O/C

KAMAL CEMENT
SINCE 1944

SDCCL/EHS/F-07

Date: 30.08.2024

**ID 17132 (Cement Plant)**
**ID 44546 (STP)**
**ID 44547 (Jetty)**

**To,**
**MEMBER SECRETORY,**
**GUJARAT POLLUTION CONTROL BOARD**
**PARYAVARAN BHAVAN, SECTOR -10-A**
**GANDHINAGAR – 382 010**

**Sub: Submission of Environmental Statement Report (Form V) for our Cement Plant including Waste Heat Recovery System (WHRS), 300 KLD STP & operation of Jetty for period of April 2023- March 2024.**

**Ref:** 1. AWH-I33734 dated 16/04/2024
2. W – 108661 dated 08/07/2020
3. AW - 108463 dated 23/06/2020

Dear Sir,

Please find enclosed herewith the Environmental Statement Report (Form-V) for the period of April 2023-March 2024 for our Cement Plant including Waste Heat Recovery System, 300 KLD STP and operation of the Jetty.

Hope, the above is in order.

Thanking you,

Yours Faithfully,
*For* **Shree Digvijay Cement Company Limited**

Authorized Signatory

SHREE DIGVIJAY CEMENT CO. LTD. DIGVIJAYGRAM

**Encls:** A/a

Cc: **REGIONAL OFFICER**
**Gujarat Pollution Control Board**
**Sardar Patel Bhavan, T B Hospital Road**
**Jamnagar – 361 008**

2/09/24
Gujarat Pollution Control Board
Head Office
Sector No.-10-A,
Gandhinagar 382010

# FORM V

**(See Rule 14)**

Environmental Statement for the financial year ending on 31st March on or before 30th of September every year.

## Environmental Statement for the financial year ending 31st March, 2024 (FY:2023-24)

## PART - A

| | | | |
|---|---|---|---|
| (i) | Name and address of the owner/ occupier of the industry operation or process | : | Shree Digvijay Cement Company Limited<br>PO: Digvijaygram, Sikka – 361 140<br>Jamnagar, Gujarat |
| (ii) | Industry category<br>Primary: (STC Code)<br>Secondary: (STC Code) | : | Large – Cement manufacturing<br>Red<br>R26 |
| (iii) | Production capacity (MT) | : | Cement: (1.8 MTPA)<br>Power Generation (CPP) from waste heat: 8.5 MW/Hr |
| (iv) | Year of establishment | : | 1985 |
| (v) | Date of the last environmental statement submitted | : | 22.06.2023 |

## PART – B

## WATER AND RAW MATERIAL CONSUMPTION:

### 1. Water consumption $m^3/d$

Process: 69580.89 $m^3$/year ~ 190.11 $m^3$/day
Domestic: 115480 $m^3$ /year ~ 315.52 $m^3$/day (Industrial domestic & Township consumption water)

| Name of products | Process water consumption per unit of product output | |
|---|---|---|
| | During the previous financial year | During the current financial year |
| Cement | 0.040 $m^3$/MT | 0.052 m3/MT |

### 2. Raw material consumption:

| | Name of raw materials | Name of products | Consumption of raw material per unit of output | |
|---|---|---|---|---|
| | | | During the previous financial year | During the current financial year |
| 1. | Limestone | Cement | 1.102 | 1.09 |
| 2. | Sandstone | | 0.034 | 0.03 |
| 3. | Copper Slag/Spent Catalyst | | 0.013 | 0.01 |
| 4. | Fly ash | | 0.175 | 0.19 |
| 5. | Gypsum/Chemical Gypsum | | 0.050 | 0.07 |
| 6. | Coal | | 0.085 | 0.10 |
| 7. | Petcoke | | 0.046 | 0.01 |
| 8. | AFR | | 0.0109 | 0.02 |
| 9. | Loading/Unloading | Jetty | 0.00 | 0.00 |
| 10. | Wastewater Treatment (Domestic) | STP | Avg 99 KL/Day | Avg 92.30 KL/Day |

