

REGISTERED

BJCL/Bhilai/ Evt. / 669

Date: 5th July, 2021

To

The Member Secretary
Chhattisgarh Environment Conservation Board,
Paryavas Bhavan, North Block,
Sector-19, Nava Raipur Atal Nagar
Raipur (CG) - 492002

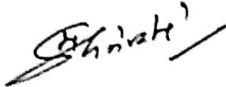
Sub : Environmental Statement for the Financial Year 2020- 2021.

Dear Sir,

We are herewith submitting the Environmental Statement for the financial year ending 31st March, 2021 in Form V in Compliance of Environment (Protection) Rules 1986 as amended subsequently.

Thanking you

Yours faithfully



Niraj Kumar Shrivastava (Unit Head)
Authorized Signatory

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



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

For your kind information pl.



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 2021

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 2021)

Contents

| <u>S.No.</u> | <u>Description</u> | <u>Page No.</u> |
|--------------|---|-----------------|
| 1 | General Information | Part A 01 |
| 2 | Water & Raw material consumption | Part B 01 & 02 |
| 3 | Pollution discharge to Environment / Unit of output | Part C 03 & 04 |
| 4 | Hazardous waste | Part D 05 |
| 5 | Solid Waste | Part E 06 |
| 6 | Characterizations of Hazardous waste as well as solid waste & disposal practice | Part F 07 |
| 7 | Impact of the pollution abatement measures taken on conservation of natural resources & on the cost of production | Part G 07 & 08 |
| 8 | Additional measure / Investment proposal for environmental protection. | Part H 08 |
| 9 | Any Other particulars for improving the quality of the environment. | Part I 09 |
| 10 | Annexure- 1 – Ambient Air Quality | 10 |

BHILAI JAYPEE GRINDING PLANT, BHILAI
F O R M - V
(See Rules 14)
Environmental Statement for the Financial
Year ending 31st March 2021

P A R T – A

- (i) Name and address of the owner/ : **BHILAI JAYPEE GRINDING PLANT**
Occupier of the industry : **BSP Premises, Slag Yard Road**
Operation or Process. : **(Opp. Sector – 4, Near NMOH)**
BHILAI, DURG -490001
- Occupier : **Shri R.B. Singh Ji**
- (ii) Industry Category : **Secondary (SIC Code)**
Primary (STC 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 : **3rd June, 2020**
Statement Submitted

PART – B

WATER AND RAW MATERIALS CONSUMPTION

- (i) Water Consumption, m³ / day (Avg.)
- | | |
|----------|---|
| Process | : NIL |
| Cooling | : 20.9 (Based on 365 Days including dust suppression) |
| Domestic | : 63.9 (Based on 365 Day including plantation) |

| Name of Product | Process Water Consumption per unit of product output | |
|-----------------|--|--|
|-----------------|--|--|

| | During the previous financial year 2019-20 | During the current financial year 2020-21 |
|-----------------------------|---|--|
| Portland Slag Cement | 0.124 m ³ /T of Cement | 0.0197 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 <u>2019-20</u> | During the Current financial year <u>2020-21</u> |
| Portland Slag Cement | | MT/ MT of Cement Prodn. | MT / MT of Cement Prodn. |
| 1. Clinker | | 0.42298 | 0.42270 |
| 2. Gypsum | | 0.01823 | 0.01926 |
| 3. Slag | | 0.53578 | 0.55804 |
| 4. Coal | | 0.01794 | 0.02090 |

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 varia- tion 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.

| <u>(b) AIR.</u> | | | |
|---|----------------------------|--|--|
| Pollutants | Allowable Standards | Concentration of Pollutants Discharged in mg/Nm³ | Percentage of variation from prescribed Standards with reason |
| <u>Stack Emission.</u> | | Min. Max. Avg. | |
| Stack of Bag house Cement Mill No.1&2 P.M. | 30mg/Nm³ | 20.7– 25.6 (23.7) | Stack emission values are well within the prescribed limits stipulated by SPCB in Consent |
| Stack of packing plant Bag Filter No-1 P.M. | 30mg/Nm³ | 17.9 – 20.7 (19.1) | Stack emission values are well within the prescribed limits stipulated by SPCB in Consent |
| Stack of packing plant Bag Filter No-2 P.M. | 30mg/Nm³ | 17.6 – 22.8 (19.3) | Stack emission values are well within the prescribed limits stipulated by SPCB in Consent |
| Stack of packing plant Bag Filter No-3 P.M. | 30mg/Nm³ | 17.4 – 20.9(18.5) | Stack emission values are well within the prescribed limits stipulated by SPCB in Consent |
| Stack of packing plant Bag Filter No-4 P.M. | 30mg/Nm³ | Shut | - |

Note- Ambient Air Quality Data as Annexure-1

P A R T – 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 2019- 20 | During the Current Financial year 2020-21 |
| (a) From Process Spent Oil (Used Oil) | Nil. | Nil. |
| (b) From pollution Control Facilities | Nil. | Nil. |

[06]

P A R T – E

SOLID WASTE

| ----- Total Quantity in MT ----- | | |
|--|---|---|
| | During the previous Financial year 2019 - 20 | During the Current financial year 2020-21 |
| ----- | | |
| (a) From Process | Nil (Burst Bags) | 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 | Nil (Burst Bags) | Nil (Burst Bags) |
| (3) Disposed | NIL | NIL |

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

P A R T – 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 200/220 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) and renewal of authorization - 204/HO/HSMD/CECB/RAIPUR date 12.12.2017 from the Board, the disposal is being done as per Hazardous & Other Wastes (Management and Transboundary Movement) Rules , 2016. The Used Oil disposed off to the Authorized recyclers approved by the CECB for processing.

