BIRLA SHAKTI CEMENT
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VC/WS/MINES/VD/2023-24

Date: 25.05.2023

To,
Member Secretary,
Karnataka State Pollution Control Board,
49, 4th & 5th floor,
Parisara Bhavana,
Church Street,
Bangalore – 560 001.

Dear sir / Madam,

Sub: Environmental Statement of Mines for the financial year April 2022 to March2023.

Ref: Rules 14 of The Environment (Protection) Rules, 1986 & Notification No G.S.R329 (E) Dt.13.03.1992 and G.S.R.386 (E) Dated 22.04.1993 of MoEF. New, Delhi.

*****

With reference to the above, please find enclosed herewith environmental Statement report of our mines for the financial year 01st April, 2022 to ending 31st March, 2023.

Kindly acknowledge the receipt.

Thanking you,

Yours faithfully,
For Vasavadatta Cement,
For Kesoram Indus Ltd.,
CIN No KIL – L17119WB1919PLC003429

U Venkatpati Raju
Chief Manufacturing Officer

ಪ್ರಾದೇಶಿಕ ಕಛೇರಿ
ಪತ್ರದ ಸಂ.
ದಿನಾಂಕ 1/6/23
ಕಲಬುರಗಿ

Cc:

1. Additional Principal Chief Conservator of Forests (C),
   Ministry of Environment & Forest, Govt. of India
   Regional office (Southern zone)
   Kendriya Sedan, IVth Floor, E & F Wings, 17th Main Road,
   II Block, Koramangala, Bangalore-560 034.

2. Environmental officer,
   Karnataka Pollution Control Board
   Plot No. 12/2, Sy. No. 19/P, Mansafdar Layout,
   M.G. Road, Santraswadi, Kalaburgi – 585 101.

P + 08441 - 276005 / 276391

Corporate Office :
E : corporate@kesoram.net

Kesoram Industries Limited
Cement Division
Unit : Vasavadatta Cement Works : Post. Sedam - 585 222.
Tq. Sedam, Dist. Kalaburagi, Karnataka
Registered Office : Birla Building, 8th Floor, 9/1, R.N. Mukherjee Road, Kolkata-700 001.
CIN - L17119WB1919PLC003429

Report of
Environmental Statement for FY 2022-23
Of Injepalli Limestone Mines

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Prologue

Vasavadatta Cement is a Second Green Field project by Kesoram Industries Ltd and ISO Certified Company, in Vasavadatta Cement the Environmental 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. Vasavadatta Cement has adopted corporate policy along with various policies like, Water Policy, Energy Policy and Safety, Health and Environment Pillar policy, for conserving the Sustainable environment and its development. Company is rated Greenco Platinum by CII (Confederation of Indian Industries). From the year 2015-16 consecutively our mine is getting 5-star rating by Indian Bureau of Mines for Sustainable Development Frame work under Rule -35(2) of MCDR -2017.

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 behaviour from our staff to achieve a greener culture.

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

1.1 INTRODUCTION

Vasavadatta Cement, a unit of Kesoram Industries Ltd, is belongs to B.K.Birla group of company. It is an ISO 9001, 14001, 18001 & IS 50001 certified company located at Sedam, District Gulbarga, in the state of Karnataka. Company is rated Greenco Platinum by CII (Confederation of Indian Industries) also awarded as energy excellent & Water excellent Company. From 2015-16 consecutively our mine is rated 5 star by Indian Bureau of Mines for Sustainable Development Frame work.

Location of Vasavadatta Cement [Injepalli Mine] Vasavadatta Cement, Injepalli Mine is located near Sedam on Gulbarga – Sedam – Hyderabad highway at Lakshminaryana nagar, which is 3 km away from sedam town. The mines site lies between longitude 17^0 09'00'' to 17^0 12'23'' North, Longitude 77^0 17'30'' to $77^0$20'00'' East and is covered under Survey of India topo sheet no 56G/8.

