JK Cement LTD.

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J.K. Cement Works, Mangrol
C/o. Kailash Nagar-312617, Nimbahera
Distt. Chittorgarh (Raj.) INDIA

CIN : L17229UP1994PLC017199

ISO 9001:2008, ISO 14001:2004 & OHSAS 18001 : 2007 CERTIFIED COMPANY

MGR/PC/ESR/21 264 Date: 15.09.2020

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

Subject: Environmental Statement Report for the FY 2019-2020 of Power Plant (25 MW) of M/s J.K. Cement Works, Mangrol, Tehsil: Nimbahera, Dist : Chittorgarh (Rajasthan).

Ref.:F(Tech)/Chittorgarh(Nimbahera)/1(1)/2008-2009/1521-1523 & Order No 2017-2018/CPM/4862, Dated 30/05/2017.

Dear Sir,

With reference to above subject matter, Please find enclosed herewith Environment Statement Report of Power Plant (25MW) of M/s J.K. Cement Works, Mangrol for the FY 2019-2020 for your reference and record. We trust you will find the same in order.

Thanking you.

Yours Faithfully
For J.K. Cement Works, Mangrol

O/C

Anil Kumar Jain
Sr. General Manager (Environment)

Encl. : as above.

Copy:
The Regional Officer, Rajasthan State Pollution Control Board, Near FCI Godown, Chanderia, Distt.- CHITTORGARH (RAJ)

ENVIRONMENTAL STATEMENT

FORM - V

Environmental Statement for the financial year 2019-2020, ending the 31st March 2020

PART-A

i. Name an address of the owner/occupier of the industry operation or process	**25 MW Captive Power Plant** **J. K. Cement Works, Mangrol** C/o Kailash Nagar, Nimbahera Tehsil: Nimbahera, Chittorgarh (Rajasthan) PIN- 312617
ii. Industry category **Primary - (STC Code), Secondary - (STC Code)**	Primary
iii. Production capacity	25 MW Power Generation
iv. Year of establishment-	Year 2014
v. Date of last environmental statement submitted	25th September 2019

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 (2018-19) (KL/MWh)	During the current financial year (2019-20) (KL/MWh)
1. POWER	**0.46**	**0.40**

ii. RAW MATERIAL CONSUMPTION

Name of raw material	Name of products	Consumption of raw material per unit of output	
		During the previous financial year (2018-19) (MT/MWh)	During the current financial year (2019-20)(MT/MWh)
Coal	**Power (Electricity)**	0.5984	0.705

PART-C

POLLUTION DISCHARGE TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (Ton/Day)	Concentration of pollutants in discharge (mg/Nm3)	Percentage of variation from prescribed standards with reasons
(a) Water	Effluent waste water generated from blow down of cooling tower and DM plant waste water treated in neutralization pit as prescribed by Rajasthan State Pollution Control Board and treated water is being utilized in cement plant in cooling purpose, hence maintaining Zero Liquid Discharge unit.		
(b) Air	**Stack Emission**		
PM	0.106	16.0	- 32 %
SO2	21.385	145.22	- 24.20 %
NOX	13.709	91.2	- 30.4 %

Ambient Air Quality (yearly average) in µg/m³

Location	Parameters				
	PM10	PM2.5	SO2	NOx	CO (in mg/m³)
Near Time Office	52.7	36.7	18.2	24.6	644.9
Near Thermal Power Plant	57.5	39.7	20.0	23.6	721.5
Near Factory Gate	59.7	39.8	18.0	25.5	746.3
Near Colony Gate	54.2	38.1	16.9	24.9	687.2

STP treated water quality data

STP treated water Quality		
Parameters	**Standards**	**Average results of YTD**
pH	Between 5.5 to 9.0	7.08
Total Suspended solids	Not to exceed 100 mg/l	4.95
Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	3.7
Chemical Oxygen Demand	Not to exceed 250 mg/l	12.48
Oil & Grease	Not to exceed 10 mg/l	< 2.46
Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	1.05
Sulphide (as S)	Not to exceed 2.0 mg/l	0.1
Total Residual Chlorine	Not to exceed 1.0 mg/l	0.1

Treated water quality of Neutralization pit data

Treated water quality of Neutralization pit		
Parameters	**Standards**	**Average of YTD**
Total Suspended Solids	Not to exceed 100 mg/L	32.37
Oil & Grease	Not to exceed 10 mg/L	1.52
Biochemical Oxygen Demand (3 days at 27° C)	Not to exceed 30 mg/l	7.13
Free available Chlorine	Not to exceed 0.5 mg/l	0.1
PH	Between 6.5 to 8.5	7.17
Temperature	Shall not exceed 5° C above the receiving water temperature	4 oC higher than the intake water temperature
Copper (as Cu)	Not to exceed 1.0 mg/l	0.016
Zinc (as Zn)	Not to exceed 1.0 mg/l	0.0325
Total Chromium (as Cr)	Not to exceed 0.2 mg/l	0.00616
Iron (as Fe)	Not to exceed 1.0 mg/l	0.26
Chemical Oxygen Demand	Not to exceed 250 mg/l	35.75
Phosphate (as P)	Not to exceed 5.0 mg/l	1.32

