JAYPEE NIGRIE SUPER THERMAL POWER PLANT
A DIVISION OF JAIPRAKASH POWER VENTURES LIMITED
ISO CERTIFIED : 9001:2015, 14001:2015 & 45001:2018
QUALITY ENVIRONMENT HEALTH & SAFETY

JAIPRAKASH
POWER VENTURES LIMITED

JVPL/EC/ES/2021-22

May 17th, 2022

To,
The Member Secretary
M.P. Pollution Control Board,
Paryavaran Parisar,
E-5, Arera Colony
BHOPAL (M.P.) – 462016.

Sub: Environment Statement under the Environment (Protection) Act, 1986 for Jaypee Nigrie Super Thermal Power Plant (A Division of Jaiprakash Power Ventures Limited) located at village Nigrie, Tehsil-Sarai, Dist. Singrauli(M.P).

Dear Sir

Please find enclosed herewith Environment Statement for the **FY 2021 – 2022** of our following Plant.

- 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 Plant
(A Division of Jaiprakash Power Ventures Ltd.)

(Vinod Sharma)
Sr. President (O & M)

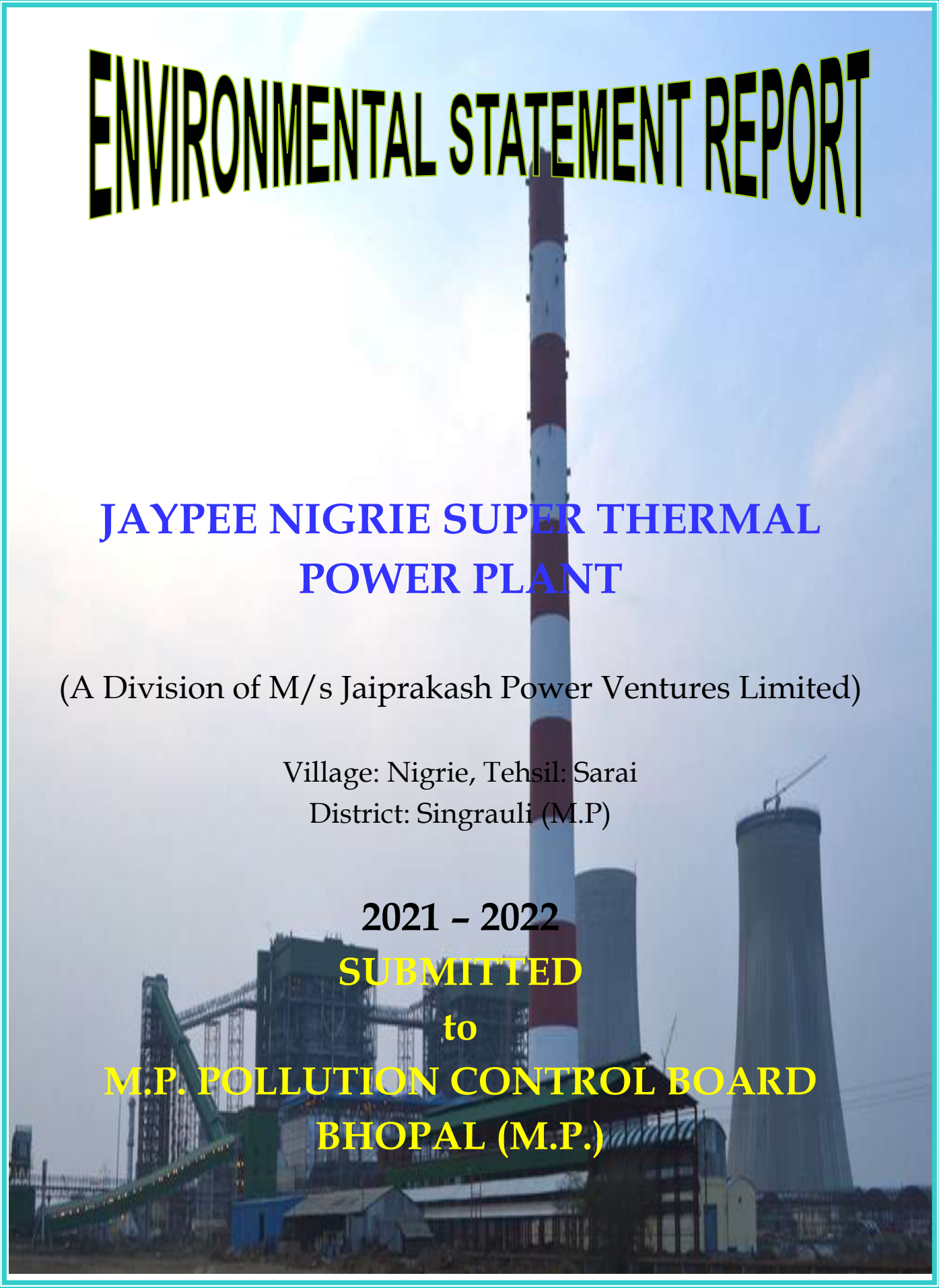
Encl: As Above.

