



o/c

UCWL/ENV/ES /2022-23 / 3183

19 September, 2022

The Member Secretary,
Rajasthan State Pollution Control Board,
4, Paryavaran Marg,
Institutional Area, Jhalana Doongari,
Jaipur, Rajasthan- 302004

Sub: Submission of Environmental statement for the financial year 2021-22 for our Integrated Cement Manufacturing Plant Udaipur Cement Works Limited (UCWL) C.F.A, Shripati nagar, Dabok, Udaipur- 313021

Ref: Consent to Operate Letter No. F(CPM)/Udaipur(Girwa)/9(1)/2013-2014/5784-5786 dated 11/03/2020.


Dear Sir,

With reference to the aforesaid subject, we are submitting herewith the **Environmental Statement in Form-V (Prescribed)** for the financial year 2021-22, ending **31st March 2022**, for our Integrated Cement Manufacturing Plant of M/s Udaipur Cement Work Limited, Situated at Shripati Nagar, CFA-Dabok, Udaipur-313022

Hope you find the above in line with the requirement.

Thanking you,

Yours faithfully,
For UDAIPUR CEMENT WORKS LTD.,


P. K. Chouhan
(General Manager –Env & QC)

Encl: As Above

CC:

1. Regional Officer, RSPCB-Udaipur

2. Ministry of Environment, Forest and Climate Change,

IRO-Jaipur, MoEF&CC, A 209 – 218 , Aranya Bhavan, Jhalana Institutional Area, Jaipur

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CIN: L26943RJ1993PLC007267



UCWL UDAIPUR CEMENT
WORKS LIMITED

ENVIRONMENT STATEMENT

(FORM V)

Udaipur Cement Works Limited
Integrated Cement Manufacturing Plant

YEAR 2021-22



Udaipur Cement Works Limited

SHRIPATINAGAR, P.O. CFA: DABOK,
DISTRICT – UDAIPUR (RAJASTHAN)-313022

FORM – V
(See rule 14)

Environmental statement for the financial year ending the 31st March 2022

PART – A

1.	Name and address of the Owner/Occupier of the Industry, operation of the process.	: M/s Udaipur Cement Works Limited, Shri pati Nagar, P.O. CFA: DABOK, District – Udaipur (Rajasthan)-313021
2.	Industry category	: Red, Large
3.	Production Capacity	: 2.85 MTPA - Cement : 2.00 MTPA -Clinker
4.	Year of establishment	: 1968
5.	Date of the last environmental statement submitted	: 28 th September, 2021

MTPA: Million Tons per Annum

PART – B

Water and Raw Material Consumption

(I) Water consumption in m³/day.

Process	:	N.A. (As the plant is based on dry process technology)
Cooling	:	601.97 M ³ (Including WHRS)
Domestic	:	278 (177 Colony, 62 Gardening & 39 Plant Domestic) M ³

Name of products	Process Water consumption* per unit of product output	
	During the current financial year 2020-21	During the current financial year 2021-22
	(1)	(2)
(Cement Production + Clinker Sold)	0.19 KL/Ton of product	0.21 KL/Ton of product

- Cooling/ spray

(II) Raw Material consumption

S. No.	Name of raw material	Name of products	Consumption of raw material per unit output (Per Ton)	
			During the current financial year 2020-21 (MT/Ton of Product)	During the current financial year 2021-22 (MT/Ton of Product)
1.	Lime Stone	Cement/ Clinker	0.97	0.93
2.	Red Ocher		-	-
3.	China Clay		0.0001	0.001
4.	Alumina Clay		0.083	0.086
5.	Gypsum		0.066	0.073
6.	Fly Ash		0.200	0.207
7.	Coal		0.047	0.050

8	Petcoke		0.065	0.038
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(III) Production

SN	Name of Product	During the current financial year (2020-21)	During the current financial year (2021-22)
1	Clinker (MT)	1155625	1367241
2	Cement (MT)	963950	1304665

PART – C

Pollution discharged to environment/unit of output generated (Parameter as specified in the consent issued)

