



BK BIRLA GROUP OF COMPANIES

# MANGALAM CEMENT LTD.



MANGALAM CEMENT LTD.

Regd. A/D

MCL/Env. Audit-117(II)/2022-2023/ H O J S

10.09.2022

Sr. Environment Engineer (CPP)  
Rajasthan Pollution Control Board,  
4, Institutional Area,  
Jhalana Doongari,  
Jaipur, (Rajasthan)

Dear Sir,

**Sub.: -Environmental Statement for the year 2021-2022**

With reference to above subject, we are enclosing herewith an Environmental Statement Report of CPP-II of M/s Mangalam Cement Ltd., Morak for the period from April-2021 to March-2022.

This is for your kind reference please. Kindly acknowledge the receipt of the same.

Thanking you,

Yours faithfully

For Mangalam Cement Ltd. (CPP-II)

P. R. Chaudhary  
Sr. Joint President (O) & FM

Cc to: - The Regional Officer  
Rajasthan Pollution Control Board  
Plot No. Spl. 2A, ParyavaranMarg  
Road No. 6, Indraprasthalndl. Area  
Kota - 324005

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**FORM-V**  
**ENVIRONMENTAL STATEMENT**  
(See rule 14)

**Environmental Statement for the financial year ending with 31<sup>st</sup> March 2022**

**PART-A**

1.	Name & address of the owner/ occupier of the industry/ operation or process	Shri K.C.Jain (Director) M/sMangalam Cement Ltd. Captive Power Plant (CPP-II) Aditya Nagar, Village : Morak Distt: Kota (Raj.) Pin code : 326520
2.	Industry Category Primary – (STC Code) Secondary – (STC Code)	Red Category
3.	Production capacity	Power : 17.5 MW
4.	Year of establishment	2011
5.	Date of last environmental statement submitted	07.09.2021

**PART –B**

Water and Raw Material Consumption:

i. Water consumption in M<sup>3</sup>/d

Process: } 204.35 M<sup>3</sup>/day which is common for CPP – I & II  
Cooling: }

Domestic: 256.50 M<sup>3</sup>/Day, which is common for Unit – I, II, III, CPP- I, CPP – II and colonies

Name of Products	Process water consumption per unit of products	
	During the previous financial year (2020-2021)	During the current financial Year (2021-2022)
1. Power (CPP I & II)	0.0005 KL/KWh	0.0006 KL/KWh

ii. Raw material consumption

Name of raw materials*	Name of product	Consumption of raw material per unit of output	
		During previous financial year (2020-2021)	During Current financial year (2021-2022)
1. Coal	Power (CPP-II)	0.94 kg/unit	0.987 kg/unit
2. Bio-Mass	Power (CPP-II)	0.0048 kg/unit	0.0237 kg/unit
3. Water	Power (CPP-I & II)	0.0005 KL/KWh	0.0006 KL/KWh
4. Kota Stone Slurry	Power (CPP-II)	0.17	0.19

\*Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.

iii) Power Consumption (KWH/KWH):-

During Previous Financial Year	During Current Financial Year
0.090	0.095

iv) Total Production (KWH):-

Production	During Previous Financial Year	During Current Financial Year
Power Generation	40312000	73383000

**PART-C**

Pollution discharged to environment/unit of output  
(Parameter as specified in the consent issued)

Pollutant	Parameter	Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants discharged (mass/volume)	Percentage of variation from prescribed standards with reasons.
<b>a) Water</b>	We are maintaining zero water discharge in our power plant & cement plant. During the year 2021-2022, 5445 KL waste water generated from power plant (CPP-I & II), which is being used 100% in our own plant for horticulture purpose after treatment in Neutralization pit.			
<b>b) CPP-II</b>	PM	0.076	32.96 mg/Nm <sup>3</sup>	No any Deviation
	SO <sub>2</sub>	0.923	359.30 Mg/Nm <sup>3</sup>	No any Deviation
	NO <sub>x</sub>	0.586	263.20 Mg/Nm <sup>3</sup>	No any Deviation

**PART-D**

**HAZARDOUS WASTES**

(As specified under Hazardous Wastes (Management, Handling & Transboundary Movement Rules, 2016).