1) C.C.: **Regional Officer** - **For information please.**
M.P. Pollution Control Board,
Bhakuar, Naugadh,
Singrauli District (M.P.) – 486885.

Site : Jaypee Nigrie Super Thermal Power Plant, Village & P.O.-Nigrie, Tehsil-Sarai, Distt.-Singrauli (M.P.)
Ph: +91 (7801) 286021 - 36, Fax: +91 (7801) 286020, Email: jpthermal.sidhi@jalindia.co.in
Corp. Office : 'JA House', 63 Basant Lok, Vasant Vihar, New Delhi - 110 057 (India)
Ph: +91 (11) 49828679, 49828642, Fax: +91 (11) 26145389
Regd. Office: Complex of Jaypee Nigrie Super Thermal Power Plant, Nigrie Tehsil - Sarai, Distt. - Singrauli - 486669 (Madhya Pradesh)
Ph: +91 (7801) 286021 - 39, Fax: +91 (7801) 286020
Website: www.jppowerventures.com **CIN**: L40101MP1994PLC042920

JAYPEE GROUP

ENVIRONMENTAL STATEMENT REPORT



JAYPEE NIGRIE SUPER THERMAL POWER PLANT

(A Division of M/s Jaiprakash Power Ventures Limited)

Village: Nigrie, Tehsil: Sarai
District: Singrauli (M.P)

2021 – 2022

SUBMITTED

to

M.P. POLLUTION CONTROL BOARD

BHOPAL (M.P.)

Jaypee Nigrie Super Thermal Power Plant

(A Division of Jaiprakash Power Ventures Limited)

Factory/Plant in Operation: Jaypee Nigrie Super Thermal Power Plant at Nigrie.

Introduction:

Jaiprakash Associates Ltd. (JAL), the flagship company of the Jaypee Group. JAL was formed due to merger of Jaiprakash Industries (JIL) and Jaiprakash Cement (JCL). JAL is the Engineering and Construction arm of the Jaypee group focused on development of River Valley and Hydro Electric Projects and a leader in Construction of River Valley and Hydropower Projects on turnkey basis for more than four decades. The company is currently executing various projects in Hydropower / Irrigation / other Infrastructure fields.

Jaiprakash Power Ventures Limited (JPVL) earlier known as Jaiprakash Hydro Power (JHPL), is a part of the Jaypee Group. The Company is engaged in the business of Generation of Power (Hydro & Thermal), Cement Grinding and Captive Coal Mining and Transmission of Power. Besides the 400MW Jaypee Vishnuprayag Hydro Power Plant in Uttarakhand, JPVL is operating 500MW Phase I (of 1200 MW) Jaypee Bina Thermal Power Plant in Madhya Pradesh & (2X660 MW) 1320MW Jaypee Nigrie Supercritical Thermal Power Plant in Madhya Pradesh and Amelia (North) Coal Mine in Madhya Pradesh a dedicated Coal Mine to Jaypee Nigrie Super Thermal Power Plant. The Company has a Captive Cement Grinding Unit named 'Jaypee Nigrie Cement Grinding Unit' at Nigrie (M.P.) with a capacity of 2.00 MTPA, which is utilizing generated Fly Ash from Jaypee Nigrie Super Thermal Power Plant.

Jaypee Nigrie Super Thermal Power Plant is a Coal Based Super Critical Thermal Power Plant of (2x660) 1320 MW at Nigrie Village, Sarai Tehsil in Singrauli District of Madhya Pradesh State having adjacent Cement Grinding Unit. Jaypee Nigrie Super (Critical) Thermal Power Plant commenced its operations w.e.f. 3rd September, 2014 (Unit # 01) & 24th March, 2015 (Unit # 02).

