BHILAI JAYPEE
CEMENT LIMITED

REGISTERED

BJCL/Bhilai/ Envt. / 422 — 23rd June, 2017

To,
The Member Secretary
Chhattisgarh Environment Conservation Board,
Paryavas Bhavan, North Block,
Sector-19
Naya Raipur (CG) - 490099

Sub : Environmental Statement for the Financial Year 2016- 17.

Dear Sir,

We are herewith submitting the Environmental Statement for the financial year ending **31st March, 2017** in **Form V** in Compliance of Environment (Protection) Rules 1986 as amended subsequently.

Thanking you,

Yours faithfully

Niraj Shrivastava (Unit Head)
Authorized Signatory

For Bhilai **Jaypee Grinding Plant, Bhilai**
(A Unit of Bhilai Jaypee Cement Limited)

CC: The Regional Officer
Regional Office,
C.E. Conservation Board,
Bhilai, Durg (CG)

Regional Office C.G. Environment Conservation Board Bhilai 23/6

: For your kind information pl.

O/C

Plant : BSP Premises, Slag Yard Road (Opp. Sector-4, NMOH) Bhilai - 490 001, Distt.-Durg(Chhattisgarh) Exchange-0788-4022255/56,Fax:0788-4022216
Regd. Office : Post Babupur, Satna (M.P.) Pin - 485112 Ph. :+91(7672) 415500L 415600
Head Office : 'JA House', 63 Basant Lok, Vasant Vihar, New Delhi - 110 057 (India)
Ph. : +91 (11) 26141540, 26147411 Fax : +91 (11) 26145389, 26143591
A JV of SAIL & JAIPRAKASH ASSOCIATES LIMITED

M/S. BHILAI JAYPEE GRINDING PLANT, BHILAI
(A UNIT OF BHILAI JAYPEE CEMENT LIMITED)
(JOINT VENTURE WITH SAIL)

ENVIRONMENTAL STATEMENT

For the Financial year ending
31st March 2017

M/S. BHILAI JAYPEE GRINDING PLANT, BHILAI

(A UNIT OF BHILAI JAYPEE CEMENT LIMITED)

(JOINT VENTURE WITH SAIL)

ENVIRONMENTAL STATEMENT

(For the Financial year ending 31st March 2017)

Contents

BHILAI JAYPEE GRINDING PLANT,BHILAI

F O R M - V

(See Rules 14)

Environmental Statement for the Financial Year ending 31st March 2017

P A R T – A

(i) Name and address of the owner/ Occupier of the industry Operation or Process.	:	**BHILAI JAYPEE GRINDING PLANT** BSP Premises, Slag Yard Road (Opp. Sector – 4, NMOH) BHILAI, DURG -490001
Occupier	:	Shri R.B. Singh Ji
(ii) Industry Category Primary (STC Code) Secondary (SIC Code)	:	Secondary (SIC Code)
(iii) Production Capacity	:	2.2 Million Tonnes /Annum of Portland Slag Cement
(iv) Year of establishment	:	June 2010
(v) Date of the last Environmental Statement Submitted	:	2nd August, 2016

PART – B
WATER AND RAW MATERIALS CONSUMPTION

(i) Water Consumption, m^3 / day (Avg.)

Process	: NIL
Cooling	: 25.8 (Based on 365 Days)
Domestic	: 69.3 (Based on 365 Day)

Name of Product	**Process Water Consumption per unit of product output**	
	During the previous financial year 2015-16	**During the current financial year 2016-17**
Portland Slag Cement	0.0264 m^3/T of Cement	0.1859 m^3/T of Cement
	Water used for cooling purpose only.	Water used for cooling purpose only. (Excluding Domestic consumption)

II -Raw Materials Consumption

Name of the Raw Materials	Name of product	Consumption of raw material per unit of output	
		During the Previous financial year 2015-16	During the Current financial year 2016-17
	Portland Slag Cement	MT/ MT of Cement Prodn.	MT / MT of Cement Prodn.
1. Clinker		0.42888	0.39339
2. Gypsum		0.02555	0.01218
3. Slag		0.52661	0.56884
4. Coal		0.01968	0.02168

PART- C

POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT

(Parameter as specified in the consent issued)

(a) Water

Pollutants	Quantity of Pollutants Discharged (mass /day)	Concentration of Pollutants Discharges (mass/volume)	%of variation from prescribed standards with reasons

- NOT APPLICABLE -

This is a Cement Grinding Unit and Portland Slag Cement is produced by dry grinding of clinker and slag with small quantity of gypsum, hence no Industrial Waste Water is being generated from the plant process. Water is used only for cooling purpose which is recycled back into the system.

