

o/c

TS/ENV/ 47 /2017
August 28th, 2017

Member Secretary
Jharkhand State Pollution Control Board
T.A. Bhavan,
H.E.C.Campus,
Dhurba, Ranchi.

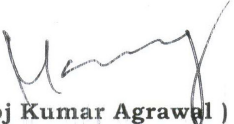
Sir,

Sub: Environmental Statement for the Year 2016-2017

Please find attached herewith the “ **Environmental Statement** “ for our Jojobera Cement Plant along with the “ **Environmental Performance for the year 2016-2017** ” in the format as prescribed. The same is being submitted as per consent condition – General Conditions Point No. 10 of Emission and Discharge Consent Order No. Ref No. JSPCB/HO/RNC/CTO-600181/2016/348 Dated : 2016-08-04.

Yours faithfully,

for Nuvoco Vistas Corporation Ltd.
(Formerly Lafarge India Limited)


(**Manoj Kumar Agrawal**)
Sr. Vice President
Jojobera Cement Plant, Jamshedpur.

Reviewed

20/8/17

Cc :

Regional Officer
Jharkhand State Pollution Control Board
MB/15, New Housing Colony
Adityapur,
Jamshedpur- 831 013

ENVIRONMENTAL STATEMENT FOR THE YEAR

2016 – 2017

(AUGUST – 2017)

**NUVOCO VISTAS CORPORATION LIMITED
(FORMERLY LAFARGE INDIA LTD.)**

JOJOBERA CEMENT PLANT

FORM – V

NUVOCO VISTAS COPORATION LIMITED
(Formerly Lafarge India Ltd.)
JOJOBERA CEMENT PLANT

ENVIRONMENTAL STATEMENT REPORT FOR THE YEAR ENDING 31.3.2017

PART – A

- i) Name and address of the occupier of : Mr. Ujjwal Batria
The industry /operation or process : Managing Director
Nuvoco Vistas Coporation Limited
(Formerly Lafarge India Ltd.)
Jojobera Cement Plant
- ii) Industry category : 32241
Primary (SIC Code) : Not available
Secondary (SIC Code) : Not available
- iii) Production Capacity : 4.60 million tones / annum
- iv) Year of establishment : 1993
- v) Date of last environmental : 23.08.2016
Statement submitted

PART –B

A) Water Consumption : (KL/Day) : 2016-2017

Process / Service : 544.62 (approx.)

Drinking : 456.29 (approx.)

Name of the Product	Process water consumption / unit of product output	
	During the previous Financial year 2015-2016	During the current year 2016-2017
Cement (M ³ /t Cement)	0.047	0.046

B) Raw Material Consumption

Name of raw materials	Name of the products	Consumption of raw material / unit of output	
		During the previous financial year 2015-2016	During the current financial year 2016-2017
BF SLAG (kg / ton of PSC)	PSC	581.11	594.51
CLINKER (kg / ton of Cement)		434.13	403.72
GYPSUM (kg / ton of Cement)		46.74	47.44
FLYASH (kg / ton of PPC)	PPC	338.72	344.46

PART – C

POLLUTION DISCHARGED TO ENVIRONMENT / UNIT OF OUTPUT (PARAMETER AS SPECIFIED IN THE CONSENT ISSUED)

Pollutants	Concentrations of pollutants in discharge (mg /l)	Percentage of variation from prescribed standards with reasons
A) Water		
TSS	40.50	All readings below norms
Oil and grease	<5	
COD	38.19	
BOD	10.04	
pH	7.77	

Pollutants	Quantity of pollutants discharged Micrograms/M3	Percentage of variation from prescribed standards with reasons
B) AIR (AAQ)		
PM 10	63.3	All readings below norms
PM 2.5	35.4	
SO ₂	57.6	
NO _x	36.0	

Pollutants	Quantity of pollutants discharged (milligrams/Nm3)	Percentage of variation from prescribed standards with reasons
C) AIR (Stack Emissions) - SPM	31.45	All readings below norms