Hazardous Wastes	Total Quantity (Kg)			
	During previous financial year (2020-2021)		During Current financial year (2021-2022)	
1. From Process (Cement Manufacturing is based on "Dry Process" no Hazardous waste is generated form the process except used oil which is drained from Machinery / Equipments)	We have Authorization for Hazardous waste Management & Handling for Unit – I CPP – I & II, D.G. set.		We have Authorization for Hazardous waste Management & Handling for Unit – I CPP – I & II, D.G. set.	
	Total Quantity Generated from April 2020 to March 2021 (Ltrs.)	10400	Total Quantity Generated from April 2021 to March 2022 (Ltrs.)	15400
	Old stock (Ltrs.)	NIL	Old stock (Ltrs.)	NIL
	Total Used Oil (Ltrs.)	10400	Total Used Oil (Ltrs.)	15400
	Sold-out to registered recycler (Ltrs.)	10400	Sold-out to registered recycler (Ltrs.)	15400
	Balance Quantity (Ltrs.)	NIL	Balance Quantity (Ltrs.)	NIL
2. From pollution control facilities	NA		NA	

**PART – E****SOLID WASTES:**

Solid Wastes	Total Quantity CPP-I & II (Ton)	
	During previous financial year (2020-2021)	During Current financial year (2021-2022)
1. From Process	Bed Ash: 17530	Bed Ash: 37390
2. From pollution control facilities	Fly Ash: 27823	Fly Ash: 38349
2. i) Quantity recycled or reutilised within the unit.	Fly Ash & Bed Ash generated from our both Captive Power Plants (CPP-I & II) are being 100% utilized in our existing cement plants for cement manufacturing. Dust Collected in the Bag filters are being 100% recycled into the system.	
ii) Solid	NIL	NIL
iii) Disposed	NIL	NIL

**PART – F**

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

**Battery Wastes :-**

As specified under Batteries (Management and Handling) Amendment Rules, 2010. We have purchased following new batteries of different categories is common for Cement Plant Unit I, II, III and Captive Power Plant Unit I & II and Mines-

Number of new batteries of categories purchased from the manufacturer / importer / dealer or any other agency.		During 1 <sup>st</sup> April 2021 to 31 <sup>st</sup> March 2022.
Common for Cement Plant Unit I, II, III and Captive Power Plant Unit I & II and Mines		
Category	i) No. Of Batteries	ii) Approximate weight (In metric Tonnes)
i) Automotive		
a) Four Wheeler	70	2.287
ii) Industrial		
a) UPS	731	8.899
Total	801	11.86

Number of used batteries of categories mentioned in Sl. No. 3 and Tonnage of scrap sent manufacturer / dealer / importer / registered recycler / or any other agency to whom the used batteries scrap was sent.		During 1 <sup>st</sup> April 2021 to 31 <sup>st</sup> March 2022.
Common for Cement Plant Unit I, II, III and Captive Power Plant Unit I & II and Mines		
Category	iii) No. Of Batteries	iv) Approximate weight (In metric Tonnes)
i) Automotive	0	4.560 MT
a) Four Wheeler		
ii) Industrial	235	4.560 MT
a) UPS		
Total	235	4.560 MT

Used battery scrap was sent to CPCB authorized recycler

#### Hazardous wastes

No Hazardous waste is generated from the process except used oil which is drained from Machineries / Equipment. The used oil & lead acid batteries are sold to CPCB authorized recyclers.

#### Bio-Medical Wastes:

Bio-Medical waste generated is common for Cement Plant, Power Plant and Mines during Period of January 2021 to December 2021 under the Bio-medical Waste Management Rules 2016 & its amendments are as follows.

Year	Bio-Medical Waste Quantity (Kg) as per Colour Coding			
	Red	Blue	Yellow	White
1 <sup>st</sup> Jan. 2021 to 31 <sup>st</sup> Dec. 2021	1.133	1.518	2.649	0.370

#### E- Wastes:-

E- Waste disposal is common for Cement Plant, Power Plant and Mines during financial year 2020-2021 and 2021-2022 under the E-Waste (Management) Rules 2016 & its Amendments are as follows.

	Total Quantity Disposed	
	During Previous Financial Year (2020-2021)	During Previous Financial Year (2021-2022)
E-waste disposed	NIL	1240 Kg

E-waste was sent to CPCB authorized recycler.

## PART-G

### Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

Captive Power Plants are being operated on environmentally clean technology. The stack emissions from the plant are controlled by ESP's. Bag Filters are installed at various material transfer points to clean the process and arrest the fugitive emissions. The boiler Ash collected in the pollution control equipment is used in the process of existing cement plants, thus it can be said that the utilization of raw material is being done at their cost. Since the system is operated on total recycle, there is no effect on the cost of production.

