JK Cement Works, Muddapur
(Unit : J.K. Cement Ltd)
CIN : L17229UP1994PLC017199
Works : P.O. Muddapur - 587 122 Distt. Bagalkot (Karnataka) India
+91-8350-289607 factory.muddapur@jkcement.com
www.jkcement.com

Through: Courier Service

JKCW/ENV/Env.Statement/Mudda.Mine/2023-24/78/08 ***Date: 07.09.2023***

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

Dear Sir,

Sub: Submission of **Environmental Statement Report in "Form-V" FY 2022-23** of Muddapur Limestone Mine of M/s. J. K. Cement Ltd, located at Muddapur Village, Mudhol Taluk, Bagalkot District, Karnataka-reg

Ref:-1 Notification No.Vide GSR 329 (E)dated 13.03.92 and GSR 386 (E)dated 22.04.1993.

Ref:-2 Vide Combined Consent Order AW-323792 dated 17.02.2021.

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As mentioned in the above cited subject matter, we are here by submitting the "Environmental Statement Report" FY 2022-23 in the prescribed format (Form V) under Environment (Protection) Rules, 1986 pertaining to Muddapur Limestone Mine of M/s. J.K Cement Ltd, located at Muddapur Village, Mudhol Taluk, Bagalkot District, Karnataka

Kindly acknowledge the receipt of the same.

Yours faithfully
For Muddapur Limestone Mine, Muddapur (Karnataka)
(Unit: J.K. Cement Ltd.)

Uma Shankar Choudhary
(Unit Head)

Rshedu

CC:

1. The Environmental Officer, Karnataka State Pollution Control Board, Sector No. 07, by pass road, Navanagar, Bagalkot- 587 102

11/09/2023
ಸ್ವೀಕರಿಸಿದೆ
ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ
ಪ್ರಾದೇಶಿಕ ಕಛೇರಿ, ಬಾಗಲಕೋಟೆ

ENVIRONMENTAL AUDIT STATEMENT

[FORM-V]

For

Muddapur Limestone Mine of JK Cement Ltd, Muddapur

Lime Stone Mining: 2 Million TPA

FOR THE
FINANCIAL YEAR
2022-2023

By

M/s. Muddapur Lime Stone Mine

Unit: JK Cement Limited

Muddapur Village, Mudhol Taluk, Bagalkot District, Karnataka-587122

CONTENTS

FORM - V

(See Rule 14) of Environment (Protection) Rules, 1986)

Environmental Statement for the Financial Year ending the 31st March 2022

M/s Muddapur Lime Stone Mine (Unit: J. K. Cement Limited)

PART – A

(i)	**Name and address of the owner / occupier of the industry operation or process.**	:	Umashankar Choudhary (Unit Head) Muddapur Lime Stone Mine (Unit: J. K. Cement Limited) Village-Muddapur, District: Bagalkot, Karnataka.
(ii)	**Industry category** **Primary (STC Code)** **Secondary (SIC Code)**	: :	Red Category
(iii)	**Production Capacity**	:	2.0 Million TPA
(iv)	**Year of Establishment**	:	Year 2008
(v)	**Date of Last Environment Statement submitted**	:	15-09-2022

PART – B

Water and Raw Material Consumption

(1) Water Consumption m^3/day & Consumption per unit of production

Dust Suppression	:	11752.85 KL
Cooling	:	NIL
Domestic	:	183 KL

Name of the Product	***Process Water Consumption (m^3) per unit (metric ton) of Product Output**	
	During the Previous Financial Year (2021-22)	**During the Financial Year (2022-23)**
Limestone	0.00622	0.00779

(2) Raw Material Consumption.

Name of the Raw Material	Consumption of Raw Material (metric ton) per unit (metric ton) of Output	
	During the Previous Financial Year (2021-22)	During the Financial Year (2022-23)
Diesel	0.00054	0.00045

PART – C

Pollution Discharged to Environment/unit of output
(Parameter as specified in the consent issued)

S.No.	Pollutants	Quantity of Pollutants Discharged (Mass/day) (tonne/day)	Concentrations of Pollutants in discharged (Mass / Volume) (kg/m³)	Percentage of variation from prescribed standard with reasons
(a)	Water	Waste water generated from the office toilets is discharged into soak pit via septic tank. There is no waste water in the mine. Mine's pit water is used for dust suppression in mine. Pit water testing report is as below in tabular form.		