D) THE AVERAGE NOISE LEVEL MEASURED AT JOJOBERA CEMENT PLANT AT THE FOLLOWING

LOCATIONS FOR YEAR 2016-17 IS AS FOLLOWS :

S.NO.	TIME	LOCATION	NOISE LEVELS	NOISE NORMS
1.	9 AM	TIME OFFICE	62.2 dB(A)	75 dB(A) (6.00 AM – 10.00 PM)
	10.30 PM		54.6 dB(A)	70 dB(A) (10.00 PM- 6.00 AM)
2.	9.30 AM	LDO TANK	59.9 dB(A)	75 dB(A) (6.00 AM – 10.00 PM)
	10.30 PM		53.2 dB(A)	70 dB(A) (10.00 PM- 6.00 AM)
3.	9.15 AM	SECURITY WATCH TOWER-4	61.7 dB(A)	75 dB(A) (6.00 AM – 10.00 PM)
	10.30 PM		53.7 dB(A)	70 dB(A) (10.00 PM- 6.00 AM)

PART-D

(As specified under hazardous wastes / management and handling rules)

Hazardous Waste	Total Quantity	
	During the previous financial year 2015-2016	During the current financial year 2016-2017
a) From process Waste Oil/Used lubricant	17.120 KL	03.310 KL
b) From Pollution control facilities		
c) Oil soaked Jute / Rags	0.200 Tons	-
d) Waste grease	1.200 Tons	-
e) Soil contaminated with oil	0.300 Tons	-

PART -E

SOLID WASTE

	Total Quantity (t/year)	
	During the previous financial year 2015-2016	During the current financial year 2016-2017
a) From process		
b) From Pollution Control Facility	NIL	NIL
c) Quantities recycled or re-utilized within the unit	NIL	NIL
d) Quantities Sold		
Screened Slag	9897.71 MT	7975.03 MT
MS Scrap	28.45 MT	325.21 MT
Rejected conveyor belt	84.25 MT	80.08 MT
P.P. Wrapper	37.81 MT	41.00 MT
Bursting Bag / Misc Plastic	39.34 MT	30.40 MT
Damaged filter bags	32.13 MT	8.406 MT

PART – F

Characteristics of wastes and their characteristics:

We are selling the used oil as well as oil soaked jute / rags to registered recyclers of MoEF. The copy of manifest is attached for records and reference please.

PART – G

Impact of pollution control measures on Conservation of natural resources and cost of production

: Minimize the uses of non-renewable resources and, wherever feasible and safe, replace them with substitute raw materials. Minimize the amount of hazardous and other waste we generate , reuse and recycle materials where feasible and dispose off waste using safe and responsible manner.

Maximize usage of industrial waste for producing cement in order to conserve natural resources like Lime Stone, Coal, and Mineral Gypsum etc

PART – H

Additional measures / investment proposal: of environmental protection including abatement of pollution

- i) Periodic inspection and maintenance of bag filters.
- ii) Up-grading present bag filters.
- iii) Regular cleaning of RCC roads with the help of road seeping machine
- iv) Regular water spray on roads.

- v) Construction of RCC wall in raw material yard to prevent run-off.
- vi) Effective control measure to bring down spillages.
- vii) Maintaining Sewage Treatment facility.
- viii) Installed Online Ambient Air and Stack monitoring instruments to monitor and reduce emission
- ix) Water sprinkler in Gypsum yards and STP outlet water.
- x) Water spray on wagon tippler belt conveyor.
- xi) Utilization of seepage water coming to our plant from outside by pumping it back to circuit

PART – I

(any other particulars for improving the quality of environment)

1. Plantation of 260 tree saplings.
2. Undertaken projects to reduce dust concentration in working areas.
3. Improving performance Factor of all production circuits.
4. Reduction in CO₂ emission by improving C/K ratio.
5. Effective Implementation of Environmental Management System in operations as per International Standard ISO : 14001: 2015.
6. Monitoring and Maintaining Good House Keeping Practices as an aftermath measure of having accorded with ISO:14001:2015 Certification by IRQS.