1.2 REGIONAL GEOLOGY:

The area under reference forms a part of the Bhima Basin comprising nearly horizontal beds of sandstone, shale and limestone well exposed in the valley of river Bhima in Gulbarga and Bijapur districts of Karnataka.

a) **LITHOLOGY OF THE LEASEHOLD:** The leasehold area is extensively covered with black cotton soil with sporadic outcrops of siliceous limestone. The lithological sequence as intersected in boreholes is as follows:

- Black cotton soil.
- Buff to light grey siliceous limestone.
- Grey to dark grey limestone.
- Purple to dark purple limestone.
- Purple shale.

b) **RESERVES:** Injepalli mines having total reserve of 552.89 Million Tone as on 01.04.2023. The Reserves / resources were re-estimated considering value of 34% Cao and above for limestone and for shale, the Cao grade considered is 25<34% over an area of 897.87 Ha area. Life of the mine @ 9.00 Million tonnes is 61 years.

1.3 METHOD OF MINING:

We are operating mine in eco-friendly way for sustainable development of environment. The mine is operated by 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 further five benches formed based on grade/Quality of limestone. ROM quality is maintained with the help of online X-belt Gamma ray's analyzer. All the stone mined is being utilized for cement manufacturing.

1.4 ENVIRONMENT MANAGEMENT:

TOP SOIL MANAGEMENT: - Only black cotton soil (Top Soil) concealing limestone to a thickness of 1 to 1.5 m is removed as over burden. Black Cotton Soil removed is 100% utilized for bund formation along the lease boundary on which plantation is being carried out.

The average thickness of top soil is 1 to 1.5 m.

a. Soil Generated as on 01.04.2023. 03.67 Million Cum.

b. Utilized for Bund formation and Green belt in mines 02.95 Million Cum.

c. Utilized for Green belt in factory and Colony 00.41 Million Cum.

AIR QUALITY MANAGEMENT:

- Wet drilling arrangement and dust extractor system provided in drilling machine.
- Loading – Dust suppression on blasted heaps before commencement of loading by rain gun provided in water tanker.
- NIVIS dust suppression system mounted on truck is provided are made for reduction of fugitive dust by the micron size droplet produce by the high quality nozzles.
- Permanent haul road is made of concrete.
- Permanent ramps & roads in mines are equipped with static water sprinklers and temporary roads and benches with truck mounted pressurized water sprinkler.
- Bob- cot made of Ingersoll Rand attached with swiping machine is used for swiping of cemented floor.
- Bag House is provided at Lime stone crusher to collect Particulate matter.
- Crusher hopper is provided with Belt curtain.
- Conveyor belts are totally covered with metal hood.
- Water spray is being done in hopper & on conveyor belts.

WATER QUALITY MANAGEMENT:

- There are no water sources in the mining lease area.
- The ground water table in the mining lease area lies between 90-95 mtr. below ground level in Pre monsoon and 80-85 mtr below ground level in Post monsoon. Mines working are restricted to 55 Mtrs from ground level. Thus no water source, surface or underground is encountered during mining.
- To store water through harvesting the rainwater, Garland Nala formed at the higher profiles are diverted into the mines pit. For control of erosion, sedimentation and siltation check dam are constructed, pitching of sides and plantation over the slopes are taken up.
- The water from HEMM washing is routed through oil separation tank constructed.
- Flouting fountains are provided in reservoir for aeration of stagnant water and to retain the biological properties of water.
- Alcosol-44 sprayed on water reservoir to reduce the Evaporation of water of mines reservoir.
- Quality of water from surface, water bodies, regular monitoring is done as per CCOM's circulars 3/92 & 2/93.
- We using about 500 m3 of water for wet drilling, sprinkling for dust suppression, green belt development and domestic use.
- In order to assess the water level in surrounding villages every quarter water level is taken with help of piezometers at three locations

Monitoring Locations of Ground Water Level for Winer Season 2022-23 in the month of March'2023.

