

JVPL/EC/ES/2016-17  
September 25<sup>th</sup>, 2017

The Member Secretary  
M.P. Pollution Control Board,  
Paryavaran Parisar,  
E-5, Arera Colony  
BHOPAL (M.P.) - 462 016.

**Sub: Environment Statement under the Environment (Protection) Act, 1986 for Jaypee Nigrie Super Thermal Power Project (A Division of Jaiprakash Power Ventures Limited) at village Nigrie, Dist. Singrauli.**

Dear Sir

Please find enclosed herewith Environment Statement for the year 2016 - 2017 of our following Plants.

- Jaypee Nigrie Super Thermal Power Project, EC reference no. J-13012/223/2007-IA-II(T) dated 25.02.2010 and its amendment dated 13.07.2012 for the Jaypee Nigrie Super Thermal Power Plant (2x660 MW) & Jaypee Nigrie Cement Grinding Unit (2.0 MTPA)

Thanking you.

Yours Faithfully  
For (Jaypee Nigrie Super Thermal Power Project)  
(A Division of Jaiprakash Power Ventures Ltd.)



(Vinod Sharma)  
President (O & M)

Encl: As Above.

- 1) C.C.:Regional Officer  
D-3 Russian complex, Vindhya Nagar  
NTPC, Vindhyanagar  
Madhya Pradesh Pollution Control Board, Singrauli

- For information please.



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Regd. Office : ~~JIT Complex, Wagnaghat, PO. Dumehar Bari, Kandaghat 173215, Distt. Solan (H.P.)  
Ph. : +91 (1792) 257999, 245367 Fax : +91 (1792) 245362  
Website : www.jalindia.co.in CIN : L10101HP1994PLC015403~~  
Regd Office Complex of Jaypee Nigrie Super Thermal Power Plant, Nigrie  
Tehsil Sarai District Singrauli 486669 (Madhya Pradesh)



# ENVIRONMENTAL STATEMENT REPORT

## CEMENT GRINDING UNIT (2.0 MTPA) Jaypee Nigrie Cement Grinding Unit

(A Division of M/s Jaiprakash Power Ventures Limited  
at Jaypee Nigrie Super Thermal Power Project)

Villages: Nigrie, Tehsil : Sarai  
District: Singrauli

2016 - 2017

SUBMITTED  
to  
M.P. POLLUTION CONTROL BOARD  
BHOPAL (M.P.)

25<sup>th</sup> September 2017

**Jaypee Nigrie Cement Grinding Unit**  
**at**  
**Jaypee Nigrie Super Thermal Power Project**  
**(A Division of Jaiprakash Power Ventures Limited)**

**Introduction:**

Jaypee group is a significant contributor in Power generation of the country through hydro based & Thermal Power plants. The Group started its journey in power sector by building Hydropower plant & operates and subsequently made its entry into Thermal Power Generation and Power Transmission implementing the power plants at Bina , Nigrie & Bara. The Group is committed to maintain a healthy environment towards the safety and health of employees and the public. The motto of the Group is '**Work for Safe, Healthy, Clean & Green Environment**'.

Jaypee Nigrie Super Thermal Power Project is a coal based super critical thermal power project of 1320 MW(660 x 2) at Nigrie Village, Sarai Tehsil in Singrauli district of Madhya Pradesh in order to utilize the flyash produced by Thermal Power Plant, a 2.0 MTPA cement grinding unit has also been set up adjacent to power plant. The Cement Grinding Unit consists of the Roller press and Ball mill combo mode with high efficiency separators which is supplied by KHD Humboldt Wedag. Portland Pozzolona Cement is produced by grinding Clinker and fly ash with small quantity of gypsum to regulate the setting time.

Clinker from nearby cement plants is transported by trucks and carried to the clinker storage Silo. The clinker is then conveyed to Mill Hopper by Belt Conveyors. Fly Ash from our adjacent Jaypee Nigrie Super Thermal Power Plant is transported to the Fly Ash silo by pneumatic conveying system and taken to 400 MT Fly Ash bin in mill building as per requirement, and to be fed to Mill in controlled manner through solid flow meter. Gypsum procured from the various suppliers/ JAL cement units is transported to the gypsum gantry is fed to Mill Gypsum Hopper with the help of Grab Crane through crusher.