**ENVIRONMENT
PERFORMANCE OF
JOJOBERA CEMENT
PLANT FOR THE YEAR
2016 -2017**

INTRODUCTION

Jojobera Cement Plant, Nuvoco Vistas Corp. Ltd. (Formerly Lafarge India Ltd) is a grinding unit for production of two variants of Slag cements i.e. Portland Slag Cement (PSC) &, Concreto and Portland Pozzolana Cement (PPC). Capacity of the plant is 3.2 Million Tons / Annum for Slag Cement and 1.40 Million Tons / Annum of PPC. Subsequently consent for producing these products has been obtained vide consent order no. Ref No. JSPCB/HO/RNC/CTO-600181/2016/348 Dated : 2016-08-04 valid upto 30.06.2021. Amendment in Environmental clearance vide File no.J-11011/638/2008-IA.II(I)dated 16th March 2016 has been obtained for producing upto 4.0 MTPA of slag cement and 1.0 MTPA of PPC, with overall volume upto 4.6 MTPA only.

The basic raw materials used are:

1. Clinker
2. Granulated Blast Furnace Slag
3. Gypsum (Mineral and Phospho Gypsum)
4. Pulverized Fuel Ash (Fly Ash)

Clinker is received from its Sonadih Cement Plant situated in Raipur district and Arasmeta Cement Plant in Janjgir-Champa district, both in Chhattisgarh State. Granulated Slag is sourcing from the Tata Iron and Steel Co., Jamshedpur, Fly Ash from Tata Power Company, Jamshedpur. Natural Gypsum is received from various sources viz. Thailand, Bhutan, Oman etc and Phospho Gypsum is from IFFCO, Paradeep etc.

The cement manufacturing process at Jojobera is categorized under the following processes.

1. Handling of raw materials clinker, Slag, Fly ash, Coal and Gypsum.
2. Slag grinding in roller press and VRM grinding circuit.
3. Clinker is grinding in roller press and ball mill as well as VRM grinding circuit.
4. Mixing of ground clinker and ground slag by paddle mixer.
5. Intergrinding of Clinker, Flyash and Gypsum in Ball Mill for making PPC.
6. Cement Storage (PSC)
7. Cement Storage (Concreto)

8. Cement Storage (PPC)
9. Packing and dispatch.

PROCESS

Manufacturing process:

In brief the manufacturing process for the production of Portland slag cement is as described below:

Clinker is received from Sonadih and Arasmeta and is stored in three clinker silos from where it is extracted as per requirement for grinding. In case both the silos are full, clinker is stored in covered shed.

Slag is received from Slag Granulation and Drying Plant (SGDP) of Tata Steel and is stored in the two Dry slag silos and linear stockpile for further grinding.

Granulated blast furnace slag is ground in two roller presses and VRM to desired fineness. After grinding slag is stored in ground slag silos.

Clinker and gypsum are being ground in the two roller presses and VRM to desired fineness.

After grinding clinker and gypsum in roller presses this mix is further ground in a ball mill to the desired fineness. In case of clinker ground from VRM, no further grinding is required. In both the cases, ground clinker is stored in silos.

Ground clinker and ground slag are then mixed in the desired proportion by a paddle mixer. Portland slag Cement thus produced is transported to cement silo by a Bucket Elevator or through pneumatic conveying system.

Portland Slag Cement is produced as per IS-455:1989 and its latest amendments

For the manufacture of Portland Pozzolana Cement, fly ash, an industrial waste of adjacent plant of Tata Power, an environmental hazard to populace, is being transported by means of dense phase conveying system and stored in closed silos of respective cement mills inside the Jojobera cement plant. From the silo, it is being fed to mills for inter-grinding with clinker & gypsum. Ball Mill-1 is a closed circuit system. Mills and its material transport systems are fully equipped with adequate capacity of Bag Filters.