Noise level monitoring data

Month	Noise Monitoring Report FY 2019-20							
	Near Time office		Near Thermal Power Plant		Near Raw material Gate		Near Packing Plant Gate	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-19	71.8	61.4	67.8	57.2	71.8	61.4	67.8	57.2
May-19	69.9	60.8	69.2	59.1	69.9	60.8	69.2	59.1
Jun-19	71.6	61.2	70.0	60.4	71.6	61.2	70.0	60.4
Jul-19	70.5	60.5	68.9	58.1	70.5	60.5	68.9	58.1
Aug-19	69.7	59.9	69.9	59.6	69.7	59.9	69.9	59.6
Sep-19	71.0	61.1	68.5	58.2	71.0	61.1	68.5	58.2
Oct-19	67.1	57.5	69.2	59.1	69.4	59.2	71.4	61.3
Nov-19	68.4	58.6	67.7	58.7	68.7	57.4	70.8	61.1
Dec-19	67.9	58.5	68.4	58.9	69.6	58.9	71.6	61.5
Jan-20	68.7	59.2	68.9	59.2	70.2	59.4	70.9	60.8
Feb-20	67.4	58.4	69.2	59.6	70.8	58.5	71.2	61.2
Mar-20	66.2	54.6	66.7	54.8	65.6	52.4	66.9	51.2
YTD	**69.2**	**59.3**	**68.7**	**58.6**	**69.9**	**59.2**	**69.8**	**59.1**

PART-D

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

Hazardous waste	Total Quantity	
	During previous financial year (2018-19) (KL)	During current financial year (2019-20) (KL)
(a) From process	Used oil (5.1)- 17.4 * Waste oil (5.2)- NIL	Used oil (5.1)- 9.40* Waste oil (5.2)- NIL
(b) From pollution Control facilities	Not applicable	Not applicable

*including Cement Plant L-1,2, 3, CPP, WHRS, Mines & Colony. Hazardous waste generated are being sold through authorized recycler by CPCB.

PART-E
SOLID WASTE

		Total Quantity	
		During previous financial year (2018-19) (MT/Year)	**During current financial year (2019-20) (MT/Year)**
(a)	**From process (Bed Ash)**	8458	6262.34
(b)	**From pollution control facility (Fly Ash)**	29634	33357.41
(c)	**Quantity reutilized with in the unit**	99.01 %	99.38 %

Fly ash collected in pollution control equipment (ESP) is utilized for PPC grade cement manufacturing in own cement plant within the premises & bed ash generated from process in also utilized for cement manufacturing and coal dust collected from bag filters is recycled into the system.

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.

1) Hazardous waste generated in the form of used / spent oil, waste / residue containing oil, which is stored in barrels at safe & dedicated area and sold to recycler approved by Central Pollution Control Board.
2) Fly ash collected in pollution control equipment (ESP) is utilized for PPC grade cement manufacturing in own cement plant within the premises & bed ash generated from process in also utilized for cement manufacturing and coal dust collected from bag filters is recycled into the system.

PART-G

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

Industry has installed electrostatic precipitator (ESP) at boiler for stack and bag filters at transfer points to control the particulate matter and fugitive emission. The particulate matter collected from ESP in the form of fly ash is completely utilized in PPC cement production.

PART-H

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

Installed new technology NOx and SO2 analyzer to provide real time emission data and same is being transferred to RSPCB and CPCB web portal.

PART-I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT

1) Monitoring of stack emission and ambient air and water quality is being done regularly as mentioned in consent to operate.
2) 4 nos. of Continuous Ambient Air Quality Monitoring Systems (CAAQMS) has been installed at periphery of the plant.
3) Continuous Emission Monitoring Systems (CEMS) for PM, SO2 & NOx have been installed at the Boiler ESP stack and real time data transfer to RSPCB & CPCB.
4) Bag filters have been installed at various material transfer points to control fugitive emission.
5) Effluent generated from the cooling tower blow down and DM plant waste water is being treated through neutralization and used in cement plant for cooling purpose, hence maintaining Zero Liquid Discharge Unit (ZLD).
6) Air cooled condenser installed.
7) Fly ash generated from CPP,convey through pneumatic system and stored in silo, and utilized in own cement plant for PPC cement production.
8) Apart from this fly ash purchased from nearby thermal power plant and use for cement production.
9) Proper Housekeeping and cleaning is being done with the help of three road sweeping machines.
10) Domestic waste water generated is being treated in sewage treatment plant (STP). Treated water is utilized for plantation / horticulture development.
11) Cover shed Constructed to store the coal, to avoid fugitive emission.
12) 16 Rain water harvesting structures have been constructed in plant and colony area to recharge ground water.
13) Cemented road constructed to avoid fugitive dust generation during the movement of vehicle.
14) Telemetry system installed for online ground water level monitoring.
15) Total 4800 sapling planted in the FY 2019-20.
16) More than 33 % area covered with green belt.

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