## PART – C

### Pollution discharged to environment / units of output

(Parameter as specified in the consent issued)

| (1) | Pollutants | Name of source | Quantity of pollutants discharged (Kg. / day) | Concentrations of pollutants in discharged (mg / $Nm^3$) | Percentage of Variation from prescribed standards with reasons |
|---|---|---|---|---|---|
| (a) | Water (Industrial) | Not Applicable since no wastewater is generated from the process (ZLD) | | | |
| | Pollutants | Name of source | Quantity of pollutants discharged (Kg. / day) | Concentrations of pollutants in discharged (mg / $Nm^3$) (Annual Avg.) | Percentage of Variation from prescribed standards with reasons |
| (b) | Air | Kiln & Raw mill BH | 14.64 | 11.3 | Within Prescribed Limits |
| | | Coal mill | 13.21 | 13.9 | |
| | | Cooler ESP | 17.00 | 12.3 | |
| | | Cement mill | 12.85 | 12.4 | |

## PART – D

### HAZARDOUS WASTES

(As specified under Hazardous Wasted / Management and Handling Rule 1989)

| Hazardous Waste | Total quantity (Kg) | | |
|---|---|---|---|
| | | During the previous financial year | During the current financial year |
| 1.From Process | 1. Used Oil / Spent Oil (Cat 5.1) | 5600 | 6610 |
| | 2. Waste residue containing oil (Cat 5.2) | 5580 | 6160 |
| 2.From pollution control facilities | NA | NA | NA |

## PART – E

### SOLID WASTES

| | Total quantity (Kg) | |
|---|---|---|
| | During the previous financial year | During the current financial year |
| a) From Process | NA | NA |
| b) From pollution control facilities | NA | NA |
| c) (1) Quantity recycled or re – utilized within the unit. | NA | NA |
| (2) Sold | NA | NA |
| (3) Disposed | NA | NA |

## PART – F

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

a) The types of hazardous waste being handled belong to category 5.1 & 5.2 only. Various AFR materials are being utilized as per CCA order. Regularly, the monthly AFR consumption report is being submitted to GPCB. Details of AFR consumption for the year 2023-24 are attached herewith as **Annexure – I**.

b) The own hazardous waste as generated from the process is being re-utilized internally in the process itself.

## PART – G

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

1. **Recycling of raw material**: -

Due to efficient working of air pollution control equipment (APCE) like ESP/ Bag house/Jet pulse Filters in the different sections like Raw mill, Cooler, Cement mill, coal mill etc., the dust generated (raw material, Clinker, Cement) is recycled and used in the process. This results in the prevention of loss of material, which directly affects the cost of production.

2. **Energy Conservation**: -

SDCCL evaluates the performance of the equipment critically and if found inadequate either with respect to process or energy, then suitable replacements are made with energy efficient equipment. This process is done on a continuous basis as the improvement in technology is limitless and the company keeps itself abreast of these technologies to enable it to use them as and when required. This aspect is critical for energy efficient processes which are essential for production / process management so that the entire production activities are carried out at maximum efficiency levels resulting in considerable savings in raw materials, fuel and power. In the same concept, SDCCL has installed the WHRS in the year 2012 to take care of green power. VFDs, MVDs, &SPRSs are being used in place of conventional controlling method for ID fans and FD fans applications. LEDs are being utilized for illumination purposes.

3. **Control of Fugitive Emission**: -

The plant is equipped with state of art Air Pollution Control devices such as ESP, Baghouse, Jet Pulse Filters etc. designed to control the emission (PM) levels <30 mg/Nm$^3$ from any of the stacks installed at our plant. In addition of the above, we are successfully managing the ambient SPM levels to below the prescribed levels by way of putting up Jet Pulse Filters at each of transfer points, fully mechanized system for fly ash handling, covered conveyors, water sprinklings in raw materials & coal conveyors and paved surfaces for vehicular movement inside the plant premises. Truck mounted Industrial vacuum cleaner and road sweeping machines are used to clean the dust.

All these systems have proved to be very effective in arresting and putting back the recovered material into the production line thus preventing the precious raw material, fuel, intermediates & finished products from getting lost in the atmosphere.

