

**"FORM - V"
(See Rule 14)**

ENVIRONMENT STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31st MARCH, 2017

PART - A

- (i) Name and address of the owner/ occupier of the industry operation or process. : Amandeep
OCL India Limited
Rajgangpur 770017
Dist:-Sundargarh (ODISHA)
- (ii) Industry category : Major
Primary - (STC Code)
Secondary - (SIC Code)
- (iii) Production capacity - Units : Limestone-4.2 MTPA
Dolomite-0.08 MTPA
Clinker -2.9 MTPA
Cement - 4.0 MTPA
CPP - 2x27 MW
- (iv) Year of Establishment : 1951
- (v) Date of the last environmental Statement submitted : 20.09.2016

PART - B

Water and Raw Materials Consumption

- (1) Water consumption m³/d.

Nature of products	Process Water consumption per unit of product output	
	During the previous financial year (2015-16)	During the current financial year (2016-17)
Cement manufacturing and Power generation	Cement (Process & Cooling) – 841 KLD, CPP (Process & Cooling) - 639 KLD,	Cement (Process & Cooling) – 122 KLD, CPP (Process & Cooling) - 217 KLD,

- (2) Raw Material Consumption – Attached as per Annexure-I

* Nature of consumption	Process Raw Material Consumption per unit of product output		
	Quality of product	During the previous financial year	During the current financial year

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

PART - C

Discharged to environment/unit of output specified if the consent issued.

Pollutants	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water	Zero discharge	Not applicable	Not applicable
(b) Air	NA	Attached as Annexure-II	Parameters are within prescribed standards

PART - D

HAZARDOUS WASTES

(As specified under Hazardous Wastes/Management and Handling Rules 1989)

Hazardous Wastes	Total Quantity (kg)	
	During the previous financial year (2015-16)	During the current financial year (2016-17)
(a) From process	Used oil - 70560 Ltrs.	Used oil - 63000 Ltrs.
(b) From pollution control facilities	Nil	Nil

PART - E

SOLID WASTE

	Total Quantity	
	During the previous financial year	During the current financial year
a) From process	Not applicable	
b) From pollution control facilities	Not applicable	
c) Quantity recycled or reutilized within the Unit.	Not applicable	
d) Sold	Not applicable	
e) Disposed	Not applicable	

PART - F

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

No solid waste generated from process. Used oil is a part of Hazardous waste category material, which is regularly being collected in drum & disposed through authorized re-cycler party.

PART - G

In respect of the pollution abatement measures taken on conservation of natural resources and on the cost of production.

Water conservation:

Raw water consumption has reduced from 841 KLD (in FY: 2016) to 122 KLD (in FY: 2017) for Cement

process and cooling purpose; which is about 81% reduction of water consumption.

Similarly, Raw water consumption has reduced from 639 KLD (in FY: 2016) to 217 KLD (in FY: 2017) for Power plant operation process and cooling purpose; which is 66% of reduction of water consumption.

Some of Water positive approach, started by OCL are:

- In our Captive power plant, we have gone for air cooled condenser in place of conventional water-cooled system, Specific water consumption is much lower.
- In Raw material beneficiation plant, implementation of air jig system in place of conventional water system.
- For Cement Vertical Roller Mill motor, Grid Resistance Regulator is used in place of Liquid Resistance starter commonly used.

PART - H

Additional measures/investment proposed for environmental protection including abatement of pollution, prevention of pollution.

- Existing system of Raw mill ESP (Pollution control system) in Line-1 to be modified with PJBFB with an investment of Rs 8.1 crores for emission control system & better working environment.
- Changing of single phase transformer to three phase transformer by investing Rs. 28 lakhs for enhancing the dust capturing capability by regulating voltage in existing ESP.
- Regular bag filter changing and replacement of all pollution control systems are maintained in plant.
- Replacing the Gas conditioning tower (GCT) with twin fluid water spraying system by investing Rs. 35 lakhs to minimise the water consumption and enhancing efficient of existing ESP functioning for the control of dust emission.

PART - I

Any other particulars for improving the quality of the environment.