Controlled and weighed quantity of raw materials (clinker, fly ash and gypsum) through electronic weigh feeder is fed to Roller Press through feed belts and is ground to the desired fineness, regulated by separator RPM. After grinding, the cement is conveyed to separator for separating fines and coarse material. Coarse material is sent back to Ball Mill for regrinding and fine material collected in bag house, sent to Silo by Air Slides and Belt Bucket Elevator. From the Cement Silos, the cement is extracted via Air slide to control bin and packed in 50 Kg. bags by Electronic Rotary Packers. The packed bags are loaded in trucks by Truck Loading Machines and in wagons by wagon loading machine and dispatched to the destinations. The

plant is fully computerized and operated through centralized control room (CCR), equipped with latest and most modern pollution control and monitoring devices to maintain emission levels within the prescribed limits.

**“FORM - V”**

(See rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31<sup>st</sup>  
MARCH 2017

**PART - A**

(I)	Name & Address of the Owner / Occupier of the Industry Operation or Process	<b>Jaypee Cement Grinding Unit , Near Jaypee Nigrie Super Thermal Power Project (JNSTPP)</b> <b>(A Division of Jaiprakash Power Ventures Limited)</b> PO- Nigrie, Distt. Singrauli-486669 Madhya Pradesh
(II)	Industry Category Primary (STC CODE) Secondary (SIC CODE)	Red Category and Large industry (Primary STC Category)
(III)	Production Capacity	Total Capacity is 4.0 MTPA out of which 2.0 MTPA is in operation
(IV)	Year of Establishment	Year 2014
(V)	Date of last Environmental Statement Submitted	September, 2016.

**PART - B**

**Water & Raw Material Consumption**

**A. Water Consumption - m<sup>3</sup>/d**

(i)	Process	-	Nil
	Cooling	-	24.08
	Domestic	-	10.00

Name of the Product	Process Water Consumption per unit of Product Output (m <sup>3</sup> /MT)	
	During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-2017)
Portland Pozzolona Cement (PPC)	PPC is produced by dry grinding of Clinker and flyash with small quantity of gypsum, hence no process water is consumed.	

**(ii). Raw Material Consumption**

Name of the Raw Material	Name of Product	Consumption of Raw Material per Unit Product Output (MT/MT of Cement)	
		During the Previous Financial Year (2015-2016)	During the Current Financial Year (2016-2017)
• Clinker	Portland	0.676	0.658
• Fly ash	Pozzolona	0.301	0.327
• Gypsum	Cement (PPC)	0.023	0.014

**Total Cement Generation**

Name of Product	During Previous Financial Year (15-16) MT	During Current Financial Year (16-17) MT
Portland Pozzolona Cement (PPC)	312577	2422

**PART - C**

**Pollutant Discharged To Environment / Unit of Output**

(Parameters as specified in the consent issued)

S. No.	Pollutants	Quantity of Pollutants Discharged (Mass / day) (tonne/day)	Concentrations of Pollutants in discharged (Mass / Volume) (mg/Nm3)	Percentage of variation from prescribed standard with reasons
(a)	<b>Water</b>			
(i)	<b>Domestic</b>	Zero discharge is maintained. Treated domestic waste water is being used in Horticulture.		
(ii)	<b>Industrial</b>	PPC is produced by dry grinding of Clinker and fly ash with small quantity of gypsum, hence no pollutant is discharged.		
(b)	<b>Air</b>			
	Monitoring of Ambient Air Quality parameter within limit and report attached as <b>Annexure- I</b>			
	<b>Stack emission</b>			
	<b>(a) Bag houses</b>			
	Stack-I (Cement Mill)	0.00	0.00	Plant was non operational and the production quantity was 0.8% compared to previous financial year.
	Stack-II(Roll Press)	0.00	0.00	

