Registered A/D

BHILAI JAYPEE CEMENT LIMITED

Date: 15.07.2021

BJCL/ENV/ESR/2020-21/01

To,
Member Secretary
MP Pollution Control Board
Paryavaran Pariser,
E-5, Arera colony
Bhopal (MP) -462016

Sub: Submission of Environmental Statement Report for the year 2020-21

Ref: 1.**Env. Clearance Letter No. J-11011/29/2008-1A-II(I) dated 21st July2009.**
2. DG Set consent Letter No. 5246 & 5248/TS/MPPCB/2013 dtd. 23.07.2013.

Dear Sir,

Please find the following enclosed **Environment Statement Report (Form-V)** for the year **2020-21** of our Cement Plant capacity 1.3 MTPA Clinker, Ispat Limestone Quarry ML-I capacity 0.6 MTPA, Ispat Limestone Quarry ML-II Capacity 1.5 MTPA and DG Set capacity 5x1500 KVA unit of Bhilai Jaypee Cement Limited, located at village Babupur, Satna (MP) for your kind information and record pl.

Enclosures:

1. Env. Statement Report of Cement Plant ;**MPPCB Cement Plant -ID- 14269**
2. Env. Statement Report of Ispat Limestone Quarry **(ML-I):MPPCB ID- ML-I- 19459**
3. Env. Statement Report of Ispat Limestone Quarry **(ML-II):MPPCB ID- ML-II- 19462**
4. Env. Statement Report of D.G Set (5X1500 KVA): **MPPCB –DG Set ID- 14259**

Regards,

Yours faithfully
For Bhilai Jaypee Cement Ltd.
Babupur (Satna) MP

P. K. Singh
Vice President (P&QC)

Cc to:

1. **Director, Regional Office (WZ),** - For kind information pl.
   Ministry of Environment Forests &Climate Change
   Kendriya Paryavaran Bhawan, E-5, Link Road -3, Ravishankar Nagar, Bhopal (M.P)-462016
2. **Regional Directorate,** Central Pollution Control Board - For kind information pl.
   Parivesh Bhavan ,Paryavaran Pariser, E-5, Arera Colony, Bhopal (M.P) – 462003
3. **Regional Officer,** MP Pollution Control Board - For kind information pl.
   Rewa Road, Maihar Bipass, Satna (MP) – 485001

FORM- V

MPPCB Cement Plant -ID- 14269

ENVIRONMENTAL STATEMENT REPORT FOR THE YEAR 2020-21
M/S BHILAI JAYPEE CEMENT LIMITED, BABUPUR, SATNA (MP)

PART- A

(i)	Name and address of the owner/ Occupier of the Industry, operation or process	:	**Bhilai Jaypee Cement Ltd. Babupur – 485112, Satna (M.P.)**
(ii)	Industry Category	:	Red and Large Industry
(iii)	Production Capacity	:	**1.3 Million Tons per Annum (Clinker)** **0.6 MTPA (Cement)**
(iv)	Year of Establishment	:	**January, 2010**
(v)	Date of Last Environment Statement Submitted	:	**28.05.2020**

PART- B
WATER AND RAW MATERIAL CONSUMPTION

(i) Water Consumption

Water consumption- m^3 /day		Remarks
Cooling: (Spraying)	**406.76**	**Water consumption in FY 2020-21 is less due to plant stoppage.(Kiln run hrs. was 264.82 days only)**
Domestic	**248.84**	
Process	**Nil**	

Name of Products	Water consumption per unit of Products	
	During the previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
1. Clinker	0.23 M^3/MT	0.22 M^3/MT

(ii) Raw Material Consumption

Name of raw material consume	Name of products	Consumption of raw material Per unit of Products (MT)	
		During the previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
1. Limestone	**Clinker**	**1.485**	**1.497**
2. Additive (Iron ore/ Laterite/ High Gr. Laterite/ Bauxite)		**0.021**	**0.032**
3. Coal +Pet coke		**0.141**	**0.148**
4. Plastic waste (Co processing)		**104 (Ts.)**	**NIL**

PART- C

Pollution discharges to environment/ unit of output.

