFACTURER OF STONE CHIPS & HIGH GRADE LIME STOTE
GSTIN NO. 22ACHFS2734E1ZG

Original For Buyer

TAX INVOICE

Reverse Charge (Y/N) : N	Transportation Mode :
Invoice No. 4451	Vehicle Number CG-04L4 4875
Invoice Date : 6-8-022	Date of Supply : 6-8-022
State CHHATTISGARH State Code : 22	Place of Supply : अकलतरा, जि-जांजगीर
Details of Buyer / Billed to	**Details of Consignee / Shipped to :**
Name : मै छिन मसीतिका सीमेन्ट एण्ड स्पात	Name :
Address : ग्राम पिपरिया तहसील बुढ़ारमाफ जि रामगढ़	Address :
GSTIN : 20AADCM9547Q1ZY	GSTIN :
State : झारखंड State Code : 20	State : State Code :

Sr. No.	Description of Goods	HSN CODE	GST RATE	SIZE	Qty. CFT/CM/MT	RATE	AMOUNT
1	स्टोनचिप्स		5%	1P6 mm	30.300 mt	3501 प्रतिमिट	10.605

Rupees in Word ..... ग्यारह हजार छह सौ पांच रुपये मात्र	Total Amount Before Tax 10.605
	Add : CGST
	Add : SGST
	Add : IGST 5% 530
	Total Amount After Tax 11.135

Bank Details :
Bank Name : Central Bank of India
Bank Account No. 3246375616
Bank IFSC : CBIN0280791

Terms & Condition :
1. All Subject to Bilaspur Jurisdiction only.
2. Goods Once Sold will not taken back or exchange.

For, Satguru Minerals

प्ररूप –1

[नियम 4 (1) देखिये]

खनिज अभिवहन पास

(खनिज रियायत धारकों के लिए)

द्वितीय प्रति

2280707

22808

पास क्र.

टीप : प्ररूप भरने के पूर्व, पीछे अंकित अभियुक्तियों को ध्यानपूर्वक पढ़ें।

विकास मिनरल्स

1. अनुज्ञप्ति / पट्टेधारी का नाम : ~~श्री इन्द्रजीत कुमार~~
   अनुज्ञप्ति / खान क्षेत्र का विवरण : ~~ग्राम किशनी ब.न.१~~
   ग्राम / तहसील / जिला : ~~खनिज ब्लॉक नम्बर ए-०५~~
   रकबा : ~~अवधि 07.04.2010 से 06.04.2015~~ (हेक्टेयर)
   अवधि : से
   खनिज का नाम :
2. परिवहन किये जा रहे खनिज की श्रेणी :
   साईज (लम्प / फाईन्स / स्टीम / स्लैक / अन्य) : 20mm
3. परिवहन किये जा रहे खनिज की मात्रा : (टन / घन मीटर)
   वाहन का ग्रॉस वेट(टन में) :
   वाहन का टेयर वेट (टन में) :
4. खनिज का विकय मूल्य : (रूपये प्रति टन / घन मीटर)
5. खनिज प्रेषण का दिनाँक : 6.8.022
   खनिज प्रेषण का समय (A.M. / P.M.) : 9.30 P.M.
6. वाहन पंजीयन क्रमांक : C.G.04LY4875
   वाहन का प्रकार (ट्रेलर / हाईवा / ट्रक / ट्रेक्टर / अन्य) :
7. 1[वाहन स्वामी का नाम, पता एवं मोबाईल नंबर] :
   2[वाहन चालक का नाम,पता एवं एवं मोबाईल नंबर] :
8. खनिज क्रेता / प्राप्तकर्ता का नाम :
   डी. ओ. क्रमांक / दिनाँक (यदि लागू हो) : मे॰ हिन्दुस्तान सीमेन्ट एण्ड स्पात प्रा॰ लि.
9. खनिज गंतव्य स्थल : ~~ट्रेलर~~ 2 ~~जुलाई~~ जिला रायगढ़ 3 ~~मार्च २०१५~~ व्हाया
10. अन्य विवरण :

PAID FOR VEHICLE CARRING CAPACITY ONLY
ROYALTY PAID FOR TWENTY MT ONLY

अभिवहन पास जारी करने वाले व्यक्ति का नाम	वाहन चालक का नाम तथा हस्ताक्षर तारीख सहित	जाँचकर्ता का नाम तथा हस्ताक्षर तारीख सहित

M/s. Satguru Minerals

Works : Latia Road, Akaltara, Distt. Janjgir-Champa (C.G.)
Office : Jagmal Chowk, Bilaspur (C.G.), Cell : 09300531818, 07978071527, 09338990809
MANUFACTURER OF STONE CHIPS & HIGH GRADE LIME STOTE
GSTIN NO. 22ACHFS2734E1ZG

Original For Buyer

TAX INVOICE

Reverse Charge (Y/N) : N	Transportation Mode :
Invoice No. 4452	Vehicle Number : CG-04 LY 4875
Invoice Date : 6-2-022	Date of Supply : 6-2-022
State CHHATTISGARH State Code : 22	Place of Supply : अकलतरा - सी.जी.
Details of Buyer / Billed to	**Details of Consignee / Shipped to :**
Name : मै. दिव्य मशीनका सीमेन्ट प्रा. लि. रायपुर	Name :
Address ग्राम पो. हरदखोर्दि शमगढ़	Address :
GSTIN : 26 AA D CM 9547 Q1Z4	GSTIN :
State : छत्तीसगढ़ State Code : 26	State : State Code :

Sr. No.	Description of Goods	HSN CODE	GST RATE	SIZE	Qty. CFT/CM/MT	RATE	AMOUNT
1	2-20 mm Metal		5%	40 mm	12456 MT	3501 प्रति मि टन	43571=

Rupees in Word चार हजार पाँच सौ इकहत्तर मात्र	Total Amount Before Tax 43571=
	Add : CGST
	Add : SGST
	Add : IGST 5% 2171=
	Total Amount After Tax 45742

Bank Details :
Bank Name : Central Bank of India
Bank Account No. 3246375616
Bank IFSC : CBIN0280791

Terms & Condition :
1. All Subject to Bilaspur Jurisdiction only.
2. Goods Once Sold will not taken back or exchange.

For, **Satguru Minerals**

TAX INVOICE

RUNGTA MINES LIMITED

Rungta Chamber, Sadar Bazar, Chaibasa, West singhbhum,- Jharkhand - 833201, INDIA
Phone - 06582-255261 E-mail - csp@rungtamines.com
IRN: 558032e517d948eff857537b12993363a22fe83ebd3d3d78cb47ed533cdc2d4a

Name of Supplier:	**RUNGTA MINES LIMITED**	**Invoice No:**	**CSP122D000028860**
Address:	**Chaliyama Steel Plant**	**Invoice Date:**	28.10.2022
	Vill: Chaliyama, P.O - Keshargaria,	**PO No:**	MCCIPL/22-23/60
	P.S - Rajnagar,	**PO Date:**	29.09.2022
	Dist - Seraikela-Kharsawan - 833201	**Transporter Name:**	Dayalbag Transport
State & Code:	Jharkhand, 20	**Vehicle No:**	JH02AN2783
GSTIN:	20AABCR6463N2Z7		
PAN:	AABCR6463N		
CIN:	U26911WB1962PLC025691		

Billed to		**Shipped to**	
Name of Customer:	**MAA CHHINNMASTIKA CEMENT & ISPAT**	**Name of Consignee:**	**MAA CHHINNMASTIKA CEMENT & ISPAT**
Address:	At.- Hehal P.O.- Barkakhana Dist.- Ramgarh Pin- 829103	**Address:**	At.- Hehal P.O.- Barkakhana Dist.- Ramgarh Pin- 829103
State & Code:	Jharkhand,20	**State & Code:**	Jharkhand,20
GSTIN/UIN:	20AADCM9547Q1ZY	**GSTIN/UIN:**	20AADCM9547Q1ZY
PAN:	AADCM9547Q	**Incoterms:**	EX-WORKS
Place of Supply	Jharkhand,20		

Description	HSN	Quantity	Packaging Description	UoM	Rate	Amount (Rs)
IRON ORE PELLETS FE - 63.00 %(+/-0.5%)	26011210	24.660	LOOSE	MT	7,000.00	172,620.00
Taxable Amount						172,620.00
CGST @ 9.00 %						15,535.80
SGST @ 9.00 %						15,535.80
Total Amount Inclusive of Taxes						203,691.60
ADD: Rounding						0.40
					Total Rs.	203,692.00

Total Invoice value (in words): Two Lakh Three Thousand Six Hundred Ninety Two Rupees Only E. & O.E.

Despatch Details **(Tax subject to reverse charge - NO)**

Mode: By ROAD
Source: Chaliyama Steel Plant
Destination: Ramgarh

Enclosure:

For RUNGTA MINES LIMITED
Chaliyama Steel Plant

Authorised Signatory

Declaration : Certified that the particulars given above are true & correct and the amount indicated above represents the price actually charged and that there's no flow of addiotional consideration directly or indirectly from the buyer.

Interest @18% per annum will be charged if bill not paid on presentation.
All disputes under this invoice are subject to Chaibasa Jurisdiction Only.
Regd. Off: 8A, Express Tower, 42/A, Shakespeare Sarani, Kolkata - 700017, Telefax No. (033) 2213751
Adm Office- Rungta House, Sadar Bazar, CHAIBASA -833201, West Singhbhum, Jharkhand, India, Ph No- (06582) 256661

TAX INVOICE

RUNGTA MINES LIMITED

Rungta Chamber, Sadar Bazar, Chaibasa, West singhbhum,- Jharkhand - 833201, INDIA
Phone - 06582-255261 E-mail - csp@rungtamines.com
IRN: 30c865d068f1ec54ad90426f5d6e334018fb58fd22b226cbd34323b7aa8401dd

Name of Supplier:	RUNGTA MINES LIMITED	Invoice No:	CSP122D000024143
Address:	Chaliyama Steel Plant	Invoice Date:	07.10.2022
	Vill: Chaliyama, P.O - Keshargaria,	PO No:	MCCIPL/22-23/60
	P.S - Rajnagar,	PO Date:	29.09.2022
	Dist - Seraikela-Kharsawan - 833201	Transporter Name:	SAHU ROADWAYS
State & Code:	Jharkhand, 20	Vehicle No:	JH02AU-2753
GSTIN:	20AABCR6463N2Z7		
PAN:	AABCR6463N		
CIN:	U26911WB1962PLC025691		

Billed to		Shipped to	
Name of Customer:	MAA CHHINNMASTIKA CEMENT & ISPAT	Name of Consignee:	MAA CHHINNMASTIKA CEMENT & ISPAT
Address:	At.- Hehal P.O.- Barkakhana Dist.- Ramgarh Pin- 829103	Address:	At.- Hehal P.O.- Barkakhana Dist.- Ramgarh Pin- 829103
State & Code:	Jharkhand,20	State & Code:	Jharkhand,20
GSTIN/UIN:	20AADCM9547Q1ZY	GSTIN/UIN:	20AADCM9547Q1ZY
PAN:	AADCM9547Q	Incoterms:	EX-WORKS
Place of Supply	Jharkhand,20		

Description	HSN	Quantity	Packaging Description	UoM	Rate	Amount (Rs)
IRON ORE PELLETS FE - 63.00 %(+/-0.5%)	26011210	58.340	LOOSE	MT	7,000.00	408,380.00
Taxable Amount						408,380.00
CGST @ 9.00 %						36,754.20
SGST @ 9.00 %						36,754.20
Total Amount Inclusive of Taxes						481,888.40
LESS: Rounding						0.40
					Total Rs.	481,888.00

Total Invoice value (in words): Four Lakh Eighty One Thousand Eight Hundred Eighty Eight Rupees Only E. & O.E.

Despatch Details **(Tax subject to reverse charge - NO)**

Mode:	By ROAD
Source:	Chaliyama Steel Plant
Destination:	Ramgarh

For RUNGTA MINES LIMITED
Chaliyama Steel Plant

Authorised Signatory

Enclosure:

Declaration : Certified that the particulars given above are true & correct and the amount indicated above represents the price actually charged and that there's no flow of addiotional consideration directly or indirectly from the buyer.

Interest @18% per annum will be charged if bill not paid on presentation.
All disputes under this invoice are subject to Chaibasa Jurisdiction Only.
Regd. Off: 8A, Express Tower, 42/A, Shakespeare Sarani, Kolkata - 700017, Telefax No. (033) 2213751
Adm Office- Rungta House, Sadar Bazar, CHAIBASA -833201, West Singhbhum, Jharkhand, India, Ph No- (06582) 256661

GST DELIVERY CHALLAN

(See Rule.....)

