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
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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, **Mangrol Limestone Mines**, in Mangrol Village, Tehsil Nimbahera, Chittorgarh and Rajasthan-312601.

Ref: F (Mines)/Chittorgarh (Nimbahera) /1863 (1)/2016-2017/7040-7044 Order No.2018-2019/ Mines /9905, Dated: 25/02/2019.

Dear Sir,
With reference to the above cited subject, we M/s. J.K. Cement Works, Mangrol 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 Mangrol 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 -1.50 MMTPA
iv. Year of establishment-	Year 2012
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 : - 80.5 m^3/day

Domestic : - 0.5 m^3/day

Name of products	Process water consumption per unit of products	
	During the previous financial year (2021-22) KL/Ton	During the current financial year (2022-23) KL/Ton
Limestone	**0.0167**	**0.1873**

Month & Year	Water Consumption in KL	Production in MT	Specific Consumption KL/Ton of Product output
Apr-22	990	5374.79	0.184
May-22	2,049	7676.5	0.267
Jun-22	1,897	6743.52	0.281
Jul-22	437	13727.31	0.032
Aug-22	0	6842.36	0.000
Sep-22	354	5036.78	0.070
Oct-22	0	15322.88	0.000
Nov-22	1,777	7346.54	0.242
Dec-22	1,813	10193.74	0.178
Jan-23	665	541.85	1.227
Feb-23	2,193	521.42	4.206
Mar-23	8,303	30001.38	0.277
Total	**20,477**	**109329.07**	0.187

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	**Limestone**	0.09066KG/MT	0.03841KG/MT
KELVEX 600 -83 MM		0.00582KG/MT	0.00731KG/MT
EMUAL BOOST -125 GRM		0.000582KG/MT	0.00026KG/MT
KELVEX-P -83 MM		0.00197KG/MT	0.00024KG/MT
KELVEX 500-83 MM		0.0066275KG/MT	0.00480KG/MT
Aquadyne (83 mm)		0.00249KG/MT	0.0000KG/MT
ENERGEL-83 MM		0.002570KG/MT	0.00343KG/MT
HSD (High Speed Diesel)		0.36421 Lit/MT	0.16816Lit/MT

Mangrol 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)	0	700	1700	750	1050	0	0	0	0	0	0	0	4200
KELVEX 600 -83 MM (KG)	0	75	100	275	350	0	0	0	0	0	0	0	800
AQUADYNE-83 MM (KG)	0	0	0	0	0	0	0	0	0	0	0	0	0
EMUAL BOOST -125 GRM (KG)	0	6.375	13.5	4.75	4.125	0	0	0	0	0	0	0	28.75
KELVEX-P -83 MM (KG)	0	0	0	6	21	0	0	0	0	0	0	0	27
KELVEX 220 -25 MM (KG)	0	0	0	0	0	0	0	0	0	0	0	0	0
KELVEX 500-83 MM (KG)	0	25	0	300	200	0	0	0	0	0	0	0	525
ENERGEL-83 MM (KG)	0	0	50	150	175	0	0	0	0	0	0	0	375
HSD (High Speed Diesel) (Litres)	904	1291	1134	2308	1151	847	2577	1235	1714	91	88	5045	18385
Production (MT)	**5374.79**	**7676.5**	**6743.52**	**13727.31**	**6842.36**	**5036.78**	**15322.88**	**7346.54**	**10193.74**	**541.85**	**521.42**	**30001.38**	**109329.1**

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									
	Towards Factory Gate					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	46.5	28.6	9.6	17.2	624	53.4	36.3	12.3	19.3	658
May-22	49.6	30.4	8.8	15.1	527	51.9	32.4	10.4	17.0	567
Jun-22	60.2	45.6	18.6	25.3	550	54.1	36.6	17.4	28.3	693
Jul-22	53.9	40.4	26.5	31.7	595	61.4	49.4	31.4	35.1	682
Aug-22	29.3	18.8	9.2	13.6	538	36.6	23.1	11.1	17.5	573
Sep-22	27.5	16.5	7.2	11.4	544	33.1	20.3	10.0	16.0	584
Oct-22	47.5	22.0	7.3	15.8	475	41.8	19.1	8.8	11.6	487
Nov-22	44.1	19.5	6.6	13.6	435	38.6	19.0	11.5	14.7	544
Dec-22	57.0	20.5	9.7	24.2	779	42.6	15.3	12.5	17.5	653
Jan-23	56.0	31.8	15.8	27.0	836	58.5	18.6	19.1	23.1	853
Feb-23	54.8	28.7	15.8	27.0	687	67.0	32.7	11.4	24.6	590
Mar-23	50.1	24.0	12.6	26.3	567	57.9	29.5	12.9	21.4	412
Yearly AVG	**40.02**	**18.52**	**14.27**	**15.88**	**596.42**	**49.74**	**27.69**	**14.07**	**20.51**	**608**
% of Deviation wrt standard	**-59.98**	**-81.48**	**-85.73**	**-84.12**	**CO 1 Hr Standard is 4000 µg/M³**	**-50.26**	**-72.31**	**-85.93**	**-79.49**	**CO 1 Hr Standard is 4000 µg/M³**
NAAQMS Yearly Avg Standard Limit	**PM_{10}=60 µg/M3**		**SO_2 50 µg/M3**	**NOx 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	Towards Factory gate		Near Ravana Office	
	Day time	Night Time	Day time	Night Time
Apr-22	52.2	41	61.6	47.5
May-22	65.6	41.2	61.5	42.3
Jun-22	51.5	36.8	53.2	37.2
Jul-22	54.4	37.8	55.6	39.4
Aug-22	57.7	40.2	56.8	36.4
Sep-22	55.4	39.6	58.7	38.1
Oct-22	58.3	41.4	54.2	43.8
Nov-22	61.2	43.9	58.6	45.9
Dec-22	55.4	45.4	50.2	47.1
Jan-23	58.6	46.6	55.3	45.3
Feb-23	60.3	49.6	62.6	48.3
Mar-23	62.2	49.8	60.9	45.2
Yearly AVG	**57.73**	**42.78**	**57.43**	**43.04**
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			
	Sub grade	0.02580	0.00
	Over Burden/Waste	0.00	0.00
	Top Soil	0.012156	0.000046

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.
No secondary blasting is being done during the mining operation. Oversized boulders are broken by use of Hydraulic Rock breaker.
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 others: Rs: 25,340.0.6

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

1. Monitoring of ambient air & water quality is being carried out at regular intervals as per the consent order.
2. Ambient air emissions are within the prescribed norms.
3. 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.
4. 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.
5. "In FY 2022-23, total plantation done in safety zone in 0.7 ha, with 3961 of saplings. The total plantation done within lease in 2.01 ha, with 2829 of saplings.
6. Rain water harvesting is being done through mine pit water stored in lower most benches and constructed one recharge well & 02 Nos. Check Dams to augment the water resources in the mines area
7. 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.