Code	Location Name	Direction w.r.t mine	Distance in km	Water Level in (mbgl)
MGWL-1	Sedam	NW	3.00	5.75
MGWL-2	Bhatgira Buzurg	SSW	4.00	3.60
MGWL-3	Kurkunta Village	ENE	3.40	5.40

AFFORESTATION:

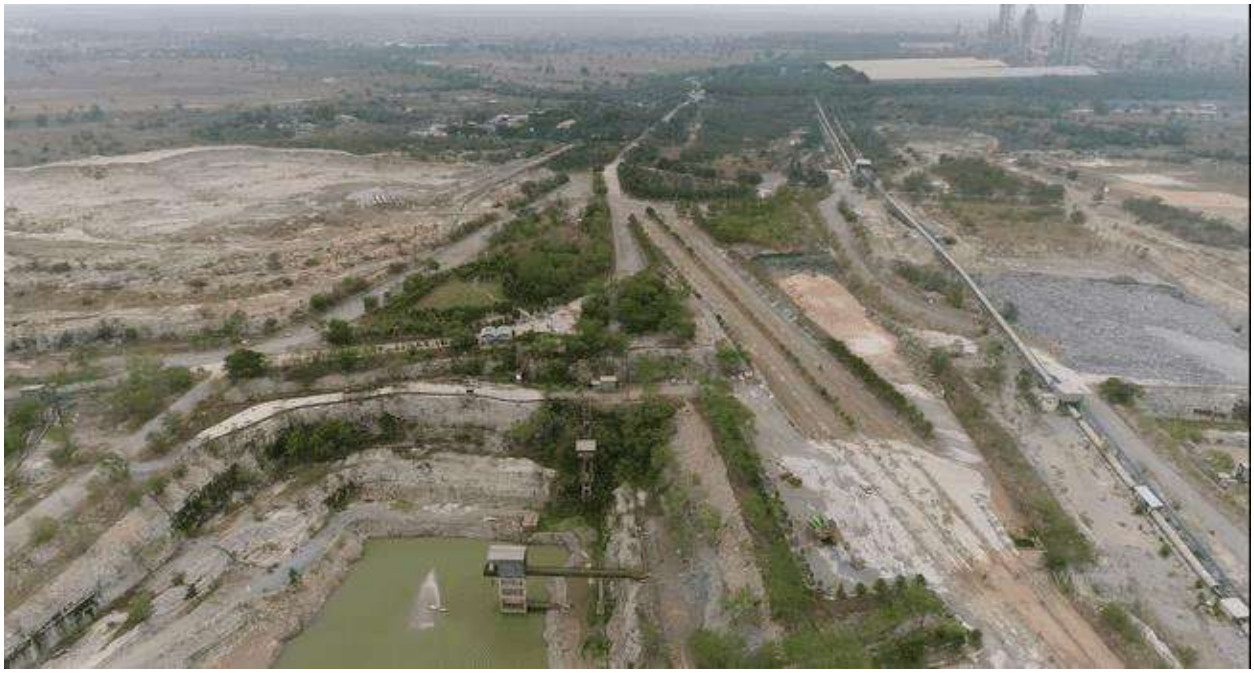
- As per Condition of Environmental Clearance accorded by MOEF. The total soil removed in the Leasehold is to be used for making bund along lease boundary (Safety zone) as on date till as on 01.04.2023 total 31.60 Ha area green belt is developed by planting 1,67,764 plants.

- Conacarpous Trees (Dubai plants) species are being planted in consultation with the Forest department for achieving better survival rate.