Sale of Raw (E-Auction / FSA)

GSTIN : 20AAACC7476RHZT

Name : Central Coalfields Ltd

Address : KDH WB 2

GST DELIVERY CHALLAN 311822C062B02703

Date : 14/10/2022 02:42:00 PM

CENTRAL COALFIELDS LIMITED

Details of Receiver (Billed to)	
Name :	MAA CHHINNAMASTIKA CEMENT &
Address :	HEHAL, BARKAKANA, PS-PATRATU ROAD
State :	20
State Code :	20
GSTIN :	20AADCM9547Q1ZY
Unique ID :	2000001724

Details of Consignee (Shipped to)	
Name :	MAA CHHINNAMASTIKA CEMENT &
Address :	HEHAL, BARKAKANA, PS-PATRATU ROAD
State :	20
State Code :	20
GSTIN :	20AADCM9547Q1ZY
Unique ID :	2000001724

Place of Supply with name of State (in case of Inter State Trade or Commerce)	HEHAL, BARKAKANA, PS-PATRATU ROAD 20
Place of Delivery (where the same is different from the place of supply)	HEHAL, BARKAKANA, PS-PATRATU ROAD 20

Description of Goods : Coals **HSN Code : 2701**

Particulars	Quantity	Unit of Measurement	Unique Quantity Code	Rate	Amount
Basic Price	24.500			7342.00	179879.00
Transportation Charges				45.90	1124.55
Payloader Loading Charges				0.00	0.00
Service Charge				0.00	0.00
Sizing / Benefication Charges				0.00	0.00
Admin Charges				0.00	0.00
Evacuation Facility Charges				60.00	1470.00
Management Fee				1.00	24.50
Covid19 Pandemic Cess				10.00	245.00
Forest Transit Fee				57.00	1396.50
Royalty 14.00% of Basic Price					25183.06
NMET 2.00% of Royalty					503.66
DMFT 30.00% of Royalty					7554.92
Total Value of Goods					**217381.19**
Discount (if any)				0.00	0.00
Total taxable Value of Goods or Services					**217381.19**
SGST				2.50	5434.53
CGST				2.50	5434.53
IGST				0.00	0.00
Clean Enery Cess				400.00	9800.00
Total Bill Value					**238050.25**
Net Payable Amount					**238050.25**

Amount Payable in words: Rupees Two Lakh Thirty Eight Thousand Fifty and Twenty Five Paise Only.

SO No	3345019881	SO. DT.	25/08/2022	SO. QTY	5000	Scheme	BE-MARKETING
Mode	ROAD	Veh. No	JH01DK0291	Challan No	14144159	Time Out	14/10/2022 02:42:00 PM

Declaration.....

Prepared by

Approved by

C, C Ltd. KDH Project N K. Arya

Authorised Signatory

4.9.1

GST DELIVERY CHALLAN
(See Rule.....)
Sale of Raw (E-Auction / FSA)

GSTIN : 20AAACC7476RHZT

Name : Central Coalfields Ltd

Address : KDH WB 2

GST DELIVERY CHALLAN 311822C062B02585

Date : 08/10/2022 05:36:12 PM

CENTRAL COALFIELDS LIMITED

Details of Receiver (Billed to)	
Name :	MAA CHHINNAMASTIKA CEMENT &
Address :	HEHAL, BARKAKANA, PS-PATRATU ROAD
State :	20
State Code :	20
GSTIN :	20AADCM9547Q1ZY
Unique ID :	2000001724

Details of Consignee (Shipped to)	
Name :	MAA CHHINNAMASTIKA CEMENT &
Address :	HEHAL, BARKAKANA, PS-PATRATU ROAD
State :	20
State Code :	20
GSTIN :	20AADCM9547Q1ZY
Unique ID :	2000001724

Place of Supply with name of State (in case of Inter State Trade or Commerce)	HEHAL, BARKAKANA, PS-PATRATU ROAD 20
Place of Delivery (where the same is different from the place of supply)	HEHAL, BARKAKANA, PS-PATRATU ROAD 20

Description of Goods : Coals HSN Code : 2701

Particulars	Quantity	Unit of Measurement	Unique Quantity Code	Rate	Amount
Basic Price	24.760			7342.00	181787.92
Transportation Charges				45.90	1136.48
Payloader Loading Charges				0.00	0.00
Service Charge				0.00	0.00
Sizing / Benefication Charges				0.00	0.00
Admin Charges				0.00	0.00
Evacuation Facility Charges				60.00	1485.60
Management Fee				1.00	24.76
Covid19 Pandemic Cess				10.00	247.60
Forest Transit Fee				57.00	1411.32
Royalty 14.00% of Basic Price					25450.31
NMET 2.00% of Royalty					509.01
DMFT 30.00% of Royalty					7635.09
Total Value of Goods					**219688.09**
Discount (if any)				0.00	0.00
Total taxable Value of Goods or Services					**219688.09**
SGST				2.50	5492.20
CGST				2.50	5492.20
IGST				0.00	0.00
Clean Enery Cess				400.00	9904.00
Total Bill Value					**240576.49**
Net Payable Amount					**240576.49**

Amount Payable in words: Rupees Two Lakh Forty Thousand Five Hundreds Seventy Six and Forty Nine Paise Only.

SO No	3345019881	SO. DT.	25/08/2022	SO. QTY	5000	Scheme	BE-MARKETING
Mode	ROAD	Veh. No	JH02AN8518	Challan No	08173610	Time Out	08/10/2022 05:36:12 PM

Declaration.....

Prepared by Approved by Checked by Authorised Signatory

4.9.1

GST DELIVERY CHALLAN

(See Rule.....)

Sale of Raw (E-Auction / FSA)

GSTIN : 20AAACC7476RHZT

Name : Central Coalfields Ltd

Address : KDH WB 2

GST DELIVERY CHALLAN 311822C062B02307

Date : 27/09/2022 01:59:14 PM

CENTRAL COALFIELDS LIMITED

Details of Receiver (Billed to)	
Name :	MAA CHHINNAMASTIKA CEMENT &
Address :	HEHAL, BARKAKANA, PS-PATRATU ROAD
State :	20
State Code :	20
GSTIN :	20AADCM9547Q1ZY
Unique ID :	2000001724

Details of Consignee (Shipped to)	
Name :	MAA CHHINNAMASTIKA CEMENT &
Address :	HEHAL, BARKAKANA, PS-PATRATU ROAD
State :	20
State Code :	20
GSTIN :	20AADCM9547Q1ZY
Unique ID :	2000001724

Place of Supply with name of State (in Case of Inter State Trade or Commerce)	HEHAL, BARKAKANA, PS-PATRATU ROAD 20
Place of Delivery (where the same is different from the place of supply)	HEHAL, BARKAKANA, PS-PATRATU ROAD 20

Description of Goods : Coals

HSN Code : 2701

Particulars	Quantity	Unit of Measurement	Unique Quantity Code	Rate	Amount
Basic Price	24.690			7342.00	181273.98
Transportation Charges				45.90	1133.27
Payloader Loading Charges				0.00	0.00
Service Charge				0.00	0.00
Sizing / Benefication Charges				0.00	0.00
Admin Charges				0.00	0.00
Evacuation Facility Charges				60.00	1481.40
Management Fee				1.00	24.69
Covid19 Pandemic Cess				10.00	246.90
Forest Transit Fee				57.00	1407.33
Royalty 14.00% of Basic Price					25378.36
NMET 2.00% of Royalty					507.57
DMFT 30.00% of Royalty					7613.51
Total Value of Goods					**219067.01**
Discount (if any)				0.00	0.00
Total taxable Value of Goods or Services					**219067.01**
SGST				2.50	5476.68
CGST				2.50	5476.68
IGST				0.00	0.00
Clean Enery Cess				400.00	9876.00
Total Bill Value					**239896.37**
Net Payable Amount					**239896.37**

Amount Payable in words: Rupees Two Lakh Thirty Nine Thousand Eight Hundreds Ninety Six and Thirty Seven Paise Only.

SO No	3345019881	SO. DT.	25/08/2022	SO. QTY	5000	Scheme	BE-MARKETING
Mode	ROAD	Veh. No	JH02AY4563	Challan No	27135910	Time Out	27/09/2022 01:59:14 PM

Declaration.....

Prepared by

Authorised by

C.C.Ltd. KDH Project N.K. Ares

Checked by

Authorised Signatory

C.C.Ltd. KDH Project N.K. Ares

4.9.1

JHARKHAND STATE POLLUTION CONTROL BOARD

T.A. DIVISION BUILDING (GROUND FLOOR), H.E.C., DHURWA, RANCHI -834004

Phone.:2400852, 2400851, Fax:0651- 2400850 www.jspcb.org

FORM 2

[See rule 6(2)]

FORM FOR GRANT OR RENEWAL OF AUTHORIZATION BY STATE POLLUTION CONTROL BOARD TO THE OCCUPIERS, RECYCLERS, REPROCESSORS, REUSERS, USER AND OPERATORS OF DISPOSAL FACILITIES

1. No. of authorization and date of issue: JSPCB/HO/RNC/HWM-1692559/2018/25 14/06/2018

2. Reference of appication(No. and date): 1692559 21/08/2017

3. MAA CHHINNMASTIKA CEMENT N ISPAT PRIVATE LIMITED of SHREE PARSURAM SINGH is hereby granted an authorisation based on the enclosed signed inspection report for generation, collection, reception, storage, transport, reuse, recycling, recovery, pre-processing, co-processing, utilisation, treatment, disposal or any other use of hazardous or other wastes or both on the premises situated at VILL- HEHAL, P.O- BARKAKANA, RAMGARH

Details of Authorisation

Sl.No.	Category of Hazardous Waste as per the Schedules I, II and III of these rules	Authorised mode of disposal or recycling or utilisation or co-processing, etc.	Quantity(ton/annum)
1	Burnt Oil - 5.1	Recovery and Reuse Captive	850 Litre/year

(1) The authorisation shall be valid for a period of 5 years

(2) The authorisation is subject to the following general and specific conditions (Please specify any conditions that need to be imposed over and above general conditions, if any):

A General conditions of authorisation:

1. The authorised person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.

2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.

3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorisation.

4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.

5. The person authorised shall implement Emergency Response Procedure (ERP) for which this authorisation is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.

6. The person authorised shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”

7. It is the duty of the authorised person to take prior permission of the State Pollution Control Board to close down the facility.

8. The imported hazardous and other wastes shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.

9. The record of consumption and fate of the imported hazardous and other wastes shall be maintained.

10. The hazardous and other waste which gets generated during recycling or reuse or recovery or pre-processing or utilisation of imported hazardous or other wastes shall be treated and disposed of as per specific conditions of authorisation.

11. The importer or exporter shall bear the cost of import or export and mitigation of damages if any.

12. An application for the renewal of an authorisation shall be made as laid down under these Rules.

13. Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.

14. Annual return shall be filed by June 30th for the period ensuring 31st March of the year.

B Specific conditions:

1. That, the occupier or the operator of facility shall store the hazardous wastes in lined tanks under cover and intact.

2. That, the occupier or the operator of facility shall maintain the working condition of the facility intact and shall not close it down without the prior permission of the State Pollution Control Board.

3. That, the occupier or the operator of facility shall not lend, sell or buy, transfer or receive or transport the hazardous wastes without the prior permission of the State Pollution Control Board.

4. That, the occupier or the operator of facility shall comply with the applicable provisions of the Hazardous wastes Management Rules, 2016.

5. That, the occupier or the operator of facility shall comply with the applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Air (Prevention & Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986.

6. That, the occupier or the operator of facility shall submit reports showing compliance of the conditions laid in paragraph 1 to 4 quarterly and shall submit application for its renewal 120 days prior to its period of expiry i.e. 30.09.2022

7. That, the occupier or the operator of facility shall practice PRAI proposal to establish and regularize the used and waste oil collection system and other issues related to management of used oil and waste oil in the country.

Memo No:JSPCB/HO/RNC/HWM-1692559/2018/25
Date: 14/06/2018

Ram Pravesh Kumar
Section Head, Hazaribagh

Copy To:

Regional office-Cum-Laboratory, Hazaribagh for information and necessary action.

Ram Pravesh Kumar
Section Head, Hazaribagh

Damodar Valley Corporation
Office of the Manager Reservoir Operations
Maithan Dam, Dhanbad
Jharkhand-828 207

Phone : 06540 279445

No.: MRO/Tariff Cell/ MCCIPL/370 Dated- June 21, 2019

To
The Authorized Signatory,
SRI PARASHURAM SINGH
M/S. MAA CHHINAMASTIKA CEMENT ISPAT PVT. LTD.
Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103.

