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## SHREE JHARKHAND CEMENT PLANT

(A UNIT OF SHREE CEMENT LTD.)

Vill : Hansda-Burudih, Dist : Seraikela Kharsawan, Jharkhand 833220



SCL/Jharkhand/Env. Statement/2020-21/07

Date: 24/08/2020

To,  
The Member Secretary,  
Jharkhand State Pollution Control Board,  
T.A. Division Building (Ground Floor),  
H.E.C. Dhurwa, Ranchi – 834 004

Sub: Environmental Statement of M/s. Shree Jharkhand Cement Plant (A unit of Shree Cement Limited) for the period from April, 2019 to March, 2020 under Environmental Protection Act, 1986.

Ref: CTO No.– JSPCB/HO/RNC/CTO – 6972715/2020/210; dated 22/01/2020.

Dear Sir,

We are submitting herewith Environmental Statement for the period from April, 2019 to March, 2020 for Cement Grinding Unit of M/s. Shree Jharkhand Cement Plant (A unit of Shree Cement Limited) located near Village – Hansda, PO – Burudih, Dist. – Seraikela-Kharsawan, Jharkhand.

Submitted for your kind information please.

Thanking you,  
Yours faithfully,

For M/s. Shree Jharkhand Cement Plant (A unit of Shree Cement Ltd.)

Ashok Kumar  
AGM (Operations)



CC:

1. The Additional Principal Chief Conservator of Forests (APCCF),  
Ministry of Environment, Forest and Climate Change,  
Regional Office (Ranchi), Bungalow No. A-2, Shyamali Colony, Ranchi - 834 002
2. The Regional Officer, JSPCB,  
Regional office cum laboratory,  
M.15, New Housing Colony, Adityapur, Jamshedpur – 831 013

**JAIPUR OFFICE** : SB-187, Opp. Rajasthan University, JLN Marg, Jaipur 302 015

Phone : 0141 6611200, 6611204, Fax : 0141 6612219

**NEW DELHI OFFICE** : 122-123, Hans Bhawan, 1, Bahadurshah Zafar Marg, New Delhi 110 002

Phone : 01123370828, 23379218, 23370776, Fax : 011 23370499

**CORP. OFFICE** : 21, Strand Road, Kolkata 700 001, Phone : 033 22309601-4, Fax : 033 22434226

**ENVIRONMENTAL STATEMENT**  
**M/s Shree Jharkhand Cement Plant (A Unit of Shree Cement Limited)**  
**Period from April 2019 to March 2020**

**FORM – V**  
**(See Rule-14)**

**PART – A**

1.	Name and address of the Owner / Occupier of the Industry operation or process	Shree Jharkhand Cement Plant (A Unit of Shree Cement Limited) Village-Hansda, PO-Burudih, Dist.-Seraikela-Kharsawan, Jharkhand – 833 210
2.	Industry Category Primary (S.T.C. Code) Secondary (S.T.C. Code)	Red Category
3.	Production Capacity	2.5 Million TPA Cement
4.	Year of Establishment	2019
5.	Date of the last Environmental Statement Submitted	18.09.2019

**PART – B**

**WATER AND RAW MATERIAL CONSUMPTION**

**(I) WATER CONSUMPTION**

Process : Nil (As plant is based on dry process Technology)  
Industrial : 14908 KL  
Domestic & Construction : 47022 KL

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year 2018-19	During Current Financial Year 2019-20
Cement	N.A., as plant was commissioned in the month of May, 2019	0.026 KL/MT of Cement

**(II) (a) RAW MATERIAL CONSUMPTION (CEMENT PLANT)**

Name of Raw Material Consume	Name of Product	Consumption of Raw Material Per Unit of Output (Cement) (Metric Tons)	
		During Previous Financial Year 2018-19	During Current Financial Year 2019-20
1. Clinker	Cement	N.A., as plant was commissioned in the month of May, 2019	0.518
2. Gypsum			0.089
3. Fly Ash			0.283
4. Slag			0.110



(II) (b) RAW MATERIAL CONSUMPTION (HAG)

Name of Raw Material Consume	Name of Product	Consumption of Raw Material Per Unit of Output (Metric Tons)	
		During Previous Financial Year 2018-19	During Current Financial Year 2019-20
Fuel / Coal	Heat	N.A., as plant was commissioned in the month of May, 2019	0.009