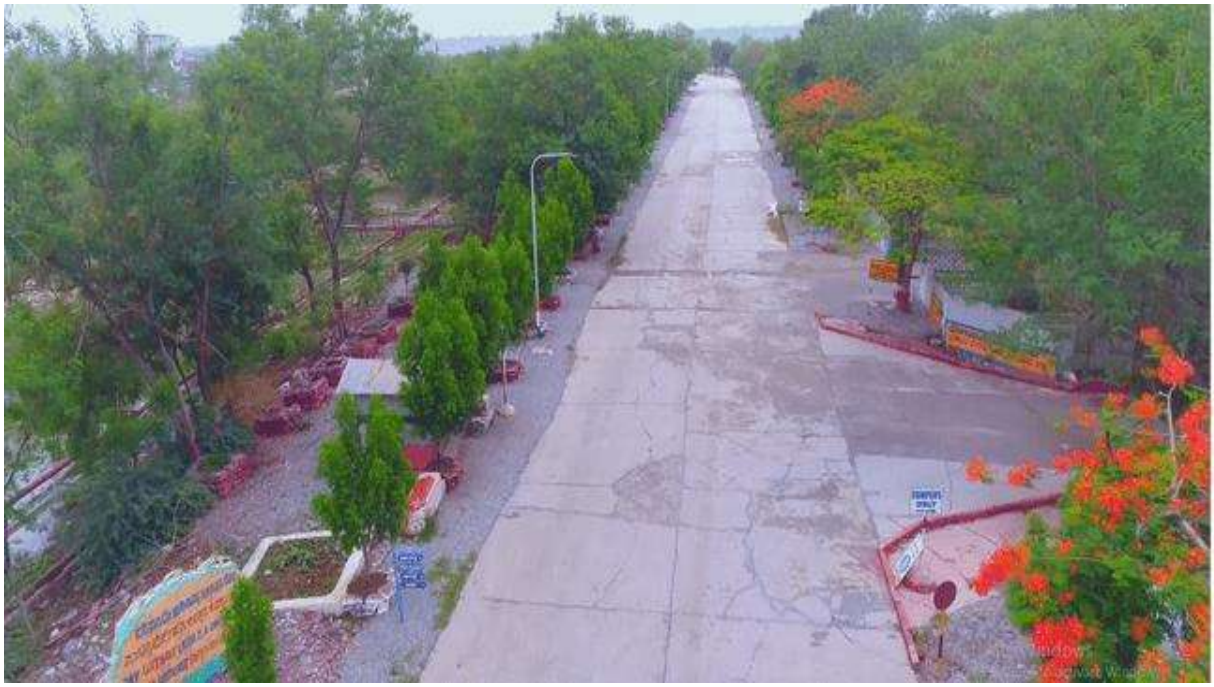
- Survival rate is increase up to 75-80% by use of water sprinklers arrangement and drip irrigation system. Two Water tankers provided with rain gun facilities for water spraying in planted area.

- NIVIS Dust suppression system provided with high quality nozzle which forms mist of water for effectively dust suppression as well as to increase the survival rate of plantation.

Trees Plantation on work Environment day on 5th June 2022.



Over all view of greenery in & around mines



Planation in mines entrance

Dubai Plants and Drip irrigation are planted in Mines for better Survival rate.

1. Ever green & will not shed the leaves in any season
2. Alternate leaf arrangement with short petioles
3. Having dense foliage & leathery leaves
4. Fast growing & will reach 6 feet in a year

Environmental Monitoring details as under. Monitoring was carried out by M/S Universal Enviro Association, Hyderabad in all four season. 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 each and every blast is monitored by "NOMIS". 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 (2022-23).**

S.NO.	POLLUTANTS (Particulate matter)	QUANTITY OF POLLUTANTS DISCHARGED (m3/H)	CONCENTRATIONS OF POLLUTANTS IN DISCHARGE (Mass/Vol.) (mg/Nm3)	Tolerance Limit (mg/Nm3)
01	New Crusher stack	47231.42	24	30

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

- Control blasting technique adopted by using NONEL, stem plug, wooden spacers
- Schedule and Preventive maintenance of HEMM.
- Centralized lubrication system in all HEMM and lincon oil dispensing at mines workshop is provided for proper lubrication.
- All HEMM are provided with Air Condition Cabin.
- Noise mapping is done regularly in all mining operation area.
- Frequency of Measurement: - Season Wise i.e. summer& Post Monsoon.

Measures taken for Ground Vibration Control:

- Use of NONEL shock tubes and keeping charge weight and delay per hole is as per the recommendation given in the scientific study carried out by CMRI. Dhanbad.
- Use of Bulk Mixing & Delivery system is using for transporting, mixing & charging of AN+FO in deep hole blasting.
- Use of Wooden Spacer, Stem Plug in blasting operation to reduce Charge/delay.
- Usage of empty plastic bottles for creating air gap and reducing explosive consumption.
- Regular monitoring of vibration & Noise by Nomis seismograph.
- Blasting operation is carried out under supervision of first Class Mines Manager.

1.5 RECLAMATION AND REHABILITATION:

RECLAMATION:

There is no generation of waste material from the mine. Every stone extracted is being used for cement manufacturing by proper blending and monitor by GAMM on line X-ray analyzer. By mining the limestone and Shale, a void of about 60 m maximum depth will be created. The mined out pit will be converted into an artificial lake or a water body as a part of hydro reclamation as per Scheme of Mining duly approved by Indian Bureau of Mines. As a part of reclamation till dates an area of 5.23 Ha Area is developed for water reservoir.

