

## Through Courier / By Hand

Ref: OCL/ENV/President-(Manufacturing)/2023-24/740

Date: 01/08/2023

To,
Member Secretary,
Karnataka State Pollution Control Board
#49, 4th & 5th floor.
Parisara Bhavan, Church Street
Bengaluru-560001

Dear Sir,

Sub: -Environment Statement Report (Form-V) of Plant & Mines for the financial year 2022-2023: -Reg

Ref-1: - GOI Notification No. G.S.R. 329(E) Dt.13.03.1992 & G.S.R.386 (E) Dt.28.04.93 of MOEF, New Delhi

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With reference to the above cited subject and vide reference- 1, M/s Orient cement Ltd, Chittapur, is here by submitting the Environmental Statement/Audit Report-Form V of Captive Limestone Mines & Cement Plant for the financial period 1<sup>st</sup> April 2022 to 31<sup>st</sup> March 2023.

Kindly find the enclosed Environmental statement report for your perusal & acknowledge the receipt of the same.

Thanking You,

Yours Faithfully,

For Orient Cement Ltd

Satyabrata Sharma

President-Manufacturing & Unit Head

Copy to:

 Additional Principal Chief Conservator of Forests (C), Ministry of Environment & Forest, Govt. of India Regional office (Southern zone) Kendriya Sedan, IV th Floor, E & F Wings, 17<sup>th</sup> Main Road, II Block, Koramangala, Bangalore-560034

 Environmental officer, Karnataka State Pollution Control Board, Plot no 12/2,SY. No.19/P Mansafdar layout MG Road, Santraswadi , Kalaburagi- 585 101. क्षेत्र स्ट क्ष्याप्त क्षेत्र क्ष्यापत क्षया क्षया

O/c-Enliverment Dept.



## **ENVIRONMENTAL STATEMENT REPORT**

(Form-V)

[Year 2022 - 2023]

**REPORT BY** 



(Orient Cement Ltd.)
Captive Limestone, Clinkerisation,
Cement Unit & Captive Power Plant
Itga (V), Chittapur (Tq)
Kalaburagi (Gulbarga) - 585211



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## **Prologue**

Orient Cement is a Green Field project by CK Birla Group and EHS policy reflects each & every section in the organization. Our main vision is to conserve the Environment through new technologies, new initiatives.

At National Level, great emphasis is being laid on maintaining environmental quality, particularly in the regions where large-scale developmental programs are being undertaken. Orient Cement has adopted corporate policy along with EHS policy, for conserving the Sustainable environment and its development.

Company aspires to exceed market expectations across all sustainability issues and go beyond legal compliance to proactively reduce our environmental impacts. Our goals are to reduce our overall carbon footprint by embedding Environmental controls and practices into the daily management of the firm and thereby encouraging positive behavior from our staff to achieve a greener culture.

In order to comply with Environmental Protection Act and Environmental Preservation and Sustainable Development, Orient Cement has prepared the Environmental Statement Report; this report is furnished in Form-V & along with the data for Environmental components like Air, Water, & Noise for the period of **April-2022 to March-2023**.



### INTRODUCTION

Man is a part of nature, and not separate or independent; at the same time, man is unique in the influence he has over nature. Man derives all his food, clothing, shelter, and other amenities from nature. In that process, if he does not take care to protect and cherish nature, but decrease or destroys, he will find that his own life and that of his children is in jeopardy.

The environment, a word as it stands today is not simple; it is not a fashionable word, but has got established definitions incorporates limitless complexities, bear definite power to put everybody under a flood of worries and pushes us to plan for betterment with minimum problems. The environment is now catching for all, the industry, the government, the people. Hence, it is joint responsibility to protect, preserve the environment and avoid perishing the natural treasures. At this critical junction of time and efforts, the Indian industry has fulfilled its commitment in maintaining the environmental integrity.

Orient Cement Limited considers itself responsible for Environment and Society. We are committed to emission reduction, climate protection, effective energy management, responsible use of resources and its conservation keeping in mind that "Today's Need – Future of Our Children".

The next few pages of this Environment Statement Report (ESR) of Orient Cement Limited is based on actual data and verified record, will present a picture of more optimism for environmental care than ever before.

Orient Cement Ltd: is situated at Itga Village, Chittapur Taluk, Gulbarga District: which is about 50 Km from Gulbarga. It started its commercial operation in the year 2015. Presently factory is operating with one Kiln of capacity 6000 TPD & 50MW Power Plant. The Company is manufacturing Ordinary Portland Cement (OPC) & Pozzolana Portland Cement (PPC).

M/s Orient Cement Ltd is operating limestone mine at Itga (V), Chittapur Taluk and Gulbarga District as captive mines for their Cement manufacturing at factory, which is about 02 Km from



Mines. This mine is being operated using a mechanized open cast method with heavy equipment like hydraulic excavators, dozers, and dumpers.

OCL Chittapur is certified with Quality Management System (ISO 9001:2015), Environment Management System (ISO 14001:2015) and Occupational health and Safety Management System (ISO 45001:2018), Facility management System(ISO 41001:2018), Energy Management System (ISO 50001:2018) certification from BSI and Information Security Management System standard: ISO/IEC 27001:2013. The new integrated cement manufacturing unit at Chittapur is equipped with new state of the art technology and latest energy- efficient equipment.

Cement manufacturing contributes significantly to the Air pollution level only in the vicinity of the works as large quantity of pulverized materials is handled at each stage of manufacturing that is from crushing of Raw material to final packing of cement resulting emission of dust leading to Air pollution. This is due to very nature of cement manufacturing.

Apart from dust, combustion product and coal used in the kiln to burn Raw materials give rise to formation of SOx and NOx. The Sulphur content of Coal would vary from source to source. However, the alkaline nature of Raw materials leads to direct absorption of SOx.

The dust emitted from various machines is controlled by providing hi-tech air pollution control equipments such as Electrostatic precipitators and bag house. The emission sources in the cement plant are mainly process dust emission and fugitive dust emissions.

Water Pollution is virtually absent in the cement plant as no liquid effluents are seriously involved & CPP liquid effluents is treated used in dust suppression. The water is used for cooling the machines/parts of the machines. A WTP – Cooling Water Tower is being maintained for the circulation of water for the entire plant. The major area of domestic water consumption inside the plant is for drinking, toilet, for canteen use & Colony.

The policy for the abatement of pollution by the government of India provides for submission of environment statement by all the industries. Environmental Statement is therefore an output of Environmental Audit.

So, an effort has been made in this report to explain Environmental Statement for the financial year 2022-2023 ended 31st March 2023 as per Government of India notification GSR 329 (E), dated 13th March 1992 and amendment to Environmental (Protection) Rules 1986 and subsequent amendment there on.







# ORIENT CEMENT LIMITED CORPORATE ENVIRONMENT, HEALTH & SAFETY POLICY

#### Scope:

This Policy applies to all Plant locations and Operations of Orient Cement Ltd where we exercise management control.

Our Commitment - At Orient Cement Limited, our priority towards Environmental Protection, ensuring Health & Safety of Employees, Stakeholders, Contractors, Visitors, Associates, and community by way of:

- ✓ Ensuring Compliances to all applicable Legal & Statutory, Social, and other requirements.
- ✓ Improvement in Environmental performance and resource efficiency.
- ✓ Reviewing of Objectives, Targets for continual improvements towards Environment, Workplace, Health and Safety.
- ✓ Providing Safe workplace and technology for efficient use of natural resources, energy consumptions, promoting waste to energy and recycle of wastes.
- Ergaging & Training Human capital to enhance their skills and augment resources for effective BHS performance.
- ✓ Continual measures for prevention of occupational injuries and Health Hazards.
- Pollution control measures for protecting clean and green environment.

SATYABRATA SHARMA

PRESIDENT - MANUFACTURING

1HNov22





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# ORIENT CEMENT LIMITED CORPORATE POLICY ON CARBON FOOTPRINT REDUCTION

Orient Cement Limited committed towards climate change, explore, adoption of technologies and input processing materials which reduce carbon footprint,

- ✓ Identify and implement tow carbon technology and processes across all the Plants.
- Measure and Monitor Carbon footprint numbers and new plans identify, plan and to reduce future Carbon footprint numbers.
- Adopt aggressive abatement actions to reduce life cycle footprint and drive growth through best practices and innovation.
- Identify and implement on continuous sustainability projects.
- Awareness, knowledge sharing of best practices towards reduction of impact of climate change and adherence to Global warming temperature below 2°C.

SATYABRATA SHARMA

PRESIDENT - MANUFACTURING

1" Nov 22







# ORIENT CEMENT LIMITED CORPORATE WATER MANAGEMENT POLICY

Orient Coment Limited believes that water is the root of every life on earth and so providing good quality water on sustainable basis for improvement of the Health & safety of employees, stakeholders and ecosystem is our ethical responsibility.

#### We committed to:

- > Measure, Monitor and Minimise, water consumption and performance of operations.
- Adherence to water regulations and laws.
- > Follow Reduce, Re-Use & Recycle water consumption.
- Continual improvement of water management across all the plants through adoption of best practices, effective & economical management systems, and methods of Rain harvesting.
- Create awareness among employees and local community on importance of water conservation.
- Conducting regular Water Accounting audits.

SATYABRATA SHARMA

PRESIDENT - MANUFACTURING

III No/22







#### ORIENT CEMENT LIMITED

## CORPORATE GREEN PROCUREMENT POLICY

Orient Cement Limited ensures & practices potential environment and associated impacts while purchasing Products & Services in the supply chain.

#### We committed to:

DUT

- Continuous creation of awareness on Environment and its impacts.
- Measures towards reduction of foot print by Energy efficiency appliances and water conserving equipment.
- Procurement and sourcing of Raw materials from nearby sources to reduce vehicle movement/diesel coroun ption and encourage local state holders.
- Measures towards increase the Rail mode for incoming and out going material transportation.
- > Create awareness among the suppliers to use a biodegradable material for packing.
- Explore and Increase the procurement of wrk/Haminious waste materials for cement manufacturing process.
- Green supply chain with increase in bulk transportation.
- > Purchase & replacement of equipment that have higher energy efficiency.

SANDEEP KOTHARI

1" Apr'21



## ENVIRONMENTAL STATEMENT REPORT

[FORM-V] (See rule 14)

### **PART-A**

Name and address of the owner/

Occupier of the industry

: Satyabrata Sharma

**President - Manufacturing & Unit Head** 

Itga (V), Chittapur (Tq) Gulbarga - 585211

Operation process : **Production of Cement** 

i. Industry category: Primary- (STC code):

Secondary-(STC code)

**Red category** 

ii. Production category-units

Cement plant : 2.0 MTPA of Clinker

: 3.0 MTPA of Cement

Captive Power Plant : **50 MW** 

iii. Year of establishment

Cement plant : **Sept 2015** 

Captive Power Plant : **Feb 2016** 

iv. Date of last environmental statement submitted: 26/09/2022 for the year (2021-2022)

## **Postal Address**

1) Registered Office : Orient Cement Ltd.

5-9-22/57/D

G.P Birla Center 2<sup>nd</sup> & 3<sup>rd</sup> floor. Adrash Nagar, Telangana Hyderabad - 500063

2) Factory : **Orient Cement Ltd.** 

Itga (V), Chittapur (Tq) Gulbarga - 585292 Phone: 08474-236716 Fax: 08474-236716



## **PART-B**

Water Reservoir at Plant (Water from Kagina River & Natural water due to mining operations) is the major source of water for this factory. Due to moderate rainfall in this region, there is always drastic variation in the yield of water from these sources and almost this area is suffering from water shortage. In this view company is also operating a Sewage Treatment Plant & Effluent Treatment Plant to treat the entire wastewater of the factory and colony, so that it can be recycled and reused for cooling the machines, gardening and for abatement of pollution in the area.

The water consumption for the year **2022-2023** is shown in the table given below and the consumption of water is measured with the help of water meters which are installed at different points of sources. Water consumption readings are being sent to the State Pollution Control Board in the monthly return.

## (i) Water Consumption (m<sup>3</sup>/day):

Being a complete dry process cement manufacturing plant does not require any process water. Water consumption in the plant for cooling, boiler feed, gardening etc is as follows.

Sl.No	Description	During Previous Financial Year 2021-2022 (m³/day)	During Current Financial Year (2022-2023) (m³/day)
	Water consumption in m <sup>3</sup> / d or KLD	2601.850	2425.721
1	a) Process/Cooling	2295.413	2012.691
1.	b) Domestic/Gardening	306.438	413.03

**Note:** OCL is permitted to withdraw water from river Kagina at the rate of 5.56 MLD, the agreement had in between M/s Orient cement ltd. and KNNL, the renewal application was submitted & awaiting for the final GO copy from KNNL.