Sub.: Execution of Agreement for Water withdrawal of 0.51 (Zero point Five One) MGD of Raw Water for M/S MAA CHHINAMASTIKA CEMENT ISPAT PVT. LTD. Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103.

Dear Sir,

Enclosed, please find here with a copy of the Agreement for drawal of 0.51 (Zero point Five One) MGD of Raw Water for Maa Chhinamastika Cement Ispat Pvt. Ltd., on for your record.

Yours faithfully,

Md. Omair 21.06.2019
(Md Omair)
Executive Engineer (Civil),
Tariff Cell, MRO'S Office, DVC, Maithon

Dated. June 21, 2019

DAMODAR VALLEY CORPORATION

AGREEMENT

EXECUTED ON ..21.St..... day of June-2019

BETWEEN

DAMODAR VALLEY CORPORATION

AND

MAA CHHINAMASTIKA CEMENT ISPAT PVT. LTD.

For Supply of RAW WATER

FOR

Sponge Iron, process units of mini steel plant like Power plant, Steel melting shop, TMT rolling mill & auxiliaries.

AT

HEHAL

FROM

Damodar River near Changarha, Barkakana, U/S of Ramgarh

FOR

INDUSTRIAL (USES)

Allocated Quantity : 0.51 (Zero point Five One) MGD

झारखण्ड JHARKHAND

B 279065

AGREEMENT

Supply of Raw Water

For

Industrial Use

This Agreement is made on this...21st.....Day of June-2019

BETWEEN

DAMODAR VALLEY CORPORATION, a Corporation constituted under the Damodar Valley Corporation Act being Act No. XIV of 1948 (hereinafter referred to as "the said Act") and having its Headquarters of DVC Towers, VIP Road, Kolkata -700 054 in the state of West Bengal (hereinafter to as "the First Party", which term shall unless excluded by or repugnant to the subject or context include its successors-in-interest and assigns) of the ONE PART

AND

M/S. MAA CHHINAMASTIKA CEMENT ISPAT PVT. LTD., a Private Limited Company having their registered office at Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103. in the state of JHARKHAND (Hereinafter referred to as "the Second Party" which term shall unless excluded by or repugnant to the subject or context include its successors-in-interest and/or permitted assigns) of OTHER PART.

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

Md. Owais

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

WHEREAS one of the functions of the First party under Section 12(a) of the said Act is the promotion and operation of the schemes inter-alia for the supply of water in the Damodar Valley.

AND WHEREAS under the provisions of Section 15 of the said Act the First Party is vested with power to determine and levy rates for bulk supply and retail distribution of water for industrial purpose and specify the manner of recovery of such rates.

AND WHEREAS under the provisions of section 17 of the said Act construction, operation or maintenance in the Damodar Valley of any dam or other work of any installation for extraction of water shall not be effected by any person without the consent of the First Party.

AND WHEREAS the Second Party has requested the First Party under cover of its Letter No.- MCCIPL/198/2019-20 dated 04.06.2019, email dated 07.06.2019 & letter No.- MCCIPL/224/2019-20 dated 17.06.2019 annexed hereto, to allow it to construct, operate and/or maintain the supply of water from Damodar River near Changarha, Barkakana, U/S of Ramgarh for their Sponge Iron, process units of mini steel plant like Power plant, Steel melting shop, TMT rolling mill & auxiliaries. at Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103. in accordance with the approved plan and drawing forwarded by Chief Engineer (Civil), DVC, Maithon under cover of his letter No. - Nil and letter No.- MRO/Tariff Cell/144 dated 18.03.2019 & MRO/Tariff Cell/846 dated 11.06.2019 of Dy. Chief Engineer (civil), Water Resources, DVC, Maithon and also the letter No. MD/DVRR/WA-6(PART - VIII/MAA CHHINAMASTIKA / 2019/609-14, dated 06.03.2019 of Member Secretary, DVRRC, CWC, Maithon annexed hereto for Industrial purpose as laid down in the relevant provisions of the said act.

AND WHEREAS the First Party has agreed to such construction, operation and/or maintenance of the water supply scheme and has further agreed to such supply of water to the Second Party for an initial period of five years as referred to in Clause- 16 here-in-under on the terms and conditions as hereinafter appearing.

NOW THIS AGREEMENT WITNESSTH AND IT IS HEREBY DECLARED AND AGREED AS FOLLOWS:-

01. (a) PERMISSION :

(i) The "First Party" hereby grants to the "Second Party" the permission to construct, operate and/or maintain the said water supply scheme in accordance with the Plan and Drawing annexed hereto and to extract such quantities of water from Damodar River near Changarha, Barkakana, U/S of Ramgarh for the purpose of Sponge Iron, process units of mini steel plant like Power plant, Steel melting shop, TMT rolling mill & auxiliaries. at HEHAL as the "Second Party" may require upto 0.51 (Zero point Five One) MGD at the point in the Damodar Valley indicated in the said plan and Drawing annexed hereto and in the manner hereinafter mentioned provided the "Second Party" desiring to increase or decrease the quantity of water to be extracted as permitted aforesaid the "First Party" may require the "Second Party" to give the "First Party" THREE(3) MONTHS' notice in writing and approach DVRRC stating the quantity of water required and the "First Party" after receipt of approval of DVRRC will permit the additional drawal of water depending on the condition prevailing at that time provided further that failure on the part of 'the First Party' will not be construed as breach of this Agreement. the sourcing point and allocation of water by DVRRC is function-specific. The allocation shall, in no way, be utilized /misused by 'the Second Party' by sale of water to any other consumer or its sister concern (or any agency on its behalf) for any purpose whatsoever. in the event of any such act, the same will be construed as breach of the terms and conditions of this agreement on the part of 'the Second Party' as specified in clause-17

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

01. **(b) PERMISSION :**

(i) The "First Party" who is seized and possessed of and is otherwise well and sufficiently entitled to the plots of land measuring Nil of DVC land, more particularly described in the drawing hereto annexed, hereby grants to the "Second Party" the right to use/build at his own cost, the intake works comprising the pump house supporting structures and approaches and also lay down pipes and other works on the above mentioned piece and parcel of land.

(ii) These structures and pumping installations shall be the property of the "Second party" and shall be maintained by them.

(iii) The "Second Party" shall apply to the "First Party" for extension of the license-period of the temporarily allotted piece of land for permissive possession/occupation for the specific use as mentioned hereinabove in Cl. 01.(b).(i) before expiry of every license-period/term of 11 (eleven) months as per the subsisting rules & regulations for temporary use/permissive possession/occupation. The "Second Party" hereby agrees to comply with all the existing terms and conditions as may be decided by the Corporation from time to time and agrees to pay the license fee as may be revised time to time without raising any dispute in this regard.

(iv) For the temporary use/occupation of the said Nil of DVC land, the second party shall pay the "First party" a license fee of 0.0 (Nil) @ Rs. 6/- sq.ft. per term of 11 (eleven) months from the date of permissive possession/occupation of the said land is made over to the 'Second Party'. The amount of 0.0 (Nil) for the term is to be paid in advance from the date of occupation of the said land by the 'Second Party'.

The aforesaid license-period and the rate of license fee may be altered and /or revised and/or enhanced as per discretion of 'the FIRST party' and 'the SECOND PARTY' agrees to make the payments as per the revised rate as and when made applicable.

(v) The "Second Party" shall not be entitled to transfer or let out the said land to others without the consent of the "First Party".

(vi) The "First Party" shall not put up any structure of its own on the aforesaid piece of land without the consent of the "Second Party" which shall not be unnecessarily withheld.

(vii) On the termination of the tenure of the temporary use and occupation period, the "Second Party" shall quit, vacate and deliver peaceful possession of the said land by removing the intake works built thereon and restoring it to its original condition at his own cost.

(viii) Neatness and cleanliness of the area occupied should be observed by the "Second Party"

02. **APPROVAL OF PLAN & DRAWING INSPECTION**:

The installation of the "Second Party" required for extraction of water at the point on the DVC Canal of DVC indicated in the said plan and Drawing shall be duly approved by the "First Party" before erection provided the "First Party" or its representatives duly authorized in that behalf shall, from time to time, and at all times be entitled to enter such installations of the "Second Party" for inspection.

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

Md. Omar

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

03. (a) **EXCESS DRAWAL :**

No drawal in excess of the water, as permitted shall be made by "the second party" without obtaining the specific prior written permission/approval of DVRRC and subject to such terms and conditions as "the First Party" may like to impose. Notwithstanding, whatever is mentioned in this agreement regarding excess drawal, it is hereby agreed and accepted by the second party that, for the quantities of water consumed in excess of the approved monthly drawal and for any other unauthorized drawal of water, sanctioned quantum will be charged @ normal rate plus overdrawal/unauthorized drawal in excess of sanctioned drawal on monthly basis will be charged @ 2 (Two) times the normal rate.

(b) LESS DRAWAL:

The less drawal of water by 10% or more of the agreement quantity during any 5 (five) consecutive years will automatically call for revision of the agreement quantity. The revised agreement quantity will be reduced to average of preceding 5 yrs' actual drawal, without making any further reference to the consumer incorporating the actual average drawal. However, the consumer may opt to apply to DVRRC for increase the quantity as per provision under Clause -1(a) hereinabove.

04. **MODE OF MEASUREMENT & METERS :**

For the purpose of measurement of the quantity of water extracted, the "Second Party" shall under this Agreement, with the prior Approval of the First Party, install at such points as may be indicated by 'the First Party', as many meters or as equal to the different type or types of uses of water so as to register the quantity of water for the purpose of determining the water drawal pattern (excess/less drawal) of the Second Party in such units of measurement as may be adopted by "the First Party"

from time to time provided that for the purpose of checking the accuracy of the meter/meters installed by "the Second Party", "the First Party" may install check meters or other mutually agreed upon check measures and "the Second Party" shall provide all facilities such as log book etc. required by "the First Party" for such installation or such check.

It shall be responsibility of the 'Second Party' to repair/rectify/replacement of meter/meters within a period of 30 days from the date of detection of the fault by either party. And that 'the second party' has to submit a report certified by the representative of the first party every year regarding their compliance with proper and satisfactory functioning of meter with proper logging of meter readings which will be given due importance during periodic review of water utilization by DVRRC. Non-compliance of above may tantamount to cancellation of water allotment.

The reading of the meters referred to above shall be jointly taken by the accredited representative of the consumer and Corporation on/or as near as practicable to the last day of each English calendar month or as decided by the corporation and the reading so taken shall be binding, final and conclusive between the consumer and the Corporation as to the quantity of water drawal by the consumer , provided that in the event of any meter being found defective and the quantity of drawal of water during the period when the meter was defective shall be determined, unless otherwise mutually agreed as detailed in clause – 6 & 10 here-in-under.

Maa Chinnamastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

Md. Ons'

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

05. **SEALING OF METERS :**

All meters referred to in the above mentioned Clause - 04 excepting the ones with automatic recorder on charts if any, shall be properly sealed on behalf of both the parties hereto and shall not be interfered with by either party except in the presence of the other party or its representatives duly authorized in that behalf.

06. **METER READING, INSPECTION & BASIS OF PAYMENT :**

The Control Valve House housing the meter/meters of 'the Second Party' shall remain in the custody of 'the second Party' and 'the First Party' through its representative duly authorized in that behalf shall at all times be entitled to enter the said Control Valve House and inspect the meter/meters. The meter reading shall be entered up daily at 9.00 hours in a register by the second Party or its representatives duly authorized in that behalf. The readings may be checked and attested by 'the First Party' or its representative duly authorized in that behalf, at convenient intervals

Provided that where it is not possible to record the quantity of water extracted for a particular use directly owing to the absence of a meter directly recording such quantity, the quantity extracted for such use shall be determined by taking the difference between the quantity recorded in the main meter, recording the total quantity extracted for all uses under this Agreement, and the quantity recorded for the other uses for which there may be direct meter/meters.

Provided further that if this meter/meters installed by 'the second party' for recording the quantity of water is/are out of order, the quantity of water extracted may be assessed by taking the average of the quantity extracted during the preceding 3 (three) months as per the reading of the meter/meters, provided further that nothing as aforesaid shall prevent the respective parties from arriving at a mutual settlement as regard the quantity of water extracted during the above period for the purpose of ascertaining excess/less drawal by the second party.

The basis of payment shall be the quantity of water extracted in a month. In other words, bills shall be raised monthly or quarterly or as decided by the corporation, based on the extracted quantity.