Portland Pozzolana Cement (Part I- Fly ash based) is produced as per IS-1489 part 1, 1991 and its latest amendments.

The cement produced is stored in silo. From the silo cement is extracted and conveyed to packing machine. The packing machine precisely packs 50 kg cement in Bags or in Bulklers through its microprocessor based filling and weighing system.

The cement so packed in bags is loaded in trucks & wagons for wagon loading machine for onward dispatch to destinations.

Capacity of main equipment & storage are as mentioned below:

SL. NO.	EQUIPMENT	CAPACITY
1.	WAGON TIPPLER	1X 500 TPH + 1 X 1200 TPH
2.	ROLLER PRESS	4 X 70 TPH
3.	CLINKER SILO	2 X 20000 TON + 1 X 12000 TON
4.	DRY SLAG SILO	2 X 4500 TON
5.	GROUND CLINKER SILO	1X 700 TON + 1 X 3000 TON
6.	GROUND SLAG SILO	1X 700 TON + 1 X 4000 TON
7.	BALL MILL	2 X 140 TPH
8.	CEMENT SILO	5 X 7000 EACH
9.	PACKER MACHINE	6 X 240 TPH
10.	TRUCK LOADING MACHINE	4 X 90 TPH
11.	WAGON LOADING MACHINE	10 X 90 TPH + 4 X 120 TPH
12.	L D O / F.O STORAGE TANK (at two locations)	2 X 22 KL + 2 X 22 KL
13.	L D O / F.O DAY TANK	2 X 5 KL
14.	H S D STORAGE & DISPENSING UNIT	2 X 20 KL
15.	LOCOMOTIVE -02 Nos.	2 X 350 HP
16.	PAY LOADER - 02 Nos.	2 CUBIC METER
17.	DOZER - 01 No.	150 HP
18.	SLAG STOCK PILE / STORAGE	10000 TON
19.	<i>COAL STOCK PILE / STORAGE</i>	1300 TON
20.	<i>TRUCK TIPPLER-1</i>	<i>40 TON</i>
21.	<i>VERTICAL CEMENT MILL HOPPERS</i>	350 T (SLAG) + 300 T (CLINKER) + 200 T (MINERAL GYPSUM) + 100 T (CHEMICAL GYPSUM)
22.	COAL MILL-1 No.	15 TPH
23.	VERTICAL CEMENT MILL -1 No.	230 TPH (SLAG) / 127 TPH (CLINKER)
24.	BULK LOADERS	1 X 160 TPH
25.	PADDLE MIXER	1 X 425 TPH + 1 X 225 TPH
26.	STACKER-1	1400 TPH
27.	RECLAIMER-1	300 TPH

INTEGRATED MANAGEMENT SYSTEM (IMS) POLICY

Nuvoco Vistas Corp. Ltd. (Formerly Lafarge India Ltd), Jojobera Cement Plant is totally committed to continuously improving environment in and around its operations. At Jojobera Cement Plant continual efforts have been made to improve the work area environment, health and safety. The top management of Company, Director with Plant Manager has formulated an Integrated Management System (IMS) Policy (which includes QMS -ISO: 9001 - 2015, EMS-ISO: 14001 - 2015 and OHSAS: 18001 – 2007 requirements) for all employees as guidelines for setting up Quality Management System, Environmental Management System and Occupational Health and Safety Assessment Series at Jojobera Cement Plant. The IMS Policy stated is as follows:

NUVOCO INTEGRATED POLICY

- ◆ **QUALITY**
- ◆ **ENVIRONMENT**
- ◆ **OCCUPATIONAL HEALTH & SAFETY**

Nuvoco Vistas Corporation Limited (formerly Lafarge India Limited) - Jojobera Cement Plant, affirms its commitment towards Customer satisfaction, Environmental protection, Healthy & Safe work environment for all concerned and shall endeavour to:

- Implementation of Quality, Environmental and Occupational Health & Safety management systems, appropriate to the purpose, context and supports strategic direction of the company *with its values, integrity.*
- Produce Cement exceeding applicable standards to satisfy the customer needs and expectations *through innovation.*
- Comply with all applicable legal and corporate requirements.
- Improve, develop and upgrade the competency and skill of human resources by engagement, coaching and regular training.
- Regularly set and review objectives and targets for continual improvement *to achieve Operational Excellence.*
- Prevention and control of pollution, injuries and ill-health, providing *care to all stakeholders.*
- Institute management systems of internationally repute and continually improve their effectiveness *by involvement & mutual collaboration at each level.*

This policy has been communicated to all the employees and is available to public and interested parties on demand.

Date: 04th April 2017

(Manoj Kumar Agrawal)
Vice President (Jojobera Cement Plant)
Nuvoco Vistas Corporation Limited
(formerly Lafarge India Limited)

(Ujjwal Batria)
Country CEO
Nuvoco Vistas Corporation Limited
(formerly Lafarge India Limited)

OBJECTIVES AND TARGETS

During the year 2016-17 emphases was put on the following issues:

1. To improve work area environment.
2. 100% utilization of pollution controls equipment.
3. To reduce waste generation.
4. To improve resource conservation
5. To improve energy efficiency
6. To reduce fugitive dust emission from surface transport
7. To bring down Specific energy consumption
8. To reduce dust in Packing Plant
9. To reduce dust in Blending circuit
10. To reduce dust in Clinker Silo area
11. To bring down Specific Water Consumption.
12. To improve C/K by improving cementitious addition
13. To improve green belt.
14. Compliance with the requirements of EMS according to the requirements of ISO 14001: 2015 and its latest amendments.

IMPROVING THE WORK AREA ENVIRONMENT:

In order to provide cleaner and greener working atmosphere, green belt has been developed in and around the plant premises. More than 33 % of plant area has been covered with green belt.

This year on 5th June, mass scale plantation of fruit sapling, seesam, Neem etc were planted along with celebration of Environment days in plant. Variety of flowering trees and garden has been developed to create a natural atmosphere.

Jojobera Cement Plant is a cement-grinding unit, hence in order to minimize air pollution, 109 bag filters have been provided. Truck parking yards and other plant roads are concreted / paved for minimizing fugitive dust.

Road sweeping machine has been procured and is being used regularly to clean the roads. Vacuum cleaning machine has been procured and is being commissioned to suck the fugitive dust in circuits.

Fixed type water sprinklers have been installed in Gypsum Storage area to minimize fugitive dust emission during surface transport. For other areas, water spray on roads inside the plant is done twice a day to reduce fugitive dust emission.

A self-contained First Aid Center has been provided within the plant premises to take care of minor injuries and ailments with doctor and an attendant in service round the clock for 365 days. First aid box have been provided at all locations.

A well-equipped ambulance with driver is available round the clock in factory to take care of emergency situations. Health checkup of all employees is being done once in a year. Free medical treatment is available to all employees at Tata Main Hospital and Tin Plate Hospital at Jamshedpur.

Dust masks have been given to all employees for their use in dust prone areas. Noise polluted areas have been identified and earmuffs / earplugs have been provided to all employees in case they are working in the Noise Zone.

All employees as well as Contractor employees have been provided with all mandatory and job specific PPE's (Personal Protective Equipments). Before inducting any person inside the plant medical fitness and safety awareness level are ensured. Other staff is also provided with regular training on Safety, Health and Environment throughout the year. Jojobera Cement Plant is also certified for OHSAS-18001 : 2007, a system, which takes into account Occupational Health and Safety of all employees.