Name of	Process water consumption per unit of products output		
products	During the Previous financial year (2021-2022)  During the current financial year (2022-2023)		
Cement	0.37(KL/Ton)	0.27(KL/Ton)	
Power	0.33(KL/MWH)	0.33(KL/MWH)	



## (ii) Raw material consumption per ton of product

Name of ways	Name of products	Consumption of raw material per unit of (Clinker) output		
Name of raw materials		During the Previous financial year (2021-22)	During the current financial year (2022-23)	
Lime Stone		1.400	1.387	
Laterite		0.061	0.058	
Bauxite		0.062	0.041	
Coal	Clinker	0.062	0.000	
Red mud		0.012	0.033	
Slag		-	0.037	

		Consumption of raw material per unit of (Cement) output		
Name of raw materials	Name of products	During the current financial year (2021-2022)	During the current financial year (2022-2023)	
Lime Stone		1.114	1.100	
Laterite Iron & Silica		0.049	0.046	
Bauxite	Cement	0.049	0.033	
Coal		0.049	0.000	
Petcoke	(OPC & PPC)	0.028	0.067	
Clinker		0.795	0.793	
Fly Ash		0.166	0.126	
Gypsum		0.034	0.035	



	Consumption of raw materia		per unit of (Power) output
Name of raw materials	Name of products	During the Previous financial year (2021-2022)	During the current financial year (2022-2023)
Coal	Power	0.98 MT/MWh	0.96 MT/MWh

### **PART-C**

The impact of the cement plant pollution on the environment is limited to its immediate surrounding areas. In reality dust pollution is the only environmental problem in & around the plant. Although the dust produced while manufacturing cement is nontoxic, nonflammable, and non-corrosive. It does constitute a nuisance to a little extent. So, the company has adopted several technological measures to completely avoid the dust emission at the source itself.

Water pollution is virtually absent as no liquid effluent are seriously involved. The water here is used for cooling the machines/parts of the machine. A WTP – Cooling Tower is being maintained for the circulation of water for the entire plant. The major area of domestic water consumption inside the plant is for domestic (Drinking, Toilet, Colony and for Canteen use).

The company is monitoring the dust level concentration at all the emission sources by batch sampling technique. The quantity of pollutants discharged is calculated at an average emission level taken from monthly stack monitoring reports.

**Pollution discharged to environment/unit of output:** (Parameter as specified in the consent issued).



	Pollutants	Quantity of pollutants discharged (Mass/day)	Concentration of pollutants in discharge (Mass/Volume)	Percentage of variation from prescribed standards with reasons
a) WAT	TER: -			
	Outlet effluent of sewage treatment plant	111.01 KL/day		
1.	рН		8.19 mg/L	Within Standard
2.	BOD 3 days at 27°C		8.03 mg/L	Within Standard
3.	COD		13.83 mg/L	Within Standard
4.	Ammonical Nitrogen		0.35 mg/L	Within Standard
5.	Total Nitrogen		3.96 mg/L	Within Standard
6.	Phosphate		0.16 mg/L	Within Standard
7.	Fecal Coliforms		5.0 MPN/100ML	Within Standard
b) AME	BIENT AIR:-			
		PM10	66.15 μg/Nm <sup>3</sup>	Within Standard
	Near Main Gate	PM2.5	24.60 μg/Nm <sup>3</sup>	Within Standard
1.		S02	13.13 μg/Nm <sup>3</sup>	Within Standard
		NOx	12.79 μg/Nm <sup>3</sup>	Within Standard
		СО	0.65 mg/Nm <sup>3</sup>	Within Standard
		PM10	63.59 μg/Nm <sup>3</sup>	Within Standard
		PM2.5	23.59 μg/Nm <sup>3</sup>	Within Standard
2.	Near Coal Yard	S02	12.82 μg/Nm <sup>3</sup>	Within Standard
		NOx	13.15 μg/Nm <sup>3</sup>	Within Standard
		СО	0.67 mg/Nm <sup>3</sup>	Within Standard
		PM10	65.54 μg/Nm <sup>3</sup>	Within Standard
		PM2.5	24.66 μg/Nm <sup>3</sup>	Within Standard
3.	Near Dispatch Gate	S02	13.18 μg/Nm <sup>3</sup>	Within Standard
		NOx	13.16 μg/Nm <sup>3</sup>	Within Standard
		СО	0.64 mg/Nm <sup>3</sup>	Within Standard



		PM10	63.47 μg/Nm <sup>3</sup>	Within Standard
		PM2.5	24.00 μg/Nm <sup>3</sup>	Within Standard
4.	Near CPP plant	SO2	12.58 μg/Nm <sup>3</sup>	Within Standard
		NOx	12.90 μg/Nm <sup>3</sup>	Within Standard
		СО	0.65 mg/Nm <sup>3</sup>	Within Standard

<sup>\*</sup> The value represents arithmetic average of 12 months for the financial year 2022-2023.

# **Stack Gas Quality for Particulate Matter CEMENT PLANT & CPP:**

S.No	POLLUTANTS	QUANTITY OF POLLUTANTS DISCHARGED (m³/H)-Flow	CONCENTRATIONS OF POLLUTANTS IN DISCHARGE (Mass/Vol.) (mg/Nm³)	PERCENTAGE OF VARIATION FROM PRESCRIBED STANDARDS WITH REASONS
1.	Crusher	34493.88	2.66	
2.	Kiln/Raw mill	377673.66	21.98	
3.	Coal mill	92091.27	17.88	
4.	Cement mill	139476.39	20.78	Within Standards
5.	Packing plant	12103.18	15.76	
6.	Clinker cooler	258735.57	15.36	
7.	СРР	136832.91	34.96	

 $<sup>\</sup>ensuremath{^*}$  The value represents arithmetic average of 12 months for the financial year 2022-23



## <u>PART-D</u> Hazardous Wastes

[As specified under Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, **2008 as Amended**]

Hazardous waste	Total Quantity MT/KL/No's	
Generation	During Current Financial Year 2021-2022	During Current Financial Year 2022-2023
Waste oil / used oil	8.84MT (Reutilized for internal machineries)	2.20MT (Reutilized for internal machineries)
Used Batteries	For the period Apr-2021 to Sep- 2021 – 66 No.s For the period Oct – 21 to March 2022 – 283 Nos.	For the period Apr-2022 to Sep- 2022 – 338 No.s For the period Oct – 2022 to March 2023 – 87 Nos.

Name & Category of the waste	Qty received & Co- processed in MT
Hazardous waste(A)	
(20.1) Contaminated aromatic, aliphatic or Naphthenic solvents may or may not be fit for reuse	305.708
(20.3) Distillation Residue	85.460
(28.1) Process residue & wastes	1947.640
(28.2) Spent Catalyst	2572.484
(28.3) Spent Carbon	21.733
(28.5) Date expired product	17.010
(28.6) Spent Solvent	405.757
(35.3) Chemical Sludge from waste water treatment	212.695
(36.1) Any Process or distillation Residue	366.454
(37.3) Concentration or Evaporation residue	29.900
AFR Pre-processed waste of organic/Inorganic waste/waste mixed liquids/ AFR raw materials facility/ Solid waste	1531.707
Subtotal (A)	7496.548 MT
Non-Hazardous/Other waste	
Rice Husk	4779.904
Soya Husk	1233.718
Tur Husk	19.858
Areca nut Husk	17.120
Coffee Husk	0.394
Agro waste	931.143
Plastic waste	1494.866



Carbon Black	1461.444
Black fines	114.000
RDF/Municipal waste	8640.339
Cow manure	3.890
Tailor Cotton Waste	1.895
Subtotal (B)	18698.571
Grand Total A+B	26195.119

The Waste oil generated at different sections in the plant is collected in the hazardous waste oil platform especially made for the purpose. Waste oil so collected in the leak proof container (M.S.Barrels) is being sold to the authorized reprocesses/recyclers KM Oils Pvt Ltd, Kalaburagi if generated in huge quantity. The waste oil generated is also reutilized in our plant machineries for lubrication purpose if the quantity is less. The details specifying the same is submitted via Form-IV to KSPCB vide our letter no **Ref: OCL/ENV/President-Manufacturing/2023-24/697 dated 20/05/2023.** 

New Batteries purchased from the dealers/agency during the period April-2022 to March-2023 has been submitted in Form VIII to Board on half yearly basis vide our letter no OCL/ENV/Asst. VP(Operation)/2022-23/595 Dated: 08.10.2022 & OCL/ENV/Asst. VP(Operation)/2023-24/703 Dated: 22.05.2023 respectively.



# PART-E Solid Wastes

	Solid Waste	Total Quantity	
Sl.No		During the current financial year 2021-2022	During the current financial year 2022-2023
1. (a)	From process (Fly ash from captive Thermal Power Plant)	Nil from Cement plant. #49427 MT from Power Plants	plant.
(b)	Fly Ash from RTPS / NTPC/Kudgi/Raichur/Ramgondam/STPP	#292304 MT	#278901 MT
2.	From pollution control facility	-	402.090 MT/Year Recycled in to the main process in cement plant
3.	Quantity recycled or reutilized Within the unit	recycled from Pollution control	(In process, material recycled from Pollution control equipment like ESPs
i	Sold		
ii	Disposed		

# Fly ash utilization is improving continuously; this is observed from the consumption values of total Fly ash generated at our Power plant, RTPS, NTPC, Kudgi, Raichur, Ramagondam & STPP.



## **PART-F**

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

#### **Hazardous waste:**

All used Oil generated from the different sections of plant is being collected in closed drums, barrels and then stored at Hazardous waste storage platform that has been made as per Hazardous Waste (Management, Handling & Trans boundary Movement) Rule, 2016. These stored hazardous wastes are being sold to authorized recycler within the stipulated time / utilised for the machineries.

#### Solid waste:

- There is no solid waste generated during the process of cement manufacturing process.
- ➤ In process, materials are recycled from pollution control equipment like ESP and Bag filters.
- The total generated fly ash & bottom ash are utilized for the manufacturing of cement.
- ➤ Refractory bricks and Mild steel scrap generated is disposed to party for further use/recycling.

## PART-G

## Impact of pollution abatement measures taken on conservation of natural resources and on the cost of production

- Cement Production is being operated on dry process technology, which is cost effective and environmentally clean technology. The advantage of dry process is also in fuel economy. The stack emissions from the plant are controlled by equipment like Bag Houses, ESP's & Bag Filters installed at various material transfer points to arrest the fugitive emissions. The particulate matter collected in the pollution control equipment is recycled in process.
- All the raw materials are being stored in covered yard by which reduction in fugitive emission is achieved.
- The conveyor belts are fully covered **due to which fugitive emission is controlled.**
- Clinker and cement is being stored in silos due to which fugitive emission **is controlled**.
- Fogging system has been installed at Raw material handling area and conveyor belts for further reduction of fugitive emission.
- Water sprinkling for dust suppression on the road and other dust generation points in and around the plant is being done to control the fugitive emissions.
- Utilization of fly ash for the manufacturing of cement is being done to avoid landfilling of waste.
- ➤ Huge rain water harvesting pit of capacity 5.6 lakh cubic meter is developed in the plant for storing water during rainy season and utilization of the same is being done for plant, mines dust suppression, Gardening etc.



- ➤ Installed an STP of capacity 500 KLD in order to recycle or reuse the treated water for plantation purpose/Gardening Purpose etc.,
- Rainwater harvesting reservoir with a capacity 5,60,000m3 has been constructed at the plant area, for recharging ground and thereby reducing the consumption of surface water.
- > Development of extensive green belt in and around the plant & Colony area to abate the pollution.

## Modifications for the year 2022-23 for energy conservation and better Environment

#### **Process:**

- ➤ Intermediate controller installed at compressor outlet in post Clinkerisation.
- ➤ Implementation of digital technologies for plant optimization by utilizing Optimax software cum analytical tool kit based on Artificial Intelligence (AI) and Machine Learning (ML) Technologies that is developed in co-ordination with M/S Wurth.
- > AI based feed mix optimization for optimum utilization of raw mix and fuel mix.
- > Install intermediate controller for compressed air system in Post Clinkerisation circuit
- > Implementation of digital technologies for plant optimization by utilizing Optimax software cum analytical tool kit based on Artificial Intelligence (AI) and Machine Learning (ML) Technologies that is developed in co-ordination with M/S Wurth
- > AI based feed mix optimization for optimum utilization of raw mix and fuel mix.

#### **Instrumentation: -**

- > Installation and commissioning of VFD for LS Crusher bag filter fan
- > Provision of indications for RM additive reclaimer position in piles and interlocking with respective hopper's feeding system.
- Fine-tuning and optimization of closed control loop controller of PC firing temperature parameter through digitization technologies to reduce the PC temperature fluctuations.
- > Implementation of additional Bluetooth communication system for coal stacker
- > Implementation of Cold Fog Dust Suppression system at Wagon Tippler to control fugitive dust emission. Facility has been provided at CCR to operate and monitor this system remotely.
- Reduction in Idle Run Hour of Clinker Transport Belt
- > Implementation of Mobile App solution for real time data monitoring of plant parameters and plant status as well which includes alarms generation on Telegram App.
- ➤ Plant optimization by Artificial Intelligence (AI) and Machine Learning (ML) based digital technologies.



> Installation of belt joint monitors in some more critical belt conveyors to remotely monitor the belt joints/damages.

## **Mechanical:**-

Following Modifications were done towards betterment of Environment & reducing power consumption.

- Modification of blending silo feed bucket elevator discharge air slide
- ➤ New Locking arrangement of support flange in DIP tube
- Replaced reject screw conveyor system of Packer 4&5 with air slides.
- ➤ Installed Intelligent flow controller for compressed sir system in Post Clinkerisation circuit.