07. **QUANTITY OF WATER CONSUMED OR EXTRACTED :**

The Registers of meter reading referred to in the above mentioned Clause- 06 or the assessed quantity of water mutually agreed upon by and between both the parties hereto or the average of the quantity of water extracted during the three months as aforesaid or computed by taking the difference between the direct recording and main meter shall be the prima facie evidence of the quantity of water extracted by 'the second Party'.

08. **PROPRIETARY RIGHT OF METERS AND UPKEEPMENT:**

Meters as mentioned in the above mentioned Clause -04 shall be the property of 'the Second Party' and 'the Second Party' shall be liable for the upkeepment of the meter and for carrying out test once a year or more to the satisfaction of the First Party about the accuracy of such meter/meters.

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

09. **ACCURACY OF METERS :**

In the event of any dispute or difference between 'the First Party' and the Second Party as to the sufficiency or accuracy or state of repair or condition of the said meter or as to the quantity of water extracted through such meter, such difference or dispute shall be referred to and determined by an Engineer to be appointed by both the parties hereto.

10. **BASIS OF ASSESSMENT IN ABSENCE OF METER :**

(a) It is accepted and agreed by the 'Second Party' that the total quantity of consumption of water for the month shall be computed by the first party on the basis of allocation of water by DVRRC and the bills shall be raised on such quantity as referred to in Schedule-I & II. However, the Second Party is required to install and commission the meter(s) up to the satisfaction of the First Party for ascertaining excess/less drawal as referred to in clause 3.(a) & 3.(b) hereinabove.

(b) If at any time the meters installed for measurement of water extracted shall at any time, cease to register correctly or be removed for repair, calibration etc., then for the period until the said meters shall have been repaired replaced or otherwise adjusted as to register the quantity of water passing through it correctly, the quantity shall be computed as per proviso of clause 06 hereinabove. The First Party, however, shall be entitled to charge and 'the Second Party' shall be liable to pay for such quantity of water as mentioned in Schedule-II and the bills shall be continued to be raised by first party based on the **extracted** quantity as mentioned hereinabove.

Notwithstanding the bills shall be raised as per provisions contained in preceding cl. 10.(a). The Second Party shall make every Endeavour to get the meter repaired and installed to the satisfaction of the First Party within a period of 1(one) months.

11. BILLS & PAYMENTS:

(a) **Bills & Tariff:**

The price for supply of water shall be charged to the 'Second Party' in accordance with Schedule-I & the First Party's 'Schedule of Rates' as given in Schedule-II and other conditions in force from time to time, provided that any levy such as any Surcharge, Sales Tax, Octroi or any another amount by whatever other name called known or made by the Corporation, the state Government or any other competent authorities on quantity of water allocated to the 'the second Party' under this agreement, shall be paid by 'the second Party'.

(b) **Security Deposit: Applicable**

The First Party may require the Second Party to deposit a Security Amount Rs. 11,26,772/- (Rs. Eleven Lakh Twenty Six Thousand Seven Hundred Seventy Two Only) equivalent to water charges for three calendar months, considering quantity allocated in 0.51 (Zero point Five One) MGD specified in Clause- 1(a) and given in the schedule –I annexed hereto and or as modified as per clause-13 here-in-under and as per the prevailing water rate mentioned in schedule of rates in Schedule-II. The Second Party shall have to pay altered security amount if the quantity of allocation is changed by DVRRC as per the terms of this agreement and as and when the water rates are revised and notified to the second party from time to time during the tenure of this agreement. In the event of termination of this agreement such security deposit shall be refunded after adjustment of dues, if any, to the Second Party without any interest thereon.

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

(c) **Periodicity of Billing:**

Bills will be raised to the Second Party monthly/quarterly based on actual drawal quantity. It will be the responsibility of second party to make the aforesaid payment within the due date without raising any dispute in this regard.

(d) **Mode of payment:**

The 'second party' shall pay the bill amount to the first party's office at Kolkata by RTGS/Cheque/Demand Draft drawn on Kolkata Branch of any Nationalized Bank, payable to Chief Accounts Officer, DVC, Kolkata within within 30 days from the date of issue of the bill . The license fee, however, is to be paid by the second party as per terms mentioned in Clause- 1 (b).

(e) **Provisional Billing for disputed bills:**

In the case of any disputed bill(s) and or non-receipt/delayed receipt of bill, the second party shall collect the duplicate bill from the office of first party and make the payment immediately. However Delay Payment Surcharge, if applicable, as mentioned here-in-under in clause 11.(f) shall have to be borne by the second party. In case of disputed bills, the second party shall continue to pay full amount as per the bill raised by the first party. The necessary adjustment shall be done by the first party *on resolution of dispute and/or differences.*

(f) **Delay Payment Surcharge:**

If 'the second party' fails to make the payment of any bill amount within the due date, the second party shall pay the surcharge of 2.0 % per month on the amount of the bill from the due date of payment to the date of receipt of such amount in first party's office at Kolkata/ in Corporation's Account which shall be treated as date of payment. The rate of Delay Payment Surcharge is however liable to revision from such date as the Corporation may decide with prior notice of one month in writing to the consumer.

(g) **Default in payment:**

In the event any bill remaining unpaid for 60 days from the date of issue of the bill, the first party shall give the second party **7(Seven)** days' clear notice in writing of its intention to discontinue the supply of water and on the expiry of such period if the payment has not been received, 'the first party' may forthwith discontinue supply of water to the second party till the period the default continues. Such discontinuance of supply shall not be deemed as breach on the part of the Corporation to comply with any of the terms of this Agreement and shall not relieve the consumer of its obligations and liabilities under the Agreement.

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

(h) **Resolution of Dispute on Bill Amount:**

In the event of any dispute on the amount of the bill the consumer shall submit the in details indicating the reason/reasons for such dispute and the aforesaid dispute/disputes normally shall be resolved by mutual discussion and/or mutual exchange of written documents between the consumer and the Corporation through authorized representative within **30 (thirty) days** from the date of receipt of such reference made by the second party to 'the First Party'.

12. MODE OF SUPPLY UNDER NORMAL & ABNORMAL CONDITION:

Save as provided herein 0.51 (Zero point Five One) MGD which, however, need not be continuous, throughout 24 hours, shall be available to 'the Second Party' provided that in case of draught or other unforeseen circumstances, force majeure or any other cause over which the First Party has no control, the First Party shall not be responsible for any diminution or discontinuance of supply on such occasions, but it shall restore the normal conditions of supply as soon as it reasonably can be done to the extent possible.

"The First Party" shall not be considered to be in default or in breach in supplying agreed quantity of raw water due to causes beyond the control of the "The First Party" such as acts of God, Natural Calamities, Civil Wars, Fire, Draught, Riot and acts of unsurpassed power, etc.

13. VALIDITY PERIOD OF QUANTUM OF WATER ALLOCATION:

Notwithstanding whatever is stated herein above, the allocated quantum of water for drawal by 'the Second Party' i.e. initial allocation of quantity (in MGD/Cusec) by DVC/DVRRC shall remain valid for INITIAL AGREEMENT period of **5 (five)** years.

In case the average drawal by the second party during the initial agreement period of five years is **not below 90%** of allocated quantity, then the allocated quantity as specified in Clause- 1(a) shall be treated as the 'allocated quantum' of water for drawal by 'the second party' during the forthcoming period provided that the average drawal during last consecutive **5 (five)** years is **not less by more than 10%** of allocated quantity at the time of review by DVRRC.

In case the drawal is found **less by more than 10%,** the first party may reduce the quantum of allocation accordingly based on the average drawal. However, the second party shall have the liberty to apply for increasing the **re-allocated quantity** as per provision of Clause- 1(a). Any change in the allocated quantity after review by DVRRC Shall deem to replace the quantity of drawal specified in Clause- 1(a) and Schedule- I annexed hereto.

Fresh application for re-allotment of the earlier quantity of water for drawal by the second party, shall be required to be submitted by 'the Second Party' **twelve(12)** months prior to expiry of the initial agreement block of 5(five) years.

If the fresh application as above, is not submitted by 'the second party' in due time to the review committee of DVRRC, 'The first party' shall have the right to reduce ex-parte the re-allocation of water as decided by the committee as deemed fit for equitable distribution taking into consideration the average drawal by the second party during the preceding 5(five) years.

'The second party' hereby accepts and agrees to the aforesaid re-allocation of water without any dispute and the bills shall be raised on the basis of the **drawal quantity** in MGD.

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

Md. Omer

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon.

14. RULES & REGULATION:

'The Second Party' agrees to conform to and abide by all rules and regulations made by the First Party including guidelines for water allocation set by DVRRC now in force and/or which may from time to time be made by the First Party consistent with this agreement relating to the extraction of water from the First Party's sources within the statutory limit of the said Act.

'The second party' shall ensure the optimal use of allotted quantum for the specific purpose and surrender the wasteful usage from the allotted quota. 'The second party' shall take all cares to avoid any untoward hydraulic conditions and undesirable changes in the river/supply channel.

'The second party' shall also ensure that the minimum flow in the river channel required for ecological balance is not interfered with. The Second Party shall take care that the intake structure and drawl of water, under no circumstance be detrimental to the safety and operation procedures of adjoining intakes/reservoir bridges both upstream & downstream of the intake point and also that the proposed intake is strong enough to be able to withstand floods in the river.

Notwithstanding whatever is stated in Clause-13 above, the review committee for allocation of water shall have prerogative to review periodically to reflect and incorporate the changes which take place in the realm of Water Resource Management.

"**The Second Party**" will ensure that the effluent water discharging out of the plant/industry will conform to the latest rules/bye laws/ regulations/prescribed water quality parameters by pollution control board of respective State Governments and/or Central Government.

Notwithstanding that the Corporation may not have acted on some previous breach, defaults or event of like nature on the part of the second party, it shall be lawful for the Corporation to enforce the terms and conditions of these presents in the event of a subsequent breach, default or event of like nature in all matters related to withdrawal of raw water by 'the Second Party'.

Any waiver by 'the First Party' of any breach of the terms and conditions of this agreement by the Second Party shall not constitute waiver of any subsequent breach of any other terms or conditions of this agreement.

15. DISPUTE OR DIFFERENCE & ARBITRATION:

Any dispute(s) or difference(s) arising out of or in connection with the agreement at any time between the 'First Party' and the 'Second Party' shall to the extent possible be settled amicably between the parties.

In the event of any dispute(s) or difference(s) whatsoever arising under the agreement or in connection therewith including any question relating to existence, meaning and interpretation of the agreement or any alleged breach thereof, the same shall be referred to the Secretary/CEO of Damodar Valley Corporation, Kolkata-700 054, to nominate Sole Arbitrator for settlement of disputes.

The Arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification thereof or for the time being in force or the latest. The decision/judgment of the Sole Arbitrator shall be final and binding on both the parties. The cost of Arbitration shall equally be borne by both the parties. The venue of Arbitration shall be at Kolkata.

However, in case the 'Second Party' is a Central Public Sector Enterprise/Govt. Department, the dispute arising between the parties shall be settled through **Permanent Arbitration Machinery (PAM)** of the Department of Public Enterprise, Govt. of India as per prevailing rules.

Md. Omar

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

Maa Gammastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

All suits arising out of dispute(s) or difference(s) between the 'First Party' and the 'Second Party' are subject to jurisdiction of Court in the City of Kolkata.

16. TENNURE OF AGREEMENT OR VALIDITY :

This agreement shall subject as hereinbefore provided be and remain in force for a period of **5 (five)** years initially from the date of commencement of supply under this Agreement and thereafter shall continue uninterruptedly under the existing terms and conditions until determined by either party after the expiration of the fifth or any subsequent year on giving **3 (Three) months'** prior notice in writing of such intention and at the expiration of such notice this Agreement shall absolutely cease and determine but without prejudice to the rights and remedies, if any, of either party which may have accrued or arisen hereunder in the meantime and provided that the Second Party shall on giving the First Party **3 (three)** months' prior notice in writing of such intention be at liberty at any time after the expiration of the fifth or any subsequent year to terminate this Agreement by making payment of the charges equal to water charges for one year as per Schedule of Rates (Annexed as Schedule-II) in force at that time.

17. TERMINATION :

If 'the **' Second Party'** commits any breach of the terms and conditions of this agreement or if there is any default on the part of **'the second Party', 'the First party'** will be at liberty to terminate this agreement upon one months' notice to 'the second party' without prejudice to the rights and remedies, if any, which may have accrued or arisen thereunder.