(Parameter as specified in the consent issued)

(i) Pollution	Quality of Pollutants Discharged (Mass/day)	Concentration of Pollutants discharges (mass/volume)	Percentage of variation from prescribed standards
(a) Colonial Waste Water	**Domestic waste water treated in 500 KLD capacity STP and treated water utilized in green belt development and dust suppression hence Zero discharge is maintained**		
(b) Industrial	**No waste water is generated in process hence Zero discharge is maintained**		
Stack emission	**a) Kiln B .H - 0.2067MT/Day** **b) Cooler ESP Stack - 0.1358MT/day** **c) Coal Mill Bag House stack - 0.0316MT/Day** **d) Limestone Crusher Bag filter - 0.0148MT/Day**	**22.82 mg/Nm3** **24.08 mg/Nm3** **20.55 mg/NM3** **20.19 mg/Nm3**	Within the permissible limit

PART- D

(HAZARDOUS WASTES)

Hazardous Wastes	Total Quantity (MT) Disposed	
	During the previous financial year (2019-20)	During the current financial year (2020-21)
(a) From process	Used Oil : 1.98 Waste Oil : 2.22	Used Oil : NIL Waste Oil :NIL
(b) E-Waste	NIL	NIL
(c) Used Batteries	0.5MT	1.03MT
(b) From pollution Control Facilities	NIL	NIL

PART- E

SOLID WASTES

TOTAL QUANTITY (Ts)		
	During the Previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
(a) From Pollution Control Equipment	**No solid waste is generated from the cement manufacturing process as all are recycled back into process.**	**No solid waste is generated from the cement manufacturing process as all are recycled back into process.**
(b) From Process	**No solid waste is generated from the cement manufacturing process as all are recycled back into process.**	**No solid waste is generated from the cement manufacturing process as all are recycled back into process.**

PART- F

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

Hazardous waste: All the used oil, waste oil, burnt grease generated from the different sections of plant is being collected in empty drums and barrels and then sent to Store Deptt for proper handling and storage. Collected hazardous waste at specified location as per Hazardous Waste (Management,

Handling & Transboundary Movement) Rule, 2016 from where the stored hazardous waste is being sold out to CPCB/MPPCB authorized recyclers.

Solid waste Disposal: The solid waste is generated in the form of MS scrap sent to Hi-Tech casting centre for recycling. Used refractory bricks were collected by Refractory bricks manufacturer for reuse, used tires, rejected rubber belts, filter bags, are generated during cement manufacturing process & these solid wastes are being sold to authorized parties

Solid waste:

S.No.	Particulars	Quantity	Disposal (Sold to authorized recycler)
1.	Belt conveyor Scrape	NIL	-
2.	Filter bags scrape	Nil	-
3.	Used tires	NIL	-
Used Batteries:			
	Batteries	--	1.03 MT(To supplier - Loya enterprises, Satna)

PART- G

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

- The plant is equipped with best available technology for Air Pollution Control devices such as Bag House, ESP, Bag Filters etc designed to control the emission level below 30 mg/Nm^3 from any of the stacks installed at our plant.

- We are successfully managing the ambient SPM level below the prescribed levels by installation of water spray system at each of the transfer points of raw materials conveying belts.
- Covered belt conveyors, water sprinklers on raw materials & coal conveyors and concreted roads for vehicular movement inside the plant premises.

- The company has undertaken various energy efficiency improvement measures & process modifications which helped to significantly reduce the overall energy consumption to enable us to achieve our ultimate goal of GHG emission reduction and positive contribution.
- Following steps were taken in connection with conservation of energy:-
- Replacement of 15 Nos. 400 Watt HPSV fittings street lights with 90 watt LED street lights. The saving of power consumption was 0.0663 Lacs Kwh and Rs. 0.524 Lacs per annum
- Replacement of 110 No 36 watt Fluorescent tube lights with 19 watt LED tube light .The saving of power consumption was 0.0392 lacs KWH and Rs 0.308 Lacs per annum
- Replacement of 35 Nos. 70 Watt HPSV well glass lamps with 25 watt LED lamps. The saving of power consumption was 0.015 Lacs Kwh and Rs. 0.111 Lacs per annum
- Replacement of 05 Nos. 250 Watt HPSV lamps with 90 watt LED well glass lights. The saving of power consumption was 0.019 Lacs Kwh and Rs. 0.153 Lacs per annum

Thus, the pollution abatement & other energy conservation practices adopted by us save precious raw material/ product and greatly help in conserving valuable natural resources.

PART- H

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

1. Replacement of damaged filter bags in bag filters and Bag House to effectively control the dust emission during material transport to improve the air quality inside the plant premises.
2. Green belt development in and around the plant premises
3. Constructed concrete roads in and around factory premises.
4. Continuous water spraying on roads for controlling the fugitive emission.
5. Fog type water sprinkler installed at coal yard.
6. Good housekeeping practices being followed to avoid dust deposition on roads.
7. Procured Ride on type diesel operated sweeping machine for good housekeeping.
8. Recurring & Maintenance cost of Pollution Control Devices.