## **PART-H**

# Additional measures/investment proposal for energy conservation and better environment.

- ➤ Continuous efforts are always being made to maintain the environment clean and green by developing a Green Belt.
- ➤ Installation of WHRB to utilize Hot gases from Cooler & Preheater and produce Electricity of 14MW.
- ➤ Regularly we are monitoring ambient air quality, Noise level and stack along with water quality analysis.
- > Constructing of internal good road inside the plant to reduce fugitive dust emission in Phase manner
- ➤ Scheduled maintenance and monitoring of all Air Pollution Control Device's (APCD'S) like Bag Filters and Bag House are being regularly undertaken to ensure their efficient operations in order to keep emissions level within the prescribed limit.
- ➤ Awareness programs like plantation activities, Slogan competition, drawing competition & Essay competition was organized for Employees & Families of Employees for awareness on environment protection on 5<sup>th</sup> June (World Environment Day), Ozone day (16<sup>th</sup> Sep) & Earth day (22<sup>nd</sup> April)
- Actions are taken to utilize Hazardous wastes like Paint sludge, ETP Sludge & other alternate fuels like Carbon powder, tyre chips, plastic waste, agro waste, MSW waste ,RDF waste etc. in Kiln.
- ➤ Green belt development and tree plantation is our on-going & continuous process. We are doing new plantation to increase the biodiversity of the area.
- ➤ Total plant area is 266 Ha out of which plantation will be done in 33% area which is 88 Ha. Presently **196921 plants have been** planted surrounding Boundary Zone, of the total plant & Mines area.

## <u>Proposed modifications for the year 2023-24 for Energy Conservation and</u> Better Environment:

## Process: -

- Optimization of Kiln Coal transportation phase density
- ➤ Improve Cooler Recuperation Efficiency from 61.7 % to 65.2 %
- > Cement Mill 1 Fan Efficiency improvement from 76.3 % to 85.4 %
- ➤ Cement Mill 2 Fan Efficiency improvement from 75.6 % to 85.4 %



## Power plant: -

> To reduce the power consumption by replacing Conventional lighting with LED Light fittings.

## **Mechanical:** -

- > To Install intermediate controller for compressed air system in Pre clinkerization circuit
- ➤ Replacement reject screw conveyor system of Packer 1,2&3 with air slides.

### **Instrumentation:** -

- > Feed mix optimization
- ➤ Installation of belt joint monitors in other critical belt conveyors to remotely monitor the belt joints/damages.

## **Packing Plant:**

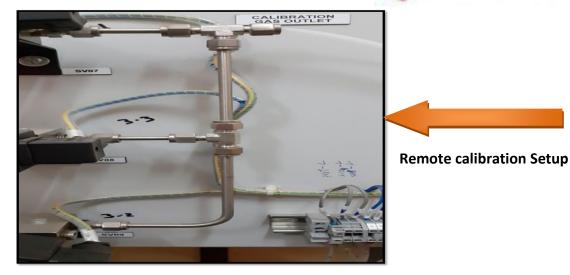
- Packer five spillage screw Conyers to be removed, and air slide with HP fan to be fixed
- > TAT to be maintained below 04 Hrs

### **PART-I**

## Any other particular in respect of environmental protection and abatement of pollution

- Implementation of EMS including compliance of environmental laws through periodic Management Review & Internal/ external audits.
- Awareness promotion through various environmental competitions, workshops, presentations etc. on world environment day, Ozone Day & Earth Day.
- ➤ Improvement in Ambient Air Quality through effective control on fugitive dust emission.
- Extensive green belt surrounding the boundary & inside plant premises is being developed in a phase wise manner.
- ➤ Installation of Remote calibration facility for Gaseous parameter SO2 & NOx for stacks of CPP & Kiln.









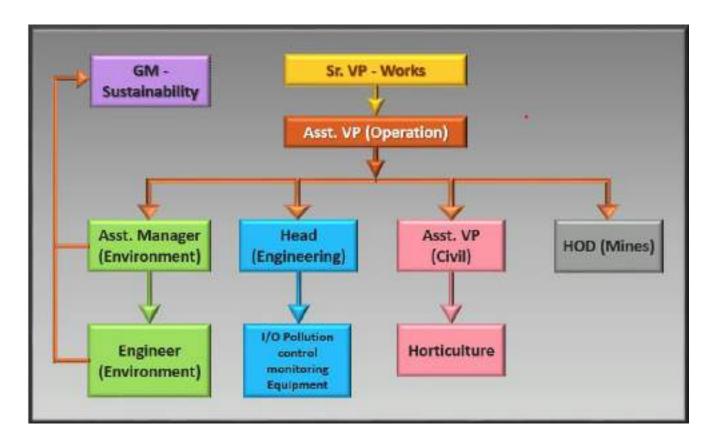
**Continuous Ambient Air Quality Monitoring stations** (04 No's Locations)



**Installation of Continuous Stack** emission monitoring stations for main stacks



## **Details of Environmental Cell**



# Miscellaneous World Environment Day 2022 Celebrations

World Environment Day 2022 was celebrated at M/s Orient Cement Ltd, Chittapur, on 11<sup>th</sup> June 2022 @ 10:30 AM. This year theme for World Environment Day was: "ONLY ONE EARTH-CARE & CONSERVE" with a Slogan "Living Sustainably in Harmony with Nature" for which Environment Department along with senior staff of Orient Cement Ltd commenced an opening program chaired by Mr. Manjeppa-EO, KSPCB, Kalaburagi, Mr. Adam Patel-AEO KSPCB Kalaburagi, Shri. Satyabrata Sharma-Unit Head, Shri. Santosh Kumar Sharma-Asst. VP-Operation & other delegates at near Rainwater harvesting pit Mines area with mass plantation of 400 saplings and near viewpoint of reservoir at plant area around 200 saplings & later individual department planted with mass plantation in selected area in plant premises and planted around 200 saplings.



From 5<sup>th</sup> June to 17<sup>th</sup> June-2022, OCL Chittapur has conducted an awareness program & Competitions such as Quiz competition, Essay Competitions, drawing competitions, Slogan competitions by involving school children's, technical staff, workmen's & labors.

The Welcome Note along with World Environment Day Speech was addressed by Mr. Murthy Raju Dandu from HR Department & then the Speech was addressed by Mr. Manjeppa-E. O KSPCB, Adam Patel – AEO KSPCB, our Unit Head Shri. Satyabrata Sharma in a thought-provoking manner, which set a perfect platform for our colleagues who have gathered for WED celebration.

The chairperson suggested few visions to be included to make remarkable changes in the environment and addressed the people to change their thoughts to change a good environment. Also prize distribution program was carried out rewarding the winners, who have participated in the World Environment Day Events (Quiz, Essay, Blogging & drawing / painting) and concluded with Vote of Thanks by Mr. Ramesh Bashetty AM-Environment.

## Glimpses of World Environment Day-2022 celebrations at Orient Cement Ltd, Karnataka.





Plantation by Mr. Adam Patel-AEO KSPCB Kalaburagi near Reservoir View point



Plantation by our Unit Head Shri. Satyabrata Sharma near Reservoir Viewpoint





## Plantation by Shri. Santosh Kumar Sharma-Asst. VP-Operation near Reservoir View point



Group photo on WED-2022 near Rainwater harvesting pit - Mines Area





## Mass Plantation carried out by our Staff near Rain water harvesting pit - Mines Area



OCL Staff and Workmen attended World Environment Day - 2022 programme





## World Environment Day programme inauguration by Chief guests



Speech by Mr. Manjeppa, E.O KSPCB, Kalaburgi





## Speech by Mr. Adam Patel, A.E.O KSPCB, Kalaburgi



Speech by Our Unit Head Mr. Satyabrata Sharma





## Vote of Thanks by Mr. Ramesh Bashetty, Environment Department



Prize distribution to winners by Mr. Manjeppa-EO, KSPCB, Kalaburagi





Prize distribution to winners by Mr. Adam Patel-AEO, KSPCB, Kalaburagi



Prize distribution to winners by Shri. Satyabrata Sharma-Unit Head & Shri. Santosh Kumar Sharma-Asst. VP-Operation







Prize distribution to winners by Mr. Saji Kumar Asst. VP- HR & Mr. Shivbasappa Nandyal, Asst. VP- Civil





Prize distribution to winners by Mr. Adam Patel-AEO, KSPCB, Kalaburagi





Prize distribution to winners by Mr. Shivbasappa Nandyal, Asst. VP-Civil



AMBIENT NOISE LEVEL (PLANT) [Leq Value in dB(A)] FY-2022-23

	71 1	
Particulars	Tolerance Limit dB(A) in day time	Actual Avg Values Max dB(A) Day Time
Near Power Plant	75	65.10
Near Coal Yard	75	64.30
Near Water Reservoir	75	63.00
Near Main Gate	75	67.00

Particular	Tolerance Limit dB(A) in Night time	Actual Avg Values Max dB(A) Night Time
Near Power Plant	70	62.90
Near Coal Yard	70	63.40
Near Water Reservoir	70	63.80
Near Main Gate	70	64.50



#### **Details of Pollution Control Measures installed at various location**

S. No.	Location of PCM	PCM		
1	Lime stone crusher	Water Sprinkling at Hopper & Bag Filter		
2	Additives crusher	Bag Filter		
3	Coal crusher	Bag Filter		
4	Raw Mill	Bag House		
5	KILN	Dag House		
6	Cooler	ESP		
7	Coal Mill	Bag Filter		
8	Cement Mill-1	Rag Filtor		
9	Cement Mill-2	Bag Filter		
10	Captive Power Plant	ESP		
11	Stacker	Water Sprinkling and Covered		
12	Clinker Silo	Bag Filter		
13	Fine Coal bin Silo	Bag Filter		
14	Raw Meal Silo	Bag Filter		
15	Cement Silo (4 no's)	Bag Filter		
16	Fly ash Silo	Bag Filter		
17	Packing House (5 no's of Packers)	Bag Filter		
18	All transferring points of raw material handling and product.	Bag Filter		
19	Sewage treatment plant for domestic sewage	Sewage treatment plant (500 KLD)		
20	Green belt development in the premises	Green belt development		

#### Statement Showing Power Consumption Plant for the Year April-2022 to Mar-2023

MONTH	POWER CONSUMPTION (KWh) KPTCL/CPP/ Renewable energy	
Apr-22	9,644,754	
May-22	10,350,789	
June-22	13,527,939	
July -22	9,434,868	
Aug-22	13,051,669	
Sept-22	9,643,122	
Oct-22	2 12,963,608	
Nov-22	13,913,678	
Dec-22	13,620,145	
Jan-23	14,798,227	
Feb-23	12,892,932	
Mar-23	11,992,617	
TOTAL	145,834,349	



#### Statement Showing Power Consumption Mines for the Year April-2022 to Mar-2023

MONTH	POWER CONSUMPTION ((KWh)) KPTCL/CPP/Renewable energy	
Apr-22	241,197	
May-22	263,338	
June-22	414,525	
July -22	219,263	
Aug-22	410,890	
Sept-22	223,641	
Oct-22	370,457	
Nov-22	362,820	
Dec-22	329,773	
Jan-23	420,062	
Feb-23	322,807	
Mar-23	335,323	
TOTAL	3,914,096	

## Year wise plantation details carried at Orient Cement Ltd

## The Details of Tree Plantation in Orient Cement Factory and Mines area from 2013-14 to 2022-2023 and Percentage of Survival

Year	Factory	Mines	Surrounding Plant Area (Labors colony, Staff Colony, Colony Roadside, School, Main Gate Front Area)	Total	Survival % Age	Survival
2013-2014	25000	-	-	25000	50%	12500
2014-2015	25000	-	-	25000	50%	12500
2015-2016	30000	1220	-	31220	70%	21854
2016-2017	49000	4780	-	53780	66%	35700
2017-2018	21266	3159	-	24425	75%	18476
2018-2019	13631	3963	15233	32827	80%	26261
2019-2020	10799	4279	24446	39524	80%	31620
2020-2021	4862	6726	13280	24868	72%	17905
2021-2022	3258	3871	6875	14004	48%	6722
2022-2023	774	2333	13436	16543	83%	13746
Total:	183590	30331	73270	287191	67%	196921



Total plant area: 266 Ha.

Total GBD to be developed: 33% of plant area = 87.78 Ha.

Total area of Green Belt Development in factory & Colony: 88 Ha as on March 2023

Total area planned during FY-2022-23: 10Ha (Gap Filling of the existing plantation Area)

#### **Types of Species planted:**

Pongemia, Badam, Thaspesia, Sisha Piniya, Acacia, Neem, Tamarind, Honge trees, Eucalyptus, Ashok, Peeple tree, Hercules fermc, Gilmore tree, Subabul tree, Hatti tree, Conocarpus (Dubai Tree) Feltoform, Bamboo, matti, alstonia, keshiaseema, keshiya-java, mango, kaala jamun, alma, guava, caesalpinia, and Others.



