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

Md. Owes

Executive Engineer (C)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

IN WITNESS WHEREOF THE PARTIES TO THESE PRESENTS HAVE HERE UNTO PUT THEIR REPECTIVE HANDS AND SEALS EACH THE DAY AND YEAR FIRST ABOVE WRITTEN.

The Agreement along with Schedule of rates would come into effect on and from the date of commencement of water supply.

21/06/19

SIGNED, SEALED AND DELIVERED
FOR AND ON BEHALF OF
DAMODAR VALLEY CORPORATION

मुख्य अभियन्ता (सिविल)
दा०घा०नि०, मैथन डैम, धनबाद
Chief Engineer (Civil)
D.V.C., Maithon Dam, Dhanbad

WITNESS

1. S.K. MAJI — DCE(OWR)

2. MD. OMAIR (MD-OMAIR).

(Name & Address) Executive Engineer (Q)
Water, Tariff Cell
MRO'S Office, DVC, Maithon

21/06/19

SIGNED AND DELIVERED
FOR AND ON BEHALF OF
MAA CHHINAMASTIKA CEMENT ISPAT PVT. LTD.

Authorised Signatory

Registered Office: Village-Hehal, Post-Barkakana, Dist.-Ramgarh, Jharkhand, Pin.- 829103.

WITNESS

1 Ashok Lal 21.06.19

2 (Name & Address) 21.06.19

ANNEXURE - 'A'

SCHEDULE- I

[Referred to in Clause-1(a)]

Quantity of Water allocated by DVRRC for drawal by M/s MAA CHHINAMASTIKA CEMENT ISPAT PVT. LTD. at HEHAL Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103., 0.51 (Zero point Five One) MGD From .....21 st..... day of June-2019 the date of commencement of water drawal:

[N.B.: The quantity of raw water allocation as revised by DVRRC from time to time as per the proviso of the agreement shall from the integral part of this agreement]

SCHEDULE- II

[Referred to in Clause-11]

SCHEDULE OF RATES

(Effective from 1st October 2012)

FOR

INDUSTRIAL WATER SUPPLY

TIERS (Based on allocation by DVRRC)

Source Of Drawal	T-1	T-II	T-III	T-IV
	(Up to 5 MGD)	(5+ to 10 MGD)	(10+ to 20 MGD)	(Above 20 MGD)
	Rate per KL	Rate per KL	Rate per KL	Rate per KL
Reservoirs /Rivers	Rs. 5.40	Rs. 5.50	Rs. 5.60	Rs. 5.70
Canals / Ponds	Rs. 5.95	Rs. 6.05	Rs. 6.15	Rs. 6.25

Note: 1) The Water Supply Bills shall be raised on the basis of actual drawal quantity as for all the consumers with the above tariff.

2) An incentive of 20% on the monthly billed amount will be allowed to those Industries who have taken appropriate measures for **'Zero Effluent Discharge"**. The said incentive will be applicable only if the payments are made within due date and on production of requisite certificate from State Pollution Control Authority.

N.B. : **Revised rate will be applicable as and when notified by the Corporation.**

21/06/2019

For and on behalf of

MAA CHHINAMASTIKA CEMENT ISPAT PVT. LTD.

Registered Office: Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103.

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

21/06/19

CHIEF ENGINEER

For and on behalf of

DAMODAR VALLEY CORPORATION

Chief Engineer (Civil)
D.V.C., Maithon Dam, Dhanbad

Kolkata-700054

Performa of information to be submitted by the company

DETAILS OF THE COMPANY

A. DETAILS OF APPLICANT:

01.Name in Capital Letters	SRI PARASHURAM SINGH
02.Designation	DIRECTOR
03.Relationship with Intending Consumer	DIRECTOR OF THE COMPANY
04.Complete Postal Address	Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103.
05.Telephone No.	06553-226846
06.FAX No.	06553-226845
07.E.Mail Address	cementispat@rediffmail.com

B. DETAILS OF THE WATER CONSUMER:

1 Details of Registered Office:

Registered Office	Postal Address:	Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103.
	Telephone No. :	06553-226846
	FAX No. :	06553-226845
	E.Mail Address :	cementispat@rediffmail.com

2 Details of Contact Person:

NAME:	SRI PARASHURAM SINGH	
Contact Person	Postal Address:	Near P.N. Bank, Main Road, Ramgarh Cantt., Dist.- Ramgarh, Jharkhand, Pin.- 829122.
	Telephone No. :	06553-226846
	FAX No. :	06553-226845
	E.Mail Address :	cementispat@rediffmail.com

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

3 **Complete Billing Address:**

Billing Address	Postal Address:	Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.-829103.
	Telephone No. :	06553-226846
	FAX No. :	06553-226845
	E.Mail Address :	cementispat@rediffmail.com

C. DETAILS OF PROJECT/UNIT/PUMP LOCATION ETC.:

01. Name of the Village/Place	HEHAL
02. Plot no.	1
03. Dag No.	86
04. Mouza Name & No.	HESLA, Sheet No.- 1
05. J.L. No.	122 (Plot No.)
06. Police Station Name & No.	Ramgarh, Thana no.- 138
07. Name of Post Office with PIN	Barkakana, PIN- 829103
08. District	RAMGARH
09. Postal Address of the Plant/ Unit site	Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103.
10. Point of Water Withdrawal/	Latitude $23^0$38' 35.55 "N & Longitude 85^0 27 '40.47"E on left Bank of the River
Telephone No.	06553-226846
FAX No.	06553-226845
E.Mail Address	cementispat@grediffmail.com
11. Location of Water Treatment Plant	(a) Water treatment plant proposed to be located near water reservoir inside plant permises. (b) From intake well (near Damodar river), water shall be brought to plant water reservoir, then to water treatment plant for further treatment as per requirement of plant.

Maa Chinnmastika Cement [illegible]

Authorised Signatory

12. Location of Pumping Station	**Pump house and MCC room will be located on the left bank of river above H.F.L.**
13. Number of pumps installed	**Two (02) (1 W + 1 S)**
14. Capacity of pumps	**51.23 LPS (0.0512 m3/s) of Head - 24 m**
15. Location of water meter	**Between pump and rising main.**
16. Location of intake point	**Nearly 3.5 Km from MCCIPL plant in village Hesla.**
17 Quantum of water withdrawal in MGD (approved by DVRRC)	**0.51 (Zero point Five One) MGD**
18. Date of Commencement of water withdrawal from pumping station	**01 January 2011**

D. DETAILS OF RAW WATER USAGE:

(Attach Separate sheet, if necessary, giving details):

(1) Industrial Uses

(2) Coal based sponge Iron plant

(3) Mini steel plant consisting of power plant, Steel melting shop & TMT rolling mill

Manoj Kumar

10/6/2019

Signature with full name of person signing the Agreement & Stamp/ Seal of Company

Maa Chinnmastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

DAMODAR VALLEY CORPORATION

P.O-MAITHON DAM,

Tel No. (06540) 279402/279683/279445; Fax No. 06540-274313

ANNEXURES

ENCLOSURES FORMING THE PART OF THE AGREEMENT:-

Annexure (1) to (4) mentioned below and annexed hereto shall form the integral part of this Agreement:-

(1) ANNEXURE-'A'	Schedule -I & Schedule -II
(2) ANNEXURE-'B'	Detail of the Company
(3) ANNEXURE-'C'	MD/DVRR/WA-6(PART - VIII/MAA CHHINAMASTIKA / 2019/609-14, dated 06.03.2019 of Member Secretary, DVRRC, CWC, Maithon
(4) ANNEXURE-'D'	**MRO/Tariff Cell/144 dated 18.03.2019 & MRO/Tariff Cell/846 dated 11.06.2019 of Dy. Chief Engineer (civil), Water Resources, DVC, Maithon**

21/06/2019

For and on behalf of

MAA CHHINAMASTIKA CEMENT ISPAT PVT. LTD.

Registered Office: Village-Hehal, Post-Barkakana, Dist.- Ramgarh, Jharkhand, Pin.- 829103.

Maa Chhinnamastika Cement & Ispat Pvt. Ltd.

Authorised Signatory

21/06/19

CHIEF ENGINEER

For and on behalf of

दा०घा०नि०, मैथन डैम, धनबाद

Chief Engineer (Civil)

D.V.C. Maithon Dam, Dhanbad

DAMODAR VALLEY CORPORATION

Kolkata-700054

JHARKHAND BIJLI VITRAN NIGAM LIMITED
(CIN No. U40108JH2013SGC001702)
ELECTRIC SUPPLY AREA, HAZARIBAG
JULU PARK, HAZARIBAG, PIN - 825301
E-mail id:- general.manager12@gmail.com, Phone :- 06546-226949

Letter No._____/HESA Dated____/____/_____

To,

M/s Maa Chhinnmastika Cement Pvt. Ltd.
Con. No.-BKL8320
Dir.- Sri Santosh Kumar Gupta,
S/o Late Mohan Prasad Gupta,
At.- Gola Road, Ramgarh, P.O.- Ramgarh
P.S.+ Distt.- Ramgarh
e-mail- cementispat@rediffmail.com

E-MAIL

Sub:- Enhancement of load from 950 KVA (HTS/ 11KV) to 6000 KVA load 33 KV supply under HTSS tariff to M/S Maa Chhinnmastika Cement Pvt. Ltd Con. No.-BKL8320 Dir.- Sri Santosh Kumar Gupta S/o Late Mohan Prasad Gupta At.- Gola Road, Ramgarh, P.O.- Ramgarh P.S.+ Distt.- Ramgarh bearing connection no -BKL-8320

Ref:- Electrical Superintending Engineer, Electric Supply Circle, Ramgarh Letter no. 651dt. 11.04.2022

Sir,

Based upon your application and application fee & processing fee of Rs. 10500/- vide M.R. No. 918371 dated 09.03.2022, the documents, and the feasibility report submitted by the Electrical Superintending Engineer, Electric Supply Circle, Ramgarh vide letter under reference, the undersigned is pleased to accord sanction of demand of 6000 KVA i.e. enhancement of load from 950 KVA to 6000 KVA on 33KV supply under H.T.S.S Tariff to your works at M/S Maa Chhinnmastika Cement Pvt. Ltd Con. No.-BKL8320 Dir.- Sri Santosh Kumar Gupta, S/o Late Mohan Prasad Gupta, At.- Gola Road, Ramgarh, P.O.- Ramgarh P.S.+ Distt.- Ramgarh with the terms and condition as enumerated here under :-

1. The security amount as calculated and demanded by the Electrical Superintending Engineer, Electric Supply Circle, Ramgarh from 950 KVA to 6000 KVA load on 33 KV supply under HTSS tariff will have to be deposited in the office of the A.E.E., Electric Supply Sub-Division, Bhurkunda on any working day before execution of the agreement (Mode of payment of security money mentioned at Sl. No. 09 a & b).
2. The cost of 33 KV line if required will be borne by your firm.
3. Your firm will have to execute fresh agreement within one month in the prescribed form of the Nigam in the office of the Electrical Superintending Engineer, Electric Supply Circle, Ramgarh on any working day after deposit of security amount of Rs.6,46,80,000/- (Rupees Six Crore Forty-six Lakh Eighty Thousand Only). Already deposited security for 950 KVA may be deducted in this amount subject to verification/ submission of original security receipt of 950 KVA.
4. Your firm will have to provide meter room near the main gate, if it is not there.
5. A Suitable metering arrangement for installation of CTPT units etc shall have to be made by your firm.
6. A suitable check meter will be installed outside of your premises / at sending end.
7. The overhead line through naked wire will terminate about 50 meter away from the boundary wall. And from the terminating point to meter, power will be supplied only by armored cable of appropriate rating.
8. Your firm shall have to procure Power transformer with ISI mark for installation in your premises. The total capacity of the power transformer shall not exceed 150% of the sanctioned load. If the capacity of the transformer at any time is found more than 150% of the sanctioned load, action may be taken as per Nigam's norms.