Fire fighting equipments have been provided at all critical locations within the plant premises

UTILISING 100 % POLLUTION CONTROL EQUIPMENT:

Total 109 nos. of Bag Filters have been installed in the plant and are integral part of the process. Preventive maintenance and monitoring of these bag filters are done in a systematic manner as per periodicity towards ensuring its effective utilization.

Maintenance of bag filters is being done at regular intervals to ensure the availability of it at all times.

Pollution measurement is being done at regular intervals to ensure that emission levels will be controlled well within statutory norms.

IMPROVING THE WASTE UTILIZATION.

During process all spilled materials such as Clinker, Gypsum, Slag, Fly ash and cement are collected and fed back into the circuit as like bag filter discharge.

Screened oversized slag and embedded iron particles of slag are entrapped during grinding process are collected separately and sold to out side party as like damaged PP bags/Wrappers.

Used oil / Lead Acid Batteries is sold to the registered recyclers of MoEF and record of it is being maintained in prescribed Form 13.

Scrap generated i.e. Steel from fabrication, tins, damaged filter bags etc. are accumulated and stored separately and then sold off to outside parties.

IMPROVING RESOURCE CONSERVATION:

Jojobera Cement Plant uses various Industrial wastes of local industries like Granulated Blast Furnace slag of Steel Plant, Fly ash of Power plant and Phospho-gypsum of Fertiliser Plant for producing high quality of cement. This not only helps to the local industries but, in large scale it helps to the local community and living organism in improving their living atmosphere.

This too helps in to the nation up to great extent towards conserving natural resources like Limestone, Coal & Power and more importantly it reduces CO₂ emission.

Up to large extent wastewater is used for gardening purpose.

Many improvement measures were undertaken to reduce electricity. They are as follows:

- I. Increase in usage of Cementitious Material to bring down specific consumption of clinker resulting in reduction in CO₂ emission to atmosphere.**
- II. Tata power generator unit tripping input through plant PLC to automatically shed major loads to avoid tripping of equipment on load resulting in reducing the idle running for cleaning purpose.
- III. Replacement of roll flange top type bag filter cages with venturi type cages to reduce compressed air consumption.
- IV. Plan to increase the mill output with upgradation of transporting equipment.
- V. Grinding media optimization in ball mills.
- VI. Timely in situ roll profiling in roller presses.
- VII. Reduction in specific consumption of fuel
- VIII. Reduction in specific consumption of Natural / Mineral Gypsum

5. IMPROVING ENERGY EFFICIENCY

Energy efficiency is being improved by following measures:

- i) Optimization of process interlocks to avoid idle running of equipment
- ii) Capacitor bank installation at non-plant transformer to improve the power
- iii) Energy saving suggestion schemes.
- iv) Encouraging people to switch off the lights/PC when they are not in use.
- v) Auto tripping of material handling belts if they are in operation without load for a predefined period of time.
- vi) Automation of street lights thorough PLC.
- vii) Replacement of roll flange top type bag filter cages with venturi type cages to reduce compressed air consumption.
- viii) Sealing of false air entry to improve fan efficiency & better heat recovery.
- ix) Plan to increase the mill output with upgradation of transporting equipment.
- x) Grinding media optimization in ball mills.
- xi) Timely in situ roll profiling in roller presses.
- xii) Optimization of central compressor by control its operation from CCR
- xiii) Replacing screw conveyors and belt conveyors with Air slides for material conveying

6. REDUCTION IN FUGITIVE DUST EMISSION FROM SURFACE TRANSPORT

- i) Water sprinkling is ensured.**
- ii) Road sweeping machine is extensively in use.**
- iii) Fixed type sprinkler running in Gypsum Storage and Clinker Silo area.**

7. REDUCTION IN SPECIFIC ENERGY CONSUMPTION

- i) Through several trials and small improvements, we have succeeded to bring down Significantly, FO (Furnace Oil) consumption per unit of slag cement production.**
- ii) Pneumatic conveying system has been replaced with Belt Bucket Elevator. This has further helped in reduction in power consumption.**
- iii) Introduction of VFD to various circuits has helped in reducing power consumption.**

8. REDUCTION IN DUST IN PACKING PLANT

For Concerto, paper bags have been implemented. Bag cleaners are being made effective. Possibility is being explored to install new nylon brush in packer discharge belts. D.P. of Bag filters is being monitored continuously.