#### **DETAILS OF EPM EXPENDITURE up to FY 2022-23**

ASSET DESCRIPTION	Amount	Amount in Lakhs
DUST SUPRESSION SYSTEM	43,58,474	43.58
BAG FILTER & ESP FOR STACKS	33,54,39,089	3,354.39
CPP - RCC CHIMNEY	2,87,14,293	287.14
WATER RESERVOIR	25,87,57,199	2,587.57
WATER TREATMENT PLANT	12,85,41,299	1,285.41
SEWAGE TREATMENT PLANT	7,28,00,825	728.01
ROAD & DRAIN	50,14,63,605	5,014.64
GREEN BELT DEVELOPMENT	53,48,720	53.49
FLY ASH SILO & HANDLING SYSTEM	12,89,16,613	1,289.17
EFFLUENT TREATMENT PLANT & DM PLANT IN CPP	3,60,66,506	360.67
CPP - ELECTROSTATIC PRECIPITATOR	10,77,18,110	1,077.18
CPP ASH HANDLING SYSTEM	3,98,25,799	398.26
COMPLETE BURNER ASSEMBLY	1,17,15,390	117.15
AMBIENT AIR QUALITY MONITORING	2,20,13,783	220.14
SNCR FOR NOX REDUCTION	3,03,21,259	303.21
AMMONIA SLIP SENSOR STACK APPLICATION	17,80,000	17.80
MEDIA CONVERT - LIQUID AFR SYSTEM	2,54,471	2.54
NEUTRON SURVEY METER	4,25,000	4.25
UT PUMP	13,03,410	13.03



WASTE SEGREGATION YARD	4,55,406	4.55
SHREDDER FOR AGRO WASTE AFR	3,47,913	3.48
BUCKET ELEV, FEEDING ARRG & SHED FOR AGRO	18,89,931	18.90
RAIN WATER HARVESTING	12,03,438	12.03
COLONY LADIES TOILETS	2,12,400	2.12
TRUCK PARKING YARD	5,60,08,531	560.09
SUBMERSIBLE PUMP 100HP/750KW	17,52,250	17.52
HERO ECO FRIENDLY ELECTRIC BIKE	89,890	0.90
CHEMICAL STORAGE ROOM - CPP	8,94,521.40	8.95
LADIES TOILETS STORES	2,49,034	2.49
LADIES TOILETS CPP	2,49,035	2.49
BUND OF 5MTR HIGHT MINES BOUNDRY	6,66,580	6.67
ELECTRIC BIKE-KA32 HB1976 (IT DEPT)	83,190	0.83
Covering Shed Rice Husk- Plastic Waste Phase - I	16,442,266.59	164.42
Toilets Construction @ Worker Colony	1,810,434.59	18.1
Hero Electric Bike KA32 HC3758 (QC)	95,470.00	0.95
Hero Electric Bike KA32 HC3755 (Dispatch)	95,470.00	0.95
Hero Electric Bike KA32 (CPP)	95,470.00	0.95
Hero Electric Bike KA32 (Electrical)	95,470.00	0.95
Total	1,79,64,41,376	179.64

#### CSR-R&R Activities carried out FY 2022-23

S. no.	Nature of expenses	Amount (Rs. In Lakh)
1	Furniture For School ( Benches, Teacher Tables,	
	Revolving Chair, Attender Stool ) - Subhash Interior	2,97,321
	Decorator	
	Computer Training, ABACUS, Women Literacy,	10,80,889
2	Accounts Writing, Dustbin Distribution - Akruti Trust	10,80,889
3	Driving Training With Liciense - Akruti Trust	3,16,680
4	Salary Staff for the month Apr-June'22	18,97,321
5	R&R Staff Vehicle Hire Charges Q1	2,29,108
6	Dispensary Expenses - Staff Salary Apr-Jun'22	10,30,898
7	Dispensary Expenses - Ambulance & Medicine Exp	1,37,852
8	Driving Training With License - Light Batch, Common Health Check- Up In 5 Villages, Soil Charging Technology, Green Boards, Beautician Training, Tailoring & Pattern Making, Computer Training, Providing Small Chairs. Round Table Plas, Admin Chgs- Akruti Trust	15,67,080
9	Salary Staff for the month July-Sept'22	20,09,364
10	R&R Staff Vehicle Hire Charges Q2	2,41,029



11	Dispensary Expenses - Staff Salary July-Sept'22	14,26,175
12	Dispensary Expenses - Ambulance & Medicine Exp	3,57,360
13	Fire NOC Paid for DAV School	1,000
14	Covered box type drainage system at APMC Yard	1,56,109
15	Education	15,09,360
16	Health	20,18,932
17	Heritage ,Culture etc. (Local folk art promotions etc.)	1,77,000
18	Infrastructure development in the villages.	15,16,140
19	Livelihood Promotion and Capability building	13,29,340
20	Programme administration monitoring and Evaluation	21,94,565
21	Education	58,67,010
22	Health	17,64,478
23	Heritage ,Culture etc. ( Local folk art promotions etc. )	47,45,029
24	Infrastructure development in the villages.	81,734
25	Livelihood Promotion and Capability building	6,99,713
26	Programme administration monitoring and Evaluation	19,44,586
	Total	345,96,073

# <u>Initiatives on Environment</u> Rubber Curtains & Water sprinkling @ Limestone Hopper







Fogging System on Belt Conveyors & Water Sprinkling (Fogging system) in Limestone Hopper





Concrete road inside the plant to avoid fugitive dust  $% \left\{ 1\right\} =\left\{ 1$ 





## Belt Conveyors are fully covered







## Clinker Silo is fully covered



**Covered Shed for Raw Material storage** 





### Raw materials Storage Yard are covered



Bag House for Kiln & Raw mill





#### **ESP for Cooler and CPP**





Bag Filters at all transfer points



Water Storage Reservoir & Rainwater Harvesting





Water Sprinkling for Dust Suppression on Roads







WTP & STP









## **ENVIRONMENTAL STATEMENT REPORT**

(Form-V)

[Year 2022 - 2023]

**REPORT BY** 



(Orient Cement Ltd.)
Itagi mines
Itga (V), Chittapur (Tq)
Kalaburagi (Gulbarga) - 585211



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#### **Prologue**

Orient Cement is a Green Field project by CK Birla Group and EHS policy reflects each & every section in the organization. Our main vision is to conserve the Environment through new technologies, new initiatives.

At National Level, great emphasis is being laid on maintaining environmental quality, particularly in the regions where large-scale developmental programs are being undertaken. Orient Cement has adopted corporate policy along with EHS policy, for conserving the Sustainable environment and its development.

Company aspires to exceed market expectations across all sustainability issues and go beyond legal compliance to proactively reduce our environmental impacts. Our goals are to reduce our overall carbon footprint by embedding Environmental controls and practices into the daily management of the firm and thereby encouraging positive behavior from our staff to achieve a greener culture.

In order to comply with Environmental Protection Act and Environmental Preservation and Sustainable Development, Orient Cement has prepared the Environmental Statement Report; this report is furnished in Form-V & along with the data for Environmental components like Air, Water, & Noise for the period of **April-2022 to March-2023**.



#### 1.1 <u>INTRODUCTION</u>

Man is a part of nature, and not separate or independent; at the same time, man is unique in the influence he has over nature. Man derives all his food, clothing, shelter, and other amenities from nature. In that process, if he does not take care to protect and cherish nature, but decrease or destroys, he will find that his own life and that of his children is in jeopardy.

The environment, a word as it stands today is not simple; it is not a fashionable word, but has got established definitions incorporates limitless complexities, bear definite power to put everybody under a flood of worries and pushes us to plan for betterment with minimum problems. The environment is now catching for all, the industry, the government, the people. Hence, it is joint responsibility to protect, preserve the environment and avoid perishing natural treasures. At this critical junction of time and efforts, the Indian industry has fulfilled its commitment in maintaining the environmental integrity.

Orient Cement Limited considers itself responsible for Environment and Society. We are committed to emission reduction, climate protection, effective energy management, responsible use of resources and its conservation keeping in mind that "Today's Need – Future of Our Children".

The next few pages of this Environment Statement Report (ESR) of Orient Cement Limited is based on actual data and verified records, will present a picture of more optimism for environmental care than ever before.

**Orient Cement Ltd:** is situated at Itga Village, Chittapur Taluk, Gulbarga District: which is about 50 Km from Gulbarga. It started its commercial operation in the year 2015. Presently the factory is operating with one Kiln of capacity 6000 TPD & 50MW Power Plant. The Company is manufacturing Ordinary Portland Cement (OPC) & Pozzolana Portland Cement (PPC).

**M/s Orient Cement Ltd** is operating limestone mine at Itga (V), Chittapur Taluk and Gulbarga District as captive mines with limestone production of 3.0 million tonnes per Annum for their Cement manufacturing at factory, which is about 02 Km from Mines. The project site is located between latitude and longitude of the mine lease area 17° 6′ 34.87″ - 17° 8′ 13.86″ N and 77°



7' 35.65" - 77° 9' 35.41" E. This mine is being operated using a mechanized open cast method with heavy equipment like hydraulic excavators, dozers and dumpers.

The policy for the abatement of pollution by the government of India provides for submission of environment statement by all the industries. Environmental Statement is therefore an output of Environmental Audit.

So an effort has been made in this report to explain Environmental Statement for the **financial year 2022-2023 ended 31**<sup>st</sup> **March 2023** as per Government of India notification GSR 329 (E), dated 13th March 1992 and amendment to Environmental (Protection) Rules 1986 and subsequent amendment there on.

#### 1.2 METHOD OF MINING:

We are operating mines in eco-friendly way for sustainable development of environment. The mines are operated by an open-cast mechanized method of working where deep hole drilling and blasting and deployment of HEMM are used.

Separate Benches are made in overburden & Limestone to avoid contamination. In limestone a further five benches formed based on grade/Quality of limestone. ROM quality is maintained with the help of online X-belt Gamma rays analyzer. All the stone mined is being utilized for cement manufacturing.

#### 1.3 ENVIRONMENT MANAGEMENT:

#### **Top soil management:**

We are stacking topsoil of black cotton at designated places at stable ground so called BC soil dump. The reason for stacking is to preserve the topsoil for plantation and land fertilization for natural condition. BC soil dump is maintained in specified gradient manner. Some of the topsoil removed is used for plantation purpose in mines area and in our plant area.





**AERIAL VIEW OF TOP SOIL DUMP** 



TOE WALL ALONG WITH GARLAND DRAIN AT BELOW THE TOPSOIL DUMP





GARLAND DRAIN ALONG THE TOPSOIL DUMP TOE WALL WITH RANDOM RUBBLE BARRIERS





CATCHMENT/GARLAND DRAINS IN MINES AREA







CATCHMENT/GARLAND DRAINS WITH RR DRY STONE BARRIERS







**DESILTING WORK** 



#### **AIR QUALITY MANAGEMENT:**

- ➤ Wet drilling arrangement and dust extractor system provided in drilling machine.
- ➤ Bag filter is provided at crusher to collect dust.
- ➤ Conveyor belts are totally covered with metal hood.
- ➤ Water spray is being done in hopper & on conveyor belts.

#### **WATER QUALITY MANAGEMENT:**

We are using mines pit water for dust suppression and drilling operation along the mines working area and haulage roads involved in transportation of limestone to crusher. We also use the pit water for planation purpose. We engaged a water tanker for planation and for dust suppression.

#### **Monitoring Locations of Ground water Level:**

Sl.No	Location Name	Water Level in (m-BGL)
1	Itga Village	6.83
2	Moghla Village	7.31
3	Diggaon Village	10.23
4	Chittapur Village	5.80

#### **AFFORESTATION:**

**FY 2022-23 trees planted are 2333**. Types of species are Gulmohar, Filta pam, Acacia, Neem, tamarind, Ashok, People tree, Dubai Conocurpus (dubai Tree), Honge trees, Bougain villa, Badam, Thespesia populmea, Sankeswar, Peltoform, Neem, Nelli, Shubham trees, Alstonia scholaris, Pongamia pinnata.

#### Areas of trees planted are as follows

- a) Nalla safety zone.
- b) Main haulage road.
- c) Near weight bridge.
- d)Office front and backside.
- e) Main road near soil dump gap filling
- f) Near viewpoint.
- g) Near road 7.5 m safety zone.
- h)Near mine crusher road and weigh bridge road.
- i) Near village safety zone.



# The Details of Tree Plantation in Orient Cement Factory and Mines area from 2013-14 to 2022-2023 and Percentage of Survival

Year	Factory	Mines	Surrounding Plant Area (Labors colony, Staff Colony, Colony Roadside, School, Main Gate Front Area)	Total	Survival % Age	Survival
2013- 2014	25000	-	-	25000	50%	12500
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CPP - ELECTROSTATIC PRECIPITATOR         10,77,18,110         1,077.18           CPP ASH HANDLING SYSTEM         3,98,25,799         398.26           COMPLETE BURNER ASSEMBLY         1,17,15,390         117.15           AMBIENT AIR QUALITY MONITORING         2,20,13,783         220.14           SNCR FOR NOX REDUCTION         3,03,21,259         303.21           AMMONIA SLIP SENSOR STACK APPLICATION         17,80,000         17.80           MEDIA CONVERT - LIQUID AFR SYSTEM         2,54,471         2.54           NEUTRON SURVEY METER         4,25,000         4.25           UT PUMP         13,03,410         13.03           WASTE SEGREGATION YARD         4,55,406         4.55           SHREDDER FOR AGRO WASTE AFR         3,47,913         3.48
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AMMONIA SLIP SENSOR STACK APPLICATION       17,80,000       17.80         MEDIA CONVERT - LIQUID AFR SYSTEM       2,54,471       2.54         NEUTRON SURVEY METER       4,25,000       4.25         UT PUMP       13,03,410       13.03         WASTE SEGREGATION YARD       4,55,406       4.55
MEDIA CONVERT - LIQUID AFR SYSTEM         2,54,471         2.54           NEUTRON SURVEY METER         4,25,000         4.25           UT PUMP         13,03,410         13.03           WASTE SEGREGATION YARD         4,55,406         4.55
NEUTRON SURVEY METER         4,25,000         4.25           UT PUMP         13,03,410         13.03           WASTE SEGREGATION YARD         4,55,406         4.55
UT PUMP         13,03,410         13.03           WASTE SEGREGATION YARD         4,55,406         4.55
WASTE SEGREGATION YARD 4,55,406 4.55
SHREDDER FOR AGRO WASTE AFR 3,47,913 3.48
BUCKET ELEV,FEEDING ARRG & SHED FOR AGRO 18,89,931 18.90
RAIN WATER HARVESTING 12,03,438 12.03
COLONY LADIES TOILETS 2,12,400 2.12
TRUCK PARKING YARD 5,60,08,531 560.09
SUBMERSIBLE PUMP 100HP/750KW         17,52,250         17.52
HERO ECO FRIENDLY ELECTRIC BIKE 89,890 0.90
CHEMICAL STORAGE ROOM - CPP 8,94,521.40 8.95
LADIES TOILETS STORES 2,49,034 2.49
LADIES TOILETS CPP2,49,0352.49
BUND OF 5MTR HIGHT MINES BOUNDRY 6,66,580 6.67
ELECTRIC BIKE-KA32 HB1976 (IT DEPT)         83,190         0.83
Covering Shed Rice Husk- Plastic Waste Phase - I 16,442,266.59 164.42
Toilets Construction @ Worker Colony 1,810,434.59 18.1
Hero Electric Bike KA32 HC3758 (QC)         95,470.00         0.95
Hero Electric Bike KA32 HC3755 (Dispatch) 95,470.00 0.95
Hero Electric Bike KA32 (CPP)         95,470.00         0.95
Hero Electric Bike KA32 (Electrical) 95,470.00 0.95
Total 1,79,64,41,376 179.64