9. Mode of Payment (As per JSERC Regulation 2015, Clause – 8.2.19 & 8.2.20).
   a. The amount payable towards security deposit shall be in the form of Bank Guarantee (BG) or Demand Draft (DD) drawn in favour of licensee. Demand Draft shall be payable at any branch of a scheduled commercial bank that is a member of the clearing house for the area where the concerned sub-division Officers is located.

   b. The consumer whose total amount of security deposit exceeds Rs. 10 Lacs may, at his option, furnish irrevocable Bank Guarantee from a nationalized or schedule commercial Bank initially valid for a period of two years. It shall be responsibility of the consumer tokeep the Bank Guarantee valid at all times and to renew the Bank Guarantee at least two months prior to its expiry.
10. Your firm will have to install VCB with over current & earth fault relay of appropriate rating as directed by local officers of JBVNL.
11. The meter will be installed near the main gate of the premises inside the meter room (size10"x10"x12") concrete roof without any hole or window in any wall with compact gate of single sheet having sheet thickness 2.0mm to 3.0mm. So the firm have to construct the same before execution of agreement.
12. Your firm shall have to install shunt capacitor of adequate capacity of ISI mark so as to maintain the power factor at minimum 0.85.
13. Your firm shall have to obtain and submit statutory clearance from the Electrical Inspector, Govt. of Jharkhand, Ranchi in respect of your electrical installation and electrical equipments for which your firm shall have to apply before electrical inspector Govt. of Jharkhand, Ranchi in time.
14. Your firm shall have to deposit all outstanding dues, if any, before execution of the agreement.
15. Your firm shall have to abide by Nigam's tariff as applicable from time to time.
16. Your firm shall have to submit a copy of each document with invoice and test report of your equipments like power transformer and protective devices before execution of the agreement.
17. Further conditions, if so required, will be communicated to your firm.
18. If the security amount is not deposited within one month from the date of the issue of the letter, the load sanctioned will be treated automatically cancelled.
19. Instructions as contained in letter no. 01 dated 03.01.2000 of the Secretary BSEB, Patna and circular no. 4 dated 03.04.2000 of the BSEB as communicated vide Secretary, JSEB, Ranchi letter no. 5188 dated 28.09.05 will have to be followed regarding energisation and metering arrangement.

Please acknowledge the receipt of this letter.

Yours faithfully,

27/5/2022

(Rakesh Prasad)
General Manager-Cum-Chief Engineer

Navjeet

MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

Registered Office & Works:
At- Hehal, Post - Barkakana - 829103, Dist.- Ramgarh (Jharkhand)
CIN:U26941JH2004PTC010665
ramgarh jh@rediffmail.com

MCCIPL/79/ 2020-21 11/02/2021

To,
Central Ground Water Authority (CGWA),
Jamnagar House, 18/11, Man Singh Road Area,
New Delhi - 110001.

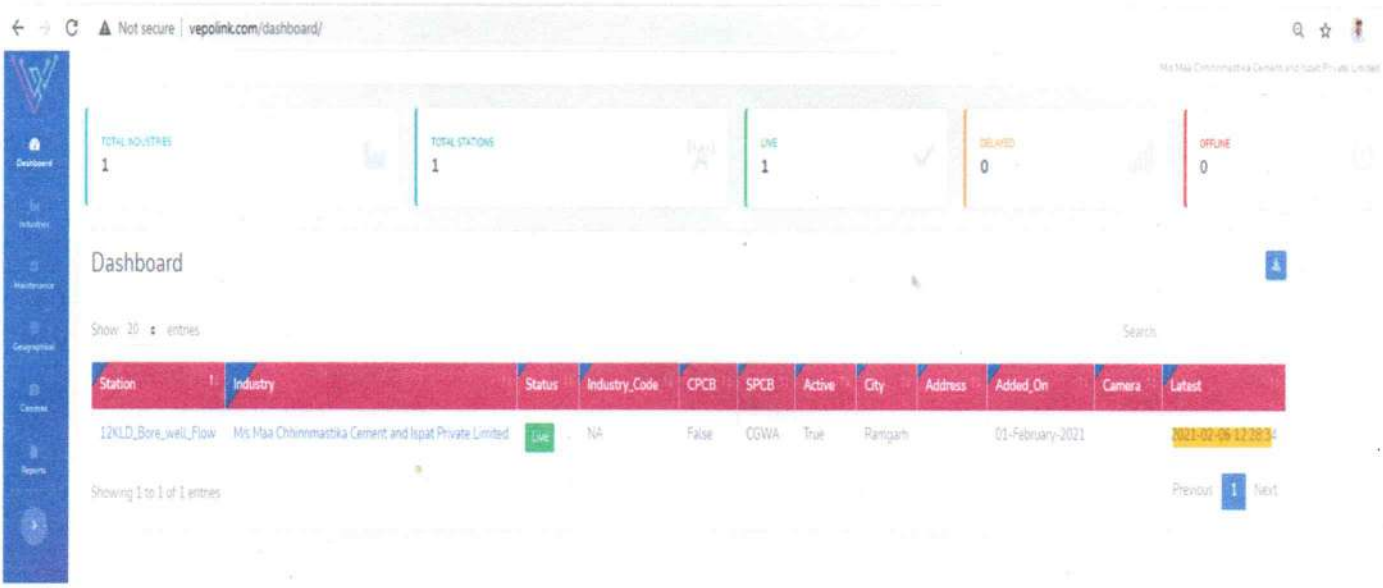
Sub: - Regarding Installation & Commissioning of Telemetry Flow Meter and piezometer as per the Central Ground Water Authority (CGWA) NOC condition no – 1 & 3.

Ref: - CGWA NOC No. - CGWA/NOC/IND/ORIG/2020/9638, dated – 23/12/2020.

Dear Sir,

Kindly refer to the above subject, Our CGWA **NOC No. - CGWA/NOC/IND/ORIG/2020/9638, dated – 23/12/2020** for withdrawal of ground water 12 m3/day. We have done installation and commissioning of telemetry Flow Meter at our Bore well & piezometer (photographs are enclosed for your kind reference), as per the condition no. - 1 & 3 of NOC CGWA and we are uploading Flow meter data in web portal. Kindly find the below login details to view data report in web portal. Screenshot attached for your reference.

- URL - http://www.vepolink.com/
- Login id - jam.env2018@gmail.com
- password - MCCIPL@123



Thanking you.

Yours faithfully
For MAA CHHINNMASTIKA CEMENT & ISPAT PVT LTD.

Santosh Kumar Gupta
DIRECTOR

Encl.:- As above.

Maa Chhinnmastika Cement & Ispat Pvt Ltd

Digital Water Flow Meter

Maa Chhinnmastika Cement & Ispat pvt Ltd

Piezometer

M/S M.L. CONSULTANCY
ADDRESS: - WARD NO :32, RAM NAGARI,
MOTI NAGAR, BALAGHAT (M.P.)
Email: mlconsultency@gmail.com
Mobile: 8839929248, 9691835970

Ref No.: 101/Jabalpur

Date – 29/07/2022

RAIN WATER HARVESTING COMPLETION CERTIFICATE

This is Certify that I have installed rain water harvesting system at premises of M/S MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED, VILLAGE-HEHAL, POST-BARKANAKA, DISTRICT-RAMGARH, STATE-JHARKHAND, PINCODE-829103, Through 03 no. of recharge well (5feet Dia×8feet Depth) from those recharge system they have saved Approx. Per structure 25830 liter/ hour of rain water. Now the system is working properly.

Necessary Precautions-

- First two and three Flushes of rain water are not for se of recharging. It mustbe flushed out.
- This system works in Rainy Season and He will also have fresh water from industries.
- The System is designed For Purely Rain Water Harvesting. Please ensure that Run-off Water is Purely Rain Water/Fresh Water only & Contaminated free.
- Save Water Save Life.

M.L. CONSULTANCY BALAGHAT (M.P.)

VIKAS TIDKE
(Regd. Hydro Geologist Jabalpur zone)
Regd. No.609/2022
Mobile - 8839929248

COMPLETION REPORT

CONSTRUCTION OF GROUND WATER RECHARGE (ARTIFICIAL RECHARGE) WELL At MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

WORK DONE REPORT WITH PHOTOGRAPHS

Prepared By

M/S M.L. CONSULTANCY

CSEB ROAD, RAMNAGAR BHAWANI NAGAR, RAIPUR CHHATTISGARH
PINCODE- 492001
Email: mlconsultancy@gmail.com, Mobile: 7000377676

Submitted to

MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

AT

HEHAL, POST – BARKAKANA – 829103, DIST. – RAMGARH, STATE – JHARKHAND CIN: U26941JH2004PTC010665
Email: ramgarhjh@rediffmail.com

M.L. CONSULTANCY * BALAGHAT (M.P.) *

1. INTRODUCTION:

MAA CHINNMASTIKA CEMENT AND PVT LTD was taken over by RC Rungta group in the year 2010. This project is to be set up as a mini-integrated Steel plant including Sponge Iron, Induction furnaces, Re-Rolling mills, Iron Ore Crushing Plant and captive Power Plant in Phases. Right now, the company is running its 90,000 TPA Sponge Iron plant at Village – Hehal, P.O.- Barakanaka, Ramgarh District Jharkhand.

2. OBJECTIVE:

The broad objectives of the study are:

- To observe Hydro geological conditions and availability of ground water of in the area.
- To work out scope of Rooftop & Storm water harvesting within the premises and suitable rainwater harvesting systems.
- To study more recharge possibilities in and around the plant.

3. RAIN WATER HARVESTING:

Rain water harvesting is collection and storage of rain water that runs off from roof tops, parks, roads, open grounds, etc. This water runoff can be either stored or recharged into the ground water. A rainwater harvesting systems consists of the following components:

1. Catchment from where water is captured and stored or recharged,
2. Conveyance system that carries the water harvested from the catchment to the storage/recharge zone,
3. First flush that is used to flush out the first spell of rain,
4. Filter used to remove pollutants,
5. Storage tanks and/or various recharge structures.

3.1 ADVANTAGE:

The benefits of the rainwater harvesting system are listed below.

- Less cost.
- Helps in reducing the water bill.
- Decreases the demand for water.
- Reduces the need for imported water.
- Promotes both water and energy conservation.
- Improves the quality and quantity of groundwater.
- Does not require a filtration system for landscape irrigation.
- This technology is relatively simple, easy to install and operate.
- It reduces soil erosion, storm water runoff, flooding, and pollution of surface water with fertilizers, pesticides, metals and other sediments.

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- It is an excellent source of water for landscape irrigation with no chemicals, dissolved salts and free from all minerals.

3.2 DISADVANTAGE:

In addition to the great advantages, the rainwater harvesting system has a few disadvantages like unpredictable rainfall, unavailability of the proper storage system, etc.

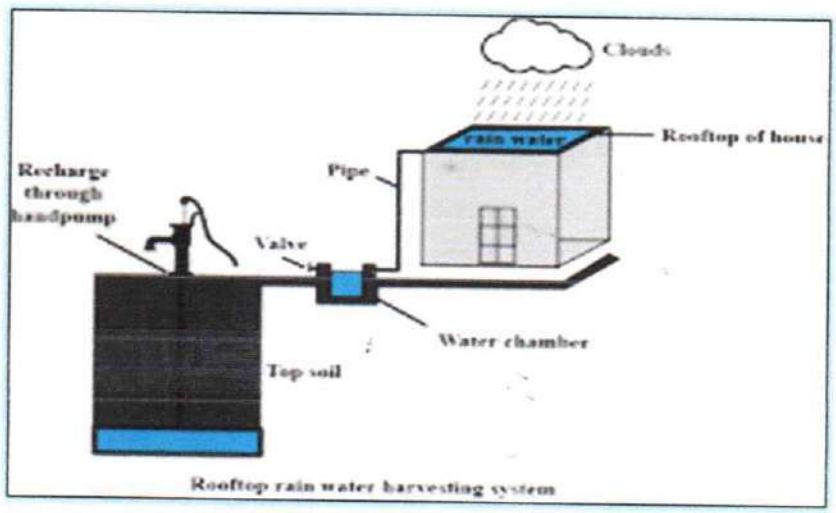
Listed below are a few more disadvantages of the rainwater harvesting process.

- Regular maintenance is required.
- Requires some technical skills for installation.
- Limited and no rainfall can limit the supply of rainwater.
- If not installed correctly, it may attract mosquitoes and other waterborne diseases.
- One of the significant drawbacks of the rainwater harvesting system is storage limits.