Following initiatives taken by OCL India Ltd to improve the environment:

- Mist cannon water spraying systems installed at Gantry area and Raw material handling areas to suppress the fugitive dust nuisance.
- Reduction of dust emission during clinker loading process by adopting Hatch adaptor system.
- Road sweeping machine is in continued operation with vacuum suction system to control fugitive dust on the roads of plants in addition to earlier mechanized road sweeping machine. Also, there are 30 nos. of manual operated road sweeping machines deployed for dust cleaning activities.
- Installation of high jet pressure water spraying system at limestone stacking, feeding to grinding mill area, Wagon & Truck Tippler, Coal Stacking & CPP areas.
- Enclosures with cladding made up of 10 mtrs. height along Line-2 CCP area to arrest any fugitive dust movement to nearby areas outside of our factory premises.
- Installation of high efficiency Bags (10 chambers) in RABH of Line-2 to control the fugitive emission.
- Total bags changed in Coal mill in Nov.,2016 of Line-2 for control of dust emission.
- Implementation of rain water harvesting pond in Cement plant and CPP areas.

- Continued usage of total quantity of flyash & bed ash generated from our own Captive Power Plant for manufacture of cement.
- ESP inlet duct improvement work completed for PM emission control for Cooler ESP, in Line-1.
- Installation of Low Nox burner in Cement kiln burner to control Gaseous emission as stipulated by regulatory bodies.
- Celebration of 'World Environment day 'on 5th June every year to create greater awareness among the people of villagers, employers, Colony ladies & children and organising various types of competitions with massive plantations.
- Certification of Environment, Occupational Health and Safety management System" as per IS/ISO 14001:2004 & IS 18001:2007 by BIS
- Green belt development made for 37% of total plant areas with forest species and indigenious tree species.
- Specific Energy consumption reduced from 63.51 to 60.87 KWH per ton of Cement in FY:2016-17.
- Specific Energy consumption reduced from 54.15 to 53.38 per ton of Clinker in FY:2016-17.
- Increased production of blended cements with highest possible of fly ash and slag utilization in PPC and PSC cement manufacturing.
- Other industrial waste like PTA waste from Oil refinery and various means of alternate fuels are being utilised in our cement co-processing, as per Govt. directives and an initiation towards waste utilization.

Production detail for FY: 2016-17

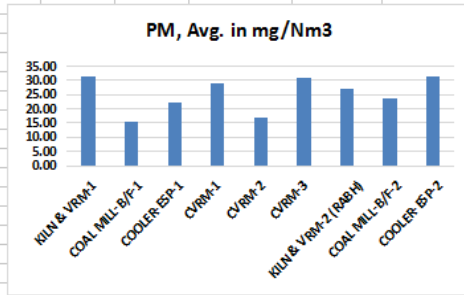
- (a) Cement : 28,18,549 tonnes.
- (b) Clinker: 25,82,537 tonnes.
- (c) Power for Cement: 17,15,75,754 Kwh.
- (d) Power for Clinker: 13,78,59,944 Kwh.

Raw Material Consumption for the previous Fin. Year (2015-16)			
Name of Product	Name of Raw Material	Consumption quantity per annum (Tonne)	Raw Material consumption per tonne of product
CEMENT & CLINKER	LIMESTONE	3491423.17	1.297
	BEDASH	8622.53	0.003
	CINDER	39349.97	0.015
	ESP Dust	8825.81	0.003
	SANDSTONE	35377.68	0.013
	MORRUM	47166.39	0.018
	GYPSUM	72718.40	0.027
	SLAG	1311135.18	0.487
	FLYASH	234231.30	0.087
	COAL	190095.36	0.062
	PETCOKE	167957.09	0.071
Raw Material Consumption for the year (2016-17)			
Name of Product	Name of Raw Material	Consumption quantity per annum (Tonne)	Raw Material consumption per tonne of product
Cement (PSC+PPC)	Slag	27,08,762	0.961
	Clinker	14,74,465+6,40,084	0.750
	Gypsum	1,13,888+29,929	0.051
	Coal	31,525+48	0.011
	Pet coke	4,098	0.001
Clinker	Lime stone	37,11,709	1.437
	Morrum	97,427	0.038
	Sand stone	22,191	0.009
	Cinder	72,011	0.028
	Fly ash & Bed ash	19,187	0.007
	Coal	3,15,903	0.122