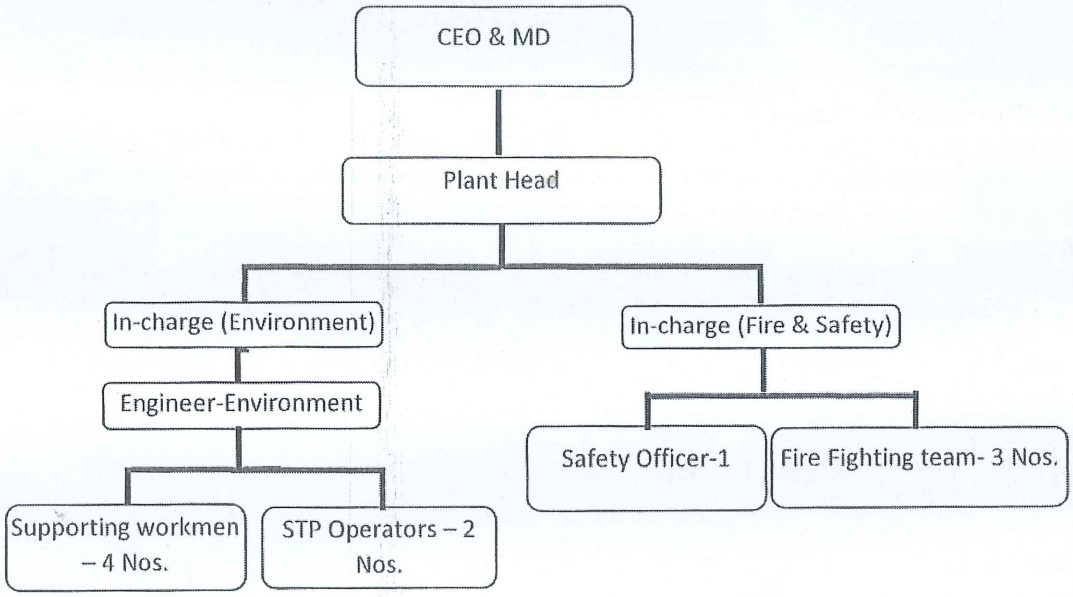
Additionally, over the years, the company has undertaken various energy efficiency improvement measures & process modifications which helped to significantly reduce the overall energy consumption to enable us to achieve our ultimate goal of GHG emission reduction and positive contribution towards reversing the effects of Climate Change.

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

4. **Environmental, Health & Safety Department: -**

The Environmental, Health & Safety (EH&S) of SDCCL has experts in the field of Environmental & Safety management from different disciplines. This department is also supported by sufficiently qualified staff for maintenance of pollution control equipment from the Civil, Mechanical, Automation, Electrical & Instrument Departments.

**Organization Structure for Environment Management Division**



## 5. Air, Water & Noise Monitoring:

### 5.1 Ambient Air Monitoring: -

Air is the major shareholder of environment and gets affected immediately by each activity. So, keeping in view of this, an air surveillance program has been designed to monitor the air quality in and around plant by fixed five numbers of ambient air quality monitoring stations including at Jetty area & nearest village Sikka area as per the GPCB guidelines. Monitoring Reports are submitted in GPCB on monthly basis.
We have installed Continuous Ambient Air Quality Monitoring System (CAAQMS) at our premises and real time data are transmitted to GPCB & CPCB servers.

### 5.2 Wastewater treatment & monitoring: -

We have installed a 300 $m^3$/day capacity Sewage Treatment Plant for treatment of domestic sewage generated from the Township. The treated water is being utilized for greenbelt development and dust suppression purposes.

The average quality parameters for the year of 2023-24 are tabulated below.

| Sr. No. | Parameters | Treated Water (Outlet) |
|---|---|---|
| 1 | pH | 7.41 |
| 2 | Suspended Solids, mg/L | 15 |
| 3 | BOD, mg/L | 7.5 |
| 4 | FC | 54.42 |

### 5.3 Noise Monitoring

Noise is considered to be one of the dimensions of pollution, which leads to degradation of the environment and also poses health and communication hazards. Although noise levels are within prescribed limits, for better protection protective equipments such as earplugs/earmuff are being provided in specific areas. Proper lubrication in rotating equipments is being done regularly.

## 6. Minimization of Health Hazards: -

As a result of different pollution abatement measures being adopted, the health hazards to the workers have been minimized. This has indirectly reduced the cost of production.

