JK Cement LTD.

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

CIN : L17229UP1994PLC017199
ISO 9001:2008, ISO 14001:2004 & OHSAS 18001 : 2007 CERTIFIED COMPANY

NBH/PC/ESR/21 542

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 (22 MW) of M/s J.K. Cement Works, Nimbahera, Tehsil: Nimbahera, Dist : Chittorgarh (Rajasthan).

Ref.: F (Tech)/ Chittorgarh (Nimbahera) / 5(1) / 2010-2011 / 1721-1723 & Order No 2019-2020 / CPM / 5487, Dated 29/07/2020.

Dear Sir,

With reference to above subject matter, Please find enclosed herewith Environment Statement Report of Power Plant (22MW) of M/s J.K. Cement Works, Nimbahera for the FY 2019-2020 for your reference and record. We believe you will find the same in order.

Thanking you.

Yours Faithfully
For J.K. Cement Works, Nimbahera

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 2019-20, ending the 31st March 2020

PART-A

i. Name an address of the owner/occupier of the industry operation or process	**J.K. Cement Works, Nimbahera (22 MW Captive Power Plant)** Kailash Nagar, Tehsil: Nimbahera, Chittorgarh (Rajasthan) PIN- 312617
ii. Industry category **Primary - (STC Code), Secondary - (STC Code)**	Primary
iii. Production capacity	22 MW
iv. Year of establishment-	2006
v. Date of last environmental statement submitted	25th September 2019

PART-B

WATER AND RAW MATERIAL CONSUMPTION

i. WATER CONSUMPTION in m3/day

Process **: -** Nil

Cooling **: -** 276 m3/day

Domestic **: -** 5 m3/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	0.410	0.397

ii. **RAW MATERIAL CONSUMPTION**

Name of raw material	Name of products	Consumption of raw material per unit of output (MT/MWh)	
		During the previous financial year (2018-19)	During the current financial year (2019-20)
Coal	Power (Electricity)	0.800	0.992

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	0.133	19.91	- 39.82 %

Ambient Air Emission (yearly average)

Location	Parameters				
	PM10 (µg/m3)	PM2.5 (µg/m3)	SO2 (µg/m3)	NOx (µg/m3)	CO (mg/m3)
Main security gate	48.5	34.2	11.5	22.5	678.1
Near thermal power plant	59.88	39.79	12.92	24.29	707.457
Near new J.K. factory gate	50.51	36.88	12.48	23.24	700.86
Near Mines gate	55.90	38.90	12.89	24.50	696.525

STP yearly average Analysis report

S.No.	PARAMETER	Standards	Yearly Average
1	pH	Between 5.5 to 9.0	7.36
2	Total Suspended solids	Not to exceed 100 mg/l	17.15
3	Chemical Oxygen Demand	Not to exceed 250 mg/l	25.37
4	Biological Oxygen Demand (3 days at 27 Degree C)	Not to exceed 30 mg/l	6.21
5	Oil & Grease	Not to exceed 10 mg/l	2
6	Ammonical Nitrogen (as N)	Not to exceed 50 mg/l	3.875
7	Sulphide (as S)	Not to exceed 2.0 mg/l	0.54
8	Chlorides	Not to exceed 1000 mg/l	133.67
9	Total Kjeldahl Nitrogen (as N)	Not to exceed 100 mg/l	1.34
10	Residual Chlorine	Not to exceed 1.0 mg/l	<0.1

Noise level monitoring data

Month	Main Security Gate		Thermal Power Plant		New JK Factory Gate		Mines Office	
	Day	Night	Day	Night	Day	Night	Day	Night
Apr-19	68.2	57.2	69.8	56.5	67.9	56.2	68.1	55.8
May-19	68.5	56.8	69.9	56.9	68.2	56.6	67.9	57.2
Jun-19	67.8	57.5	69.5	55.7	68.2	56.8	67.6	56.2
Jul-19	65.8	56.2	68.9	57.1	67.2	56.9	68.1	55.8
Aug-19	64.9	55.8	67.3	56.7	66.5	56.3	67.6	54.2
Sep-19	65.5	56.4	68.7	57.8	68.2	57.9	66.8	55.8
Oct-19	66.2	57.2	69.6	58.9	69.3	58.8	67.5	56.4
Nov-19	67.3	58.2	67.8	58.9	68.9	59.7	68.7	57.6
Dec-19	66.9	57.5	66.7	57.2	67.5	58.9	68.2	56.4
Jan-20	67.5	56.1	68.6	59.3	66.1	58.4	67.3	57.2
Feb-20	66.2	55.4	67.9	57.2	65.1	56.8	64.4	54.2
Mar-20	67.3	54.9	66.8	55.9	64.9	55.7	63.7	56.2
YTD Avg	66.8	56.6	68.5	57.3	67.3	57.4	67.2	56.1

Neutralization pit treated waste water analysis report

S.No.	PARAMETERS	RPCB Limits	Yearly Average
1	pH	Between 5.5 to 9.0	7.2
2	Total Suspended Solids (TSS)	Not to exceed 100 mg/l	19.28
3	Bio-Chemical Oxygen Demand (BOD) (3 Days at 27 deg C)	Not to exceed 30 mg/l	5.88
4	Chemical Oxygen Demand (COD)	Not to exceed 250 mg/l	26.58
5	Oil & Grease	Not to exceed 10 mg/l	<1.63
6	Iron (Total)	Not to exceed 1.0 mg/l	0.31
7	Copper (total)	Not to exceed 1.0 mg/l	<0.02
8	Phosphate (as PO4)	Not to exceed 5.0 mg/l	1.30
9	Zinc (as Zn)	Not to exceed 1.0 mg/l	<0.03
10	Free available chlorine	Not to exceed 0.5 mg/l	<0.06

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)- 23.70 * Waste oil (5.2)- NIL	Used oil (5.1)- 9.970* Waste oil (5.2)- NIL
(b) From pollution Control facilities	Not applicable	Not applicable

*including Cement Plant, CPP, WHRS, Mines & Colony. Hazardous waste generated are being sold to authorized recycler authorized 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)**	6881	9333.49
(b)	**From pollution control facility (Fly Ash)**	25170	46241.05
(c)	**Quantity reutilized with in the unit**	100%	91.68%

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.

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

2) Ammonia dosing system installed to reduce higher NOx emission from boiler stack.

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 Boiler 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 waste water generated is totally being treated in Neutralization pit and finally reused in cement plant.
6) Fly ash generated from thermal power plant use in cement production.
7) Raw materials are storage in covered shed.
8) Proper Housekeeping and cleaning is being done with the help of three road sweeping machines.
9) Domestic waste water generated is being treated in sewage treatment plant (STP). Treated water is utilized for plantation / horticulture development.
10) All Belt Conveyor belt are fully covered & also installed Bag filter at all material transfer points
11) Cemented road constructed to avoid fugitive dust generation during the movement of vehicle.
12) Telemetry system installed for online ground water level monitoring.
13) Industry has constructed 15 nos. of rain water harvesting structures in plant and colony area and 02 Nos. Check bund on seasonal nallah and 01 water pond at Nimbahera plant to recharge ground water more than 200%.
14) Total 4521 plants are planted in FY- 2019-20, apart from this unit has covered more than 33% area under green belt.