S. No	Pollutants	Quantity of Pollutants discharged (Kg/day)	Quantity of Pollutants discharged (mg/l)	Percentage of variation from prescribed standards with reason.	
a. Water					
	Industrial	The Cement plant based on dry process technology , hence there is no trade effluent generation from cement plant process , the water only required for spraying in mills and cooling of cement plant machinery, equipment which is re-circulated and recycled back into the system	NIL	NIL	
	Domestic	NIL	NIL	NIL	
b. Air (Stack Emission)					
		(Avg. values for the year 20-21)			
	(Stack emission) Particulate matter	Stack Attached to	Quantity of Pollutants discharged (kg/day)	Quantity of Pollutants discharged (mg/Nm3)	
			Percentage of variation from prescribed standards with reason (%)		
		1. Kiln/VRM	174.04	16.1	-46.3 % (Below Prescribed Standards)
		2. Cooler	130.04	19.4	-35.3 % (Below Prescribed Standards)
		3. Coal Mill	10.30	12.6	-58.1 % (Below Prescribed Standards)
		4. Cement Mill - 1	10.37	13.3	-55.5 % (Below Prescribed Standards)
	5. Cement Mill - 2	10.28	13.2	-55.8 % (Below Prescribed Standards)	

PART - D

Hazardous Wastes

(As specified under Hazardous and Other Wastes (Management and Trans boundary Movement) Rules, 2016)

S/N	Hazardous Waste	Total quantity (Lit.)	
		During the current financial year 2020-21	During the current financial year 2021-22
a.	From Process (Generation)	1020 L (Category-5.1/ Schedule-I – Used Oil)	15330 L (Category-5.1/ Schedule-I – Used Oil)
b.	From pollution control facility	Nil	Nil

HWM Utilize as Co-Processing

SN	Co-Processable Hazardous Waste	Quantity consumed (in MT)
1	Chemical Gypsum	30507.25
2	Waste Mixed liquid (HCV)	28.04
3	Waste Mixed liquid (LCV)	8579
4	ETP Sludge solid-35.3	72.38
5	Distillation residue-20.3	280.54
6	Process residue-21.1	90.62
7	Spent carbon-28.3	35.18
8	Spent solvent-20.2	521.94
9	Waste mixed solid- OW	147.92
10	Process waste-36.1	219.58
11	Distillation residue-36.1	227.12
12	Aqueous Waste-	82.78
13	ETP Sludge Tubes-35.3	112.90

PART – E

Solid Waste

S/N	Solid Waste	Total quantity (Tons)	
		During the current financial year 2020-21	During the current financial year 2021-22
a.	From Process (Used Brick generate from pyro process)	306.78 MT	196.62 MT
	E-Waste generates	-	0.36 MT
b.	From pollution control facility	Dust collected from the air pollution control device (Bag filter , ESP, and Bag House) recycled back into the process.	Dust collected from the air pollution control device (Bag filter , ESP, and Bag House) recycled back into the process.
c.	1. Quantity recycled or reutilized within the unit	Quantity generate during process is being 100% reutilized in the process	Quantity generate during process is being 100% reutilized in the process
	2. Sold	Used pyro bricks was sold to	Used pyro bricks was sold

		recycler	to recycler
		-	E-Waste sold to recycler M/s Greentech Reman Pvt Ltd. Authorized by UPPCB.
	3. Disposed	Used pyro bricks was sold to recycler	Used pyro bricks was sold to recycler

PART – F

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

Hazardous Waste Management

The Used Oil was generated in year 2020-21 was 15.33 KL.

The Used oil is stored in closed leak proof steel containers and kept on an impervious site at an isolated place, properly marked with a sign board having danger sign and warning text “**Hazardous waste – Unauthorized persons keep away**”, and away from the operational area and human activities & is sold to the authorized recyclers only.

Bio Medical Waste Management-

The Bio-medical waste generated from OHC Centre, located in Shripati Nagar Colony are being segregated into colored bins & disposed through the authorized CBWDF I.e. M/s En- Vision. The transportation of BMW done by their own vehicle for final treatment and disposal.