3.3 METHODS OF RAIN WATER HARVESTING SYSTEM

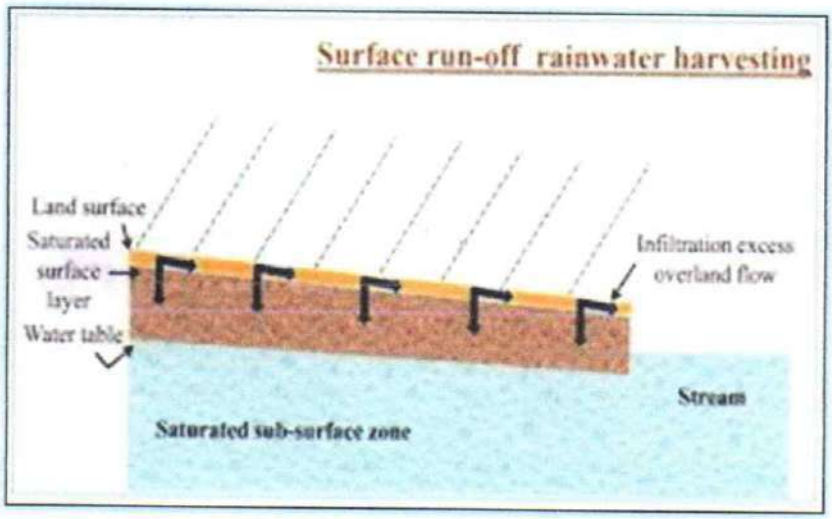
Rooftop rainwater harvesting – The rooftop becomes the catchments, and the rainwater from the building and houses are collected. The components of the rooftop rainwater harvesting are:

1. First, flush.
2. Transportation.
3. Catchment.
4. Filter.



Rooftop rain water harvesting system

Surface runoff harvesting – It is the system that collects rainwater, which flows away as surface runoff. The runoff rainwater is caught and used to recharge aquifers by adopting appropriate techniques.

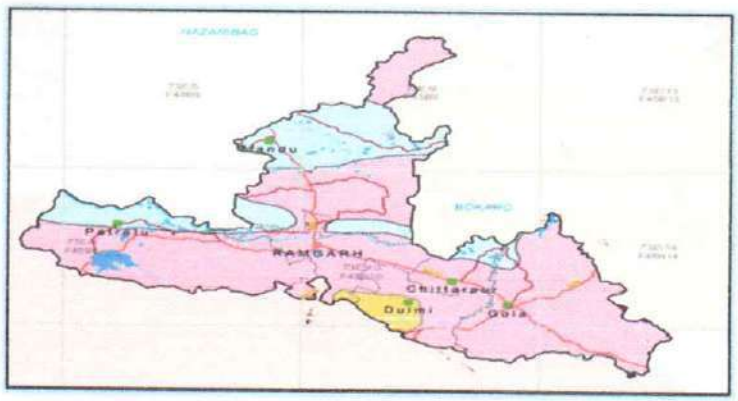


3.4 FACTORS AFFECTING THE AMOUNT OF RAIN WATER HARVESTING

- Catchment features
- Quantum of runoff
- The capacity of storage tanks

4.GEOLOGY OF RAMGARH:

Alluvium, soil/Boulders, Conglomerate, Older alluvium & Laterite. Lower Gondwana system/ Carbonaceous shale/ Sandstone/ Coal Seam, Chotanagpur Gneiss & Granophyre, Basic & ultrabasic.



5. HYDROGEOLOGY OF RAMGARH:

The district is having varied hydrogeological characteristics due to which ground water potential differs from one region to another. It is underlain by Chotanagpur granite gneiss of pre-Cambrian age in three-fourth of the district.

Aquifer systems Two types of aquifers are found. Weathered aquifer and fractured aquifers. Thickness of weathered aquifers varies from 10-20 m in granite terrain and 30-60m in lateritic terrain. In weathered aquifer ground water occurs in unconfined condition while in fractured aquifer ground water occurs in semi confined to confined condition.

6. CLIMATE & RAINFALL OF RAMGARH:

The area lies in the sub-humid region of Chotanagpur Plateau and enjoys semi-extreme type of climate. The day temperature rises around 40°C during the summers and drops down to around 10°C during the winter.

The average annual rainfall of the district is 1251.2 mm more than 80% of the precipitation is received during the monsoon months.

7. PHOTOGRAPHS OF RAINWATER HARVESTING STRUCTURE CONSTRUCTED ON BUILDING PREMISES

NUMBER OF STRUCTURE – **3 NOS** (Size: 5 feet × 8 feet)
Feeling material of recharge well: Stone, Coal, Sand.
Two Structure with Bore well Depth 120 feet & Casing Depth 60 feet and one structure of without Bore well

S. No.	Location	Latitude	Longitude
1	Near of Piezometer Station	23.620813	85.430525
2	Near of new water reservoir	23.619372	85.430347
3	Near of Electric Control Room (SMS Area)	23.625022	85.430626

Average surface run-off coefficients considered for different surfaces as per CGWB norms aregiven below in table:

S. No.	Details	Values
1	Runoff coefficient for roof top	0.85
2	Runoff coefficient for yard & paved area	0.65
3	Runoff coefficient for green belt	0.15
4	Runoff coefficient for open area	0.20

Reference: Manual of Artificial Recharge of Ground Water (CGWB, 2007).

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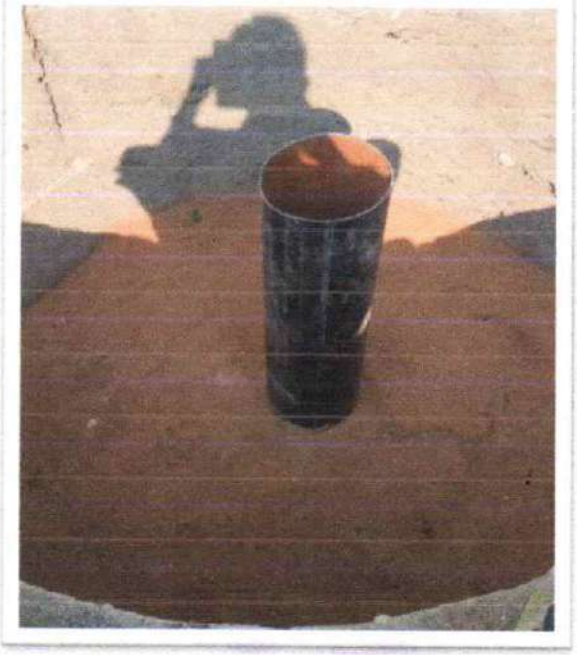
PHOTOGRAPHS

1. Structure: Near of Piezometer Station



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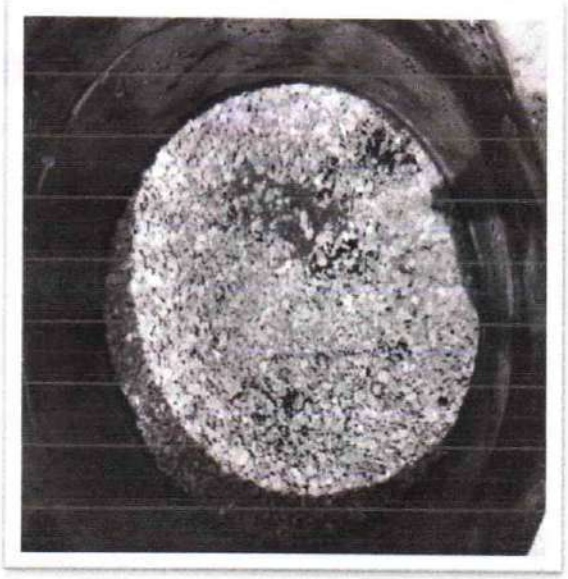
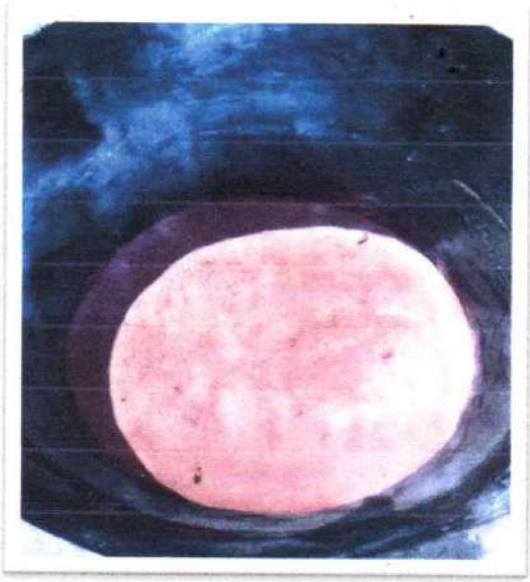
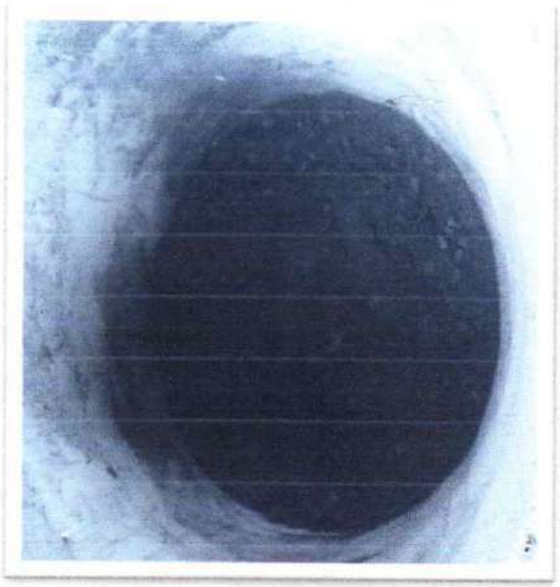
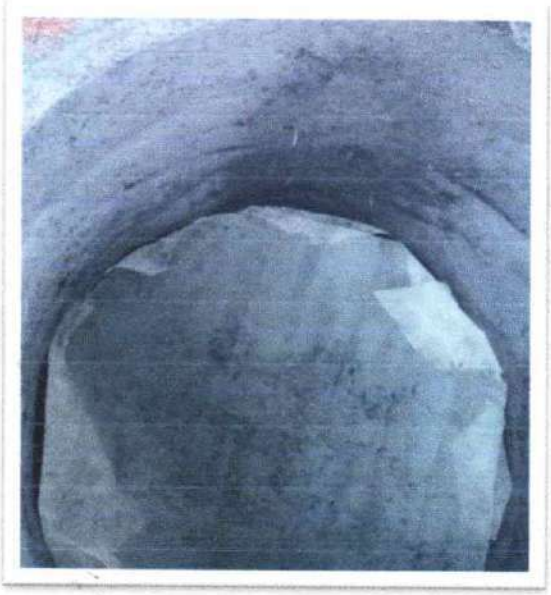
BALAGHAT (M.P.)

2. Structure: Near of new water reservoir









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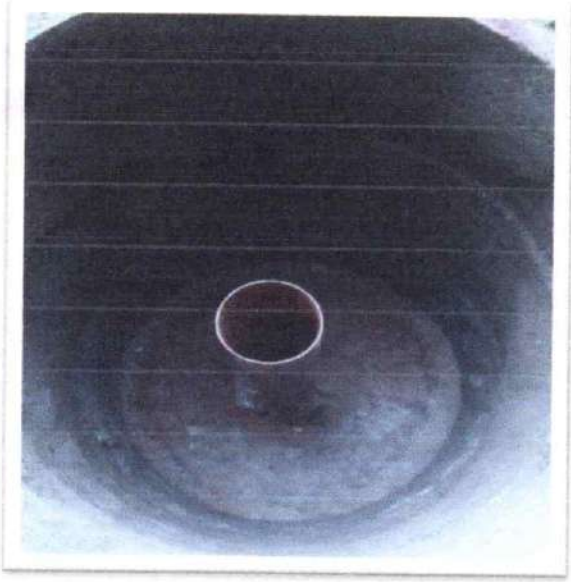
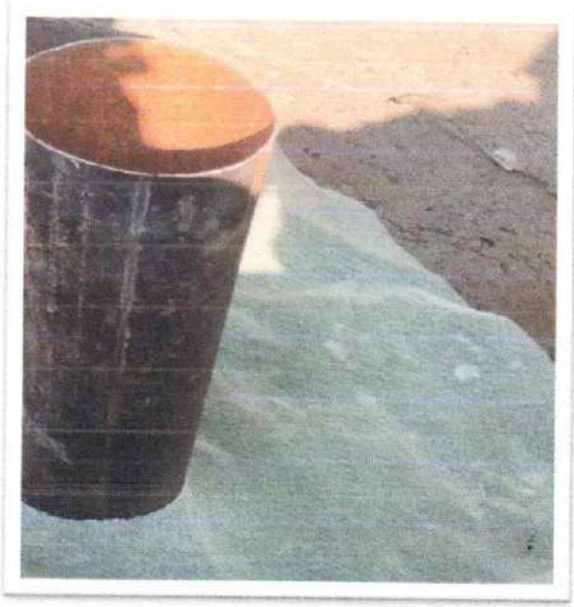
BALAGHAT (M.P.)

3. Structure: Near of Electric Control Room (SMS Area)





M.L. CONSULTANCY
BALAGHAT (M.P.)