Muddapur Mine's Pit Water Analysis Report

Pollutant	Concentrations of Pollutants in Discharges (Mass/volume) mg/liter	Standards in mg/liter (Permissible Limit)	Percentage of variation from prescribed standards with reasons
Colour	01	15	-93% deviation from standard
pH	6.8	NR	-
Turbidity	0.0	5	-
Conductivity	1600	-	-
TDS	1042	2000	-48% deviation from standard
Total Alkalinity as $CaCO_3$	301.4	600	-50% deviation from standard
Total Hardness as $CaCO_3$	355	600	-41% deviation from standard

	Calcium as Ca	188.3	200	-6% deviation from standard
	Magnesium as Mg	87.3	100	-13% deviation from standard
	Sodium as Na	44	-	-
	Potassium as K	06	-	-
	Iron as Fe	0.11	NR	-
	Chlorides as Cl	232.5	1000	-77% deviation from standard
	Sulphates as SO_4	156.9	400	-61% deviation from standard
	Nitrates as NO_3	1.12	NR	-
	Fluoride as F	0.22	1.5	-85% deviation from standard
	Boron as B	Absent	5.0	-
	Phosphorous as P	Absent	-	-
	Cadmium as Cd	Absent	-	-
	Nickel as Ni	Absent	NR	-
	Zinc as Zn	Absent	15	-
	Lead as Pb	Absent	-	-
	Chromium As Cr	Absent	-	-
	Mercury as Hg	Absent	-	-
	Manganese as Mn	Absent	0.5	-
	Copper as Cu	0.01	1.5	-99% deviation from standar
	NR*- No Relaxation			

(b)	Air	There is no point source emission in mine. Ambient air quality and fugitive emission monitoring report as below in tabular form.

Ambient Air Quality

Concentrations of Pollutants in Discharges (Mass/volume) µg/m³		Annual Avg in µg/m³	Percentage of variation from prescribed standards with reasons
Near Mine's Office			
PM_{10}	57.5	60	-4% deviation from standard
PM 2.5	25.1	40	-37% deviation from standard
SO_2	6.9	50	-86% deviation from standard
NO_x	17.3	40	-57% deviation from standard
Petlur Village			
PM_{10}	54.7	60	-9% deviation from standard
PM 2.5	24.1	40	-40% deviation from standard
SO_2	7.4	50	-85% deviation from standard
NO_x	16.4	40	-59% deviation from standard
Timmapur Village			

PM_{10}	53.5	60	-11% deviation from standard
$PM_{2.5}$	24.5	40	-39% deviation from standard
SO_2	7.2	50	-86% deviation from standard
NO_x	15.4	40	-62% deviation from standard
Colony D Block Quarter			
PM_{10}	54.0	60	-10% deviation from standard
$PM_{2.5}$	21.0	40	-48% deviation from standard
SO_2	6.6	50	-87% deviation from standard
NO_x	17.8	40	-56% deviation from standard
Fugitive Emission Monitoring (SPM)			
Loading Area	524.07	600	-13% deviation from standard
Drilling Area	541.29	600	-10% deviation from standard
Haulage Area	573.55	600	-4% deviation from standard
Waste Dumping Site	527.59	600	-12% deviation from standard
Service Road	499.76	600	-17% deviation from standard

PART – D

(As specified under Hazardous waste / Management and Handling rules, 1989, 2008, 2016 and amendments thereof)

Hazardous Waste	**Total Quantity (KL)**	
	During the Previous Financial Year (2021-22)	**During the Current Financial Year (2022-23)**
(a) From Process	N.A.	N.A.
(b) From Pollution Control Facilities	N.A.	N.A.

PART – E

Solid Wastes

Solid Waste		Total Quantity	
		During the Previous Financial Year (2021-22)	During the Current Financial Year (2022-23)
(a)	From Process	N.A.	
(b)	From Pollution Control facilities	N.A.	
(c)	(i) Qty. recycled or reused Within the unit.	N.A.	
	(ii) Sold	N.A.	
	(iii) Disposed: During the mining of limestone disposed of overburden (In MT)	0.0 MT	➢ Over burden generated- 10015 MT ➢ Over burden disposed/used in plantation- 10015 MT

PART – F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THE CATEGORIES OF WASTES.

- **Hazardous Wastes:** No hazardous wastes is being generated due to mining operations
- **Solid wastes:** Over Burden except, no solid waste is being generated during mining operations, the same is being used for development of greenery.

