JK Cement Works, Mangrol
A unit of JK Cement Ltd.
CIN: L17229UP1994PLC017199
C/o. Kailash Nagar - 312617, Nimbahera Distt., Chittorgarh (Raj.) INDIA
+91-1477-220098, 220087 jkc.mgrl@jkcement.com
www.jkcement.com

JKCW/MGR/PC/ESR/21/22-23 Reg Date: 23/09/2023

To,
The Member Secretary
Rajasthan State Pollution Control Board
4, Industrial Area
Jhalana Doongri
Jaipur – 302004 (Raj)

Sub: Submission of Environmental Statement Report in Form-V for Financial Year 2022-2023 by M/s JK Cement Works, **Tilakhera Limestone Mines**, in Mangrol Village, Tehsil Nimbahera, Chittorgarh and Rajasthan-312601.

Ref: F (Mines)/Chittorgarh (Nimbahera)/1868(1)/2017-2018/2126-2130
Order No.2017-2018/Mines/9303 Dated: 20/06/2017

Dear Sir,

With reference to the above cited subject, we M/s. J.K. Cement Works, Tilakhera Limestone mine hereby submitting the Environmental Statement Report in Form-V for Financial Year 2022-2023 as per, Rule No 14 of The Environment (Protection) Rules, 1986, EC & CTO order.
This is for your information please.

Thanking You
Yours Faithfully
For J.K. Cement Works, Mangrol

R. B. M. Tripathi
Unit Head & President (Operations).

Encl: Form-V Environment Statement report.
Copy: The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderiya, Dist. - Chittorgarh (Raj)-312021.

ENVIRONMENTAL STATEMENT
FORM - V

Environmental Statement for the financial year 2022-2023, ending the 31st March 2023

PART-A

i. Name an address of the owner/occupier of the industry operation or process	Sh. R.B.M.Tripathi Unit Head & President (Operations) J.K. Cement Works, Mangrol, **Tilakhera Limestone Mine** Village Mangrol, Tehsil-Nimbahera District- Chittorgarh ,Rajasthan , Pin code- 312617
ii. Industry category **Primary - (STC Code), Secondary - (STC Code)**	Red Category Limestone Mining
iii. Production capacity	Limestone -2.4 MMTPA
iv. Year of establishment-	Year 1979
v. Date of last environmental statement submitted	19th September 2022

PART-B

WATER AND RAW MATERIAL CONSUMPTION

i. WATER CONSUMPTION in m^3/day

Process	: -	Nil
Cooling	: -	300 m^3/day
Domestic	: -	5 m^3/day

Name of products	Process water consumption per unit of products	
	During the previous financial year (2021-22) KL/Ton of out put	During the current financial year (2022-23) KL/Ton of out put
Limestone	**0.0119**	**0.0083**

Water consumption with respect to output production for the financial year 2022-2023

Month & Year	Water Consumption in KL	Production in MT	Specific Consumption KL/Ton of Product output
Apr-22	2,188	252549	0.0087
May-22	1,765	226201	0.0078
Jun-22	1,671	198467	0.0084
Jul-22	496	142335	0.0035
Aug-22	427	80792	0.0053
Sep-22	1,694	108545	0.0156
Oct-22	2,226	138427	0.0161
Nov-22	1,130	83819	0.0135
Dec-22	1,222	87635	0.0139
Jan-23	1,136	153291	0.0074
Feb-23	790	169511	0.0047
Mar-23	90	147157	0.0006
Total	**14,834**	1788728	0.0083

ii. RAW MATERIAL CONSUMPTION

Name of raw material	Name of products	Consumption of raw material per unit of output	
		During the previous financial year (2021-22)	During the current financial year (2022-23)
AMMONIUM NITRATE 'PRILLED'	**Limestone**	0.0986KG/MT	0.0915KG/MT
ED		0.00089KG/MT	0.0012KG/MT
Dynaex Boost-83 MM		0	0.0002 KG/MT
KELVEX 600 -83 MM		0	0.0105 KG/MT
AQUADYNE-83 MM		0.001623KG/MT	0.0030 KG/MT
EMUAL BOOST -125 GRM		0.000814KG/MT	0.0008 KG/MT
KELVEX-P -83 MM		0	0.0011 KG/MT
KELVEX 500-83 MM		0.006814KG/MT	0.0099 KG/MT
ENERGEL-83 MM		0.001655KG/MT	0.0043 KG/MT
D- FUSE		0.04453KG/MT	0.0490 KG/MT
MSDD		0.000254KG/MT	0.0003 KG/MT
Nonel's		0.01044KG/MT	0.0094 KG/MT
HSD (High Speed Diesel)		0.6369LITER/MT	0.5454LITER/MT