#### CSR - R&R Activities carried out FY 2022-23

S. no.	Nature of expenses	Amount (Rs. In Lakh)
1	Furniture For School ( Benches, Teacher Tables, Revolving Chair, Attender Stool ) - Subhash Interior Decorator	2,97,321
2	Computer Training, ABACUS, Women Literacy, Accounts Writing, Dustbin Distribution - Akruti Trust	10,80,889
3	Driving Training With Liciense - Akruti Trust	3,16,680
4	Salary Staff for the month Apr-June'22	18,97,321
5	R&R Staff Vehicle Hire Charges Q1	2,29,108
6	Dispensary Expenses - Staff Salary Apr-Jun'22	10,30,898
7	Dispensary Expenses - Ambulance & Medicine Exp	1,37,852
8	Driving Training With License - Light Batch, Common Health Check- Up In 5 Villages, Soil Charging Technology, Green Boards, Beautician Training, Tailoring & Pattern Making, Computer Training, Providing Small Chairs. Round Table Plas, Admin Chgs- Akruti Trust	15,67,080

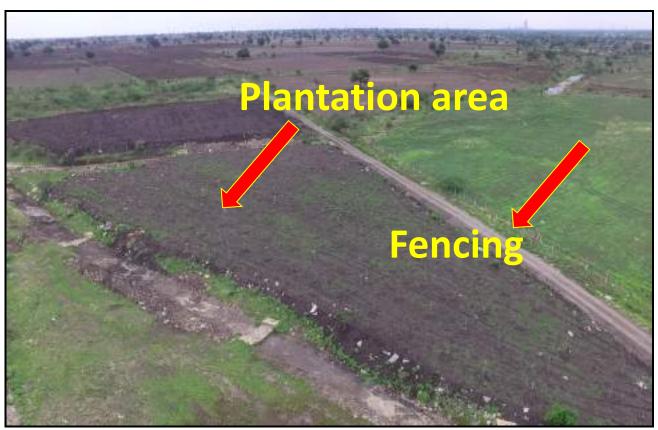


9	Salary Staff for the month July-Sept'22	20,09,364
10	R&R Staff Vehicle Hire Charges Q2	2,41,029
11	Dispensary Expenses - Staff Salary July-Sept'22	14,26,175
12	Dispensary Expenses - Ambulance & Medicine Exp	3,57,360
13	Fire NOC Paid for DAV School	1,000
14	Covered box type drainage system at APMC Yard	1,56,109
15	Education	1,509,360
16	Health	2,018,932
17	Heritage, Culture etc. (Local folk art promotions etc. )	177,000
18	Infrastructure development in the villages.	1,516,140
19	Livelihood Promotion and Capability building	1,329,340
20	Programme administration monitoring and Evaluation	2,194,565
21	Education	5,867,010
22	Health	1,764,478
23	Heritage, Culture etc. (Local folk art promotions etc. )	4,745,029
24	Infrastructure development in the villages.	81,734
25	Livelihood Promotion and Capability building	699,713
26	Programme administration monitoring and Evaluation	1,944,586
	Total	34596073



PLANTATION OVER DUMP AREA





PLANTATION ALONG THE SERVICE ROAD &HAUL ROADS



PLANTATION ON VIRGIN AREA AFTER SPREAD THE B.C SOIL







PLANTATION ALONG THE SERVICE ROAD & HAUL ROADS





PLANTATION INFRONT OF MINES-OFFICE



FENCING OF AFFORESTATION AREA & AGRO FORESTORY







STONE PITCHING ALONG THE NALA BANKS





STONE PITCHING BELOW THE TOPSOIL DUMP







**DISPLAY OF COMMITY MEMBERS** 



PLANTATION ALONG THE SERVICE ROAD & HAUL ROADS



#### Year wise plantation at Mines

SL No	Financial Year	Location	Area in Ha.	Number of trees Planted	No. of plants survived	Survival (%)	Types of Species
1	2015-16	Reclaimed Black cotton dump area and Behind Mines Office	1.3	1220	610	50%	Acacia, Neem, tamarind, Ashok, People tree, Conocarpus (dubai Tree), Honge trees.
2	2016-17	Safety zones, Magazine Roads, Mineral stock area and Along the nala banks	2.35	4780	2390	50%	Acacia, Neem, tamarind, Ashok, People tree, Conocarpus (dubai Tree), Honge trees.
3	2017-18	Safety zones, Behind office & Garage and near view point	2.13	3159	2527	80%	Acacia, Conocarpus, Bougain villa, Badam, Honge, Tapsi, Sankeswar, Peltoform, Neem, Nelli, Shubham trees
4	2018-19	Avenue plantation(near nala), 7.5 m safety zone, Behind ANFO mixing shed & Near New rest shelter (WLA)	4.3	3963	3646	92%	Acacia, Conocarpus, Bougain villa, Badam, Honge, Tapsi, Sankeswar, Peltoform, Neem, Nelli, Shubham trees
5	2019-20	Nala & Buffer Safety zone and office surround area	3.33	4279	3829	89%	Conocarpus, Badam, Honge
6	2020-21	7.5m Safety zone, Village safety zone and Gap plantation	1.8	6726	6480	96%	Accasia, Conacorpous, Bougain villa, Badam, Honge, Tapsi, Sankeswar, Peltoform, Neem, Nelli, Shubham trees
7	2021-22	Limestone Crusher Area, Green belt, Gap plantation at Back side of HSD pump house and	1.55	3871	3290	85%	Mahagani, Terminia Catappa(Badam), Cassia Simma, Azadirachta Indica(Neem), Ficus religiosa(Peepal tree), Conacorpous,



		itaga village 500m safety zone.					bougainvillea, and Delonix regia(Gulmohar).
8	2022-23	1. Plantation near BP-J MLB pillar 2. Gap plantation near Itaga village side, back side of AN building and near viewpoint area (Green belt)	1.27	2333	1781	85%	Azadirachta Indica(Neem), Conacorpus, Big neem, Delonix regia(Gulmohar), Cassiya, Cassia siamea, Bougainvillea, Accasia and Terminia Catappa(Badam).
	Total		18.03	30331	24553	78%	

Total area: 519 Ha

Active Mining Area: 39.30 Ha

#### **Environmental Monitoring details as under:**

Monitoring is carried out by M/S Cosmo Conscious Research laboratory, Bellary in all four seasons. The details are as under.

S.No	Environmental	Parameters
	parameters	
1	Ambient Air Quality	Ambient air quality is being monitored continuously season wise as per IBM circular 3/92 & NAAQ notification 2009.
2	Noise	Season wise noise measurement study is carried out within the mining lease area. Personal protective devices were provided to workers to reduce the impact of noise.
3	Ground vibration	Ground vibration study is carried out by the company and every blast is monitored by "Seismograph". It is observed that all the readings are less than acceptable level.
4	Water	Water quality within the mine pit is monitored on regular basis. IS – 10500-2012 Drinking water standards, GSR 422 (E) General Standards for discharge of Effluent.



#### a) Stack monitoring report is as below.

S.NO.	POLLUTANTS (Particulate matter)	Avg. Quantity of Flow discharged (Nm3/H)	Avg. CONCENTRATIONS OF POLLUTANTS IN DISCHARGE (Mass/Vol.) (mg/Nm3)	Tolerance Limit (mg/Nm3)
01	New Crusher stack	34493.88	2.66	30

#### b) Measures Taken to Control Noise: -

- Seismograph is used to get details of vibration and Noise pre blasting.
- Control blasting technique adopted by using NONEL.
- Schedule and Preventive maintenance of HEMM.
- Centralized lubrication system in Drilling Equipment.
- Noise mapping is done regularly in all mining operation area.

#### AMBIENT NOISE LEVEL (MINES) [Leq Value in dB(A)] FY-2022-23

Particular	Tolerance Limit dB(A) in day time	Average Actual Values in dB(A)
Crushing & Screening	75	65.75
Mining Area	75	64.80
Haulage / Office	75	54.74
Surge bin hopper	75	53.52

Particular	Tolerance Limit dB(A) in Night time	Average Actual Values in dB(A)
Crushing & Screening	70	62.18
Mining Area	70	62.15
Haulage / Office	70	48.62
Surge bin hopper	70	44.86

#### c) Measures taken for Ground Vibration Control:

- Seismograph is used to get details of vibration, Noise & fly rock pre blasting. Blasting pattern is modified if parameters are high.
- Down the Hole initiation is performed by shock tubes NONEL to reduce the noise and ground vibration.
- Optimum Charge per delay is maintained as per the recommendation given by DGMS.
- Blasting operation is carried out under supervision of qualified and experienced team.



#### ENVIRONMENTAL STATEMENT REPORT

[FORM-V] (See rule 14)

#### **PART-A**

Name and address of the owner/

Occupier of the industry

: Satyabrata Sharma

President - Manufacturing & Unit Head

Itga (V), Chittapur (Tq) Gulbarga - 585211

**Operation process** 

i. Industry category: Primary-(STC code)

Secondary-(STC code)

: Production of Cement : Red category

: 2 MTPA (for Clinker Production)

ii. Production category-units

3 MTPA (for Cement Production)

a. Installed Capacity

: 3.6 MTPA (Limestone)

b. Consented Capacity

: 3 MTPA (Limestone)

iii. Year of establishment

: 2015 (ML-2681)

iv. Date of last environmental statement submitted : 26/09/2022 (FY 2021-22)

#### **Postal Address**

1) Registered Office

: Orient Cement Ltd.

5-9-22/57/D G.P Birla Center, 2<sup>nd</sup> & 3<sup>rd</sup> floor, Adarsh Nagar,

Hyderabad-500063

Telangana

2) Factory

: Orient Cement Ltd.

Itga (V), Chittapur (Tq) Gulbarga - 585211 Phone: 08474-236716 Fax: 08474-23671



#### PART-B

#### **Water and Raw Material Consumption**

Particulars	During Previous Financial Year (2021-2022)	During Current Financial Year (2022-2023)		
	(m³/day)	(m³/day)		
Process/Dust suppression	43.88	44.89		
Domestic/Gardening/Dust Suppression	3.64	3.65		

	Process water consumption	per unit of products output
Name of products	During the previous financial year (2021-2022)	During the current financial year (2022-2023)
	(m³/MT of Limestone)	(m³/MT of Limestone)
Limestone	0.00684	0.00572

#### (ii) Raw material consumption

N	Nama	Consumption of raw	material per unit of (Clinker) output			
Name of raw materials	Name of products	During the previous financial year (2021-2022)	During the current financial year (2022-2023)			
Limestone	Limestone	1.400	1.387			



#### PART-C

## Pollution discharged to environment/unit of output (Parameters as specified in the consent issued)

S.NO	Pollutants	Quantity of pollutants discharged. (Mass/day))	Concentration of pollutants in discharge (Mass/Volume)	Percentage of variation from prescribed standards with reasons	
a) WATE	R: -				
a.	Effluent treatment plant	Nil		No wastewater generation in Mines	
b) AMBIE	NT AIR: -				
	Mining Area		52 μg/m <sup>3</sup>	Within	
a.	Mining Area	D144.0	15 μg/m <sup>3</sup>	Standards	
l.	Havlana	PM10	53 μg/m <sup>3</sup>	Within	
b.	Haulage	o	16 μg/m <sup>3</sup>	Standards	
_	Consolina O Consonina	&	53 μg/m <sup>3</sup>	Within	
C.	Crushing & Screening	PM2.5	16 μg/m <sup>3</sup>	Standards	
د	Course him have an	F.W12.5	53 μg/m <sup>3</sup>	Within	
d.	Surge bin hopper		15 μg/m <sup>3</sup>	Standards	

<sup>\*</sup> The value represents arithmetic average of 12 months for the financial year 2022-23