REHABILITATION: -

Injepalli village is situated in approx 3 acre of land adjacent to the mine lease having 108 families. Company acquired approx 6 acre of land to rehabilitated the existing village taking into consideration all the required infrastructure facilities like school, community hall etc.

1.6 CRUSHING PLANT:

Location of the Crusher Plant:

The crusher is located in Mines Pit. Crushed limestone is transported to plant by totally covered belt conveyor system length of 1.4 Km (Covered by Metal Hood).

FORM – V

(See rule 14)

Environmental Statement for the financial year ending 31st March 2023

PART – A

i) Name and address of the owner/ Occupier of the industry operation:	Shri. P. Radhakrishnan. Whole Time Director. Kesoram Industries Ltd. 9/1 R.N. Mukherjee Road KOLKATA – 700 001
Operation or Process	
ii) Industry Category:	Red
Primary : (STC Code)	----
Secondary : (STC Code)	----
iii) Production capacity	Limestone 9.00 Million Ton per Annum & Shale 0.5 Million Ton per Annum.
iv) Year of establishment	16.05.1983 (Execution) & 18.06.1984 (starting of mine).
v) Date of last Environment statement submitted	: 25.05.2022

PART B

WATER AND RAW MATERIAL CONSUMPTION

WATER CONSUMPTION

The Injepalli limestone mine has its own water reservoir of 40 Lakh m^3 The rain water harvesting is implemented to fill the water into the reservoir by making necessary drain along the slope and considering the contour elevation.

Consumption of water for vehicles cleaning, gardening, road sprinkling and sprinkling of water on blasted material during loading and unloading etc.

RAW MATERIAL CONSUMPTION

S.no	Name of the Raw Material	Name of the Product	Dispatch of Raw Material to Plant	
			During Previous Financial Year 2021-2022	During Current Financial Year 2022-2023
i.	Lime stone	Tonne of cement	68,58,115.00	64,72,138
ii.	Shale		1,021.00	9,900

PART C

POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT (2022-23):

(Parameter as specified in the consent issued)

S.NO.	POLLUTANTS (Particulate matter)	QUANTITY OF POLLUTANTS DISCHARGED (m^3/H)	CONCENTRATIONS OF POLLUTANTS IN DISCHARGE (Mass/Vol.) (mg/Nm^3)	Tolerance Limit (mg/Nm^3)
01	New Crusher Stack	47231.42	24	30

Environmental Pollution Control

Air

Dust Pollution Control System.

- ✓ 02 Nos Water Tanker with pressurised sprinklers & rain gun.
- ✓ NIVIS Dust suppression system.
- ✓ Satatic Water Sprinklers on Haul roads & Unlading Area.
- ✓ Plantation is done along the mining lease to arrest the dust.
- ✓ Baghouse and Belt Curtain at Crusher.
- ✓ Wet drilling along with dust extractor in Drilling machine.
- ✓ Convenor belt is Covered by Metal hood throw-out the length.

Water

Water Pollution Control System.

- ✓ Garland Drains maid for collection of rain water.
- ✓ Check dam.
- ✓ Desilting tanks .
- ✓ Water Conservation by Rain water harvesting.

Land

- ✓ Soil Bund along mining lease for development of green belt.
- ✓ Judicious use of Land for Mining Activities.
- ✓ Land use and Land Cover by using digital imagery by Remote sensing Centre.

Noise Control.

- ✓ **Ear Muffs.**
- ✓ **Green Belt.**
- ✓ **Improved Machine Design.**

Environmental Monitoring

Air Quality

NAAQ Standards - 2009

- ✓ PM-10.
- ✓ PM-2.5.
- ✓ SO2.
- ✓ NOX.
- ✓ Dust Fall

DGMS Requirement.