## 7. On-Line Stack Monitoring Equipments: -

In order to monitor the stack emission continuously, Opacity meters have been installed in each stack and $SO_2$ & NOx analyzer has been installed in Raw Mill & Kiln Bag house stack, which are working efficiently. Real-time data is transmitted to GPCB & CPCB server. The stacks provided with on-line monitoring system are given below:

- Stack attached with Raw Mill & Kiln Bag house
- Stack attached Clinker Cooler ESP
- Stack attached with Coal Mill Bag house
- Stack attached with Cement Mill Bag house

8. **Plantation/Greenbelt development:**

At SDCCL, plantation is an integral part of our activities for environmental protection and balancing the ecosystem. This also helps us in providing an additional aesthetic look in and around our works, including our residential areas. We have been conducting the plantation in various areas since the installation of the plant. In the financial year 2023-24, Around 40000 Nos. of saplings have been planted in the Plant, Colony & Mines areas. The survival rate is 80% considering our plant situated in the Saurashtra region and also scanty rainfall the survival rate is quite satisfactory.

9. **Water Harvesting:**

The plant site falls in semi-arid zone with the average rainfall of 600 mm/yr. Considering the importance of water as an essential natural resource, we are not only optimizing our process water requirements but also creating large water storage structures in our township and mines area in order to maximize the groundwater harvesting initiatives. We have created four nos. of water ponds in the township area to catch maximum surface runoff. Similarly, in the mines area several water collections pits have been created and are being maintained.

**Achievements of Water harvesting efforts: -**

The plant being nearer to sea, it is observed that the underground water table has turned brackish over the years with increase in salinity. The impact of interventions is remarkable and resulted into.

- With the water storage & recharge structures, we have been able to slightly decrease the salinity and curtail the backward flow of sea water in the fresh underground water pockets.
- This has largely contributed to help the local dwellers in the nearby community to get access to reduced level of salinity, and with our continuous efforts we are sure that this brackishness / salinity can one day be totally curtailed and the water below the earth can remain free from sea salinity.
- Moreover, the water collected in the artificial recharge structures not only helps to recharge the groundwater table of the area but is also contributing greatly to increase biodiversity of the region. The availability of water in the reservoirs helps to the proliferation of biodiversity by attracting various species, overall improving the species diversity in the region. It has been observed that the stored water body attracts many local as well migratory birds, which overall shows positive impact on biodiversity.

## PART – H

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

These are the following investment have already made for conservation of natural resources, environmental protection and pollution abatement as below.

- Migration of Online Continuous Emission Monitoring System (OCEMS) old vendor to new vendor.
- The OCEMS have already been installed at all the stacks as Raw Mill & Kiln, Cement Mill, Coal Mill & Clinker Cooler.
- SNCR: To control the NOx the SNCR has been installed & complying with the GPCB/CPCB norms/guidelines.
- Covered storage sheds were provided for raw materials storage.
- Mobile Road Sweeping Equipment & truck mounted vacuum cleaning Equipment were procured and utilized for cleaning of dusts.
- Installation of Primary shredder, feeding equipment for Pre-processing and co-processing to improve the overall TSR to 7% from existing 4%.

- Road infrastructure development for raw material handling area.
- Replacement of MV VFD of PG Bag House for conservation of energy.
- New Process Bag Filter for cement mill venting was provided.
- Covered shed of clinker transport belts (Belts no. 16, 17, 18, 19 & 20) were provided.
- CT3 Belt with Air Slide Bucket elevator were provided for Cement Transport.
- CT2 Air slide & Bucket Elevator for Cement Transport.

| S. No. | Expenses for Environmental protections & Improvements FY 2023-24 | Expenses (Rs.) |
|---|---|---|
| 1 | Environmental Monitoring (Third Party, AMC of CAAQMS) | 10,23,987.99 |
| 2 | Horticulture Expenses including Gardening | 188509.24 |
| 3 | BIO MEDICAL WASTE TREATMENT | 1,26,640.50 |
| 4 | Water sprinkling in roads through tankers | 3,82,200.00 |
| 5 | STP operation & maintenance | 564112.56 |
| 6 | Env Audit (schedule-1) & ISO certification | 1041122.00 |
| 7 | Portal service charges for CAAQMS data transmission, CEMS data transmission, groundwater flowmeter etc. | 3,60,000.00 |
| 8 | Equipments & materials for installation, Civil, Mechanical, Electrical Fabrication & erection services for AFR handling system and etc. | 1,06,47,277.16 |
| 9 | Equipments & materials for installation, Civil, Mechanical, Electrical Fabrication & erection services for CT-2 &CT3 system and etc. | 2,76,87,593.65 |
| 10 | CEMS CONNECTIVITY & related Other Material for the | 35,50,860.00 |
| 11 | ROAD SWEEPING M/C;INDUSTRIAL;RIDE ON;CAP:950L | 18,50,000.00 |
| 12 | INDUSTRIAL VACCUME CLEANER;TRUCK MOUNTED | 61,00,000.00 |
| 13 | Filter Bags and Repair kit for solenoid valve for Bag filters | 11,64,404.38 |
| 14 | Emitting electrodes, shock bars and other material for ESP | 3,13,136.93 |
| 15 | EHS Promotional activities expenses | 1,45,170.00 |
| 16 | Consultant Fee for Compliance EPR | 48,000.00 |
| | **Total Expenses for Environmental protections & Improvements FY 2023-24** | **₹ 5,51,93,014.41** |