#### Ambient Air Quality Report in µg/m³ Mines FY 2022-23

Ambient Air (	Quality Rep	ort in µg/i	m <sup>a</sup> Mines FY	2022-23										
Mining Area		Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Average
	PM 10	54	53	54	53	51	51	52	50	52	51	52	54	52
	PM 2.5	14	13	15	15	15	16	17	16	17	16	14	17	15
	SO2	16	15	15	15	16	18	17	15	17	18	16	17	16
	NOx	15	14	15	15	16	17	18	15	16	17	15	16	16
	со	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Haulage														
	PM 10	55	54	54	54	49	50	54	54	52	55	54	52	53
	PM 2.5	15	14	16	16	15	15	18	16	15	15	16	16	16
	SO2	15	15	16	15	16	18	18	16	16	18	15	17	16
	Nox	15	15	15	14	16	16	17	15	17	17	16	17	16
	со	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Crushing &														
Screening														
	PM 10	54	52	54	51	52	50	54	55	52	54	54	51	53
	PM 2.5	16	14	16	14	16	16	16	15	16	16	16	16	16
	SO2	15	15	15	15	16	18	18	15	15	19	16	17	16
	Nox	14	15	15	15	16	17	18	15	17	17	15	16	16
	со	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Labor														
Colony/Near														
	PM 10	55	55	53	55	51	51	50	53	51	52	55	53	53
	PM 2.5	16	15	14	14	16	14	16	15	16	15	15	16	15
	SO2	15	15	15	15	16	19	18	17	16	18	16	17	16
	Nox	14	15	15	15	16	16	17	17	16	17	15	16	16
	со	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND



#### **Mines Pit Water Quality Monitoring Data FY 2022-23**

WATER QUALITY MO	NITORING DATA	MINES I	FY 2022	-23										
,														
Parametrs	Unit	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Avg
Colour	Hazen units	5	15	2	<1	<1	3	2	2	1	1	<1	<1	3.88
conductivity	ms/cms	430	597	535	575	495	419	496	524	555	571	542	598	528.08
Total dissolved Solids	mg/l	294	419	378	408	347	294	347	357	391	414	412	417	373.17
pН	-	8.02	8.04	7.54	8.21	7.96	8.16	8.2	7.98	8.23	8.28	8.38	7.93	8.08
Turbidity	NTU	1.9	1	1.1	1.3	1.6	0.7	0.3	0.5	1.7	1.5	1.2	1.4	1.18
<b>Total Suspended Solids</b>	mg/l	13	1.6	12	17	6	6	4	13	5	5	1	4	7.30
Calcium as Ca	mg/l	30.46	53.71	52.1	43.29	52.91	32.06	44.09	52.91	53.71	58.52	56.11	53.71	48.63
Magnesium as Mg	mg/l	27.18	26.2	23.29	26.69	18.43	18.44	26.7	18.92	25.71	24.74	19.4	25.71	23.45
Total Hardness as														
CaCO3	mg/l	188	242	226	218	208	156	220	210	240	248	220	240	218.00
Chlorides as Cl	mg/l	52.48	52.48	76.21	61.86	54.44	61.86	18.81	62.48	62.48	54.98	79.98	69.98	59.00
Sulphates as SO4	mg/l	36	32	42	37	31.82	36.19	22.7	34.5	27.16	31.68	20.54	32.24	31.99
Flouride as F	mg/l	0.92	1.73	1.67	1.79	1.46	1.86	1.62	1.42	2.38	1.68	1.79	1.29	1.63
Nitrate Nitrogen As														
NO3	mg/l	1.6	8.2	8.7	4.7	4.8	1.45	9.1	8.8	3.85	7.80	10.00	8.8	6.48
Total Alkalinity as														
CaCO3	mg/l	145	235	190	195	185	150	205	255	245	240	325	270	220.00
Total Iron as Fe	mg/l	0.157	0.162	0.019	BDL	BDL	BDL	BDL	BDL	0.102	BDL	BDL	BDL	0.11
Total Coliform Count	MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Escherichia Coli Count	MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent

#### **PART-D**

#### **Hazardous Wastes**

[As specified under Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008]

Hazardous Wastes		Total Quantity	
		During the Previous Financial year (2021-2022)	During the Current Financial year (2022-2023)
(a) From Process	(a) Spent/ Used Oil (Category 5.1) (Including CPP)	8.84 MT	2.26 MT
(b) From Pollution control Facilities	N.A.	N.A.	N.A.

However, this waste is being generated from industrial related activity i.e. hydraulic movement of machines, oiling/ greasing etc. which will be sold to registered to recycler once authorization for Hazardous waste is received from the board.



#### PART-E Solid Wastes

	Total Quantity (Overburden) in tones		
	During the previous financial year (2021-22)	During the current financial year (2022-2023)	
(a) From process	88478 (Over burden)	94713 (Over burden)	
(b) From pollution control facility	2.01 MT (from LS Crusher Bag filter)	2.63 MT (from LS Crusher Bag filter)	
(c) Quantity recycled or re- utilized	2.01 MT	2.63 MT	

#### **PART-F**

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

#### Hazardous waste:

- ➤ No hazardous waste generated from the mining activities.
- Limestone Crusher Gear box oil will be stored and disposed for authorized person.

#### Solid waste:

➤ Generated and disposed during 2022-23: 94713MT of over burden is used for making bunds and for green belt development.

#### **PART-G**

Impact of pollution abatement measures taken on conservation of natural resources and on the cost of production.

- > 0.71 ha of Overburden soil dump area has been reclaimed and rehabilitated by plantation.
- ➤ Total 30331 saplings have been planted in 18.03ha area till March 2023 near BP-J MLB pillar, Gap plantation near Itaga village side, back side of AN building and near viewpoint area (Green belt).
- Constructed Embankment and garland drain around the pit about 285m to avoid surface water into mines.
- Around 9700 sqm of Stone pitching has been made along the slopes of nala stream both sides.
- Automatic water sprinkler has been installed on main haul road to reduce dust Emission.
- > Crushed limestones are being conveyed to plant by fully covered belt conveyor to avoid spillage and air borne dust.
- ➤ Water sprinkling system is provided at crushing operations and transfer points of belt conveyer for controlling fugitive emissions.





**BC Soil Dump with Protection Wall** 



Garland Drain along the Dump Toe Wall with Random Rubble Barriers





Garland drain with RR barrier



**Stone Pitching along Nala Banks** 





Haul Road Dust Suppression



Water sprinkler along the Haulage road





**Closed Belt Conveyor** 



Rubber curtains & Water sprinkler system provided at Limestone dump hopper to Control dust at Lime stone Crusher





Wet drilling



Water sprinkling on drill hole face before blasting and water sprinkling for dust suppression on blasted muck pile





**Desilting Work** 

#### Modifications for the year 2021-22 for energy conservation and better Environment:

#### **Energy Conservation:**

• Use of artificial intelligence and digital technologies to improve the performance of the crusher by auto control of limestone feed based on secondary crusher load. This helps in maintain stable load at optimum power eliminating equipment damages due to overload.

#### **Better Environment:**





#### ECO-FRIENDLY GEO TEXTILE COIR MATT FOR SLOPE PROTECTION



RAINWATER HARVESTING PIT cum SETTLING TANK

- Total green energy purchased for the 2022-23 is 3,39,70,000 kwh (22%) for plant & mines utilization.
- Existing plantation maintenance (plantation, maintenance, and Fencing) cost Rs. 1013720.00/-
- Construction of earthen garland drain for a length of 1300 m around the proposed working pit to avoid surface water in to mines area cost Rs. 144800.00/-
- Desilting of Check Dam, Nala & Rainwater Harvesting pit cost Rs. 90500.00/-
- Constructed Embankment and garland drain around the pit to avoid surface water into mines area.
- Total 2.5KV solar panel has been installed in various location as alternative power.
- Topsoil spread for future green belt plantation for length of 1977m along the mining lease boundary.
- 2333 no's of saplings are planted in the year 2022-23 covering an area of 1.27 ha.



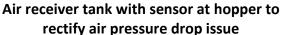


**Catchment Drains with RR Dry Stone Barriers** 

- Pressurized water sprinkler is fitted on water tanker for spraying on blasted material to avoid dust during loading.
- 4 No's of Permanent tower lights installed in mines for illumination of working area.
- Total 2.5KV solar panel has been installed in various location as alternative power.
- Sources for lighting and other applications.
- Construction of Rainwater Harvesting Pit.









Variable Frequency Drive in 111AF060 Apron feeder

#### **PART-H**

Additional measures/investment proposal for environmental protection including abatement of pollution, prevention of pollution.

- 1. Total 30331 saplings have been planted in 18.03ha area till March 2023 near BP-J MLB pillar, Gap plantation near Itaga village side, back side of AN building and near viewpoint area (Green belt).
- 2. Total 370 m of Toe wall at below the top soil dump has been construction and garland drain along the dump toe wall with 36 no's of random rubble type barriers is made to arrest the silt.
- 3. Catchment/garland drains for a length 2800m for appropriate size with suitable gradient is made around the mine pit and at haul roads to prevent run off water and desilted at regular intervals.
- 4. Pressurized water sprinkler is fitted on water tanker for spraying on blasted material to avoid dust during loading.
- 5. Rainwater harvesting pit with size 50m X 40m with depth 2m has been constructed near south side of the mine lease boundary for ground water recharge.



- 6. Pumping of Mine water to plant reservoir has been installed.
- 7. Existing plantation maintenance cost Rs. 8, 50,000/-
- 8. Total 2.5KV solar panel has been installed in various locations as alternative power sources for lighting and other applications.
- 9. Desilting of garland drain, nala, ponds.
- 10. 2322 m of fencing made around the working pit and along the mining lease boundary to avoid unauthorized entry.
- 11.5m height earthen bund for a length of about 250 m has been formed along the village and Mining lease boundary.
- 12. Personal dust monitoring will be done to workmen in every quarterly.
- 13. Around 9700sq.m of area stone pitching has been done at both sides of nala bank to avoid soil erosion.
- 14. Total green energy purchased FY 2022-23 is 3,39,70,000 kwh of 22% of the total energy purchased & produced from CPP for plant & mines utilization.

#### > EXPENDITURE ON ENVIRONMENT MANAGEMENT

#### **DETAILS OF EPM EXPENDITURE**

ASSET DESCRIPTION	Amount	Amount in Lakhs
DUST SUPRESSION SYSTEM	43,58,474	43.58
BAG FILTER & ESP FOR STACKS	33,54,39,089	3,354.39
CPP - RCC CHIMNEY	2,87,14,293	287.14
WATER RESERVOIR	25,87,57,199	2,587.57
WATER TREATMENT PLANT	12,85,41,299	1,285.41
SEWAGE TREATMENT PLANT	7,28,00,825	728.01
ROAD & DRAIN	50,14,63,605	5,014.64
GREEN BELT DEVELOPMENT	53,48,720	53.49
FLY ASH SILO & HANDLING SYSTEM	12,89,16,613	1,289.17
EFFLUENT TREATMENT PLANT & DM PLANT IN CPP	3,60,66,506	360.67
CPP - ELECTROSTATIC PRECIPITATOR	10,77,18,110	1,077.18
CPP ASH HANDLING SYSTEM	3,98,25,799	398.26
COMPLETE BURNER ASSEMBLY	1,17,15,390	117.15
AMBIENT AIR QUALITY MONITORING	2,20,13,783	220.14
SNCR FOR NOX REDUCTION	3,03,21,259	303.21
AMMONIA SLIP SENSOR STACK APPLICATION	17,80,000	17.80
MEDIA CONVERT - LIQUID AFR SYSTEM	2,54,471	2.54
NEUTRON SURVEY METER	4,25,000	4.25
UT PUMP	13,03,410	13.03
WASTE SEGREGATION YARD	4,55,406	4.55
SHREDDER FOR AGRO WASTE AFR	3,47,913	3.48
BUCKET ELEV,FEEDING ARRG & SHED FOR AGRO	18,89,931	18.90
RAIN WATER HARVESTING	12,03,438	12.03



COLONY LADIES TOILETS	2,12,400	2.12
TRUCK PARKING YARD	5,60,08,531	560.09
SUBMERSIBLE PUMP 100HP/750KW	17,52,250	17.52
HERO ECO FRIENDLY ELECTRIC BIKE	89,890	0.90
CHEMICAL STORAGE ROOM - CPP	8,94,521.40	8.95
LADIES TOILETS STORES	2,49,034	2.49
LADIES TOILETS CPP	2,49,035	2.49
BUND OF 5MTR HIGHT MINES BOUNDRY	6,66,580	6.67
ELECTRIC BIKE-KA32 HB1976 (IT DEPT)	83,190	0.83
Covering Shed Rice Husk- Plastic Waste Phase - I	16,442,266.59	164.42
Toilets Construction @ Worker Colony	1,810,434.59	18.1
Hero Electric Bike KA32 HC3758 (QC)	95,470.00	0.95
Hero Electric Bike KA32 HC3755 (Dispatch)	95,470.00	0.95
Hero Electric Bike KA32 (CPP)	95,470.00	0.95
Hero Electric Bike KA32 (Electrical)	95,470.00	0.95
Total	1,79,64,41,376	179.64

# 

Sl no.	Particulars	2022-23
1	Expenses for B C Soil Handling & Use for Afforestation	3523331.00
2	Expenses for Afforestation (plantation, maintenance, and Fencing)	1013720.00
3	Laying of Geotextile coir matt at green belt	-
4	Expenses for Repair & Construction of Random Rubble check	-
5	Expenses for construction of earthen garland drain around the proposed working pit (1.3 km length)	144800.00
6	Expenses for Desilting of Check Dam, Nala & Rainwater Harvesting pit	90500.00
7	Expenses for Dust Suppression operation & maint., cost of Water Tanker	1548000.00
8	Expenses for operation & maint., cost of permanent water sprinkler in Haul Road, viewpoint and 3no's floating arrangement for pumps in mine pit (procurement of steel for floating pump and pipes for permanent water sprinklers)	280000.00
9	Expenses for Use of NONEL, Electronic Detonators, Wooden Spacers and Stem Plugs.	1431800.00
10	Expenses for Environmental Monitoring Expenses + Airborne dust survey for workmen	1057640.00
11	Expenses for Ear Plugs & Earmuffs	50000.00
	9089791.00	9089791.00
Rs in Lakhs		90.89791



### Proposed modifications for the year 2022-23 for Energy Conservation and Better Environment:

- 19000 no's of sapling are proposed to plant in the Green Belt area, Nala safety zone and village safety zones covering an area 7.0 ha.
- A Random Rubble dry stone wall below the overburden dump is proposed for a length of 176 meters.
- Catchment/Garland drains for a length of 176 m of appropriate size and gradient proposed at below the overburden dump, 600m length around the mine pit and along the haul roads to prevent run off water and desilted at regular intervals.
- Construction of Embankment and garland drain around the pit to avoid surface water into mines area.