9. REDUCTION OF DUST LEVEL IN BLENDING CIRCUIT

- i) Pfister system has been installed in Blending circuit to reduce fugitive dust level.**
- ii) High efficiency Pulse pleat bags are being used.**
- iii) New design belt scrapper is being done.**
- iv) False air is arrested.**
- v) Belt conveyor conveying fine material at silo top has been replaced with air slide.**

10. TO REDUCE DUST EMISSION BELOW CLINKER SILO AND MATERIAL HANDLING CIRCUIT

- i) High Efficiency horizontal bag filters are additionally installed at clinker silo extraction point.**
- ii) This bag filter is having high efficiency Pulse pleat bags.**
- iii) New design belt scrapper is being done.**

11. IMPROVING ENVIRONMENT / OPERATIONAL EFFICIENCY BY INCREASING CEMENTITIOUS ADDITION

Over the year there is continual reduction in clinker consumption thereby reduction in CO₂ by means of product development and improving consumption of industrial waste like slag, fly ash and Phospho-Gypsum. This gives quantum reduction in limestone and mineral gypsum, a

precious natural resource.

12. MONITORING AND MAINTAINING THE IMPLEMENTED ENVIRONMENTAL MANAGEMENT SYSTEMS IN ITS OPERATIONS AS PER THE STANDARD ISO 14001 : 2015 AND ITS LATEST AMENDMENTS.

Environment Management Systems have been formulated and put into practice as per the guidelines given in ISO – 14001 : 2015. Several nos. of “Environment Management Programmes (EMPs)” have been undertaken to improve the Environment at Jojobera Cement Plant. They are as follows:

- 1. To reduce dust emission in Packing Plant**
- 2. To reduce dust emission in Grinding Building.**
- 3. To save environment by increasing addition of cementitious material.**
- 4. To plant more maximum possible nos. of trees every year in and around Jojobera Cement Plant.**

**HIGHLIGHTS OF ENVIRONMENTAL ACHIEVEMENTS IN
2016-2017:**

1. Online connectivity of PM 10, PM 2.5, SO_x, NO_x, CO, Stack monitoring data to CPCB and JSPCB servers.
2. Higher substitution of Fly ash in cement. It's industrial waste.
3. Higher substitution of BF slags in cement. It's industrial waste.
4. Higher substitution of Phospho gypsum, it's industrial waste.
5. Higher substitution of wet slag resulting in reduction in CO₂ emission.
6. Improving Energy efficiency of Plant by various measures.
7. Enhancement production volume.
8. Reduction in specific water consumption.
9. Reduction in specific fuel consumption.
10. Emission level controlled well within prescribed limit.
11. Noise level is controlled well within prescribed limit.
12. Sewage and drinking water quality is maintained within prescribed limits.
13. STP working in full fledged manner. Its outlet water being used for sprinkling on roads and gardening.
14. Use of truck mounted Road Sweeping Machine in day-to-day operations.
15. Maintaining rainwater-harvesting pits operational.
16. Industrial Vacuum cleaning machine being used for industrial cleaning.
17. Tree plantation.

FUTURE PLANS

1. Reduce Fugitive dust concentration in Work Zones.
2. Increase cementitious consumption in Slag Cement.
3. Increase production of Slag Cement.
4. Improve housekeeping in the Plant.
5. Reducing consumption of Natural gypsum by increase in percentage of Phospho Gypsum.
6. Produce Composite Cement.
7. Upgradation of Bag-Filters.
8. Installation of VFD in major fans.
9. Reduction in specific consumption of mineral gypsum.
10. Pumping seepage water being received at our plant from outside for our plant uses.