## PART – H

### Additional measures/investment proposal for environmental protection including abatement of pollution.

Green belt development and tree plantation is our on-going process. In the year 2020-2021 we have planted 510 No's of native species and up to March 2022, 131664 trees have been planted in premises of Unit – I, II, III, CPP – I, CPP – II and colonies.

## PART –I

MISCELLANEOUS:

### Any other particulars in respect of environmental protection and abatement of pollution.

1. We have full-fledged Environment Department with three separate cells, for monitoring, maintenance of pollution control equipment and Green Belt development.
2. Monitoring of stack emission and ambient air and water quality is being done regularly.
3. Maintenance department is doing regular checking and scheduled maintenance of all the pollution control devices.
4. Civil Department is taking care of Housekeeping, water supply and operation of STPs.
5. Horticulture Department is taking care of tree plantation and green belt development. Every year we are doing tree plantation.

We are enclosing herewith following documents:-

**Annexure – 1:-** Stack Emission Monitoring Test Reports

**Annexure – 2:-** Ambient Air Quality (PM10, PM2.5, NOx and SO2)

**Annexure – 3:-** Analysis Report of Treated Effluent Waste Water.

**Mangalam Cement Ltd.**  
**Stack Monitoring Report : (CPP-2)**

**Period: 2021-2022**

**( All values are in Mg/Nm<sup>3</sup> )**

S.No.	Month	Main ESP Stack (CPP-II)			Coal Bunker-II
		PM	SO <sub>2</sub>	NO <sub>x</sub>	PM
Prescribed Standards (in mg/NM <sup>3</sup> )		50	600	450	50
1	Apr-21	34.60	451.70	230.10	11.80
2	May-21	27.70	430.30	266.70	12.60
3	Jun-21	33.20	482.30	228.50	9.67
4	Jul-21	26.30	288.21	190.76	12.38
5	Aug-21	27.90	170.45	250.10	11.30
6	Sep-21	34.50	31.90	320.40	12.90
7	Oct-21	37.10	330.00	335.00	14.70
8	Nov-21	36.30	470.10	330.20	13.20
9	Dec-21	38.90	464.20	141.20	14.40
10	Jan-22	33.10	473.50	339.50	16.10
11	Feb-22	NR			
12	Mar-22	NR			
<b>Average</b>		<b>32.96</b>	<b>359.27</b>	<b>263.25</b>	<b>12.91</b>
Min		26.30	31.90	141.20	9.67
Max		38.90	482.30	339.50	16.10

## MANGALAM CEMENT LIMITED, MORAK, DIST: KOTA

AMBIENT AIR QUALITY (All values in  $\mu\text{g}/\text{m}^3$ )

(Year : 2021-22)

Location Month	Near Railway Gate				Near Work Shop				Near Rack Loading Area				Near Security gate							
	PM 10	PM 2.5	SO2	NOx	CO	PM 10	PM 2.5	SO2	NOx	CO	PM 10	PM 2.5	SO2	NOx	CO	PM 10	PM 2.5	SO2	NOx	CO
Limits	100	60	80	80	4000	100	60	80	80	4000	100	60	80	80	4000	100	60	80	80	4000
Apr-21	61.4	31.4	6.9	14.0	396.0	54.6	27.6	6.9	13.6	444.6	61.8	32.1	7.4	11.2	532.1	56.6	27.6	8.2	15.9	561.3
May-21	58.3	31.6	6.7	14.0	465.8	51.7	26.4	6.7	14.4	404.8	48.7	26.0	4.8	11.4	515.8	48.9	25.3	4.3	13.7	562.7
Jun-21	62.4	33.3	5.8	13.4	479.3	53.4	28.9	6.3	14.3	465.4	55.2	28.7	6.4	14.2	481.4	49.3	25.6	6.3	14.4	484.9
Jul-21	54.3	30.5	5.4	12.7	425.2	48.9	27.3	5.4	12.9	432.1	47.6	25.6	5.3	13.2	451.7	44.9	22.5	5.9	13.9	434.9
Aug-21	53.3	29.6	5.6	13.3	372.4	49.2	25.7	5.7	13.6	369.6	51.6	26.1	5.9	13.0	312.6	46.1	22.6	5.6	13.7	315.4
Sep-21	48.6	24.7	5.2	11.9	361.2	50.7	26.6	5.1	13.8	379.3	47.6	23.1	5.2	11.4	379.8	52.5	28.0	5.8	14.9	355.7
Oct-21	51.9	26.4	4.4	12.0	414.2	53.6	28.7	4.5	14.7	422.0	50.2	23.8	4.6	11.0	418.0	55.9	29.9	7.3	15.6	436.1
Nov-21	59.9	30.0	3.8	11.3	390.8	66.5	32.7	4.6	15.3	398.6	55.9	30.3	4.2	11.2	381.4	66.2	36.5	7.3	17.2	468.9
Dec-21	59.8	30.6	3.6	11.5	375.1	65.6	32.5	4.4	14.8	406.4	59.1	31.4	4.1	11.8	398.6	66.0	36.5	7.6	16.9	437.7
Jan-22	56.4	29.2	3.3	11.0	367.3	60.7	32.3	3.9	13.8	351.7	54.7	29.3	4.4	10.8	367.3	62.6	34.8	6.8	15.5	422.0
Feb-22	63.4	28.8	3.3	11.3	359.5	66.8	32.6	3.7	13.8	359.5	58.2	30.2	3.8	11.3	367.3	69.4	37.0	6.5	17.4	390.8
Mar-22	65.9	31.8	3.8	11.3	390.8	66.5	34.9	3.9	13.3	414.2	61.9	32.9	4.5	11.7	429.8	70.3	40.5	7.8	16.9	375.1
Average	58.0	29.8	4.8	12.3	399.8	57.4	29.7	5.1	14.0	404.0	54.4	28.3	5.1	11.8	419.7	57.4	30.6	6.6	15.5	437.1
Minimum	48.6	24.7	3.3	11.0	359.5	48.9	25.7	3.7	12.9	351.7	47.6	23.1	3.8	10.8	312.6	44.9	22.5	4.3	13.7	315.4
Maximum	65.9	33.3	6.9	14.0	479.3	66.8	34.9	6.9	15.3	465.4	61.9	32.9	7.4	14.2	532.1	70.3	40.5	8.2	17.4	562.7