#### PART-I

## Any other particular in respect of environmental protection and abatement of pollution

- Promoting Eco Friendly zero waste mining.
- ➤ Implementation of EMS including compliance of environmental laws through periodic Management Review & Internal / external audits.
- Awareness promotion through various environmental competitions, workshops, presentations etc. on world environment day.
- ➤ Improvement in Ambient Air Quality through effective control on fugitive dust emission.
- Extensive green belt is being developed in the mining area with plantation of tree saplings surrounding mining lease area.



Arrangement of Solar light Panels in required areas



#### **MISCELLANEOUS**

#### **World Environment Day 2022 Celebrations**

World Environment Day 2022 was celebrated at M/s Orient Cement Ltd, Chittapur, on 11th June 2022 @ 10:30 AM. This year theme for World Environment Day was: "ONLY ONE EARTH-CARE & CONSERVE" with a Slogan "Living Sustainably in Harmony with Nature" for which Environment Department along with senior staff of Orient Cement Ltd commenced an opening program chaired by Mr. Manjeppa-EO, KSPCB, Kalaburagi, Mr. Adam Patel-AEO KSPCB Kalaburagi, Shri. Satyabrata Sharma-Unit Head, Shri. Santosh Kumar Sharma-Asst. VP-Operation & other delegates at near Rainwater harvesting pit Mines area with mass plantation of 400 saplings and near viewpoint of reservoir at plant area around 200 saplings & later individual department planted with mass plantation in selected area in plant premises and planted around 200 saplings.

From 5<sup>th</sup> June to 17<sup>th</sup> June-2022, OCL Chittapur has conducted an awareness program & Competitions such as Quiz competition, Essay Competitions, drawing competitions, Slogan competitions by involving school children's, technical staff, workmen's & labors.

The Welcome Note along with the World Environment Day Speech was addressed by Mr. Murthy Raju Dandu from HR Department & then the Speech was addressed by Mr. Manjeppa-E. O KSPCB, Adam Patel – AEO KSPCB, our Unit Head Shri. Satyabrata Sharma in a thought-provoking manner, which set a perfect platform for our colleagues who have gathered for WED celebration. The chairperson suggested few visions to be included to make remarkable changes in the environment and addressed the people to change their thoughts to change a good environment. Also prize distribution program was carried out rewarding the winners, who have participated in the World Environment Day Events (Quiz, Essay, Blogging & drawing / painting) and concluded with Vote of Thanks by Mr. Ramesh Bashetty AM-Environment.



#### Glimpses of World Environment Day-2022 celebrations at Orient Cement Ltd, Karnataka.

Plantation by Mr. Manjeppa-EO, KSPCB, Kalaburagi near Reservoir View point



Plantation by Mr. Adam Patel-AEO KSPCB Kalaburagi near Reservoir View point





Plantation by our Unit Head Shri. Satyabrata Sharma near Reservoir Viewpoint



Plantation by Shri. Santosh Kumar Sharma-Asst. VP-Operation near Reservoir View point





Group photo on WED-2022 near Rainwater harvesting pit - Mines Area



Mass Plantation carried out by our Staff near Rain water harvesting pit - Mines Area





#### OCL Staff and Workmen attended World Environment Day – 2022 programme



World Environment Day programme inauguration by Chief guests





Speech by Mr. Manjeppa, E.O KSPCB, Kalaburgi



Speech by Mr. Adam Patel, A.E.O KSPCB, Kalaburgi





#### Speech by Our Unit Head Mr. Satyabrata Sharma



Vote of Thanks by Mr. Ramesh Bashetty, Environment Department





Prize distribution to winners by Mr. Manjeppa-EO, KSPCB, Kalaburagi



Prize distribution to winners by Mr. Adam Patel-AEO, KSPCB, Kalaburagi





#### Prize distribution to winners by Shri. Satyabrata Sharma-Unit Head & Shri. Santosh Kumar Sharma-Asst. VP-Operation





Prize distribution to winners by Mr. Saji Kumar Asst. VP- HR & Mr. Shivbasappa Nandyal, Asst. VP- Civil







Prize distribution to winners by Mr. Adam Patel-AEO, KSPCB, Kalaburagi



Prize distribution to winners by Mr. Shivbasappa Nandyal, Asst. VP-Civil





Glimpses of Social Activities organised by Orient Cement Ltd, Karnataka





# REHABILITATION & RESETTLEMENT ACTIVITIES



ORIENT CEMENT LTD., CHITTAPUR
CONDUCTED REHABILITATION &
RESETTLEMENT (R & R) PROGRAMS
FOR THE PERIOD FROM APRIL 2022 TO
MARCH 2023





Our Company has taken initiation for distribution of flour mill & shiaviyamaking machine under the Self-Help Group to the group of women of nearby villages of Diggaon, Itaga, Mogala, MogalaTanda & Station Tanda under R&R activities. Mr. Shivanand Patil GM-Liaison briefed the women's group of the above said villages in view of how to make use of the Flour mill & Shaviyamaking machine and put maximum efforts in deriving maximum profit out of which try to multiplicity of new types of machines to be introduced under self-help group. Before Distribution of flour mill & shiaviyamaking machine under the Self-Help Group to the group of women's of nearby villages of Diggaon, Itaga, Mogala, MogalaTanda & Station Tanda, proper training has been given to the women's of SHG and the same is being inspected by our AVP Civil Mr. S.G. Nandyal& GM-Liaison Mr. Shivanand Patil. Machines are being distributed to Self-Help Group to the group of women of nearby villages of Diggaon, Itaga, Mogala, MogalaTanda & Station Tanda under R&R activities by Finance Head Mr. SadivkBadam& GM-Liaison Mr. Shivanand Patil, Selfhelp group women's, Villagers -Panchayath President -Vice President are very happy and expressed their gratitude towards Orient Cement Company for distribution of Flour mill & Shaviyamaking machine to the women's of self-help group.









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# DISTRIBUTION OF DRIVING LICENSE & TRAINING TO YOUNG –MEN' OF STATION TANDA UNDER R&R ACTIVITIES



OrientCementLtd. Has taken initiation of Driving training&License to un-employed 30 young men of Station Tand under our R&R activities. All the 30 young men are being trained well in LMV & the License was being distributed to the b eneficiearies. The parents — Station Tanda people and TMC member are very happy and expressed their gratitude towards Orient Cement for facilitating Driving Training and License distribution of LMV to get their yong un-employed Son's in to self employment and some of them started their own care hiring business.





# DISTRIBUTION OF DRIVING LICENSE & TRAINING TO YOUNG – MEN' OF STATION TANDA UNDER R&R ACTIVITIES









# DISTRIBUTION OF DRIVING LICENSE & TRAINING TO YOUNG –MEN' OF STATION TANDA UNDER R&R ACTIVITIES







Stauon Tanda

FACILITATED BY: MORE TRUST



### DISTRIBUTION OF DRIVING LICENSE & TRAINING TO YOUNG -MEN' OF STATION TANDA UNDER R&R









# DISTRIBUTION OF DRIVING LICENSE & TRAINING TO YOUNG –MEN' OF STATION TANDA UNDER R&R ACTIVITIES









# DISTRIBUTION OF DRIVING LICENSE & TRAINING TO YOUNG –MEN' OF STATION TANDA UNDER R&R ACTIVITIES









# DISTRIBUTION OF DRIVING LICENSE & TRAINING TO YOUNG – MEN' OF STATION TANDA UNDER R&R ACTIVITIES









Orient Cement has taken initiative for conducted Health Camp MogalaVillage under our Rehabilitation & Resettlement (in short R & R) Activities. The health screening camp is being conducted through well experienced General Pysicianand treated the patients by supplying medicines as prescribed by the Doctor.

The Patients, Villagers & panchayath members are expressed their gratitude towards Orient Cement for conducted health screening camp through well experienced General Pysicianand treated the patients & for supplying medicines as prescribed by the Doctor.







































Orient Cement has taken initiative for conducted Health Camp Diggaon Village under our Rehabilitation & Resettlement (in short R & R) Activities. The health screening camp is being conducted through well experienced General Pysicianand treated the patients by supplying medicines as prescribed by the Doctor.

The Patients, Villagers & panchayath members are expressed their gratitude towards Orient Cement for conducted health screening camp through well experienced General Pysician and treated the patients & for supplying medicines as prescribed by the Doctor.









































Orient Cement has taken initiative for conducted Health Camp Itaga Village under our Rehabilitation & Resettlement (in short R & R) Activities. The health screening camp is being conducted through well experienced General Pysicianand treated the patients by supplying medicines as prescribed by the Doctor.

The Patients, Villagers & panchayath members are expressed their gratitude towards Orient Cement for conducted health screening camp through well experienced General Pysician and treated the patients & for supplying medicines as prescribed by the Doctor.























































Orient Cement has taken initiative for conducted Health Camp Station Tanda under our Rehabilitation & Resettlement (in short R & R) Activities. The health screening camp is being conducted through well experienced General Pysicianand treated the patients by supplying medicines as prescribed by the Doctor.

The Patients, Villagers & panchayath members are expressed their gratitude towards Orient Cement for conducted health screening camp through well experienced General Pysician and treated the patients & for supplying medicines as prescribed by the Doctor.







































### BEARUTY PARLOUR TRAINING COURSE TO SELF HELP GROUP WOMEN'S UNDER R&R ACTIVITIES

Our Company has taken initiation for the womans & Girls of Station Tanda under R&R activities to facilitate them training course in Beauty Parlor related classes.

Proper training has been given to the women's & Girls of SHG under R&R activities in learing thoroughly Beautician & Beaurty parlour related practical training is being conducted and the same is being inspected by our GM-Liaison Mr. Shivanand Patil.

The Practical training has been given to the women's & Girls of SHG under R&R activities and they all learnt how to do face make-up, mahendi art during marriage traditionally and hari-style and other all training related to Beauty parlour the Self-help group women's, Villagers — Panchayath President — Vice President are very happy and expressed their gratitude towards Orient Cement Company for very useful training program of Beaurty parlour training courses to the women's of self-help group.









### BEARUTY PARLOUR TRAINING COURSE TO SELF HELP GROUP WOMEN'S UNDER R&R ACTIVITIES































































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Orient Cement Ltd. has taken initiation of training program on solil recharging at Krishi Vigyan Kendra Kalaburagi to the farmers of Mogala & Diggaon villages under our R&R activities. All the farmers, who attended the training for soil recharging are being trained well in various types of soil, how to protect the soil and what types of organic farming helps in growing crops with heigh yield, for this training program the farmers are benefited. The Training Certificate was being distribfuted to the farmers for successful completion of training in Soil recharging.

The farmers, Panchayath members are very Happy and expressed their gratitude towards Orient Cement for facilitating such a useful traing program on Soil recharging in a very well known agriculturl research centre Krishi Vigyan Kendra Kalaburagi (in short KVK)

























































































Orient Cement has taken initiative for conducted Training to youths of Diggaon Village in Electrician Training for house wiring under our Rehabilitation & Resettlement (in short R & R) Activities. The Training was being conducted through well experienced trainer and youths learnt the electrical fittings and wiring for house very perfectely

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The Benficiareis, villagers & panchayath members are expressed their gratitude towards Orient Cement for conducted Training to youths of Diggaon Village in Electrician Training for house wiring under our Rehabilitation & Eclectrial Trainer.





































Orient Cement has taken initiative for Computer Training Classes for Diggaon Village Government School Students under our Rehabilitation & Resettlement (in short R & R) Activities. Orient Cement has successfully conducted Computer Training to the students of Diggaon Government School and issued Certificates to respective students, who are successfully completed their Computer training program.

The Students, Villagers & panchayath President, Vice President PDO and members are expressed their gratitude towards Orient Cement for conducting Computer Training classes.

























#### COMPUTER TRAINING CLASSES FOR DIGGAON GOVT.

































Orient Cement has taken initiative for Tailoring Training Classes for Mogala Village Women's & Girls under our Rehabilitation & Resettlement (in short R & R) Activities. The Women & Girls of the Village, learnt the Tailoring classers conducted for Self help group to start their own Tailoring profession.