- ✓ GDS.
- ✓ PDS.
- ✓ Dust Concertation.
- ✓ Free Silica Analysis

Water Quality

IS – 10500 Standard of Drinking Water

- ✓ pH
- ✓ TDS, mg/l
- ✓ Total Hardness as CaCO3, mg/l
- ✓ Chlorides as Cl, mg/l
- ✓ Fluoride as F, mg/l
- ✓ Sulphates as SO4, mg/l
- ✓ Iron as Fe, mg/l

GSR 422 (E) Effluent standard

- ✓ pH
- ✓ BOD, mg/l
- ✓ COD, mg/l
- ✓ TSS, mg/l
- ✓ TDS mg/l
- ✓ Sulphide as S, mg/l
- ✓ Chlorides as Cl, mg/l
- ✓ Oil & Grease, mg/l

Ground water Level

Noise

- ✓ Noise Mapping.
- ✓ Noise Survey.
- ✓ Blasting Vibration

SUMMARY OF AMBIENT AIR QUALITY FOR SUMMER SEASON 2022-23:

Code No	Location	Concentration (in µg /m^3)									
		TSPM		RPM		PM 2.5		So2		Nox	
		Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
A-1	Mines Office	261	176	73.5	55.9	29.5	22.9	18.6	16.3	21.7	18.2
A-2	Drilling Area	326	286	90.3	72.6	36.2	29.0	17.3	15.4	20.2	17.5
A-3	Loading Area	263	201	97.3	79.1	38.7	31.6	16.6	14.3	19.3	17.0
A-4	Haulage Road	263	223	93.6	79.3	38.0	32.8	17.1	15.3	19.6	17.5
A-5	At Quarry Edge	328	299	86.1	71.7	35.0	28.6	15.1	13.1	17.3	15.5
A-6	Colony (Guest House)	153	136	60.6	49.1	24.6	19.6	14.1	12.7	17.0	15.2
A-7	Sedam Town	153	131	58.2	51.3	24.2	21.0	15.4	13.1	18.0	15.8
A-8	Udagi Village	153	131	63.5	51.6	25.8	20.5	14.8	12.8	17.9	15.0
A-9	Bhatgirabuzurg village	169	147	55.9	48.3	23.2	19.2	14.8	13.1	17.3	15.8
A-10	Surwar Village	154	122	58.6	53.1	23.5	21.7	13.9	12.6	16.6	14.7
A-11	Tilkur Village	148	129	54.2	47.3	22.5	19.3	14.6	12.6	17.7	14.8
A-12	Turk Bommanahalli Village	163	124	65.1	53.8	26.1	22.3	16.3	14.1	19.2	16.0

Co in all locations was found < 1ppm.

SUMMARY OF WATER QUALITY DURING FOR SUMMER SEASON 2022-23:

Sl. No	Parameters	Udgi village		Sedam Town		Bhatgira Buzurg		Kurkunta Village		Drinking Water Standards IS-10500	
		Max	Min	Max	Min	Max	Min	Max	Min	Desirable Limits	Permissible Limits
1	pH	7.96	7.87	7.48	7.40	6.92	6.76	7.42	7.35	6.5-8.5	No Relaxation
2	TDS, mg/l	1031	1006	1246	1191	2025	1972	1071	1053	500	2000
3	Total Hardness as $CaCO_3$, mg/l	742	721	293	263	921	851	561	542	300	600
4	Chlorides as Cl, mg/l	108	98.3	163	152	436	441	261	251	250	1000
5	Fluoride as F, mg/l	1.62	1.50	0.95	0.90	1.13	1.08	1.89	1.69	1.00	1.5
6	Sulphates as SO_4, mg/l	99.1	92.7	66.2	65.2	243	231	92.3	87.2	200	400
7	Iron as Fe, mg/l	0.34	0.21	0.09	0.02	1.42	1.36	<0.1		1.00	No Relaxation

Summary of Water Quality [Pump House] for Summer Season 2022-23.

S. No.	Parameters	Before Treatment		After Treatment		Drinking Water Standards IS-10500	
		Max	Min	Max	Min	Desirable Limits	Permissible Limits
1	pH	8.39	8.30	8.48	8.36	6.5-8.5	No relaxation
2	TDS, mg/l	278	254	331	286	500	2000
3	Total Hardness, mg/l	<0.1		<0.1		300	600
4	Chlorides, mg/l	49.1	47.3	55.1	48.3	250	1000
5	Fluoride, mg/l	0.91	0.80	0.97	0.91	1.0	1.5
6	Sulphates, mg/l	59.2	57.1	67.8	65.1	200	400
7	Iron, mg/l	0.04	0.01	0.02	0.01	1.0	No relaxation

Summary of Water Quality [Surface water] for Summer Season 2022-23.