Supply of Super-Critical Boilers was executed by L & T - Power Boilers while the Steam Turbine Generator was sourced from L & T - Power. Boilers installed are with Super-Critical Steam Parameters and with High Efficiency resulting in Less Fuel Consumption and Less Environmental Pollution.

Features:

- Greater operating flexibility.
- Improved thermal efficiency.
- Lower emission levels.
- Reduced ash generation.
- Reduced fuel consumption.
- Reduced PM, NOx emission.
- Reduction of carbon dioxide emission due to less consumption of fuel.
- Super critical boiler technology will achieve a higher net efficiency level for coal fired power stations. This technology's higher steam temperatures and pressure parameters offer the most economical way to improve plant efficiency and operating flexibility – as well as achieve fuel savings and lower emissions for each KWH of electricity generated.

Environment:

Efforts are made to Conserve Ecological Balance without any harm done to the local flora & Fauna. JPVL has also taken Green Initiatives, afforestation, Resources Conservation, Water Conservation, and Air Quality Control & Noise Pollution Control.

"FORM – V"

(See rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31st March 2022

PART – A

(I)	Name & Address of the Owner / Occupier of the Industry Operation or Process	**Jaypee Nigrie Super Thermal Power Plant (JNSTPP, Nigrie)** **(A Division of Jaiprakash Power Ventures Limited)** P.O- Nigrie, Distt. Singrauli-486669 Madhya Pradesh
(II)	Industry category Primary – (STC Code) Secondary – (SIC Code)	17 Category /'RED' Category And Large Scale (Namely Thermal Power Generation Plant), Major
(III)	Production Capacity Unit-I Unit-II	2x660 MW Power Generation
(IV)	Year of Establishment Unit-I Unit-II	 Year 2014 Year 2015
(V)	Date of last Environmental Statement Submitted	May, 2021

PART – B

Water & Raw Material Consumption

A. Water Consumption - m3/day

(I)	Process	-	547.96
	Cooling	-	35699.75
	Domestic	-	582.22

Name of the Product	Process Water Consumption per unit of Product Output (m^3/MU) (1 Mu=1000000 KW)	
	During the Previous Financial Year (2020-2021)	During the Current Financial Year (2021-2022)
Electricity	27.16	23.86

(ii). Raw Material Consumption

Name of the Raw Material	Name of Product	Consumption of Raw Material per Unit Product Output (MT/MU of Electricity) (1 Mu=1000000 KW)	
		During the Previous Financial Year (2020-2021)	During the Current Financial Year (2021-2022)
Coal	Electricity	566.14	592.77
Fuel Oil **(HFO & LDO)**		0.2684	0.2997
Chemicals-			
HCl		0.0638	0.0509
H_2SO_4		0.0198	0.0246
NaOH		0.0371	0.0595
Ammonia		0.0062	0.0070
Hydrazine		0.00001	0.0000
Alum		0.0295	0.0250
NaOCl		0.0084	0.0068
Hydrogen Gas		0.0011	0.001089
CO_2 Gas		0.0001	0.000098
Chlorine Gas		0.0179	0.0180
Ferric Chloride		0.0024	0.0021
Dolomite		0.0012	0.0042

Total Electricity Generation MU (1 MU=1000000 KW)

Name of Product	During Previous Financial Year (2020-2021) MU	During Current Financial Year (2021-2022) MU
Electricity	**8106.40**	**8381.90**

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) (Tonnes/day)	Concentrations of Pollutants in discharged (Mass / Volume) (mg/Nm^3)	Percentage of variation from prescribed standard with reasons
(a)	**Water**			
(i)	**Domestic**	Zero discharge is being maintained and treated domestic waste water is being used in Horticulture & Green belt development.		
(ii)	**Industrial**	Zero discharge is being maintained. Treated waste water is reused in Cooling Water makeup & sprinkling in coal handling plant.		
(b)	**Air**			
	Monitoring of Ambient Air Quality parameters within limits and report attached as **Annexure- I**			
	Stack emission			
	(a) ESPs			
	Stack-I (Unit-I) Parameter - PM	2.925	44.22	Within permissible limit
	Stack-II (Unit-II) Parameter – PM	2.924	44.19	Within permissible limit

