



B.K. BIRLA GROUP OF COMPANIES

MANGALAM CEMENT LTD.



MANGALAM CEMENT LTD.

Regd. A/D

MCL/Env. Audit-117(II)/2023-2024/ 2379

14.09.2023

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

Dear Sir,

Sub.:- Environmental Statement for the year 2022-2023

With reference to above subject, we are enclosing herewith an Environmental Statement Report of CPP-I of M/s Mangalam Cement Ltd., Morak for the period from April-2022 to March-2023.

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

Thanking you,

Yours faithfully

For Mangalam Cement Ltd. (CPP-I)


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

Regd. Office & Works : P.O. Aditya Nagar-326520, Morak, Distt. Kota (Raj.) CIN : L26943RJ1976PLC001705, Telefax : 07459 - 232156
Website : www.mangalamcement.com, E-mail : email@mangalamcement.com

Kota Office : Shop No. 20, 80 Feet Road, Opp. Sukhdham Colony, (Near SBI Bank) Kota - 324001 (Rajasthan)
Mob : 9351468064, E-mail : mclcta@kappa.net.in

Delhi Office : 153, Leela Building (GF), Okhla Indl. Estate, Phase-III, New Delhi - 110020
Tel. No. : 011- 43539132, 43539133, 43539137 Fax : 011- 23421768
E-mail : delhi.purchase@mangalamcement.com, delhi.marketing@mangalamcement.com

Jaipur Office : 2nd Floor, Geejgarh Tower, Hawa-Sarak, Jaipur - 302 006 (Rajasthan)
Tel. : 0141 - 2218933, 2218931, E-mail : jaipur.marketing@mangalamcement.com

FORM-V
ENVIRONMENTAL STATEMENT
(See rule 14)

Environmental Statement for the financial year ending with 31st March 2023

PART-A

1.	Name & address of the owner / occupier of the industry / operation or process	Shri. P. R. Choudhary Sr. Joint President (Operation) & FM M/s Mangalam Cement Ltd. Captive Power Plant (CPP-I) 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	2007
5.	Date of last environmental statement submitted	10.09.2022

PART –B

Water and Raw Material Consumption:

i. Water consumption in M³/d

Process: } 258.56 M³/day which is common for CPP – I & II

Cooling: }

Domestic: 190.15 M³/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 (2021-2022)	During the current financial Year (2022-2023)
1. Power (CPP I & II)	0.0006 KL/KWh	0.0009 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 (2021-2022)	During Current financial year (2022-2023)
1. Coal	Power (CPP-I)	0.999 Kg/Unit	0.839 Kg/Unit
2. Bio-Mass	Power (CPP-I)	0.0230 Kg/Unit	0.0979 Kg/Unit
3. Water	Power (CPP-I & II)	0.0006 KL/ KWH	0.0009 KL/ KWH
4. Waste Stone Slurry	Power (CPP-I)	0.217 Kg/Unit	0.1047 Kg/Unit

*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
0.106	0.113

iv) Total Production (KWH):-

Production	During Previous Financial Year	During Current Financial Year
Power Generation	59186000	53354000

PART-C

Pollution discharged to environment/unit of output

(Parameter as specified in the consent issued)

Pollutants	Parameter	Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants in discharged (mass/volume)	Percentage of variation from prescribed standards with reasons.
a) Water	We are maintaining zero water discharge in our power plant & cement plant. During the year 2022-2023, 5475 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) CPP-I	PM	0.096 Ton / day	38.65 mg/Nm ³	No any Deviation
	SO2	0.791 Ton / day	311.47 mg/Nm ³	No any Deviation
	NOx	0.635 Ton / day	257.96 mg/Nm ³	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 (2021-2022)		During Current financial year (2022-2023)	
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 2021 to March 2022 (Ltrs.)	15400	Total Quantity Generated from April 2022 to March 2023 (Ltrs.)	12600
	Old stock (Ltrs.)	NIL	Old stock (Ltrs.)	NIL
	Total Used Oil (Ltrs.)	15400	Total Used Oil (Ltrs.)	12600
	Sold-out to registered recycler (Ltrs.)	15400	Sold-out to registered recycler (Ltrs.)	12600
	Balance Quantity (Ltrs.)	NIL	Balance Quantity (Ltrs.)	NIL