Domestic Waste Water generated from the office toilet is small quantity and the same is being disposed off into the Sewage line of Bhilai Steel Plant which finally is treated in their Sewage Treatment Plant.

(b) AIR.			
Pollutants	**Allowable Standards**	**Concentration of Pollutants Discharged in mg/Nm^3**	**Percentage of variation from prescribed Standards with reason**
Stack Emission.		Min. Max. Avg.	
Stack of Bag house Cement Mill No.1&2			**Stack emission values are well within the prescribed limits stipulated by SPCB in Consent**
P.M.	**50mg/Nm^3**	**23.3– 27.1 (24.7)**	
Stack of packing plant Bag Filter No-1			**Stack emission values are well within the prescribed limits stipulated by SPCB in Consent**
P.M.	**50mg/Nm^3**	**16.4 – 18.5 (17.3)**	
Stack of packing plant Bag Filter No-2			**Stack emission values are well within the prescribed limits stipulated by SPCB in Consent**
P.M.	**50mg/Nm^3**	**14.6 – 18.7 (16.7)**	
Stack of packing plant Bag Filter No-3			**Stack emission values are well within the prescribed limits stipulated by SPCB in Consent**
P.M.	**50mg/Nm^3**	**14.8 – 16.2 (15.5)**	
Stack of packing plant Bag Filter No-4			**Stack emission values are well within the prescribed limits stipulated by SPCB in Consent**
P.M.	**50mg/Nm^3**	**18.4 – 19.3 (18.9)**	

Note- Ambient Air Quality as Annexure-1

PART – D

Hazardous Waste

(As specified under Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2008)

Hazardous Waste	Total Quantity (kg)	
	During the previous Financial year 2015 - 16	During the Current Financial year 2016-17
(a) From Process Spent Oil (Used Oil)	1540 liter	840 liter
(b) From pollution Control Facilities	Nil.	Nil.

PART – E

SOLID WASTE

	Total Quantity in MT	
	During the previous Financial year 2015 - 16	During the Current financial year 2016-17
(a) From Process	15.65	Nil (Burst Bags)
(b) From Pollution control Facilities	NIL	NIL
(c) (1) Quantity recycled or reutilized Within the unit	All the collected swept solid waste is reused in the the process	
(2) Sold	15.65	Nil (Burst Bags)
(3) Disposed	NIL	NIL

Dust collected in the Bag House and Bag filters are Recycled back into the system

PART – F

Please specify the characterization (in term of composition and quantum) of Hazardous as well as solid waste and indicate disposal practice adopted for both these categories of wastes.

HAZARDOUS WASTE.

This is a Cement Grinding Unit and Portland Slag Cement is produced by dry grinding of clinker and slag with small quantity of gypsum. No Hazardous waste is generated from the process except used oil which is collected from machineries. Presently used oil is stored in 200 liter capacity drums and kept in secured area / place within the factory premises as per the Hazardous Waste Management Rules. After getting the authorization of Hazardous Waste (Authorization No. 40/HO/HSMD/CECB/ RAIPUR Dated 06/11/2012) from the Board, the disposal is being done as per Hazardous Waste (Management, Handling and Transboundary Movement) Rules , 2008 as amended Rules,2010. The Used Oil disposed off to the Authorized recyclers approved by the CECB for processing.

SOLID WASTE.

Burst bags are collected, stored in specific area and sold to recyclers.

Dust collected in the Bag House and Bag filters is recycled back into the system.

Part-G

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

Bhilai Jaypee Cement Grinding plant is using slag generated by Bhilai Steel Plant to manufacture Portland Slag Cement, thus utilizing industrial waste and conserving limestone and coal-the non-renewable natural resources. The plant is equipped with state–of-the art Air Pollution Control devices so that emission level maintained well below stipulated norms as prescribed in the consent Total 34 Nos. of Bag filters including Bag House have been installed to control the Stack emission and at various material transfer points to control the fugitive dust emissions as per CPCB guideline. Entire collected dust is also recycled/ reutilized into the system. Fully mechanized system developed for handling of raw materials. All raw materials handling is being done by fully covered conveyor belt. Water sprinkling on road is being carried out regularly to control the fugitive dust emission which is generated during movement of vehicles.

Good housekeeping practice is being done by

1. Raw coal is stored in covered shed
2. Clinker and cement is being stored in covered silo.
3. Gypsum is stored in covered shed.
4. Regular road sweeping is being carried out.
5. Scheduled maintenance and monitoring of Pollution Control Devices is being done.

PART – H

Additional measures/ investment proposal for environmental protection including abatement of pollution, and Prevention of Pollution.