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 (2020-2021)			During the Current Financial Year (2021-2022)		
		Used oil	Waste oil	Resins	Used oil	Waste oil	Resins
(a)	From Process	15,100 Kg	Nil	Nil	Nil	21,940 Kg	5,440Kg
(b)	From Pollution Control Facilities.	NA			NA		

PART – E

Solid Wastes

Solid Waste		Total Quantity	
		During the Previous Financial Year (2020-2021)	During the Current Financial Year (2021-2022)
(a)	From Process	Bottom Ash (2,87,981 MT)	Bottom Ash (3,15,880 MT)

(b)	From Pollution Control facilities	Fly Ash (11,51,925 MT)	Fly Ash (12,63,519 MT)
	(i) Qty. recycled or reutilised within the unit.	Fly Ash (10,178 MT) (Utilized in adjacent Cement Grinding unit of Jaypee Nigrie)	Fly Ash (5,755 MT) (Utilized in adjacent Cement Grinding unit of Jaypee Nigrie)
	(ii) Sold	9,67,058.17 MT of Fly Ash utilized by Cement Manufacturers & Brick Manufacturers (100% Fly Ash is being utilized.)	10,46,365.06 MT of Fly Ash utilized by Cement Manufacturers & Brick Manufacturers (89.55% Fly Ash is being utilized.)
	(iii) Disposed	Bottom Ash (2,87,981 MT) is disposed in Ash Pond. 4,63,264.20 MT of Pond Ash used by Cement Manufacturers & Brick Manufacturers & Low Lying Area filling within the Plant Boundary as per the Approval of MPPCB, H.O., Bhopal vide Letter No. क्रमांक / 225 / तक. सीई -2/ PCB/ 2019 भोपाल दिनांक 27-01-2020.	Bottom Ash (3,15,880 MT) is disposed in Ash Pond. 3,62,215 MT of Pond Ash used by Cement Manufacturers & Brick Manufacturers & Low Lying Area filling within the Plant Boundary as per the Approval of MPPCB, H.O., Bhopal vide Letter No. क्रमांक / 225 / तक. सीई -2/ PCB/ 2019 भोपाल दिनांक 27-01-2020.

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: Generated Haz. Waste is being stored under covered shed at an isolated covered place; the floor is concreted & persons working at site have been provided with all required PPEs. From there the stored hazardous waste is being sold out to authorized recyclers.

21.94 MT of Waste residues containing Oil and 5.44 MT Resin waste has been handed over to the Authorized Recycler/TSDF site during FY 2021-2022.

Solid waste: Fly Ash & Bottom Ash are being generated in form of solid waste from Jaypee Nigrie Super Thermal Power Plant for which suitable provisions are made for its use.

- Fly Ash is being consumed by its adjacent Jaypee Nigrie Cement Grinding Unit & rest is transported to nearby Cement Plants (Jaypee Rewa, PCL Satna, Birla Corp Satna, KJS Maihar, VTC Maihar & UTCL, Bhagwar & UTCL, Bela and Other Brick manufacturing Units) for manufacturing of PPC and manufacturing of fly ash bricks.

- **Ash Water Recirculation System & Clarifier System:-**
  The Bottom ash slurry is being disposed through ash slurry pumps to ash dyke. In the ash dyke ash particles settles and the ash water is recovered from the dyke for re-circulation/re-use. The ash water flows from ash dyke to ash water recovery system. In the recovery system the ash water from the ash dyke is received at stilling chamber and pumped to flash mixer where required coagulants are being added. The water from the flash mixer flows to the clariflocculator where contaminated ash sludge being separated and the clear water from the clarifier pumped back to ash water sump for re-use.

- Ash Ponds are lined with fine sand then HDPE (1 mm thickness) lining and over that PCC. Bottom Ash will also be suitably utilized after drying to meet the stipulation of Fly ash Notifications.