PART- I

Any other particulates in respect of environmental protection and abatement of pollution.

1. Pet coke in Cement Kiln: -16969 MT
2. Plastic waste co processed in Kiln: NIL

Prepared By
Dated: 10.07.2021

For M/s Bhilai Jaypee Cement Ltd.

(Authorized Signatory)
P.K Singh
Vice President (P&QC)

FORM- V

MPPCB ID- ML-I- 19459

ENVIRONMENTAL STATEMENT REPORT FOR THE YEAR 2020-21

ISPAT LIMESTONE QUARRY (ML-I)
Mine Lease Area -- 590.22 ha
Unit: BHILAI JAYPEE CEMENT LTD. BABUPUR, SATNA (MP)

PART- A

(i)	Name and address of the owner/ Occupier of the Industry, operation or process	:	**Ispat Limestone Quarry (ML-I)** **Unit: BHILAI JAYPEE CEMENT LTD.** **Babupur, Satna (M.P.) - 485112**
(ii)	Industry Category	:	**Red and Large industry**
(iii)	Production Capacity	:	**0.6 MTPA Limestone**
(iv)	Year of Establishment	:	**January, 2010**
(v)	Date of last Environment Statement Submitted	:	**28.05.2020**

PART- B
WATER AND RAW MATERIAL CONSUMPTION

(i) Water consumption - m^3 /day

Cooling: (Spraying)	:	**18.63 (Mine pit water)**
Domestic	:	**24.51**
Process	:	**Nil**

Name of Products	**Water consumption per unit of Products M^3/Ton**	
	During the previous Financial Year (2019-20)	**During the Current Financial Year (2020-21)**
1. Limestone	0.036 M^3 / MT of LS	0.025 M^3 / MT of LS

Raw Material Consumption

Name of raw material consume	**Name of products**	**Consumption of raw material / Unit of Product**	
		During the previous Financial Year (2019-20)	**During the Current Financial Year (2020-21)**
5. Diesel (HSD) 6. Slurry Explosive(83mm) 7. Colum charge (83mm)	**Limestone**	0.69 Lit /MT of Limestone 0.188Kg /Tones of Limestone 0.065 Kg /Tones of Limestone	0.76 Lit /MT of Limestone 0.226Kg /Tones of Limestone N.A.

PART- C
Pollution discharges to environment/ unit of output.
(Parameter as specified in the consent issued)

(i) Pollution	Quality of Pollutants Discharged (Mass/day)	Concentration of Pollutants discharges (mass/volume)	Percentage of variation from prescribed standards
(a) Colonial Waste Water	**Zero discharge is maintained**		
(b) Industrial	**Zero discharge is maintained**		
Air (AAQM)	Ambient Air Quality (Annual Avg.) **PM $_{2.5}$** **PM $_{10}$**	**Annual average data** **Direction Avg. Result** East - 26.25 µg/M^3 West - 26.68 µg/M^3 North - 25.67 µg/M^3 South - 25.40 µg/M^3 East - 62.54 µg/M^3 West - 62.47 µg/M^3 North - 63.71 µg/M^3 South - 62.09 µg/M^3	Ambient air quality is within the permissible limits

PART- D
HAZARDOUS WASTES

Hazardous Wastes	Total Quantity (MT)	
	During the previous financial year (2019-20)	During the current financial year (2020-21)
(a) From process	NIL (ML-I & ML-II)	0.20 MT
(b) From pollution Control Facilities	N.A.	N.A.

PART- E
SOLID WASTES

TOTAL QUANTITY (Ts)		
	During the previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
(a) From Process- Over Burden from mine	**133446.91**	**167185.14**
(b) From Pollution Control facilities	**NIL**	**NIL**
(c) Qty. recycled or reused Within the unit.	**Maximum Quantity of generated OB has been used in Back filling.**	**Maximum Quantity of generated OB has been used in Back filling.**

PART- F

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

Hazardous waste disposal practices: All the used oil, waste oil, generated from the HEME is being collected in empty drums and barrels and then sent to store deptt for proper handling and storage. Collected hazardous waste at specified location as per Hazardous Waste (Management, Handling & Transboundary Movement) Rules, stored hazardous waste is being sold out to CPCB/MPPCB authorized recyclers within the state.

Solid waste - Over burden dumped at earmarked location and will be reused for back filling in mined out area.

PART- G

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

Pollution Control Measures Adopted for Control of Pollution

1. Wet drilling system is adopted for control the fugitive dust emission.
2. Water sprinkling on haul roads by water tanker of capacity 15.0 KL for control of dust emission.
3. Blasting is done with Nonel to control the ground vibrations and AOP.
4. Top soil is stack at earmarked location and reused for plantation work.
5. Green Belt Development Measures: As a part of green belt development, planted more than 2000 plant saplings in mine and Colony area during financial year 2020-21.