S. No.	Parameters	Kagina River		Kamalavati Nallha		Drinking Water Standards IS-10500	
		Max	Min	Max	Min	Desirable Limits	Permissible Limits
1	pH	8.35	8.29	8.29	8.17	6.5-8.5	No Relaxation
2	TDS, mg/l	341	312	482	452	500	2000
3	Total Hardness as $CaCO_3$, mg/l	112	98.3	45.2	43.1	300	600
4	Chlorides as Cl, mg/l	33.4	28.6	38.3	36.8	250	1000
5	Fluoride as F, mg/l	0.88	0.81	0.92	0.87	1.0	1.5
6	Sulphates as SO_4, mg/l	18.9	17.8	28.9	24.1	200	400
7	Iron as Fe, mg/l	1.68	1.64	0.48	0.35	1.0	No relaxation

Summary of water quality for Summer Season 2022-23.

S. No.	Parameters	Mine Pit – A & B		Workshop Effluent		General Standards For Discharge of Effluents Into Inland Surface Water of GSR 422 (E)
		Max	Min	Max	Min	Permissible Limits
1	pH	8.38	7.80	7.91	7.69	5.5-9.0
2	TDS, mg/l	271	183	282	261	2100
3	Chlorides as CL,mg/l	35.2	25.4	45.2	41.4	1000
4	Flouride as F, mg/l	1.23	0.71	1.51	1.48	2.0
5	Sulphates as SO4,mg/l	45.2	24.8	68.3	61.2	1000
6	Iron as Fe, mg/l	0.06	0.01	0.08	0.02	1.0
7	Colour	<1.0				All efforts should be made to remove colour and unpleasant odour as per as practicable
8	Odour	Objectionable				

PART – D

Hazardous Wastes

The Hazardous and Other waste (Management and Transboundary Movement) Rules, 2016.

Hazardous waste Generation	Total Quantity MT/KL	
	During Previous Financial Year 2021-22	During Current Financial Year 2022-23
Used oil & waste/residue containing oil	9.32 MT	17.7 MT
Used Batteries (Apr-Mar)	5.15 MT	5.16 MT

PART – E

Solid Wastes

- There is no generation of solid waste from Mining operation.

PART – F

Please specify the characterisations (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 wastes:

There are no hazardous wastes in mine except waste lubricant oil drained from HEMM & Light vehicles & used batteries from the various equipment's. Used oil and Batteries are disposed to authorized KSPCB Reprocessors and recyclers.

Solid wastes: There is no solid waste generation from Mining operation.

PART – G

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

The following are the impact of pollution abatement measures on conservation of natural resources and the cost of production.

PART – H

Additional measures / Proposal modifications for energy conservation and better Environment

MODIFICATION CARRIED OUT DURING THE YEAR 2022-23.

1. Reducing lead distance by making short ramp from 395 R.L to box cut.

Benefits:

- ✓ Time saved & saving in fuel consumption.
- ✓ Productivity has increased.
- ✓ Curves reduced & Safety enhanced.
- ✓ Material Removed =50000MT.
- ✓ Trips handling: 50000/55=909.
- ✓ Time saved per trip=1minute = 15 Hrs.
- ✓ HSD consumption saved= 15*32=480 Ltrs.

2. Making short ramp from Low grade bench(425RL) to High grade bench(405RL)

Benefits:

- ✓ Time saved & saving in fuel consumption.
- ✓ Productivity has increased.
- ✓ Curves reduced & Safety enhanced.
- ✓ Material Removed = 150000MT.
- ✓ Trips handling: 150000/55=2727.
- ✓ Time saved per trip=1minute = 45 Hrs.
- ✓ HSD consumption saved = 45*32=1440Ltrs.

3. Avoiding entry of inrush of water into Mines Pit by making drains/trenches.

Benefits:

- ✓ Mineral conservation
- ✓ Productivity has increased
- ✓ We are feeding high grade limestone from r.L.395 bench
- ✓ Local problem solved.