Ash Dyke Pond

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 2 x 660 MW has the potential to generate 1.579 MTPA (Fly ash = 1.263 MTPA & Bottom Ash 0.316 MTPA). Ash utilisation by the JNSTPP, Nigrie for the FY 2021-22 is 89.55%. Generated Fly ash is consumed in adjacent Jaypee Nigrie Cement Grinding Unit & rest is transported to nearby Cement Plants (Jaypee Rewa, PCL Satna, Birla Corp Satna, KJS Maihar, VTC Maihar & Other Brick manufacturing Unit) for manufacturing of PPC and manufacturing of fly ash bricks. **– This has resulted into Top Soil Conservation.**

b) Installation of Sewage Treatment Plant & Effluent Treatment Plant (ETP): Adequate facilities for treatment of industrial waste water including blow down from Natural Draft Cooling Towers. The waste water is treated in the ETP with UF & RO system and the quality of treated water conforms to MPPCB standards as prescribed in Consent Order and this treated water reused in makeup of condenser cooling water & reject water used for dust suppression in CHP. Sewage Treatment Plant of 1000 KLD in Township & 100 KLD in Plant area have been installed and treated water from both these STP is used for horticulture. **– This has resulted into Water Conservation.**

1000 KLD - Sewage Treatment Plant

Waste water Treatment Plant (ETP)

c). Installation of APCDs at various sources:

Highly efficient Electrostatic Precipitators (ESPs) with efficiency of 99.93% have been installed for each boiler to meet particulate emission less than 50 mg/Nm^3 with one field out of service at full load with worst coal. The ESP's engineering, supply and erection & commissioning work is done by M/s. BHEL (A Govt. of India Undertaking). Each ESP has six passes and each pass is having 16 fields (i.e. total 96 fields).Additionally we have installed 10 no. of bag filters at various point sources to control the fugitive emission.

Photograph of ESP

d**) Online Monitoring system**:

- ✓ Four Continuous Ambient Air Quality Monitoring Stations (Online/Real Time) are provided along the boundary considering the wind rose/wind directions for parameters PM_{10}, $PM_{2.5}$, SO_2, NO_x & CO and the total data of the CAAQMS are connected with MPPCB server at Bhopal & CPCB server at Delhi.

- ✓ Online Continuous Emission Monitoring Analyzers installed to Monitor Emissions (PM, SO_2, NO_x & Hg) for both boiler stacks and data is being transmitted to MPPCB & CPCB servers, and the results are well within the Norms.

CAAQMS Photographs

CEMS Photographs

e). Installation of Water Sprinkling Systems:

Water spraying arrangements are made for control of fugitive emissions from Coal Handling Plant and other areas by installation of Water Sprinklers.

Photograph of water sprinkling at various Point

f). Noise Pollution Abatement Measures:

Provision of Acoustic Enclosures at Turbines & other Machineries to attenuate Noise Levels. Acoustic Enclosures of Machines have been provided to control Noise Levels.

g). Good housekeeping practice adopted:

Following measures have been taken for good housekeeping.

- The conveyor belts are fully covered.
- Scheduled maintenance of Pollution Control Devices is carried out.
- Coal Wagon bottom unloading System is installed.

Further the Company has obtained IMS - Integrated Management System Certificate covering ISO 9001:2015 (QMS – Quality Management System), ISO 14001:2015 (EMS - Environmental Management Systems) & ISO 45001:2018 (OHSAS - Occupational Health and Safety Assessment Series).

CHP and covered conveyer belts

Coal wagon unloading system

PART – H

ADDITONAL 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. 33% of the plant area in and around the Power plant boundary has been developed with green belt as per the CPCB guidelines.

Total number of Plants Planted up to 31.03.2022 is approximately 5.23 lakhs in 144.21 ha. (Also including Cement Grinding Unit). During this FY (April, 2021 – March, 2022) total no. of 0.525 lakhs of Trees have been planted.

Steps taken to protect plantation:

1. Barricading provided for protection of plants.
2. Two numbers of dedicated water tankers are provided for regular watering of plants.
3. Dedicated manpower is provided for regular watering & care 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 constructed 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 instruments.

Environment Cell

Concreting of Roads:

All internal roads in plant & township area are made Pucca.

CSR works:

- A separate budget earmarked for CSR activities. CSR study report already submitted to the ministry vide letter no. - JPVL/JNSTPP/MOEF/2010 dated 20.01.2011 and 29.06. 2011.

- For CSR activities capital outlay of more than Rs. 24.00 Crores has been made.

- The company is carrying out CSR activities in the vicinity of the Project as per the directions and guidance of the District Administration.