PART – G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

There is no impact on vegetation & water bodies in the surrounding areas due to mining activities, dust is suppressed at its generating sources. The following measures are taken to suppress the dust.

1. Periodical haul road maintenance and water sprinkling is being practiced for control of dust.
2. Wet drilling practiced and sharp drill bits used for drilling.
3. Induced ground vibration monitoring done regularly at the time of blasting operation.
4. Nonel system have been adopted for controlling of fly rock and Induced ground vibration during blasting
5. Dump slopes have been stabilized with plantation & green belt developed all along the lease boundary.
6. Drainage systems have been made all along the embankments of broken up area, the rain water diverted is collected into water recharging & harvesting pits, the water is used for operations of plant, dust suppression and plantation purpose.
7. Retaining walls are constructed and drainages have been made to control soil erosion at overburden dump bottom
8. Asphalt & CC roads are paved from mines head to crusher hopper.

No discharge of rain water from the mines to outside lease area, rain water in the catchment area at mine lease is diverted through drainage system as per the natural gradient.

Noise is generated in the mine due to following mining activities:

- Excavation, drilling, blasting and operations of HEMM.
- Transportation and handling of material.

The results are well below the permissible limits, the following measures are taken to reduce the noise level

- Providing enclosures for noise sources to reduce dispersion of noise like cabin in HEMM.
- Proper maintenance and lubrication of machinery rotating parts.
- Use electric delay detonator on surface in place of detonating fuse.
- By covering the detonating fuse as well as detonators under drill cutting or the fine material.
- By providing earmuffs and earplugs to eligible miners.
- Use of Air Decking & sufficient column stemming in the blast holes.

PART – H

ADDITONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

Plantation has been done on OB sites, road sides and on other parts of non-mineralized ML area. The top layer of the dump material and slopes are covered with top soil which is excellent property of water retention that supports good tree growth.

Green Belt development has been taken up in phased manner, during the FY 2022-23, we have planted 775 no's of saplings in Muddapur mine. The total plantation covered from inception of plant to 31st March 2023 is 20220 no's os sapling covering an area of 8.1 Ha.

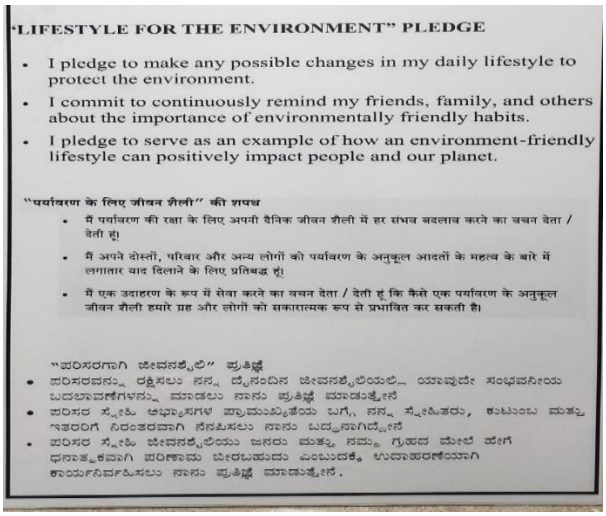
PART – I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.

- Regular water spraying is being done on haulage road and near loading places for effective dust suppression and thick plantation in and around the mine is being done.
- Regular and proper maintenance of noise generating machinery including the transport vehicles is being done to maintain noise levels and air quality is being regularly monitored.
- Delay detonators and shock tube initiation system is being used for blasting so as to reduce vibration and dust.
- Sharp drill holes and drills with water flushing systems are being used to reduce dust generation.
- We are providing all personal protective equipment (PPEs) to all mine employees i.e. dust mask (respirator), ear plug & ear muff, eye goggle etc. Concern to them as additional measures of Air & Noise Pollution Control.
- We are having full pledged laboratory for monitoring of ambient air quality, water testing, noise monitoring etc.
- Industry has been certified for Standards ISO 9001, 14001, 45001 and 50001.
- Renewable energy/Green energy generation through sonar lighting system.
- Fencing all along the plantation area for increasing survival rate of plantation.
- Water conservation through pipeline system & water sprinklers system.
- Halki mines rated as Five star during the year 21-22 from Ministry of Mines.

World Environment Day 5th June 2023 is the biggest international day for the environment, led by the United Nations Environment Programme (UNEP), and held annually since 1972, it has grown to be the largest global platform for environmental outreach. It is celebrated by millions of people across the world. World Environment Day 2023 is hosted by Côte d'Ivoire.