## PART – I

Any other particulars for improving the quality of the environment.

1. **Word Environment Day: -**

The "World Environment Day" is celebrated on 5th June of every year with full enthusiasm by involving of our all workers & staff. On this occasion environmental awareness programs are conducted like plantation, oath ceremony by ladies and school children, plantation by executives & workmen, environmental quiz, slogan competition, poster competition and section wise housekeeping competitions etc.

2. **Rural Development and Socio – Economic Environment: -**

The Company undertakes special initiatives and projects in the areas of eradication of poverty, women empowerment, health care (including preventive health care and sanitation), providing safe drinking water & education. Company also engages in skill development leading to creation of alternative employment. Company ensures environmental sustainability through forestry, conservation of natural resources and maintaining quality of soil, air and water, all directed towards helping neighbouring communities, including disadvantaged, vulnerable and marginalized stakeholders and being instrumental in cultivating their

progress. The Company was the first industrial unit in the region, who started providing free drinking water and free medical amenities to all nearby villagers, particularly disadvantaged, vulnerable and marginalized population, whosoever residing around Company's plant and mining locations. The Company also has a well-established CSR policy which reflects the objective of economic and social development to create a positive impact.

During COVID-19 pandemic, Company took various initiatives to provide the employment to the local woman to produce the face mask and other products. The produced mask distributed among communities near the plant. In addition to this, sanitisation was carried out among communities near the plant. Mass scale awareness drives in communities conducted on the usage of masks, social distancing, importance of hand washing, vaccination etc.

During the year, an amount of Rs. 162.51 lakhs was spent on CSR activities. This represents more than 2% of average net profit for three financial years immediately preceding the financial year 2023-24.

3. **Environment, Social and Governance (ESG) Policy: -**

The Company through its Environment, Social and Governance (ESG) Policy, inter alia:

a) Established systems to manage environmental and social impact of business activities across the value chain.
b) Established, implemented and maintained an effective monitoring and reporting systems for continuous improvement of ESG performance.
c) Implemented mechanisms to achieve an equitable, healthy, and safe working environment for employees
d) Supported the local communities for an inclusive development of the society.
e) Consulting and sought feedback from relevant stakeholders to ensure continued relevance of policy.

For more details, kindly refer our **Environmental Audit Report** for the period April'23 to March'24 as prepared & submitted under Schedule I audit scheme. The said report submitted to your good office vide our letter No. SDCCL/ENV/2024-25/F-22 dated 28.06.2024.

*For* **Shree Digvijay Cement Company Limited**

Authorized Signatory

SHREE DIGVIJAY CEMENT CO LTD • SHREE DIGVIJAY GRAM •

Annexure-I

| AFR consumption during FY 2023-24 | | |
|---|---|---|
| SL NO | AFR materials | Quantity |
| 1 | SPENT CARBON | 83.27 |
| 2 | OIL SLUDGE | 1276.28 |
| 3 | OIL SOAK COTTON WASTE | 321.6 |
| 4 | OILY FILTER CARTRIDGES | 59 |
| 5 | MIXED WASTE,ORGANIC | 184.9 |
| 6 | PLASTIC WASTE, MIXED | 16954.4 |
| 7 | Solvent-Liquid | 100 |
| 8 | WASTE MIXED SOLID AFR | 488.8 |
| 9 | RESIDUE DISTILLATION SOLID CAT 20.3 | 59.79 |
| 10 | WASTE -RDF MUNCIPAL SOLID AFR | 91.4 |
| 11 | ETP SLUDGE | 4060.12 |
| 12 | WOOVEN WASTE | 334.29 |
| | | **24013.86** |