S/N	BMW Quantity disposed during	:	2021-22
1	Category wise waste generated & sold to M/s Envision for disposal	:	Yellow Category:- 48.5 Kg
		:	Red Category:- 7.3 Kg
		:	White:- 0.65 Kg
		:	Blue Category:- 31.8 Kg
		:	General Solid Waste:- 50 kg

Solid Waste Management-

- I. There was no solid waste generated from the process, the domestic sludge was generated in the sewage treatment & the same is being use in horticulture activity.
- II. The dust collected by air pollution control equipment in the process is recycled back into process.
- III. The pyro refractory bricks etc disposed to vendors only.
- IV. High volume low effective waste such as fly ash and additives were used as a alternative raw alternative in cement manufacturing for conservation of natural.

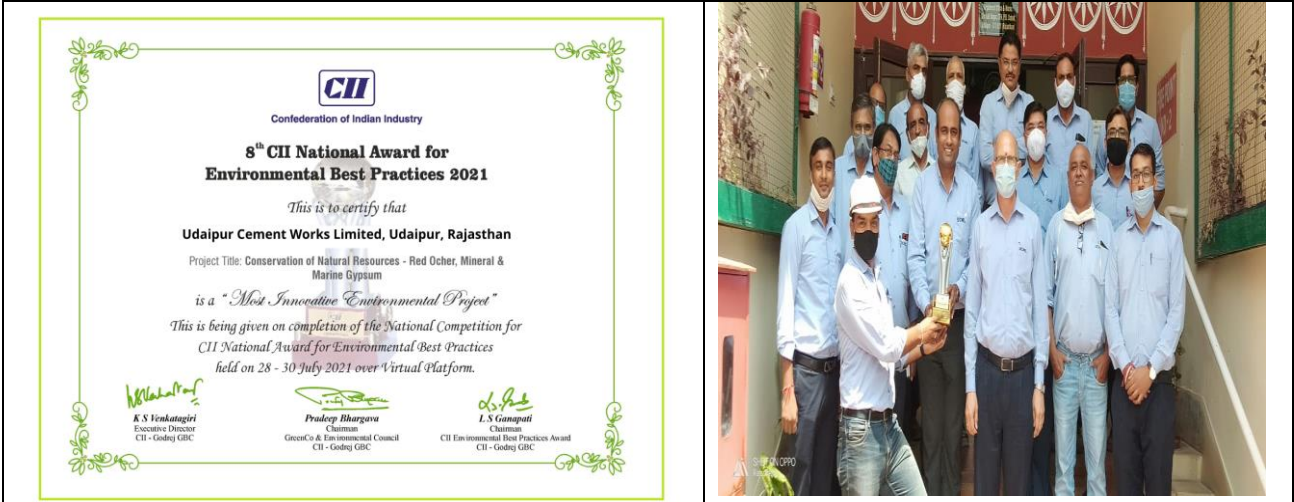
PART – G

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

The cement plant is based on dry process technology which is very cost effective and environmentally clean technology. The co- processing of hazardous waste such as waste mixed liquid, Chemical Gypsum, petcoke (byproduct of petroleum refineries) Waste as a fuel in cement kiln and utilization of fly ash of the thermal power plant as an alternative raw material for cement manufacturing, conserving the natural resources. The stack emission from the plant are controlled by the bag filter installed at various material transfer points. The particulate

matter collected in the pollution control equipment is recycle in the process and neutralizing the cost of operation of pollution control equipment hence no cost impact on the production cost.

M/s Udaipur Cement Works Ltd. has awarded in the 'Most Innovative Environmental Project Award-"Conservation of Natural Resources by use of Jarosite as a set Retarder in Cement" during the 8th edition of the National Award for Environmental Best Practices 2021' organised by the Confederation of Indian Industry (CII) works.



Depends of limestone quality, **Red Ocher** is widely used and key additive to design raw mix. As users are many, the availability is confined and limited natural resource, we were encouraged to use alternative material instead of Natural resource Red Ocher. Keeping in mind with quality parameters of Red Ocher, our own (UCWL) quality standards and BIS specification, we found Zinc Slag (waste of zinc smelting process) is an alternate resource which can replace Red Ocher without compromising product quality. Earlier it was the problem of generator to dispose off this waste in environmentally sound manner