Tilakhera Limestone Mine Raw material Consumption for the financial year 2022-2023													
Material Description	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Total
AMMONIUM NITRATE 'PRILLED' (KG)	20250	15750	17800	12200	5250	9650	14600	12000	11050	13700	14800	16650	163700
ED (KG)	218	208	248	194	88	129	172	4	157	224	212	242	2096
Dynaex Boost-83 MM (KG)	0	0	0	0	0	0	0	0	0	0	0	325	325
KELVEX 600 -83 MM (KG)	2200	2400	1150	1700	1100	775	900	1200	1825	1650	1750	2050	18700
AQUADYNE-83 MM (KG)	1200	125	1275	825	150	325	750	750	0	0	0	0	5400
EMUAL BOOST -125 GRM (KG)	192.25	128.625	117.125	92.625	40	89.625	126.5	91.75	77.5	135.625	141	144.25	1376.875
KELVEX-P -83 MM (KG)	0	335	485	503	64	115	9	0	0	31	292	207	2041
KELVEX 220 -25 MM (KG)	0	0	0	0	0	0	0	0	0	0	0	0	0
KELVEX 500-83 MM (KG)	2425	2350	1925	2025	875	1000	1275	550	275	1725	1750	1575	17750
ENERGEL-83 MM (KG)	1750	700	800	825	625	0	0	0	600	275	325	1850	7750
D- FUSE (KG)	11125	9750	9475	7550	3150	4675	6750	5475	5300	7050	7475	9850	87625
MSDD (KG)	64	176	92	16	8	14	4	134	0	18	12	56	594
Nonel's (KG)	2329	1640	1751	1374	587	898	1300	1116	1026	1453	1572	1826	16872
HSD (High Speed Diesel) (Litres)	137736	123367	108241	77627	44063	59199	75496	45713	47795	83603	92449	80257	975546
Production (MT)	252548.9	226200.84	198467.3	142334.92	80792.4	108544.63	138427.14	83818.64	87635.33	153290.52	169510.54	147156.85	1788728.01

PART-C

POLLUTION DISCHARGE TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (Tons/Day)	Concentration of pollutants in discharge (Mass/Volume)	Percentage of variation from prescribed standards with reasons
A. Water	NIL		
B. Air: There is no continuous source emission. The dust generated during the mining operation is monitored by establishing the Ambient Air Quality monitoring stations at different stations and the results are within the prescribed limits.			

Month/ Year	Ambient Air Quality Monitoring Results for the financial year 2022-2023									
	Near Mine Office					Near Ravana Office				
	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO	PM_{10}	$PM_{2.5}$	SO_2	NO_x	CO
Apr-22	48.0	31.4	12.7	19.6	641	57.3	38.8	16.5	24.5	670
May-22	51.0	28.0	9.3	16.8	607	57.4	32.0	13.3	19.6	636
Jun-22	66.2	42.2	16.5	24.6	636	77.5	49.0	15.6	25.2	773
Jul-22	59.9	37.2	19.1	32.4	704	70.0	44.8	23.1	39.8	742
Aug-22	44.4	23.2	16.4	23.3	664	47.4	26.3	20.2	27.2	705
Sep-22	41.4	21.6	14.7	20.5	705	45.6	23.0	19.5	25.9	745
Oct-22	58.6	28.2	12.8	16.8	490	69.4	31.3	13.3	14.5	516
Nov-22	51.4	23.2	10.2	18.8	664	62.8	29.3	12.6	15.5	544
Dec-22	66.7	25.6	10.4	20.7	716	72.0	29.8	13.0	17.3	607
Jan-23	63.1	37.2	13.4	25.7	716	61.6	28.4	18.0	25.0	533
Feb-23	59.0	23.8	14.2	19.7	762	46.5	21.6	11.2	27.9	561
Mar-23	34.9	24.6	14.0	27.9	682	35.7	19.8	11.0	17.7	779
Yearly AVG	**53.72**	**28.85**	**13.64**	**22.23**	**665.58**	**58.6**	**31.18**	**15.61**	**23.34**	**650.92**
% of Deviation wrt standard	**-46.28**	**-71.15**	**-86.36**	**-77.77**	**CO 1 Hr Standard is 4000 µg/M³**	**-41.4**	**-68.82**	**-84.39**	**-76.66**	**CO 1 Hr Standard is 4000 µg/M³**
NAAQMS Yearly Avg Standard Limit	**PM_{10}=40 µg/M3**		**SO_2 50 µg/M3**	**NOx 40 µg/M³**		**$PM_{2.5}$= 40 µg/M3**		**SO_2 50 µg/M3**	**NOx 40 µg/M³**	