(II) (c) RAW MATERIAL CONSUMPTION (D.G.Set)

Name of Raw Material Consume	Name of Product	Consumption of Raw Material Per Unit of Output (Ltrs/KWh)	
		During Previous Financial Year 2018-19	During Current Financial Year 2019-20
Diesel	Power	N.A., as plant was commissioned in the month of May, 2019	0.440

(III) POWER CONSUMPTION (KWH/T OF Cement):

During Previous Financial Year 2018-19	During Current Financial Year 2019-20
N.A., as plant was commissioned in the month of May, 2019	41.12

(IV) TOTAL CEMENT PRODUCTION (MT):

During Previous Financial Year 2018-19	During Current Financial Year 2019-20
N.A., as plant was commissioned in the month of May, 2019	572944

(V) TOTAL D.G. POWER PRODUCTION (KWh):

During Previous Financial Year 2018-19	During Current Financial Year 2019-20
N.A., as plant was commissioned in the month of May, 2019	2726



**PART – C**

**DISCHARGED TO ENVIRONMENTAL / UNIT OF OUTPUT**

Pollutants	Quantity of Pollutants Discharged (Mass/Day)	Concentration of Pollutants in Discharge (Mass/Value)	Percentage of variation from prescribed standard with reasons
(a)	Water	The plant is being operated on dry process technology and therefore no liquid effluent is generated from the cement plant. Waste water generated from office toilets and canteen is being treated through Sewage Treatment Plant (STP) and soak pit via septic tank. The STP treated water is being utilized in horticulture activities.	
(b)	Air	Please refer Annexure – 1 & 2	
(c)	Noise	Please refer Annexure – 3	

**PART – D**

**HAZARDOUS WASTE**

(As specified under Hazardous Wastes (Management, Handling & Trans boundary Movement Rule, 2016)

Hazardous Waste	Total Quantity (Ltrs.)	
	During Previous Financial Year 2018-19	During Current Financial Year 2019-20
a) From Process (Cement manufacturing is based on “Dry Process” No Hazardous waste is generated from the process except used oil which is drained from Machinery / Equipment)	No Hazardous waste has been generated.	
(b) From Pollution Control Facilities		

**PART – E**

**SOLID WASTE**

		Total Quantity	
		During Previous Financial Year 2018-19	During Current Financial Year 2019-20
(a)	From Process	N.A., as plant was commissioned in the month of May, 2019	N.A.
(b)	From Pollution Control Facility		Dust collected in the bag house and bag filters are recycled back into the system.
(c)	1. Quantity rejected or re-utilized within the unit		100%
	2. Sold		Nil
	3. Disposed		Nil





## 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 the categories of wastes:**

### Hazardous Wastes

Cement manufacturing is based on “Dry Process”. No Hazardous waste is generated from the process except used oil which is drained from Machineries / Equipments.

### Battery Wastes:

As specified under Batteries (Management and Handling) Amendment Rules, 2010, we have purchased following new batteries of different categories.

1.	Number of new batteries of different categories purchased from the manufacturer / importer / dealer or any other agency	During 1 <sup>st</sup> Apr 2019 to 31 <sup>st</sup> Mar 2020	
	Category:	(i) No. of Batteries	(i) Approximate Weight (In MT)
	(i) Automotive		
	a) Four wheeler	Nil	Nil
	b) Two wheeler	Nil	Nil
	(ii) Industrial		
	a) UPS	116	1.029
	b) Motive Power	Nil	Nil
	c) Stand –by	Nil	Nil
	(iii) Others	12	1.612
	Total	128	2.641
2.	Number of used batteries of categories mentioned in Sl. No 1 and Tonnage of scrap sent manufacturer/dealer/importer/registered recycler/or any other agency to whom the used batteries scrap was sent	During 1 <sup>st</sup> Apr 2019 to 31 <sup>st</sup> Mar 2020	
	Category:	(i) No. of Batteries	(i) Approximate Weight (In MT)
	(i) Automotive		
	a) Four wheeler	Nil	Nil
	b) Two wheeler	Nil	Nil
	(ii) Industrial		
	a) UPS	Nil	Nil
	b) Motive Power	Nil	Nil
	c) Stand –by	Nil	Nil
	(iii) Others	Nil	Nil
	Total	Nil	Nil