Monitoring: We have established fully equipped Environment Lab with modern instrument facilities for monitoring environment parameters under control of President (Plant).

PART- H

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

Ground vibration study was done by CIMFR, Dhanbad for optimized of blasting.

PART- I

Any other particulates in respect of environmental protection and abatement of pollution.

NIL

Prepared By
Dated: 10.07.2021

For M/S Bhilai Jaypee Cement Ltd.

(Authorized signatory)
P.K Singh
Vice President (P&QC)

FORM- V

MPPCB ID- ML-II- 19462

ENVIRONMENTAL STATEMENT REPORT FOR THE YEAR 2020-21

ISPAT LIMESTONE QUARRY (ML-II)
Mine Lease Area -- 1033.99 ha
Unit: BHILAI JAYPEE CEMENT LTD. BABUPUR, SATNA(MP)

PART- A

(i) Name and address of the owner/ Occupier of the Industry, operation or process : **Ispat Limestone Quarry (ML-II)**
Unit: BHILAI JAYPEE CEMENT LTD.
Babupur, Satna (M.P.) - 485112

(ii) Industry Category : Red and Large Industry

(iii) Production Capacity : **1.5 MTPA Limestone**

(iv) Year of Establishment : **January, 2010**

(v) Date of Last Environment Statement: Submitted **28.05.2020**

PART- B
WATER AND RAW MATERIAL CONSUMPTION

(ii) Water consumption - m^3 /day

Cooling: (Spraying) : **18.63 (Mine pit water)**

Domestic : **24.51**

Process : **Nil**

Name of Products	Water consumption per unit of Products M^3/Ton		Remarks
	During the Previous Financial Year (2019-20)	During the Current Financial Year (2020-21)	Mine Production is very less due to Kiln stoppage.
1. Limestone	0.021 M^3 / MT of LS	0.015 M^3 / MT of LS	

Raw Material Consumption

Name of raw material consume	Name of products	Consumption of raw material / Unit of Product	
		During the previous Financial Year (2019-20)	During the Current Financial Year (2019-20)
8. Diesel (HSD) 9. Slurry Explosive(83mm) 10. Colum charge (83mm)	**Limestone**	.51 Lit /MT of Limestone 0.188Kg /Tones of Limestone 0.065 Kg /Tones of Limestone	0.51 Lit /MT of Limestone 0.178Kg /Tones of Limestone N.A.

PART- C

Pollution discharges to environment/ unit of output.

(Parameter as specified in the consent issued)

(i) Pollution	Quality of Pollutants Discharged (Mass/day)	Concentration of Pollutants discharges (mass/volume)	Percentage of variation from prescribed standards
(a) Colonial Waste Water	**Zero discharge is maintained**		
(b) Industrial	**Zero discharge is maintained**		
Air (AAQM)	Ambient Air Quality (Annual average data) **$PM_{2.5}$** **PM_{10}**	**Annual average data** **Direction Avg. Result** East - 26.25 µg/M^3 West - 26.68 µg/M^3 North - 25.67 µg/M^3 South - 25.40 µg/M^3 East - 62.54 µg/M^3 West - 62.47 µg/M^3 North - 63.71 µg/M^3 South - 62.09 µg/M^3	Ambient air quality is within the permissible limits

PART- D

HAZARDOUS WASTES

Hazardous Wastes	Total Quantity (MT)	
	During the previous financial year (2019-20)	During the current financial year (2020-21)
(a) From process	NIL	0.30 MT
(b) From pollution Control Facilities	N.A.	N.A.

PART- E

SOLID WASTES

TOTAL QUANTITY (Ts)		
	During the previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
(a) From Process- Over Burden from mine	39885.85	87976.25
(b) From Pollution Control facilities	Nil	Nil
(c) Qty. recycled or reused Within the unit.	**Maximum Quantity of generated OB has been used in Back filling.**	**Maximum Quantity of generated OB has been used in Back filling.**

PART- F

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

Hazardous waste disposal practices: All the used oil, waste oil, generated from the HEME is being collected in empty drums and barrels and then sent to store deptt for proper handling and storage. Collected hazardous waste at specified location as per Hazardous Waste (Management, Handling & Transboundary Movement) Rules, stored hazardous waste is being sold out to CPCB/MPPCB authorized recyclers within the state.

Solid waste: Over burden dumped at earmarked location and will be reused for back filling in mined out area.