## Annexure - IIA

## MANGALAM CEMENT LIMITED, MORAK, DIST: KOTA

## AMBIENT NOISE MONITORING REPORT

Year, 2021-22

Date	Measured Noise Level (in dBA)							
	Near Railway Gate		Near Work shop		Near Rack Loading Area		Near Security gate	
	Day	Night	Day	Night	Day	Night	Day	Night
Limits	75.0	70.0	75.0	70.0	75.0	70.0	75.0	70.0
Apr-21	69.0	64.2	66.8	62.3	68.8	63.5	68.7	64.2
May-21	67.2	62.1	66.2	60.8	68.9	63.1	68.5	63.4
Jun-21	67.4	61.6	64.8	59.3	67.2	61.6	66.9	60.8
Jul-21	64.7	60.1	65.5	60.3	63.6	59.3	67.2	61.4
Aug-21	65.2	58.3	67.6	61.1	65.8	59.6	67.8	61.8
Sep-21	64.8	58.5	68.1	61.1	64.1	58.8	69.3	62.0
Oct-21	66.7	58.7	68.5	61.2	65.2	58.3	70.2	60.9
Nov-21	66.6	58.9	70.3	60.4	64.5	58.2	71.3	62.8
Dec-21	66.2	58.0	65.7	58.6	65.6	58.1	70.4	61.3
Jan-22	65.9	56.8	66.3	56.1	65.6	57.1	69.9	59.8
Feb-22	65.3	56.3	67.7	56.0	63.0	56.9	69.5	59.0
Mar-22	67.1	56.3	67.5	56.3	64.1	56.3	69.4	58.9
Average	66.3	59.2	67.1	59.5	65.5	59.2	69.1	61.4
Minimum	64.7	56.3	64.8	56.0	63.0	56.3	66.9	58.9
Maximum	69.0	64.2	70.3	62.3	68.9	63.5	71.3	64.2

## M/S Mangalam Cement Ltd - Morak

Neutrillization Pit Outlet ( Trade Effluent) : (2021-2022)

Sr. No.	Month	Parameters										
		PH	COD	BOD (3 days at 27°c)	TSS	Oil and Grease	Free Available chlorine	Phosphate	Chromium (Total)	Copper	Iron	Zinc
Permissible Limits		(6.5 to 8.5)	(250 Mg/L)	(30 Mg/L)	(100 Mg/L)	(10 Mg/L)	(0.5 Mg/L)	(5.0 Mg/L)	(0.2 Mg/L)	(1.0 Mg/L)	(1.0 Mg/L)	(1.0 Mg/L)
Average Result (April-2021 to March-2022)		7.92	75.1	16.0	40.1	2.4	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L

B.D.L : Below detectable limit