JKCW, Muddapur has conducted World Environment Week from 5th to 10th June, with a theme "**Beat Plastic Pollution**" is the campaign slogan, with the focus on "Solution for Plastic Pollution" as declared by UNEP, various events like **Mission Life Oath**, plantation drives and awareness programs have been conducted across organization to create awareness, glimpses of the event are follows.


"LIFESTYLE FOR THE ENVIRONMENT" PLEDGE

- I pledge to make any possible changes in my daily lifestyle to protect the environment.
- I commit to continuously remind my friends, family, and others about the importance of environmentally friendly habits.
- I pledge to serve as an example of how an environment-friendly lifestyle can positively impact people and our planet.

"पर्यावरण के लिए जीवन शैली" की शपथ

- मैं पर्यावरण की रक्षा के लिए अपनी दैनिक जीवन शैली में हर संभव बदलाव करने का वचन देता / देती हूं।
- मैं अपने दोस्तों, परिवार और अन्य लोगों को पर्यावरण के अनुकूल आदतों के महत्व के बारे में लगातार याद दिलाने के लिए प्रतिबद्ध हूं।
- मैं एक उदाहरण के रूप में सेवा करने का वचन देता / देती हूं कि कैसे एक पर्यावरण के अनुकूल जीवन शैली हमारे ग्रह और लोगों को सकारात्मक रूप से प्रभावित कर सकती है।

"ಪರಿಸರಗಾಗಿ ಜೀವನಶೈಲಿ" ಪ್ರತಿಜ್ಞೆ

- ಪರಿಸರವನ್ನು ರಕ್ಷಿಸಲು ನನ್ನ ದೈನಂದಿನ ಜೀವನಶೈಲಿಯಲ್ಲಿ ಯಾವುದೇ ಸಂಭವನೀಯ ಬದಲಾವಣೆಗಳನ್ನು ಮಾಡಲು ನಾನು ಪ್ರತಿಜ್ಞೆ ಮಾಡುತ್ತೇನೆ
- ಪರಿಸರ ಸ್ನೇಹಿ ಅಭ್ಯಾಸಗಳ ಪ್ರಾಮುಖ್ಯತೆಯ ಬಗ್ಗೆ, ನನ್ನ ಸ್ನೇಹಿತರು, ಕುಟುಂಬ ಮತ್ತು ಇತರರಿಗೆ ನಿರಂತರವಾಗಿ ನೆನಪಿಸಲು ನಾನು ಬದ್ಧನಾಗಿದ್ದೇನೆ
- ಪರಿಸರ ಸ್ನೇಹಿ ಜೀವನಶೈಲಿಯು ಜನರು ಮತ್ತು ನಮ್ಮ ಗ್ರಹದ ಮೇಲೆ ಹೇಗೆ ಧನಾತ್ಮಕವಾಗಿ ಪರಿಣಾಮ ಬೀರಬಹುದು ಎಂಬುದಕ್ಕೆ ಉದಾಹರಣೆಯಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸಲು ನಾನು ಪ್ರತಿಜ್ಞೆ ಮಾಡುತ್ತೇನೆ.

World Environment day has started with Mission Life Oath

World Environment Day Plantation at Plant along with Mission Life Oath, Plantation has been arried out by Miyawaki technique and same time drip irrigation system has been installed.

World Environment Day Awareness Programme at Govt College Bagalkot

WED Plantation and Mission Life Awareness programme in Muddapur Mine

WED Plantation and Mission Life Awareness programme in Halki Mine, involving the Govt School's students.

WED Plantation and Mission Life Oath with Employees family and children of Sir Padam Pat school - JK Cement Muddapur.

Environment Dept. has taken awareness program on World Environment Day-2022 and awareness speech on Effects of plastics on Environment to children of Sir Padam Pat school - JK Cement Muddapur.

Mission Life: JKCW, Muddapur has issued a circular on "Ban of Single Use Plastics" in Plant and Colony premises. We have conducted awareness programs on ban of single use plastics to colony residents, workers and "No to single use plastic" display boards have been installed in plant and colony.

KCW, Muddapur has celebrated World Environment Week Programme along with Mission Life Awareness and Oath, during World Environment Week Programme along with Mission Life, JK Cement Muddapur has conducted various programme in Halki Mine, Muddapur Mine, Colony residential area and Govt College Bagalkot regarding WED and Mission Life Awareness and Oath.

Display Boards at Plant & colony Awareness drives on premises