### Bio-Medical Wastes

	Bio-Medical Waste Quantity (Kg) as per Color Coding			
	Red	Blue/White	Yellow	Black
During Previous Financial Year 208-19	No Bio-Medical Waste has been generated during the financial year 2019 - 20.			
During Current Financial Year 2019-20				

### E- Wastes:

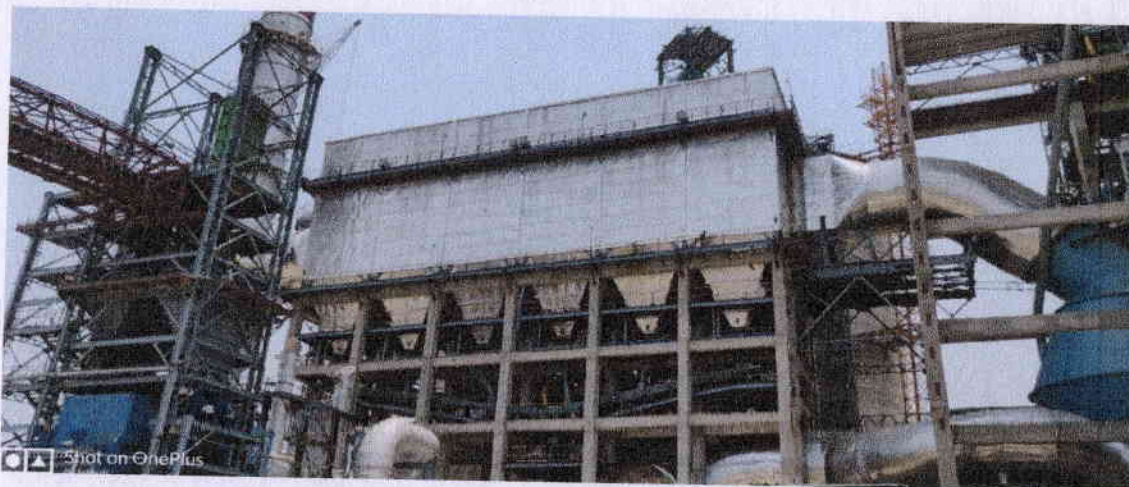
	Total Quantity	
	During Previous Financial Year 2018-19	During Current Financial Year 2019 - 20
From Process	N.A., as plant was commissioned in the month of May, 2019	Nil
From Pollution Control Facility		Nil

Solid Wastes: - N.A.

### PART – G

#### IMPACT OF THE POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON THE COST OF PRODUCTION

M/s Shree Jharkhand Cement Plant (A Unit of Shree Cement Limited) is a clinker grinding unit and operated on dry process technology, which is cost effective and environmentally clean technology. The advantage of roller press for pre grinding of clinker is an energy conservation process. The stack emissions from the plant are controlled by equipment like Bag Houses and 57 number of Bag Filters installed at various material transfer points to clean the process and arrest the fugitive emissions. The particulate matter collected in the pollution control equipment is recycled in process and neutralizing the cost of operation of pollution control equipments and hence no cost impact on the production cost. Further fly ash is also being utilized in the production of PPC cement thus eliminating the harmful impacts on environment.



(Image Showing Baghouse of Cement Mill)





Moreover, to control the dust nuisance emission effectively, M/s Shree Jharkhand Cement Plant has constructed concrete silos and covered yard to store raw materials and end product.