The following measure are already adopted for conservation of natural resources

1. Products are produced with marginal grade of limestone thereby best utilization of the natural resource.
2. Installed cross belt analyzer for online quality checking.
3. Other industries waste i.e Pet Coke is used as main source of fuel.
4. Increased utilization of alternative fuels in kiln like Spent Carbon, Spent Solvent, waste Mix Liquid etc.
5. Use fly ash generated from the power plant for making blended cement.
6. Use of Jarosite (Hazardous waste of industrial process) in cement manufacturing as a part replacement of natural Gypsum.
7. Use of Zinc Slag which is an alternative of Red Ocher.Raw Material and Product in the plant are transferred via closed bucket elevators and covered conveyor belts, with installed efficient pollution control equipment at each material transfer point, thereby ensuring no fugitive emissions.
8. Covered conveyor belt provided for transportation of raw material and product inside the plant premises to reduce fugitive emission and loss of resources.
9. Dust collected inside the pollution control device recycle back into the process
10. Bag filter provided at all raw material transfer point and materials product storage Silo to control free to emissions.
11. Unit has installed one of its lightweight structure based 6.00 kms long Covered Over Land Belt Conveyor from mines crusher to plant site that eliminates the need of transportation of limestone via trucks through roads, thereby saving fuel and thus mitigating associated carbon emissions.

PART – H

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

Air Pollution Control Measure

UCWL plant designed and adopted world-class technology and is environmental friendly. All the pollution control equipment (Bag filter/ House/ESP) are installed to get the emission level below 30 mg/nm³.

Sn	Major Source of Air Pollution	Pollution Control Measures
1	Vertical Raw Mill & Kiln	Reverse Air Bag House
2	Vertical Coal mill	Bag House
3	Clinker Cooler	ESP
4	Cement Mill-1	Bag House
5	Cement Mill-1	Bag House
6	Cement Mill-1	Bag House
7	Material Transfer Point/ Discharge of conveyor belts	Bag Filter

1. Proper operation of pollution control device is being issued by a regular checking in scheduled maintenance of all concerned device
2. Regular house-keeping of plant and colony area is being done by truck mounted sweeping machine to maintain dust free environment.
3. SNCR system is installed and used to control Nox Emissions



A Visuals of CAAQMS, Analyzers and display Board



A Visual of Liquid AFR Tank & feeding arrangement



Water Sprinkling tankers



Automatic dust sweeping Machin

Water Pollution Control Measure

The cement plant based on dry process Technology hence there is no effluent wastewater generation from cement plant process the water only used for cooling and spring purposes recirculated recycle back into the system treatment of domestic observed through STP and treated water every utilized for dust suppression and Green Belt development.

As per CGWA Guideline, The UCWL has renewed the NOC for abstraction of 2525 KLD ground water from CGWA on 18/02/2022 & the same is valid till 21/04/2024, UCWL has installed 10 Nos of digital water flow meter at borewell to monitor the water abstraction along with telemetry service & Digitwal water level recorder (3 Nos).

UCWL has been taken of action for the recharge of ground water level. Most of the buildings (Guest house, Admin & Technical building, store) are connected to the harvesting pits by roof top rain water harvesting system & construct one more harvesting structure near school building for recharge of rain water in the residential colony.

CGWA Compliance- UCWL always committed to meet environmental and conduct ground Water Audit by National Productive Council.



A Visual of Digital Water meter, Digital water level recorder along with telemetry service.



A Visual of roof top & surface rain water harvesting structures



Sewage Treatment Plant



Effluent Treatment Plant

Unit meets its maximum water requirement by sourcing the harvested rainwater stored in the mines pit that reduces the need of ground water abstraction thereby conserving Ground Water Resource.



Location-South Daroli Block 1



Location-North Daroli Block

Energy Conservation

1. During FY 2021-22, the Company ramped up its solar power generation capacity by 4.35 MW, in addition to the existing 10.1 MW, further totaling it to 14.45 MW.
2. Installation of VFD in cement mill -2 CA Fan.
3. VFD Installation in Air slide blower of packing plant
4. Replaced reciprocating compressor with screw compressor
5. Installation of VFD in cement mill-3 Bag filter
6. Reduction of Diameter in Coal conveying pipeline to reduce the power Consumption.
7. Installation of Coal metering and dosing system to reduce the power consumption & smooth operations.
8. Installation of additional economizer tube SPLP Steam Boiler to improve the power generation.
9. Identification and Installation of 2 Nos. of VFD panels for various applications to reduce the power consumption.
10. Installation of FRP Based Fans for shell cooling for lower power consumption.
11. Design of operational philosophy for various units of the plant to maximize solar power utilization.
12. Reduction in False air ingress in Raw mill Fan resulting into power saving.
13. Optimization in WHR Section to achieve the Auxiliary power consumption below 4%.
14. Optimization of compressed air pressure and re-routing of lines in various sections of plant resulting into power saving.
15. Power saving by Fine tuning of various VFDs installed in the plant.
16. Logic modification in limestone transportation system for reducing the idle running leading to power saving.