PART- G

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

<u>Pollution Control Measures Adopted for Control of Pollution</u>

6. Wet drilling system is adopted for control the fugitive dust emission.
7. Water sprinkling on haul roads by water tanker of capacity 15.0 KL for control of dust emission.
8. Blasting is done with Non electric detonator to control the ground vibrations.
9. Top soil is stack at earmarked location and reused for plantation work.
10. Green Belt Development Measures: As a part of green belt development, planted more than 3000plant saplings in mine and Colony area during financial year 2020-21.

Monitoring: We have established fully equipped Environment Lab with modern instrument facilities for monitoring environment parameters under control of Jt. President (Technical).

PART- H

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

Ground vibration study was done by CIMFR, Dhanbad for optimized of blasting.

PART- I

Any other particulates in respect of environmental protection and abatement of pollution.

Prepared By
Dated: 10.07.2021

For M/S Bhilai Jaypee Cement Ltd.

(Authorized signatory)
P.K Singh
Vice President (P&QC)

FORM- V

MPPCB –DG Set -ID- 14259

ENVIRONMENTAL STATEMENT REPORT FOR THE YEAR 2020-21

M/S BHILAI JAYPEE CEMENT LIMITED, BABUPUR, SATNA (MP)
Unit: DG Set (5x1500 KVA)

ENVIRONMENTAL STATEMENT FOR THE FINANCIALYEAR ENDING THE 31st MARCH 2021

PART – A

(I)	Name & Address of the Owner / Occupier of the Industry Operation or Process	**Bhilai Jaypee Cement Limited Babupur – 485112, Satna (M.P.)**
(II)	Industry Category	Red Category and Large industry
(III)	Production Capacity	5 x 1500 KVA (DG Set)
(IV)	Year of Establishment	5th August 2010
(V)	Date of last Environmental Statement Submitted	28.05.2020

PART- B
WATER AND RAW MATERIAL CONSUMPTION

(iii) Water consumption - m^3 /day

Cooling: (Spraying) : **NIL (Stand by)**

Domestic : **DG Set installed in BJCL premises (No additional water req.)**

Process : **Nil**

Name of Products	**Water consumption per unit of Products**	
	During the previous Financial Year (2019-20)	**During the Current Financial Year (2020-21)**
1. Electricity	Nil	Nil

(iv) **Raw Material Consumption**

Name of raw material	**Name of**	**Consumption of raw material / Unit of Product**

consume	products	During the previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
11. Diesel (HSD)	Electricity	0.408 Ltr/KWH	0.327 Ltr/KWH

PART- C

Pollution discharges to environment/ unit of output.

(Parameter as specified in the consent issued)

(i) Pollution	Quality of Pollutants Discharged (Mass/day)	Concentration of Pollutants discharges (mass/volume)	Percentage of variation from prescribed standards
(a) Colonial Waste Water	**Nil**		
(b) Industrial	**Nil**		
Air (AAQM) **East :** **West :** **North :** **South :**	-	Annual Average data (PM-10) **62.15 µg/m^3** **63.70 µg/m^3** **62.12 µg/m^3** **62.61 µg/m^3**	Ambient air quality is within the permissible limits

PART- D

HAZARDOUS WASTES

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year (2019-20)	During the current financial year (2020-21)
(a) From process	NIL	Used Oil (5.1) – Nil
(b) From pollution Control Facilities	NIL	NIL

PART- E

SOLID WASTES

TOTAL QUANTITY (Ts)		
	During the previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
(c) From Pollution Control Equipment	**Nil**	**Nil**
(d) From Process	**Nil**	**Nil**

PART- F

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

Hazardous waste generation: Nil (DG Set is standby unit and its running hour's i.e. 11.5 hours only is very less. Small quantity waste generated is added with Plant HW)

Solid waste disposal: NIL

PART- G

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

DG Set is installed in the Plant premises.

PART- H

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

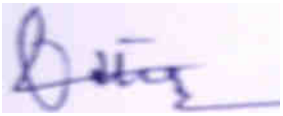
1 Green belt development in and around the Plant & DG Set premises
2. Concrete roads in and around factory premises.
3. Continuous water spraying on roads for controlling the fugitive emission.
4. Good housekeeping practices being followed to avoid dust deposition on roads.
5. Mechanical road sweeping machine is in operation.
6. Installed two nos. of CAAQMS.

PART- I

Any other particulates in respect of environmental protection and abatement of pollution.

DG Set is installed in the Cement Plant Premises

Prepared By
Dated:10.07.2021



For M/S Bhilai Jaypee Cement Ltd.

(Authorized signatory)
P.K Singh
Vice President (P&QC)