The Women & Girls of the Village, Villagers & panchayath members are expressed their gratitude towards Orient Cement for conducted such a High Class Training Program through well experienced & Eminent Trainer

























































Orient Cement has taken initiative for Abacus Training Classes for Mogal Village Government School Students under our Rehabilitation & Resettlement (in short R & R) Activities. The students of Govt. School have learnt the abacus thoroughly through an eminent abacus trainer. The students very quickly answer the mathematics calculations very fast as well they spell the tables upto fifty (50)

We have distributed Certificates to the students who have completed the abacus level of courses successfully

The Students, Villagers & panchayath members are expressed their gratitude towards Orient Cement for conducting Abacus Training classes.











































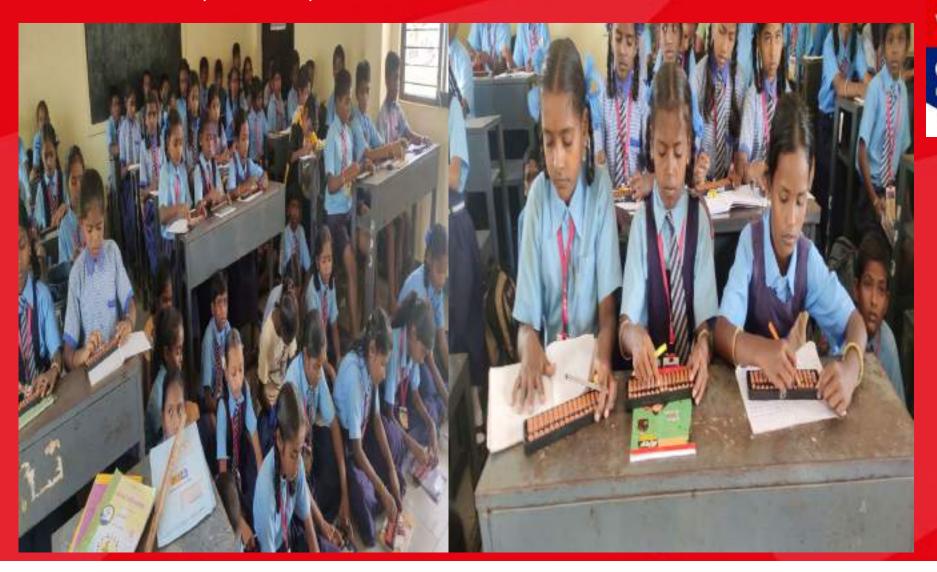




















































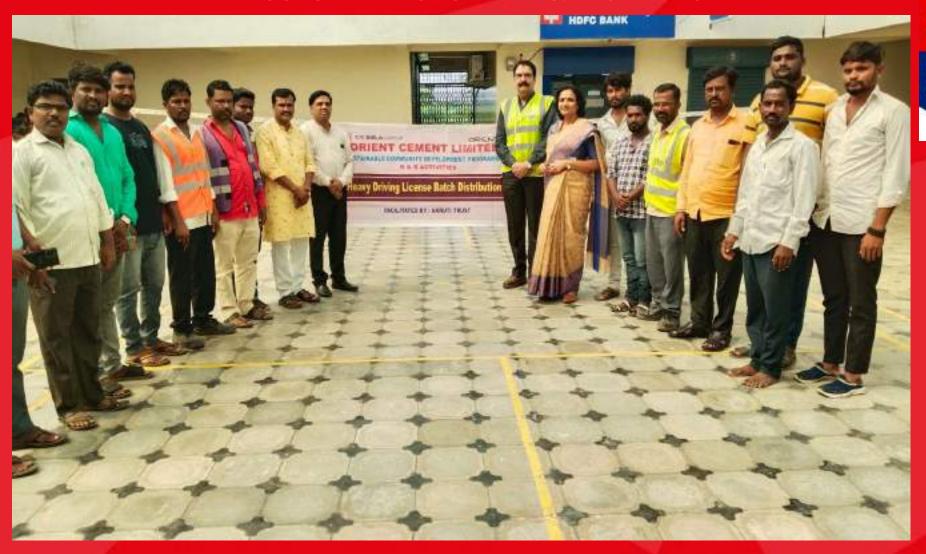
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Orient Cement Ltd. has taken initiation of Driving training & License to unemployed young-men of Diggaon Village under our R&R activities. All the young men are being trained well in LMV & Four-Wheeler Heavy Batch and also the License are being distributed to the beneficiaries.

The parents & Mogal Village people, Panchayath Members are very Happy and expressed their gratitude towards Orient Cement for facilitating Driving Training & License distribution of LMV & heavy batch to get their young un-employed Son's into self-employment and some of them stated their own car hiring business- and joined as a truck drivers on employment and getting good salary.





















































Orient Cement has taken initiative for distribution of Farm & Agricultural equipments to the farmers of Diggaon & Mogal Villages under our Rehabilitation & Resettlement (in short R & R) Activities. The Farm and agricultural equipments are having very useful for attaching to their tractors for working in the agricultural fields and Auto-Spared Sprayer machines manufactured by HONDA are being distributed to the farmers.

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The Benficiareis, villagers & panchayath members of bother village Diggaon & Mogal are expressed their gratitude towards Orient Cement for distribution of farm & agricultural tools & equipments of very good quality with company branded products, which are very useful for their day to day works in the agricultural fieds.





















































































#### DISTRIBUTION OF CHAIRS, PRINTERS ALIMARAHA, COTS -BEDS-BEDSHEETS AND BLANKET GOVERNMENT BOYS BLIND SCHOOL - KALABURGI UNDER R&R ACTIVITIES

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Orient Cement has taken initiative for distribution of Chairs, Printer, Alimaraha, Cots -Beds, Bedsheets along with blankets to facilitate the blind students and teachers of Government Boys Blind School under our Rehabilitation & Resettlement (in short R & R) Activities.

The Students, Prinicpal & Sthetaff, Government Officials are expressed their gratitude towards Orient Cement for donating Chairs, Printer, Alimaraha, Cots -Beds, Bedsheets along with blankets, which are very useful to the teachers and blind students.





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# ORIENT CEMENT LTD. ITAGA CHITTAPUR

Donated to : Governement School - Kalaburgi

- 08 Nos Bo's Almaraha 20 coats ,beds Blanket, Bedshee
- office Chairs 10 Xerox Printer Machine

UNDER R&R PROGRAM















































# DONATED PRINTER AND INSTALLED 500 LPH R O WATER PLANT AT GOVERNMENT BOYS DEAF & DUMB SCHOOL – KALABURGI UNDER R&R ACTIVITIES

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Orient Cement has taken initiative of donating Printer and Installed 500 LPH RO Water to facilitate the blind students and teachers of Government Boys deaf & dumb School under our Rehabilitation & Resettlement (in short R & R) Activities.

The Students, Prinicpal & Sthetaff, Government Officials are expressed their gratitude towards Orient Cement for donating donating Printer and Installed 500 LPH RO Water, which are very useful to the teachers and blind students.





# ORIENT CEMENT LTD. ITAGA CHITTAPUR

Donated to : Governement Dum & Duff School - Kalaburgi

- RO plant -500 LPH
- Xerox Printer Machines

**UNDER R&R PROGRAM** 

















































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### ABACUS TRAINING CLASSES FOR THE STUDENTS OF MOGALA, ITAGA, DIGGAON VILLAGES & STATION TANDA

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Place

Orient Cement has taken initiative for Electrician Training Classes for Diggaon Village for un-employed youths under our Rehabilitation & Resettlement (in short R & R) Activities. The youths of the Diggaon Village have thoroughly trained electrician courses.

We have distributed Certificates to the youths who have completed the electrician courses successfully

The Youths, Villagers & panchayath members are expressed their gratitude towards Orient Cement for conducting Abacus Training classes.





### ELECTRICAL TRAINING CERTIFICATE DISTRIBUTION FOR THE YOUTHS OF DIGGAON VILLAGES









### ELECTRICAL TRAINING CERTIFICATE DISTRIBUTION FOR THE YOUTHS OF DIGGAON VILLAGES

Great Place To







#### DISTRIBUTION OF DUS-BIN TO TMC – CHITTAPUR UNDER R&R ACTIVITIES



Orient Cement Ltd. has taken initiation of distribution of Dus-bins to Town Municipal Counicil, Chittappur under our R&R activities. The Chief Officer & Sanitary Inspector of TMC were distributed Dust-Bin to Chittapur Court, Shree Nagavi Yallambike Temple, and other Government Office and to various wards of Chittapur Town.

The Chief Officer, Sanitary Inspector, Tahsildar, Hon'ble Civil Judge and people of respectrive wards of Chittap are very Happy and expressed their gratitude towards Orient Cement for facilitating Dust-bins for their day-to-day usage for putting garbage and other waste materials to keep the chittapur town clean & green in view fo Swacha-Bharath-mission.





### DISTRIBUTION OF DUST-BIN TO TOWN MUNICIPAL COUNICIL - CHITTAPUR UNDER R&R ACTIVITIES









### DISTRIBUTION OF DUST-BIN TO TOWN MUNICIPAL COUNICIL - CHITTAPUR UNDER R&R ACTIVITIES









### DISTRIBUTION OF DUST-BIN TO TOWN MUNICIPAL COUNICIL - CHITTAPUR UNDER R&R ACTIVITIES









Orient Cement has taken initiative in providing Medical equipment's – Pediatric ICU Wards beds & General Wards beds and necessary equipment's for both wards to Chittapur Government Hospital



The District Administration, Taluka Administration – THO – DHO – MLA and people of Chittapur are expressed their gratitude towards Orient Cement for providing necessary and very useful medical equipment's, hospital beds for both ICU Pediatirc wards & General Wards which are very useful for their day-to-day usage in the Government Hospital Chittapur.

The District Administrator appreciated Orient Cement for the machine defibrillator rarely available in this region and which was very useful during the visit of Prime Minister of India to Mallkhed

































76GH+Q39, Mangalgi, Karnataka 585312, India

Mangalgi

Karnataka

India

2023-04-17(Mon) 12:34(pm)



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# DISTRIBUTION OF OFFICE CHAIRS, DESKTOP COMPUTERS- LCD PROJECTORS – WHTE BOARDS – XEROX MACHINE AND ERRECTED 500LPH RO PLANT – TO KENDRIYA VINDAYLAY SCHOOL KALABURGI UNDER R&R ACTIVITIES

Orient Cement has taken initiative for distribution of Office Chairs, Desktop Computers, LCD Projectors, White Boards-Xerox Machine and Errected 500 LPH RO plant facilitated to the the Students & Teachers of Kendriya Vidyalaya, Kalaburagi under our Rehabilitation & Resettlement (in short R & R) Activities.

The Students, Prinicpal & the staff, Government Officials are expressed their gratitude towards Orient Cement for donating Office Chairs, Desktop Computers, LCD Projectors, White Boards-Xerox Machine and Errected 500 LPH RO plant, which are very useful to the teachers and students.













































































# CONSTRUCTION OF DRINAGE FROM APMC YARD TO DIGGAON ROAD ADJCENT TO FLY OVER AT CHITTAPUR UNDER R&R ACTIVITIES

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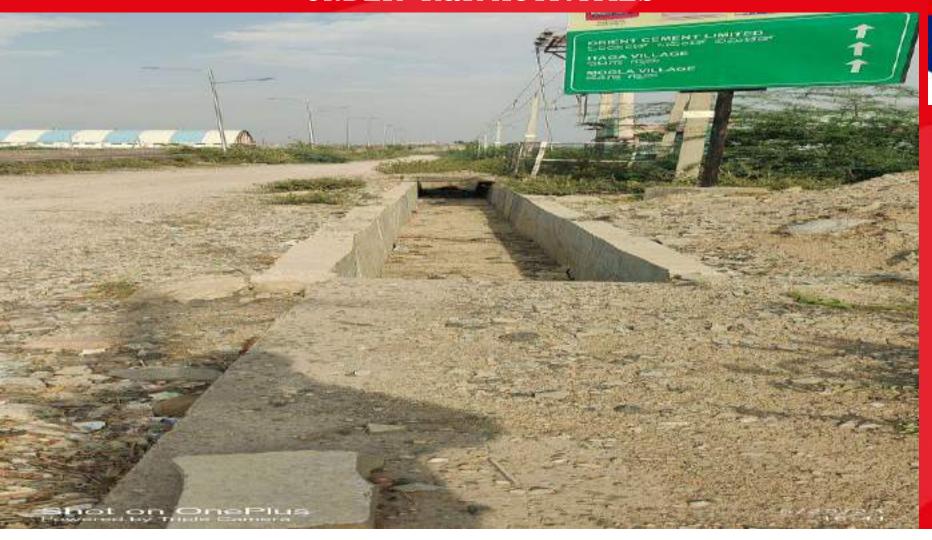
Orient Cement has taken initiative for construction of drainage system from APMC Yard to Diggaon Road adjacent to Fly over at Chittapur under our Rehabilitation & Resettlement (in short R & R) Activities.

The Taluka Administration, Chief Officer of TMC and other local public are expressed their gratitude towards Orient Cement for constructed drainage system for smooth drain movement in the requested location, which are very useful and there is no water or drain loging either side of the road at Chittapur.





# CONSTRUCTION OF DRINAGE FROM APMC YARD TO DIGGAON ROAD ADJCENT TO FLY OVER AT CHITTAPUR UNDER R&R ACTIVITIES









# CONSTRUCTION OF DRINAGE FROM APMC YARD TO DIGGAON ROAD ADJCENT TO FLY OVER AT CHITTAPUR UNDER R&R ACTIVITIES









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Orient Cement has taken initiative for construction of Compound Wall and Shed at Sub-Registrar, Chittapur under our Rehabilitation & Resettlement (in short R & R) Activities.

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The Taluka Administration, Sub-Registrar of Chittapur and Chief Officer of TMC and other local public are expressed their gratitude towards Orient Cement for constructed copound wall and shed in the requested location, which are very useful and there is no other unnessay movement of animals and non-related people and the shed is very useful to the people coming for registration and they use to sit in summer & rainy season

































REHABILITATION & RESETTLEMENT ACTIVITIES

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Thank You