**PART - D**

**Hazardous Wastes**

(As specified under] Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016

Hazardous Waste	Total Quantity (Kg)			
	During the Previous Financial Year (2015-2016)		During the Current Financial Year (2016-2017)	
	Used oil	Waste oil	Used oil	Waste oil
(a) From Process	Nil		Nil	
(b) From Pollution Control Facilities.	Nil		Nil	

**PART - E**

**Solid Wastes**

Solid Waste		Total Quantity	
		During the Previous Financial Year (2015-2016)	During the Current Financial Year (2016-2017)
(a)	From Process	Nil	Nil
(b)	From Pollution Control facilities	All the collected material is recycled in the process.	All the collected material is recycled in the process.
(c)	(i) Qty. recycled or reutilised within the unit.	All the collected Solid waste is reused in the process	All the collected Solid waste is reused in the process
	(ii) Sold	Nil	Nil
	(iii) Disposed	Nil	Nil

**PART - F**

**PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.**

Hazardous waste: Hazardous Waste will be collected in empty drums, barrels & stored under covered shed in isolated fenced place (As specified under] Hazardous and Other Waste (Management & Transboundary Movement) Rules, 2016 from where the stored hazardous waste will be sold out to authorized recyclers.

**Solid waste:** No Solid Waste is being generated from the plant. All the collected material is recycled in the process.



## PART - G

### IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Following measures have been adopted for abatement of pollution, conservation of natural resources:-

**a) Utilization of Fly Ash for the manufacturing of cement**

JNSTPP having capacity of 660 x2 MW has the potential to generate total fly ash 1.477 MTPA (Fly ash = 1.177 MTPA & Bottom Ash 0.30 MTPA). The Fly ash is consumed in Jaypee Nigrie Cement Grinding Unit for manufacturing of PPC and also supplied to other cement plants of Jaypee Group, thereby conserving naturally occurring non-renewable mineral resources limestone and coal.

**b) Installation of Sewage Treatment Plant -**

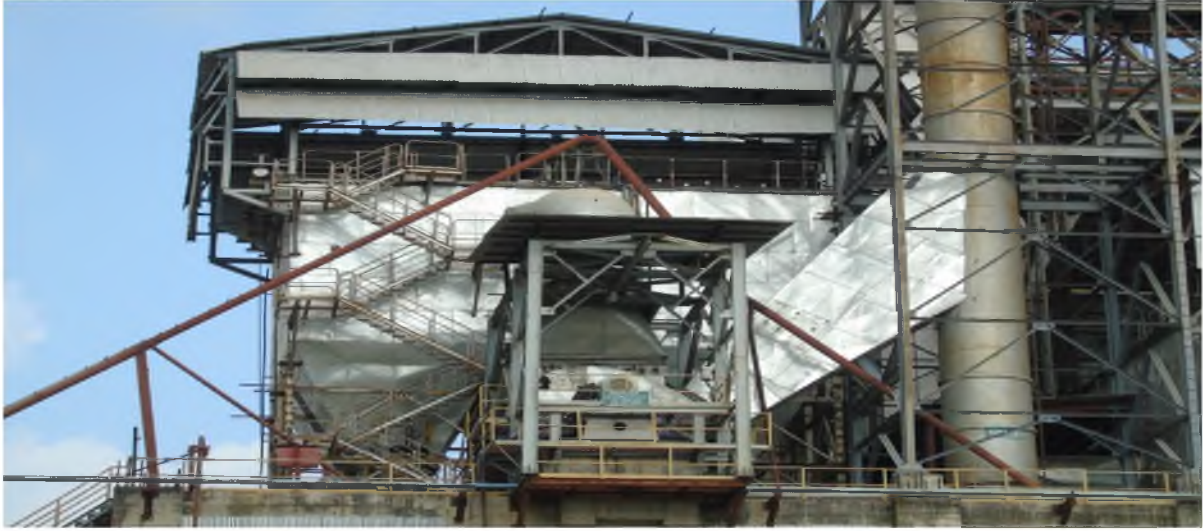
Sewage Treatment Plant of 1000 KLD has been installed for treatment of domestic waste water and treated water is used for horticulture. There is no discharge of water from the premises to any surface drain, hence zero discharge is maintained.