Company has installed and commissioned Continuous Online Ambient Air Quality Monitoring Systems and Continuous Online Emission Monitoring System.

The ecology of the area has improved due to Green Belt development programme undertaken by the plant. So far, total 10670 trees have been planted over an area of 4.24 ha.

For the pollution control measures the company incurred a cost of Rs. 254.9 per ton of Cement production during 2016-17. This does not include capital investment for installation of Pollution Control devices.

ADDITIONAL MEASURES

1. Permanent water sprinklers near wagon tippler area have been provided for dust suppression.
2. The parking area of cars and two wheeler inside plant has been concreted to control fugitive emission during movement.
3. Constructed the check dam near coal storage area to restrict the spillage of coal in the drain

4. Skirt guard of some part of coal conveyer belt replaced to control fugitive emission.
5. Damaged nozzles of Water sprinklers in different places at feeding belts replaced.
6. Coal crusher building covered with the sheet.
7. HAG 2 bottom covered with sheets.

PART-I

Any other particulars for improving the quality of the Environment

1. The company has planted about 690 trees during the year 2016-17 in the plant premises. Total area covered about 4.24 ha till date.
2. Periodic review of various Environmental Compliance conditions through Environmental Committee Meeting every month.
3. Replacement of 269 Numbers bag, 3 Numbers solenoid valve and 3 Numbers Cages from Bag Filters & Bag Houses for controlling of dust emission effectively.
4. Water Sprinkling is being done on regular basis for dust suppression.
5. Awareness program and Tree plantation carried out on World Environment Day.
6. Awareness program carried out on International Ozone Day.
7. Celebrated India water week 2016(4 – 8 April, 2016) on theme "Water for All-Striving together"
8. Awareness sessions carried out on India water week.

Ambient Air Quality

(b) AIR.			
Pollutants	**Allowable standards**	**Concentration of pollutants discharged in $\mu g/m^3$**	**Percentage of variation from prescribed Standards with reason**
1-Ambient Air		**Min. Max. Avg.**	
I. Switch Yard			
i) S.P.M.	$500\mu g/m^3$	165.0 - 220.0 (194.0)	Well within the norms
PM_{10}	$100\mu g/m^3$	43.8 - 66.1 (57.1)	Well within the norms
$PM_{2.5}$	$60\mu g/m^3$	15.3 - 26.0 (20.9)	Well within the norms
ii) SO_2	$80\mu g/m^3$	6.0 - 6.9 (6.5)	Well within the norms
iii) NOx	$80\mu g/m^3$	21.2 - 23.7 (22.2)	Well within the norms
iv) CO	$4mg/m^3$	- BDL-	Well within the norms
II. Coal Yard		**Min. Max. Avg.**	
i) S.P.M.	$500\mu g/m^3$	168.0 - 238.0 (207.0)	Well within the norms
PM_{10}	$100\mu g/m^3$	45.7 - 66.5 (60.1)	Well within the norms
$PM_{2.5}$	$60\mu g/m^3$	16.9 - 27.2 (22.0)	Well within the norms
ii) SO_2	$80\mu g/m^3$	6.5 - 7.1 (6.8)	Well within the norms
iii) NOx	$80\mu g/m^3$	20.5 - 25.5 (22.6)	Well within the norms
iv) CO	$4mg/m^3$	- BDL-	Well within the norms
III. Wagon Tippler		**Min. Max. Avg.**	
i) S.P.M.	$500\mu g/m^3$	172.0 - 278.0 (228.0)	Well within the norms
PM_{10}	$100\mu g/m^3$	47.2 - 71.1 (62.8)	Well within the norms
$PM_{2.5}$	$60\mu g/m^3$	18.3 - 31.6 (24.4)	Well within the norms
ii) SO_2	$80\mu g/m^3$	6.4 - 7.3 (6.9)	Well within the norms
iii) NOx	$80\mu g/m^3$	23.3 - 26.3 (24.7)	Well within the norms
iv) CO	$4mg/m^3$	- BDL-	Well within the norms
IV. Auto workshop		**Min. Max. Avg.**	
i) S.P.M.	$500\mu g/m^3$	158.0 - 208.0 (187.0)	Well within the norms
PM_{10}	$100\mu g/m^3$	48.1 - 65.9 (63.4)	Well within the norms
$PM_{2.5}$	$60\mu g/m^3$	15.2 - 24.9 (20.1)	Well within the norms
ii) SO_2	$80\mu g/m^3$	6.3 - 7.3 (6.7)	Well within the norms
iii) NOx	$80\mu g/m^3$	22.6 - 24.3 (23.6)	Well within the norms
iv) CO	$4mg/m^3$	- BDL-	Well within the norms