STACK MONITORING ONLINE MONTHLY AVERAGE PARTICULATE MATTER(PM) VALUES FOR FY:2016-17 (APRIL TO MARCH)

STACK LOCATION	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	Yearly Avg.
KILN & VRM-1	45.9	38.7	44.3	34.5	33.1	21	39	25.6	30.5	24.9	22.1	17.1	31.39
COAL MILL-B/F-1	21.4	27.9	18.9	10.4	12.6	11	9	14.7	7.1	14	21	20.5	15.71
COOLER-ESP-1	10.1	19.7	102.6	17.1	30.2	8.6	13.5	25.1	5.8	8.8	12.8	12.7	22.25
CVRM-1	33.4				25.5	27.2	29.4	29	35.8	30.1	28	24.1	29.17
CVRM-2	8.2	10.8	20.1	21.5	21.8	24	31.8	17.3	14.5	11	5.6	14.8	16.78
CVRM-3	29.6	38.4	29.6	32.1	30.8	32.7	37.9	33.3	30	26.7	25.8	26.4	31.11
KILN & VRM-2 (RABH)	26.2	30	34.6	45.2	48.7	53.8	30.7	15	11.4	11.6	10.1	10	27.28
COAL MILL-B/F-2	8	12.7	15.3	19.5	20.2	28.1	39.1	55.2	70.5	6.4	4.1	4.6	23.64
COOLER-ESP-2	29.8	88	34.8	35.3	33.3	28.9	37.8	31.4	28.4	9.6	9.8	11.7	31.57

STACK LOCATION	PM, Avg. in mg/Nm3
KILN & VRM-1	31.39
COAL MILL-B/F-1	15.71
COOLER-ESP-1	22.25
CVRM-1	29.17
CVRM-2	16.78
CVRM-3	31.11
KILN & VRM-2 (RABH)	27.28
COAL MILL-B/F-2	23.64
COOLER-ESP-2	31.57



STACK MONITORING Sox & Nox ONLINE MONTHLY AVERAGE REPORT - APRIL 2016 TO MARCH 2017

LOCATION MONTH	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	Sox	Nox	Sox	Nox	Sox	Nox	Sox	Nox	Sox	Nox	Sox	Nox	Sox	Nox	Sox	Nox	Sox	Nox	Sox	Nox	Sox	Nox	Sox	Nox
KLIN VRM ESP-1	71.4	288.3	80.8	398.2	80.5	230.4	65.5	293.4	5.2	204.5	2.2	136.9	15.4	184.1	5.8	136.9	4.78	326.4	16.6	417.4	27.7	443	23.6	423.1
KLIN VRM RABH-2	4.3	193.5	12.7	226.6	8.5	242.8	8.4	269.2	6.9	277.7	6.4	285.4	10	290.7	14.2	256.1	11.8	266.4	4.9	226.2	12.9	396.7	16.7	407.7

Stack emission (CEMS)	parameter	april	may	June	July	August	September	October	November	December	January	February	March	Avg. value
Kiln VRM ESP, Line-1	So2 in mg/	71.4	80.8	80.5	65.5	5.2	2.2	15.4	5.8	4.78	16.6	27.7	23.6	33.3
Kiln VRM RABH, Line-2	So2 in mg/	4.3	12.7	8.5	8.4	6.9	6.4	10	14.2	11.8	4.9	12.9	16.7	9.8
Kiln VRM ESP, Line-1	Nox in mg/	288.3	398.2	230.4	293.4	204.5	136.9	184.1	136.9	326.4	417.4	443	423.1	287.7
Kiln VRM RABH, Line-2	Nox in mg/	193.5	226.6	242.8	269.2	277.7	285.4	290.7	256.1	266.4	226.2	396.7	407.7	278.3