**c). Installation of APCDs at various sources-**

High Efficiency Bag Houses (2Nos.) are attached to (Ball & Roll Press Mill) with guaranteed emission level of  $<30 \text{ mg/Nm}^3$  at full load. Each Bag House has 1180 & 780 bags respectively. We have installed 34 no. of Bag Filters at various source points to control the fugitive emission.



Photograph of bag house

**d) Online Monitoring system:** Online Continuous ambient air quality monitoring instruments are installed and commissioned for monitoring of PM, SO<sub>2</sub>, NO<sub>x</sub> & CO in the ambient air. The four locations have been approved for CAAQM stations. The Opacity meters have been installed & Commissioned at stack for monitoring of PM.



Photograph of CAAQMS

e). **Installation of Water Sprinkling Systems-** Water spraying arrangements are made for control of fugitive emission from dusty area like Fly Ash Silo and transfer points and other dust generation areas of the plant.

f). **Noise Pollution Abatement Measures** – Acoustics enclosures are provided to reduce Noise levels in noise-making rotating machines area. Personal protective equipment like ear plug/ear muffs will be provided to the workmen working in high noise area such as Compressor area.

g). **Good housekeeping practice adopted**

Following measures have been taken for good house keeping

- a. Raw materials are being stored in silos and the covered shed.
- b. The conveyor belts are fully covered.
- c. Schedule maintenance of PCDs

## PART - H

### ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

**Additional measures taken for Environmental Protection are as under**

**Extensive plantation in and around the Plant.**

We have a dedicated team of skilled horticulturists for the afforestation and greenery development program at our plant under the supervision of senior experienced person. Till date we have planted 88,050 plants in 35.22 Ha.

**Steps taken to protect plantation:**

1. Barricades are provided for protection of plants.
2. Two numbers of dedicated water tankers are provided for regular watering of plant.
3. Dedicated manpower is provided for regular watering of plants.
4. Tree Guards are provided for protection of the plants.



### PART - I

#### **ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.**

- Water Harvesting Measures- A surface water body is designed in the township area for rain water harvesting.



- Establishment of Environment Laboratory-  
Environment Laboratory has been set up with well equipped facilities such as water & waste water testing instruments as well Air Quality Monitoring machines.





- **Concreting of Roads-** All internal roads are made Pucca.



- **CSR works -**

Adoption of village: Surrounding four villages i.e. (i) NIGRIE (ii) KATAI (iii) NIWAS and (iv) HARDI have been identified for development through COMPREHENSIVE RURAL DEVELOPMENT PROGRAM (CRDP): This Program will comprise of Health care, Education, Vocational Training, provision of drinking water, Sanitation and employment generation particularly in the area of Animal Husbandry

- **Hindi Medium School- Free Education for nearby villagers-**



- **Free Medical Camps -**



- **Free Medicines to all nearby Villagers** - A 10 bed hospital is functional for medical check-up and treatment to the local habitats for the surrounding 10 villages. Almost 250 to 300 people avail the Medical facilities daily



Further as a need based assessment of nearby village District Administration has taken initiative to give training through skill development programme at ITI Waidhan, the company has contributed Rs. 12,000,00 against this programme and 100 people from nearby villages have been identified and sent for this training.