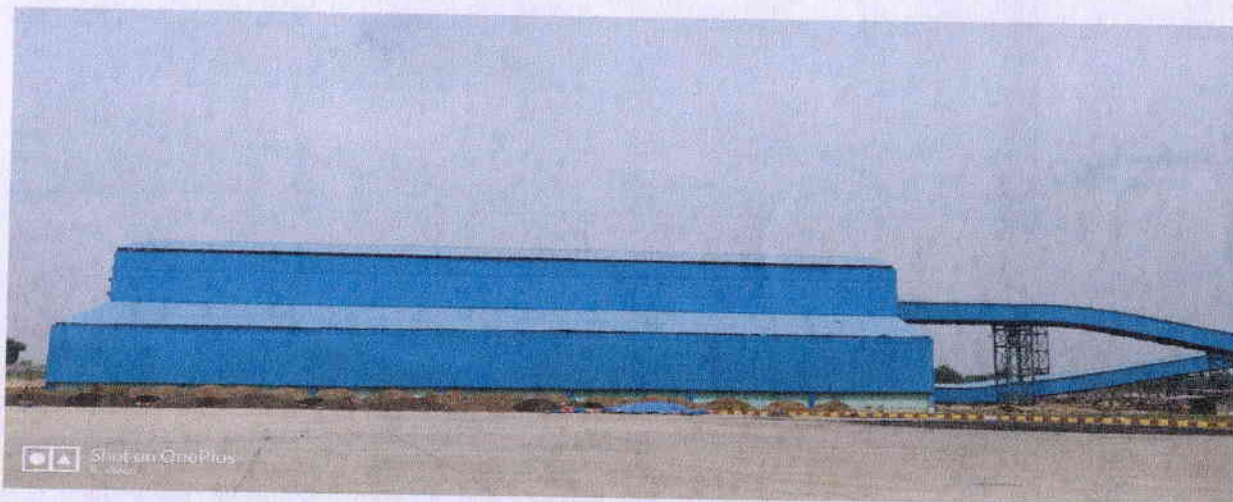
(Clinker Silo)



(Fly ash Silo)



(Cement Silo)



(Gypsum Yard)





## PART – H

### ADDITIONAL MEASURES / INVESTMENTS PROPOSAL FOR ENVIRONMENT PROTECTION INCLUDING ABATEMENT OF POLLUTION

Green belt development and tree plantation is our ongoing activity within the plant area and outside of the area. Every year plantation activities are being done to increase the bio-diversity of the area. Till 31<sup>st</sup> March, 2020, we have covered 31.05 acres with around 5177 nos. of trees. We have planted different type of forest plant species like *Mangifera indica*, *Azadiracta indica*, *Dalbergia sissoo*, *Syzygium cumini*, *Millettia pinnata*, *Anacardium occidentale*, *Roystonea regia*, *Albizia lebbeck*, *Delonix regia*, *Mimusops elengi* etc.



(Plantation inside plant premises)





**PART – I**  
**ANY OTHER PARTICULATES FOR IMPROVING THE QUALITY OF ENVIRONMENT.**

1. We have full-fledged Environment Department for monitoring, maintenance of pollution control equipment and Green Belt development.
2. House-Keeping of plant area is being maintained in perfect order. To control fugitive dust nuisance and for better housekeeping, two number of vacuum sweeping & cleaning machine has been engaged.
3. Moreover, all the material transfer belts are covered and transfer points are equipped with pollution control equipment. To further control fugitive dust nuisance, we have developed concrete area within the vehicle movement area.
4. Frequent monitoring and analyses of data for ambient air quality, ambient noise and ground water quality & water levels is being done to improve the environment quality of the plant area.
5. Special attention has been given to Green belt development with planting tree of different species inside and outside of the plant area.
6. 17 number of solar LED street light has been installed inside plant premises which is ecofriendly.
7. We have installed Continuous Emission Monitoring System (CEMS) and 4 numbers of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) for real time monitoring and to display the data on PCB web sites.
8. We have installed STP of capacity 25 KLD to recycle domestic waste water.
9. We are developing Rain Water Harvesting Structure to recharge ground water.
10. We have installed 1.999 MW Solar Power system.
11. We have installed water sprinklers to control fugitive dust nuisance.

On the support of above, we are enclosing herewith following documents: -

Annexure-1: Stack Emission monitoring report

Annexure-2: Ambient Air Quality monitoring report

Annexure-3: Ambient Noise Level monitoring report

Annexure-4: Vacuum sweeping & cleaning machine

Annexure-5: Water Sprinklers

Annexure-6: Solar LED Street light



**Shree Jharkhand Cement Plant  
(A unit of Shree Cement Limited)**

<b>Stack Emission Monitoring Data (values in mg/Nm<sup>3</sup>)</b>	
<b>Months</b>	<b>Norms : 20 mg/Nm<sup>3</sup></b>
Apr – 19	N.A.
May – 19	N.A.
June – 19	1.97
July – 19	9.9
Aug – 19	13.0
Sept – 19	16.0
Oct – 19	11.21
Nov – 19	14.38
Dec – 19	3.33
Jan – 20	10.5
Feb – 20	13.38
Mar – 20	4.62
Average	10

\*Plant was commissioned on 31<sup>st</sup> May, 2019.