8. CALCULATION OF RECHARFE FOR PER STRUCTURE.

DETAILS OF ARTIFICIAL RECHARGE STRUCTRE & ITS RECHARGE QUANTUM MEASURES

We have implemented total 03 nos. of recharge structure in which all of recharge well is of 5 feet Día× 8 feet Depth.

QUANTUM OF RAIN WATER RECHARGE THROUGH RECHARGE WELL OF 5 FEET DIA × 8 FEET DEPTH:

1. Volume of water within free Board (Settlement Chamber) = $\pi r^2 h$ = 4. 44 Cubic meter

2. Volume of water in Gravel filled part, i.e., Volume of water within the pore spaces of sand, gravel filled part @45% =3.14× $(0.75)^2$×0.5×0.45 = 0.3974 Cubic meter

3. Volume of water in recharge well through which recharge will be done Intake capacity of recharge well = 20000 lph = 20 m^3/hour

4. Settlement chamber of 1 cubic meter of capacity

Therefore, total volume to be recharge through an individual structure will be = (4. 44+0.3974+20+1) = 25.83 Cubic meter / hour = 25830 liter / hour

Thus, the Rain water recharging well can accommodate 25.83 cubic meter/hour of the Rain water.

9. DECLERATION:

Recharge of ground water table is a gradual process; we cannot suddenly increase the ground Water table after constructing recharge structures, by constructing any type of recharge structure, And we can give our contribution in aquifer recharge. This will help to rejuvenate the depleting Ground water resources. Also help to save the little amount of rain water which used to drain Away from many years. Thus, it is concluded that implementation of RWH: **MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED** would result in the form of the best approach to deal with present scenario of water scarcity and storing huge quantity of 25830 liters / hour.

M.A. CONSULTANCY BALAGHAT (M.P.)

ANEXXURE – 10

GREENBELT

Greenbelt Plantation

Plant Premises

Sabz Care
Environmental Consultancy Pvt. Ltd.

lets start thinking about nature for tomorrow

Recognized by JSPCB, Ranchi
Accredited by NABL, ISO/IEC 17025:2017

TEST REPORT

Unique Lab Report No. (ULR No.)		**TC994822000001204F**	
Name of Industry	**M/s Maa Chhinnmastika Cement & Ispat Private Limited**	**Work order No.-**	**15043832(Date-19.12.2022)**
Address	**Vill-Hehal, P.O.-Barkakana District- Ramgarh, State-Jharkhand**	**Particular of the Plant**	**Sponge Iron Plant**
Discipline	**Chemical**	**Group**	**Atmospheric Pollution**
Date of Sampling	**20.12.2022 to 21.12.2022**	**Sample Collected by**	**Ranjeet Yadav & Team**
Type of Sample	**Suspended Dust and Gases**	**Sample Condition**	**Sealed and Preserved**
Sample Details	**Ambient Air**	**Sample Drawn By**	**Sabz Care Lab**
Sample ID	**SCECPL/TR/22/380/AA-331**	**Report Release Date**	**23.12.2022**
Period of Analysis	**21.12.2022 to 22.12.2022**	**Plant Status**	**Operational**

A. GENERAL INFORMATION

Location of Sampling: Location-1: **Near Main Gate** (Coordinates- 23°37'15.35"N to 85°25'51.80"E)
Location-2: **North East Side of the Unit** (Coordinates- 23°37'8.73"N to 85°25'40.13"E)
Location-3: **West Side of the Unit** (Coordinates- 23°36'59.40"N to 85°25'33.87"E)

Duration of Sampling: 24 hours

B. METEOROLOGICAL INFORMATION

1. **Average Ambient Temperature (°C)** : 18.0
2. **Relative Humidity (%)** : 48
3. **Barometric Pressure (mmHg)** : 752
4. **Smell or Odour** : No Remarkable smell
5. **Weather condition** : Clear

C. TEST RESULTS

S.N.	PARAMETERS	UNIT	TEST METHOD	RESULTS (Location-1)	RESULTS (Location-2)	RESULTS (Location-3)	Requirements/ Specifications as per CPCB
1.	**Particulate Matter as $PM_{2.5}$**	$\mu g/m^3$	IS 5182 (Part 24)	46.71	55.86	58.76	60 ($\mu g/m^3$)
2.	**Particulate Matter as PM_{10}**	$\mu g/m^3$	IS 5182 (Part 23)	89.24	96.73	97.51	100 ($\mu g/m^3$)
3.	**Sulphur Dioxide as SO_2**	$\mu g/m^3$	IS 5182(Part 2)	25.83	23.33	22.50	80 ($\mu g/m^3$)
4.	**Nitrogen Dioxide as NO_2**	$\mu g/m^3$	IS 5182(Part 6)	36.03	39.50	37.42	80 ($\mu g/m^3$)

*** END OF REPORT ***

Remarks: The ambient air quality with respect to Particulate matters, SO_2 and NO_2 are within the prescribed National Ambient Air Quality Standard.

- Test values are reported based on the samples received.
- Samples will be destroyed after 15 days from date of issues of the Test Report subject to nature of preservation. Samples will be preserved as per the standard method.

Authorized Signatory
Piyush
Quality Manager
(Piyush Ranjan)

Annexure - 14

MAA CHHINNMASTIKA CEMENT AND ISPAT PRIVATE LIMITED

Registered Office & Works:
At- Hehal, Post - Barkakana - 829103, Dist.- Ramgarh (Jharkhand)
CIN:U26941JH2004PTC010665
ramgarh jh@rediffmail.com
cementispat@rediffmail.com
ramgarh_jh@rediffmail.com

MCCIPL/029/2022-23 01e **22/06/2022**

To,
The Member Secretary,
Jharkhand State Pollution Control Board,
HEC Campus, TA Division Building,
Durwa, Ranchi - 834 004.
Jharkhand

Sub: Submission of Environmental Statement Report from the period of April 2021 to March 2022 for our Coal based Sponge Iron.

Ref.:- CTO Ref. No. – JSPCB/HO/RNC/CTO-2204067/2018/958, Dated 06/06/18.

Dear Sir,

With reference to the above, we are enclosing herewith the Environmental Statement Report for the period from April 2021 to March 2022 of our Sponge Iron.

Please find above in order and do the needful.

Thanking you,

Yours faithfully,
For MAA CHHINNMASTIKA CEMENT & ISPAT PVT.LTD.

22/06/22

Manoj Kumar
Manager (Environment)

Encl: As above.

CC to: - The Regional Officer, Regional Office, State Pollution Control Board, Hazaribagh (Jharkhand)

RJ218528561IN IVR:827421852856
RL RAMGARH CANTT HO (829122)
Counter No:1,23/06/2022,11:14
To:THE REGIONAL OFFICER,H BAGH
PIN:825301, Hazaribagh HO
From:MAA CHHINNMASTIKA
Wt:25gms
Amt:27.00(Cash)
(Track on www.indiapost.gov.in)
(Dial 18002666868) (Wear Masks, Stay Safe)

भारतीय डाक
India Post

Rec'd
Board
22/6/22

JHARKHAND STATE POLLUTION CONTROL BOARD * RANCHI *

ENVIRONMENTAL STATEMENT
Maa Chhinnmastika Cement & Ispat Pvt. Ltd.
Period from: April 2021 to March 2022

FORM – V
PART – A

1.	Name and address of the Owner / Occupier of the Industry operation or process	Maa Chhinnmastika Cement & Ispat Pvt. Ltd. Occupier name – Santosh Kumar Gupta Village – Hehal, P.O – Barkakana, Dist. – Ramgarh, Jharkhand – 829103
2.	Industry Category Primary (S.T.C. Code) Secondary (S.T.C. Code)	Red Category
3.	Production Capacity	Sponge Iron – 300 TPD
4.	Year of Establishment	02.06.2004
5.	Date of the last Environmental Statement Submitted	22/09/2021

PART – B
WATER AND RAW MATERIAL CONSUMPTION

(I) Water consumption in m3/day:

Process & Cooling : 174.92 m3/day
Domestic : 5.41 m3/day

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year (2020-21)	During Current Financial Year (2021-22)
Sponge Iron	0.9215	0.9215

(II) RAW MATERIAL CONSUMPTION:

Name of Raw Material	Name of Product	Consumption of Raw Material Per Unit of Output	
		During Current Financial Year (2020-21)	During Current Financial Year (2020-21)
Iron ore/Iron Ore Pellets	Sponge Iron	2.108	2.446
Coal		1.242	1.272
Dolomite		0.089	0.034

(III) POWER CONSUPTION (KWH/MT of Sponge Iron):

During Previous Financial Year (2020-21)	During Current Financial Year (2021-22)
51.576	49.147

(IV) TOTAL PRODUCTION (MT):

During Previous Financial Year (2020-21)	During Current Financial Year (2021-22)
63,108.00	69,283.98

PART – C

DISCHARGED TO ENVIRONMENTAL / UNIT OF OUTPUT

Pollutants	Quantity of Pollutants Discharged (Mass/Day)	Concentration of Pollutants in Discharge (Mass/Valume)	Percentage of variation from prescribed standard with reasons
(a) Water	• No industrial effluent is generated. In compliance to Zero Liquid Discharge (ZLD), the web camera and flow meter are installed with online monitoring facilities. • The waste water generated from the office toilet and mess has been discharged via septic tank and soak pits.		
(b) Air	• Online monitoring of PM & SO2 are installed with web connectivity with CPCB & SPCB. • Continuous Ambient Air Quality Monitoring System (CAAQMS) PM 10 parameter is installed.		

PART – D

HAZARDOUS WASTE

(As specified under Hazardous Wastes (Management, Handling & Trans boundary Movement Rule, 2010)

Hazardous Waste	Total Quantity (Ltrs.)	
	During Current Financial Year (2020-21)	During Current Financial Year (2021-22)
a)From Process	Used gear oil and lubricant are stored in drum and used in different Chain Drive within plant campus. Hazardous waste authorization issued vide letter no JSPCB / HO / RNC / HWM-1692559 /2018/25 dated 14/06/2018 valid up to 30/09/2022.	Used gear oil and lubricant are stored in drum and used in different Chain Drive within plant campus. Hazardous waste authorization issued vide letter no JSPCB / HO / RNC / HWM-1692559/ 2018/25 dated 14/06/2018 valid up to 30/09/2022.
(b) From Pollution Control Facilities	Not applicable	Not applicable

PART – E

SOLID WASTE

		Total Quantity (MT)	
		During Previous Financial Year (2020-21)	During Current Financial Year (2021-22)
(a)	From Process		
	1) Dolachar (Coal Chai)	43603.080	53300.000
(b)	From Pollution Control Facility	Nil	Nil
(c)	Quantity recycled or re- utilized within the unit		
	1) Sold	23116.61	51449.22
	2) Dispose	Nil	Nil

PART – F

Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both the categories of wastes.

- Used gear oil and lubricant are stored in drum and used in different Chain Drive within plant campus.
- Coal Char (Chhai), the solid waste generated in process are being sold at present, the earlier stock of coal char are also being sold as per demand.

PART – G

Impact Of The Pollution Control Measures on Conservation of Natural Resources And Consequently On The Cost Of Production

- Unit has 3X100 TPD Sponge Iron kilns, installed three numbers of ESP attached to each kiln stack to control stack emission.
- Unit has installed seven numbers of bag filters at various material transfer points to control fugitive emissions.
- Unit has installed one hundred five numbers of water sprinklers at various places within plant premises to control dust emission / fugitive emission from haul roads.
- All conveyor belts are covered with M.S.Plate.
- All raw materials are kept in covered shed.

PART – H

Additional Measures/Investments Proposal for Environment Protection Including Abatement of Pollution

- Plantation are done surrounding the boundary wall area and road side within campus. We are also doing support for plantation in nearby village during rainy season every year. New plantations are also made every year in the plant during rainy season.

- EC issued vide letter no F.No.J-11011/215/2016-IA.II(I)dated – 07th August,2019.
- CTE issued vide letter no. JSPCB/HO/RNC/CTE-6089357/2020/366 dt 24.09.2020 from JSPCB. Project work is going on.

PART – I

Any other particulates for improving the quality of environment

- Unit has installed two numbers of online Continuous Emission Monitoring System (CEMS) for measurement of particulate matter (PM) & SO_2.
- The web camera & flow meter has installed with online monitoring facilities.
- Continuous Ambient Air Quality Monitoring System (CAAQMS) PM 10 parameter is installed with online monitoring facilities.
- Data of CEMS, Camera & flow meter are continuously updated on CPCB & SPCB server.
- 6 numbers of CCTV cameras has been installed within plant premises to monitor the operationalization status of Air pollution Control Devices.