Noise Monitoring Data for the financial year 2022-2023

Month & Year	Near Mine Office		Near Ravana Office	
	Day time	Night Time	Day time	Night Time
Apr-22	69.4	39.4	71.2	42.2
May-22	65.5	46.3	62.1	47.1
Jun-22	69.4	42.2	63.3	40.1
Jul-22	59.2	40.5	62.2	41.2
Aug-22	60.8	41.5	64.3	46.2
Sep-22	62.0	47.1	65.7	49.9
Oct-22	64.3	47.6	61.1	44.6
Nov-22	58.8	46.2	55.9	47.4
Dec-22	60.1	49.5	61.3	51.4
Jan-23	64.1	50.6	65.1	52.2
Feb-23	69.4	52.5	61.9	55.4
Mar-23	62.3	55.3	60.9	52.3
Yearly AVG	63.78	46.56	62.92	47.5
Standard Limit			75dBA	70dBA

PART-D

(As specified under Hazardous & Other Waste Management Rules-2016)

Hazardous waste	Total Quantity	
	During previous financial year (2021-22) (KL)	During current financial year (2022-23) (KL)
(a) From process	Used oil (5.1)- 5.0* Waste oil (5.2)- 31.6*	Used oil (5.1)- * 7.6KL Waste oil (5.2)- *4.4 KL
(b) From pollution Control facilities	Not applicable	Not applicable

***The hazardous wastes generated are used/waste oil from lines 1, 2, and 3 of cement plants, CPP, WHRS, limestone mines, etc. The hazardous waste generated is sold through CPCB certified recyclers.

PART-E

SOLID WASTE

		Total Quantity	
		During previous financial year (2021-22) (MMT/Year)	During current financial year (2022-23) (MMT/Year)
From process			
1	**Sub grade**	0.5201	0.542
2	**Interstitial Clay/ Screen rejects/ Waste**	0.0251	0.0389
3	**Top Soil**	0.0085	0.0099

PART-F

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

The hazardous waste generated is used waste oil from vehicle operations is send to the authorized recycler authorized by CPCB/RSPCB

PART-G

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

Use of wet drilling system is adopted to control fugitive dust emission
Blasting: Blasting is between 12: noon to 3:00 PM when air density is low. Use of Control blasting technique (Non-El) Non Electrical with delay detonators to avoid noise and vibration.
Dozing: The floor near the blasting face is dozed evenly to avoid heavy dust generation with the movement of dumpers.
Loading: Water spray on the blasted rock is being carried out for dust suppression before they load on to the dumpers.
Haul road Dust Suppression: Mobile Water tanker is deployed to control the fugitive road dust emissions at mimes
Permanent water sprinklers are provided in mine haulage road.
All the required PPE's have been provided to all the employee and workmen.
Periodical maintenance of Heavy earth moving machinery to meet the emission levels.
Operator cabin is dust proof & closed cabin to control noise.

PART-H

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

Expenditure incurred on environment protection during the financial year 2022-2023
Pollution Control Expenses Statutory: Rs 53,366.60
Pollution Control expenses others: Rs 45,860.60

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

Monitoring of ambient air & water quality is being carried out at regular intervals as per the consent order.
Ambient air emissions are within the prescribed norms.
One CAAQM station is installed at Mines office to monitor the air quality continuously 24/7 and the data is being uploaded to the RSPCB & CPCB.
Green belt development: Plantation of native species to protect the species diversity and also develop local ecosystem. Arrest the soil erosion Noise control and aesthetic beauty of the plant. In addition 7.5 mts is being developed as a shelter belt to arrest the dust emissions and noise control.
Total plantation done in safety zone till FY 2022-23 is 4.013 ha with 10262 nos. including gap filling.
The WCLP has been referred by DFO Chittorgarh to the Chief Conservation Officer of the Forest Department.20% of Rs 57.07 lakh will be paid to DFO – Chittorgarh against the WCP total of 285.30/-Cr in July 2021
As per mining plan, groundwater values are measured in the network of existing wells.3piezo holes for periodical and one DWLR with a telemetry system for online monitoring of groundwater levels.

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