Ambient Air Quality Monitoring Data (values in µg/m³)																	
Locations		Plant boundary near logistic building				Plant boundary near Rain water harvesting pond				Plant boundary near railway siding				Plant boundary near wagon tippler			
Parameters		PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>
Norms (24 hours)		100	60	80	80	100	60	80	80	100	60	80	80	100	60	80	80
Apr – 19		55	33	13	14	56	33	11	15	55	37	11	14	56	35	11	13
May – 19		54	31	14	13	56	31	12	14	57	36	09	15	57	37	12	10
June – 19		53	32	11	13	54	30	10	15	54	33	10	13	54	34	11	12
July – 19		51	29	12	11	52	28	11	13	52	30	09	11	51	31	09	11
Aug – 19		48	27	10	11	49	28	09	10	49	29	10	12	50	28	10	10
Sept – 19		45	24	10	12	43	26	10	11	46	23	09	09	52	26	09	11
Oct – 19		50	28	11	12	52	27	11	12	51	32	9	11	54	30	10	12
Nov – 19		53	31	11	12	50	29	9	12	46	24	10	11	50	30	9	12
Dec – 19		57	31	8	10	50	32	9	11	58	36	8	10	51	35	8	11
Jan – 20		54	32	8	11	48	27	9	11	50	31	8	11	55	34	8	11
Feb – 20		55	34	9	14	47	27	10	14	51	30	9	13	53	33	9	15
Mar – 20		56	37	10	14	51	28	11	14	53	33	10	14	55	34	10	14
Average		52.58	30.75	10.58	12.25	50.67	28.83	10.17	12.67	51.83	31.17	9.33	12.00	53.17	32.25	9.67	11.83
Norms (Annual)		60	40	50	40	60	40	50	40	60	40	50	40	60	40	50	40



**Shree Jharkhand Cement Plant  
(A unit of Shree Cement Limited)**

<b>Ambient Sound Level Monitoring Data Leq. in dB(A)</b>									
Locations	Plant boundary near logistic building		Plant boundary near Rain water harvesting pond		Plant boundary near railway siding		Plant boundary near wagon tippler		
Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	
<b>Norms</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	<b>75</b>	<b>70</b>	
Apr – 19	69.8	56.1	68.9	59.7	70.5	64.5	71.5	58.7	
May – 19	68.1	54.8	70.5	58.5	70.3	65.1	69.8	59.6	
June – 19	67.9	55.9	69.8	57.8	69.8	64.2	70.6	60.1	
July – 19	67.1	54.7	70.1	58.6	71.1	65.3	69.3	58.4	
Aug – 19	68.4	56.1	69.4	59.0	70.8	66.5	70.2	59.6	
Sept – 19	66.9	53.8	67.1	56.3	72.3	67.4	71.9	60.2	
Oct – 19	65.1	53.1	65.2	52.4	67.8	58.2	70.1	59.8	
Nov – 19	67.3	54.1	65.8	51.4	66.2	55.8	71.2	56.3	
Dec – 19	68.1	49.1	66.2	49.6	67.1	51.6	70.8	52.1	
Jan – 20	67.4	55.1	70.6	58.2	71.3	65.1	69.8	58.7	
Feb – 20	69.2	54.0	68.7	53.5	69.1	58.8	70.3	60.1	
Mar – 20	70.1	55.1	67.5	51.4	58.9	56.8	70.7	59.1	
<b>Average</b>	<b>68.0</b>	<b>54.3</b>	<b>68.3</b>	<b>55.5</b>	<b>68.8</b>	<b>61.6</b>	<b>70.5</b>	<b>58.6</b>	







(Vacuum sweeping & cleaning machine)







(Water Sprinklers arrangement inside plant premises)







(Solar LED street light)