2. From pollution control facilities	NA	NA
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PART – E

SOLID WASTES:

Solid Wastes	Total Quantity –CPP-I & II (Ton)	
	During previous financial year (2021-2022)	During Current financial year (2022-2023)
1. From Process	Bed Ash: 37390	Bed Ash: 5587
2. From pollution control facilities	Fly Ash: 38349	Fly Ash: 32981
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 st April 2022 to 31 st March 2023.	
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	90	3.208
ii) Industrial		
a) UPS	221	1.72
Total	311	4.928

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 st April 2022 to 31 st March 2023.	
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	1.050 MT	
a) Four Wheeler			
ii) Industrial	150		
a) UPS		1.050 MT	
Total	150		

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 2022 to December 2022 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 st Jan. 2022 to 31 st Dec. 2022	2.058	0.974	3.125	0.446

E- Wastes:-

E- Waste disposal is common for Cement Plant, Power Plant and Mines during financial year 2021-2022 and 2022-2023 under the E-Waste (Management) Rules 2016 & its amendments are as follows.

	Total Quantity Disposed	
	During Previous Financial Year (2021-2022)	During Previous Financial Year (2022-2023)
E-waste disposed	1240.00 kg	3220.00 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 Plant is 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. We have planted 296 No's of native species and up to March 2023, 132160 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.

**M/s Mangalam Cement Ltd.
(CPP-I)**

**Stack Monitoring Report
(All values are in Mg/Nm³)**

Period: 2022-2023

S.No.	Month	Main ESP Stack (CPP-I)		
		PM	SO ₂	NO _x
Prescribed Standards (in mg/NM³)		50	600	450
1	Apr-22	40.8	360	271.00
2	May-22	35.28	413	262.00
3	Jun-22	43.2	369	293.00
4	Jul-22	N.R	N.R	N.R
5	Aug-22	46.3	174.5	280.50
6	Sep-22	37.45	184.9	274.50
7	Oct-22	N.R	N.R	N.R
8	Nov-22	N.R	N.R	N.R
9	Dec-22	N.R	N.R	N.R
10	Jan-23	N.R	N.R	N.R
11	Feb-23	35	459.4	253.50
12	Mar-23	32.5	219.5	171.20
Average		38.65	311.47	257.96
Min		32.50	174.50	171.20
Max		46.30	459.40	293.00

N.R:- Not Running

MANGALAM CEMENT LIMITED, MORAK, DIST: KOTA

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

(Year : 2022-23)