4. Making of new ramp from 415 to 395 RL to reduce lead distance and to avoid road curves for better safety and saving in transportation cost.

Benefits:

- ✓ Smooth operation of cement plant and crusher plant in rainy season,
- ✓ Systematic mine development
- ✓ Quality maintenance is better, conservation of high grade material.
- ✓ Statutory compliance, Bench height maximum 12 mtrs.
- ✓ Drill rod jamming and hole deviation is avoided. Reducing lead distance by making short ramp from Ramsetu road to Centre road

5. Drone Survey of entire Mining lease area including 100 Mtrs buffer zone as per MCDR Rules 2021.

Benefits:

- ✓ Planning of Land use land cover of mining area is easier.
- ✓ Monitoring of working with reference to proposals is easier.
- ✓ Planning can be done for judicial usage of land for mining.

6. Sandvik drilling machine dust collector pipe jointer replacement

Benefits:

- ✓ Time saving, Improvement in maintenance
- ✓ Utilization of drill machine has increased.
- ✓ Reduction in air pollution.

7. Modification of silencer in BH-50 Dumpers.

Benefits:

- ✓ Reduction in Noise pollution.

8. Making new ramp from 415 to 405 R.L in Pit A

Benefits:

- ✓ Lead distance has reduced. Thus reduction diesel consumption.
- ✓ ensured safety
- ✓ Cost saving

9. Modification of Hydraulic metal hose in Ex-1200-3

Benefits:

- ✓ Avoided hydraulic oil leakage. Thus reduced soil contamination by oil leakage.

PROPOSED FOR THE YEAR 2023-24.

Sl.no	Details of Improvement	Benefits
1	Exploration work for mineral investigation	Conversion of Limestone Resources from (G3) to Reserves(G1) as per UNFC Classification.
2	Conservation of portable IR Tower light in to Electrical Tower light.	Reduction of HSD consumption
3	Drone Survey to be done as per MCDR(Mineral Conservation and Development Rules) Rules 2021	For better planning of mineral extraction & judicially using the land for mining activities.
4	Proposed plantation of 3000 Saplings in mines (1500 Fresh + Gap Filling)	Green belt development
5	Installation of permanent sprinkler on haulage road	Water conservation.

PART – I

Any other particulars for improving the quality of the Environment.

- ✓ Promoting Eco Friendly zero waste mining.
- ✓ Data Mines software (3D Modelling) is used for evaluation of reserve and resources for Mineral conservation.
- ✓ Total Station (survey instrument), GPS and AutoCAD aided mine planning and design.
- ✓ Installed Gamma Rays Cross Belt Analyser to detect high silica in limestone.
- ✓ Promoting Rain water harvesting practices. Storage capacity of Mines 40 lakhs Cubic meter and Alchosol – 44 spraying to minimise evaporation losses.
- ✓ Installed Software based blasting techniques to minimise ground vibration, fly rock and noise pollution, Seismograph and video recording of every blast is undertaken to record blasting performance.
- ✓ Key features of mining machinery – Systematic oil Sampling, Tyre Pressure monitoring system, Proximity Sensor, Rear View Camera, centralised Lubrication System, Nitrogen Inflator, Fire Detection and Suppression System, Video checking of engines, tyre management etc.
- ✓ Reduction in consumption of Diesel, Explosive, Lub oil & Tyres.

Awards and achievements during MEMCW Week – 2022-23

Mines Environment and Mineral Conservation Week (ME&MCW) - 2022-2023 final day celebrations were held at Zurich Club, Kalaburagi hosted by M/s. Shree Cements Ltd on 12.03.2023. Our organization has bagged the following prizes in different categories. Prizes were given by Shri Balakrishna Babu, Controller of Mines-SZ, IBM-Bengaluru. Our mine is falling under Group 1 in Karnataka state and organizations such as ACC-Wadi, UTCL- Malkhed, KIL-Sedam Unit, Orient Cement-Chittapur, Chettinad cement – Kallur and Kalaburgi Cement – Chatrasala are the other member mines of this group. The details of prizes are as under.

Sl. No.	Category	Prize
1	Environmental Monitoring	1st
2	Afforestation	2nd
3	Mineral Beneficiation	2nd
4	Publicity & Propaganda	2nd
5	Energy Conservation	2nd