**For Jaypee Nigrie Cement Grinding Unit  
(A Division of Jaiprakash Power Ventures Ltd)**

  
**(Rajiv Sharma)  
General Manager**





**JAYPEE NIGRIE CEMENT GRINDING UNIT**  
**(A Division of Jaiprakash Power Ventures Limited)**

**AMBIENT AIR QUALITY MONITORING REPORT**

**Period : April, 2016 - March 2017**

<b>Near STP - Colony area</b>						
<b>Month</b>	<b>Particulars</b>	<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	<b>NO<sub>x</sub> (µg/m<sup>3</sup>)</b>	<b>CO (µg/m<sup>3</sup>)</b>
Apr-16	Monthly Average	37.60	69.27	25.99	36.35	0.18
May-16		36.85	67.39	25.24	35.60	0.18
Jun-16		35.34	66.95	24.69	34.54	0.18
Jul-16		20.93	48.30	16.70	17.54	0.10
Aug-16		22.03	33.63	16.41	17.23	0.09
Sep-16		22.83	49.69	18.38	19.82	0.12
Oct-16		35.03	70.73	8.46	19.71	0.58
Nov-16		33.90	71.00	8.30	19.70	0.58
Dec-16		35.90	70.60	8.50	19.80	0.58
Jan-17		33.40	70.00	8.30	20.10	0.59
Feb-17		36.30	71.00	8.60	20.30	0.60
Mar-17		35.30	69.70	8.30	18.10	0.60
<b>Near H<sub>2</sub> Gas cylinder shed</b>						
<b>Month</b>	<b>Particulars</b>	<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	<b>NO<sub>x</sub> (µg/m<sup>3</sup>)</b>	<b>CO (µg/m<sup>3</sup>)</b>
Apr-16	Monthly Average	41.51	72.45	27.13	39.38	0.17
May-16		40.68	71.00	26.30	38.55	0.17
Jun-16		39.44	70.28	25.77	37.41	0.17
Jul-16		21.88	46.00	17.11	17.96	0.09
Aug-16		22.37	33.00	16.12	17.60	0.09
Sep-16		23.23	49.25	18.06	20.24	0.11
Oct-16		34.03	67.62	6.94	18.09	0.52
Nov-16		33.00	67.70	7.00	18.30	0.51
Dec-16		35.20	67.60	6.90	17.80	0.53
Jan-17		34.90	66.20	7.10	17.80	0.52
Feb-17		34.60	68.00	7.40	18.20	0.53
Mar-17		34.80	67.00	7.10	16.80	0.52

**AMBIENT AIR QUALITY MONITORING REPORT**

**Period: April, 2016 - March 2017**

<b>Near Watch tower 22 (Grinding Unit)</b>						
<b>Month</b>	<b>Particulars</b>	<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	<b>NO<sub>x</sub> (µg/m<sup>3</sup>)</b>	<b>CO (µg/m<sup>3</sup>)</b>
Apr-16	Monthly Average	42.52	76.29	26.11	35.55	0.22
May-16		42.92	74.62	25.26	34.70	0.22
Jun-16		41.02	73.63	24.81	33.78	0.21
Jul-16		21.53	48.76	17.71	18.60	0.10
Aug-16		21.24	36.90	15.84	18.22	0.10
Sep-16		22.13	54.60	17.74	20.96	0.11
Oct-16		44.03	79.99	10.82	23.75	0.71
Nov-16		44.40	80.30	10.80	24.20	0.72
Dec-16		43.70	79.90	10.70	23.40	0.71
Jan-17		44.60	78.00	10.70	23.90	0.71
Feb-17		45.10	79.80	10.50	25.30	0.73
Mar-17		42.10	79.20	10.10	24.50	0.73
<b>Near fuel storage tank</b>						
<b>Month</b>	<b>Particulars</b>	<b>PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>SO<sub>2</sub> (µg/m<sup>3</sup>)</b>	<b>NO<sub>x</sub> (µg/m<sup>3</sup>)</b>	<b>CO (µg/m<sup>3</sup>)</b>
Apr-16	Monthly Average	42.97	70.27	24.70	37.62	0.19
May-16		42.11	68.87	23.84	36.76	0.19
Jun-16		40.82	68.16	23.46	35.74	0.18
Jul-16		20.18	47.38	18.11	19.02	0.09
Aug-16		20.14	46.71	15.57	18.64	0.09
Sep-16		21.74	48.19	17.43	21.43	0.11
Oct-16		36.45	71.14	8.01	20.51	0.60
Nov-16		33.40	68.20	7.20	18.20	0.55
Dec-16		31.60	59.20	7.10	18.20	0.52
Jan-17		39.20	73.90	8.60	22.30	0.66
Feb-17		37.60	73.60	8.90	22.90	0.67
Mar-17		38.80	73.60	8.40	21.20	0.65