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-22	69.4	32.0	3.8	11.8	375.1	68.1	35.4	4.0	13.6	414.2	62.6	34.6	4.3	11.9	351.7	74.9	42.3	8.1	17.7	406.4
May-22	73.2	34.0	3.6	11.5	389.0	75.7	38.1	3.7	13.0	396.0	67.6	39.7	3.8	12.2	402.9	81.2	49.2	6.8	16.4	409.9
Jun-22	68.3	30.1	3.9	11.3	351.7	70.3	32.9	3.8	13.6	361.2	62.9	30.4	4.0	11.6	375.1	76.9	42.6	7.1	16.4	375.1
Jul-22	53.0	26.6	3.5	10.6	359.5	56.9	30.9	3.0	12.0	382.9	44.4	25.8	3.3	10.5	429.8	55.3	32.1	5.8	14.3	398.6
Aug-22	46.5	27.3	3.4	11.3	416.8	54.1	32.6	3.4	13.2	396.0	41.4	27.9	3.7	10.9	368.2	47.4	35.0	5.9	15.5	409.9
Sep-22	45.6	28.3	3.3	10.7	396.0	50.7	32.6	3.7	12.9	409.9	35.9	26.5	3.9	11.1	430.7	43.8	34.3	7.6	17.1	486.3
Oct-22	48.0	31.3	3.8	11.0	409.9	53.9	38.6	3.9	13.6	422.0	40.1	30.1	3.8	11.6	458.5	49.0	38.6	6.2	16.6	500.2
Nov-22	49.7	34.7	3.4	10.9	423.8	58.2	33.9	3.7	14.6	396.0	39.4	27.8	3.9	11.1	416.8	50.5	30.5	6.7	16.2	423.8
Dec-22	53.2	32.6	3.2	11.2	437.7	58.8	34.9	3.2	15.4	423.8	40.2	30.2	3.7	11.5	451.6	49.1	33.7	5.0	16.8	437.7
Jan-23	59.8	32.0	3.1	10.8	444.6	64.6	34.5	3.1	15.5	444.6	44.3	30.4	3.4	12.1	402.9	56.5	33.0	4.3	16.7	430.7
Feb-23	62.3	32.3	3.3	11.0	320.4	67.1	34.4	3.4	14.6	336.1	45.8	30.3	3.3	11.6	382.9	62.7	33.2	4.8	16.1	429.8
Mar-23	64.1	32.9	3.4	10.7	326.5	70.4	35.0	3.6	15.7	340.4	43.8	32.5	3.2	11.3	402.9	66.2	35.3	4.0	16.6	396.0
Average	57.8	31.2	3.5	11.1	387.6	62.4	34.5	3.5	14.0	393.6	47.4	30.5	3.7	11.5	406.2	59.5	36.7	6.0	16.4	425.4
Minimum	45.6	26.6	3.1	10.6	320.4	50.7	30.9	3.0	12.0	336.1	35.9	25.8	3.2	10.5	351.7	43.8	30.5	4.0	14.3	375.1
Maximum	73.2	34.7	3.9	11.8	444.6	75.7	38.6	4.0	15.7	444.6	67.6	39.7	4.3	12.2	458.5	81.2	49.2	8.1	17.7	500.2

MANGALAM CEMENT LIMITED, MORAK, DIST: KOTA

AMBIENT NOISE MONITORING REPORT

Year, 2022-23

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-22	66.7	56.8	65.3	55.8	64.3	56.6	69.3	57.6
May-22	67.4	56.7	66.3	55.6	66.6	57.3	69.4	57.8
Jun-22	67.6	56.1	63.3	56.7	66.3	55.7	68.4	57.8
Jul-22	65.3	55.5	63.9	55.1	64.9	55.7	69.0	57.1
Aug-22	64.5	55.7	67.7	56.5	64.2	56.0	69.3	59.2
Sep-22	65.7	55.6	66.8	55.7	63.2	56.0	69.6	59.4
Oct-22	65.0	55.5	67.0	56.0	63.7	55.1	68.7	57.2
Nov-22	66.6	54.9	69.2	57.7	64.3	55.8	66.8	55.6
Dec-22	66.1	55.0	69.2	57.8	63.8	55.0	66.1	56.6
Jan-23	67.5	55.6	68.8	55.8	64.8	56.4	66.6	57.3
Feb-23	65.8	55.6	69.7	56.4	64.1	55.8	66.5	55.7
Mar-23	65.1	54.9	69.2	56.6	63.8	54.7	65.8	55.5
Average	66.1	55.7	67.2	56.3	64.5	55.8	68.0	57.2
Minimum	64.5	54.9	63.3	55.1	63.2	54.7	65.8	55.5
Maximum	67.6	56.8	69.7	57.8	66.6	57.3	69.6	59.4

M/S Mangalam Cement Ltd - Morak

Neutralization Pit Outlet (Trade Effluent) : (2022-2023)

Parameters

Sr. No.	Month	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-2022 to March-2023)	8.04	84.5	17.4	40.2	2.6	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L	B.D.L

B.D.L : Below detectable limit