Noise Pollution Control Measures

Adequate noise control measures have been provided for control the noise level within the permissible limit at our plant premises.

1. Closed building and acoustic silencer for compressor and Cooler fan.
2. Closed building for DG set of 500 KVA.
3. Regular maintenance of plant machineries.
4. The Ambient noise level in plant boundary are being monitored at regular interval and within the prescribed standard.
5. The personal protective equipment ear plug provided to the workers employee exposed to the high noise area

PART – I

Any other particulars for improving the quality of the environment.

Environmental management cell

1. The unit has established in environmental management cell under the control of senior executive.
2. The environmental cell is responsible for to take care of overall environmental monitoring of all type of air water and noise pollution implementation of environmental protection measures pollution control equipment performance checking & operation, regular checking of leakages and look after other general environmental activity like Green Belt, Rainwater Harvesting etc with coordination of plant people .
3. Awareness promotion through various environmental competitions, presentations, mails, tree plantation etc. conducted on world environment day, Earth Day etc.- A Report of WED Celebration is attached in Annexure-1

Environmental monitoring program

UCWL have already installed pollution control equipment and provided various pollution control measures at various source of plant and mining area. To check the effectiveness of provided pollution control measures, we have made a comprehensive environmental monitoring plan and Environmental monitoring is carried out by an NABL approved Laboratory regularly as per standard frequency.

UCWL establish 4 Nos of Ambient Air Quality Monitoring station around the plant periphery in downwind/upwind direction to monitor real time impact of emission on Air environment.

The stack emission monitoring facility with safe platform, stair case have been provided at the major process stack of plant

The calibration of all monitoring equipment are being done by external calibration agency on yearly basis

Continue mission monitoring system facility

As per the guideline issued by CPCB the online continuous emission monitoring system for stack monitoring has been installed and the same is connected with RSPCB/CPCB online portal

Accreditation

The UCWL is ISO Certified organization & certified by Bureau Veritas under following standards.

- 1) ISO 9001:2015 for Quality Management System
- 2) ISO 14001:2015 for Environment Management
- 3) ISO 50001:2011 for Energy Management System
- 4) ISO 45001:2018 for Occupational Health & Safety Management System

World Environment Day



This year on 05th June 2021, Udaipur Cement Works Limited actively celebrated 47th World Environment Day. The United Nation Declared the theme “Ecosystem Restoration - Reimagine, Recreate, Restore” for the year.

At beginning of the day, all UCWL employees and their family members took pledge for sustainable living habits followed by plantation in Mango Trees Garden at Plant Premises.

Various competitions were organized to Aware, Sensitize, Engage and Encourage our society and nearby community about importance of the Environment. Competitions such as Spot Quiz, Essay Writing, Extempore, Poster Competition etc. were organized Category wise & Age wise for MCS, workers, Home Makers and Children. All competitions were evaluated by Judges and participants and winners were awarded by Eco-Friendly Prizes.

UCWL conducted Technology Webinar Series - 2021 for all Units of JK Lakshmi Cement Ltd. and UCWL, Udaipur during 07th June - 15th June on the WED theme. Total 08 Eminent Speakers from different environment fields interacted and shared their knowledge and experience on the theme Ecosystem Restoration. Employees and their families participated enthusiastically and benefited from this knowledge sharing platform.

The programme was celebrated from 31st May 2021 to 15th June 2021.



On the World Environment day let us reaffirm our environment (terrestrial and aquatic ecosystem) & protect our biodiversity We should evidently improve our ecosystem and accelerate progress towards the sustainable development goals.

SH. NAVEEN KUMAR SHARMA
(Whole Time Director)