E-WASTE. Nil (No any E- Waste disposed)

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 been 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, approx 11200 trees in total have been planted over an area of 4.62 ha and outside the plant area.

For the pollution control measures the company incurred a cost of Rs. 171.20 per ton of Cement production during 2020-21. This does not include capital investment for installation of Pollution Control devices.

ADDITIONAL MEASURES

1. Bag filters maintenance are done regular basis..
2. Permanent water sprinklers near wagon tippler area have been provided for dust suppression.
3. Used batteries are placed in designated place and send to only authorized recycler.
4. E-waste are placed in designated place and send to only authorized recycler.
5. The parking area of cars and two wheeler inside plant has been concreted to control fugitive emission during movement.
6. Cleaning of rain water harvesting pits done.
7. Check dam made near coal storage area to restrict the spillage of coal in the drain

8. Skirt guard of some part of coal conveyer belt replaced to control fugitive emission.
9. Bulk Loading Compensator get tear off then repaired to control dust emission.
10. Damaged nozzles of Water sprinklers in different places at coal feeding belts replaced.
11. Main Suction damper of Packer replaced to control dust.

PART-I

Any other particulars for improving the quality of the Environment

1. The company has planted about 380 trees during the year 2020-21 in the plant premises and outside area. 4.62 Ha green belt area covered till date.
2. Revival & Proper care of trees/plants by top up of soil and fertilizer.
3. Periodic review of various Environmental Compliance conditions through Environmental Committee Meeting.
4. 56 Numbers bag Replaced and 79 solenoid valve/repair kit/ Diaphragm repaired/changed from Bag Filters & Bag Houses for controlling of dust emission effectively.
5. Water Sprinkling is being done on regular basis for dust suppression.
6. Awareness program and Tree plantation carried out on World Environment Day.
7. Awareness program carried out on International Ozone Day.
8. Awareness sessions carried out regarding Water conservation issues.

Ambient Air Quality
(2020-21)

| <u>(b) AIR.</u> | | | |
|----------------------------------|------------------------------|--|---|
| Pollutants | Allowable standards | Concentration of pollutants discharged in $\mu\text{g}/\text{m}^3$ | Percentage of variation from prescribed Standards with reason |
| <u>1-Ambient Air</u> | | Min. Max. Avg. | |
| <u>I. Switch Yard</u> | | | |
| i) S.P.M. | 500 $\mu\text{g}/\text{m}^3$ | 171.0 - 236.0 (209.0) | Well within the norms Well within the norms Well within the norms Well within the norms Well within the norms |
| PM ₁₀ | 100 $\mu\text{g}/\text{m}^3$ | 39.9 - 59.8 (51.1) | |
| PM _{2.5} | 60 $\mu\text{g}/\text{m}^3$ | 17.6 - 33.6 (22.1) | |
| ii) SO ₂ | 80 $\mu\text{g}/\text{m}^3$ | 6.0 - 7.7 (6.7) | |
| iii) NOx | 80 $\mu\text{g}/\text{m}^3$ | 22.4 - 26.0 (24.6) | |
| iv) CO | 4mg/m ³ | - BDL- | |
| <u>II. Coal Yard</u> | | Min. Max. Avg. | |
| i) S.P.M. | 500 $\mu\text{g}/\text{m}^3$ | 159.0 - 238.0 (204.0) | Well within the norms Well within the norms Well within the norms Well within the norms Well within the norms |
| PM ₁₀ | 100 $\mu\text{g}/\text{m}^3$ | 37.1 - 61.7 (50.6) | |
| PM _{2.5} | 60 $\mu\text{g}/\text{m}^3$ | 17.4 - 30.4 (21.9) | |
| ii) SO ₂ | 80 $\mu\text{g}/\text{m}^3$ | 5.8 - 7.1 (6.6) | |
| iii) NOx | 80 $\mu\text{g}/\text{m}^3$ | 22.7 - 25.5 (24.3) | |
| iv) CO | 4mg/m ³ | - BDL- | |
| <u>III. Wagon Tippler</u> | | Min. Max. Avg. | |
| i) S.P.M. | 500 $\mu\text{g}/\text{m}^3$ | 188.0 - 265.0 (226.0) | Well within the norms Well within the norms Well within the norms Well within the norms Well within the norms |
| PM ₁₀ | 100 $\mu\text{g}/\text{m}^3$ | 43.0 - 65.0 (55.7) | |
| PM _{2.5} | 60 $\mu\text{g}/\text{m}^3$ | 18.2 - 33.2 (25.3) | |
| ii) SO ₂ | 80 $\mu\text{g}/\text{m}^3$ | 6.2 - 7.5 (6.8) | |
| iii) NOx | 80 $\mu\text{g}/\text{m}^3$ | 23.7 - 26.6 (24.7) | |
| iv) CO | 4mg/m ³ | - BDL - | |
| <u>IV. Auto workshop</u> | | Min. Max. Avg. | |
| i) S.P.M. | 500 $\mu\text{g}/\text{m}^3$ | 160.0 - 236.0 (196.0) | Well within the norms Well within the norms Well within the norms Well within the norms Well within the norms |
| PM ₁₀ | 100 $\mu\text{g}/\text{m}^3$ | 35.4 - 57.1 (47.7) | |
| PM _{2.5} | 60 $\mu\text{g}/\text{m}^3$ | 17.1 - 23.3 (19.6) | |
| ii) SO ₂ | 80 $\mu\text{g}/\text{m}^3$ | 5.8 - 7.0 (6.4) | |
| iii) NOx | 80 $\mu\text{g}/\text{m}^3$ | 22.2 - 25.5 (23.8) | |
| iv) CO | 4mg/m ³ | - BDL- | |