- Providing drinking water facility benefitting to the nearby villages (Nigrie, Niwas, Katai, Hardi, Mahua Ganv, Chamrach and Joba).

- Unit is also investing on CSR Activities on Rural Development Projects like Plantation programs (Nigrie, Niwas, and Chamrach), Road development activities in villages Nigrie, Hardi-Papal, Women empowerment & providing furniture/building material to Police Department, Nigrie, Development of Toilets for students at Anganwadi Centre, Niwas & Girls School, Niwas, Construction of Kitchen shed at Viklang Vidyalaya, Village Katai.
- Promotion of Safety/Cultural/sports activities in Rural Areas/villages (Nigrie, Niwas & Katai), Providing water via water tankers to the nearby villagers as per requirement, Development of water pass structure & repairing of pond located in village Niwas & Contribution of Diasaster Management and Promoting Education through Sardar Patel School under Jaiprakash Sewa Sansthan & Jay Jyoti School under Jaiprakash Sewa Sansthan & Gopad Viklang Sikasha Vikas Samiti,Village-Katai.

- Total expenditure incurred up to March, 2022 is Rs 5.627 Crores.

- Based on Need Base Assessment Study for development of nearby villages, an action plan was worked out for income generating projects for up-liftment of poor section of society.

The following activities were undertaken:

- Sardar Patel Uchchtar Madhyamik Vidyalaya started for up to class five w.e.f. July, 2011 and subsequently upgraded up to 10th class in July'2016 session.

- Free Education & Free Mid-Day Meals provided to the children of affected village Nigrie & Sardar patel School, Nigrie.
- Free Health Check Up & Health cards provided to the 150 students.
- Roads have been laid down in Nigrie Village & free electricity supply to the Street Lights is provided in R & R Colony.
- Restoration & Refurbishment of water reservoirs & ponds taken place in nearby villages (Niwas).
- Providing Mobile Hospital & Ambulance Service to affected villages (Nigrie, Niwas, katai & Hardi & Mahua Ganv and Chamrach and Joba).
- A Dispensary was also setup in R & R colony. An Average of 578 patients is being benefited every month.

"Trasform Singrauli" Project under Indian government and MP Government:-

- Provided Free Medical Checkup facility, Ambulance facility, Free Medicines in Nigrie, Niwas, katai & Hardi & Mahua Ganv and Chamrach Villages.
- Multi Vitamin Drops & Zinc Drops have been provided to Malnourished Babies in the villages.
- Established/Started Kuteer Udyog, Training Centre for Stitching and honey bee keeping.
- Groceries, Nose maks have been distributed in the villages nearby project area to protect villagers from COVID-19 Pandemic Disease.
- Expenditure incurred on **"Trasform Singrauli"** in FY 2021 – 22 is 3.00 Lakhs.

Swatch Bharath Mission:-

- 1620 Fruit Yielding plants have been planted through Gram Panachayath in 3 villages.
- Provided Utensil (Bartan) for Gopad Viklang Samiti.

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 70 people avail the Medical facilities daily.

For Jaypee Nigrie Super Thermal Power Plant,
(A Division of Jaiprakash Power Ventures Ltd.)

(Vinod Sharma)

Sr. President (O & M)

Annexure-I

JAYPEE NIGRIE SUPER THERMAL POWER PLANT
(A Division of Jaiprakash Power Ventures Limited)

AMBIENT AIR QUALITY MONITORING REPORT **Period : April, 2021 - March 2022**

Near STP - Colony Area						
Month	**Particulars**	**$PM_{2.5}$ ($\mu g/m^3$)**	**PM_{10} ($\mu g/m^3$)**	**SO_2 ($\mu g/m^3$)**	**NO_2 ($\mu g/m^3$)**	**CO (mg/m^3)**
Apr-21	Monthly Average	25.8	52.4	5.7	11.8	0.400
May-21		15.3	35.2	4.4	11.1	0.324
Jun-21		14.0	29.8	3.7	10.0	0.303
Jul-21		14.8	29.6	3.4	9.5	0.290
Aug-21		13.6	27.1	5.7	9.8	0.267
Sep-21		17.9	35.8	5.3	11.1	0.342
Oct-21		19.5	41.9	6.1	11.2	0.347
Nov-21		23.8	52.2	6.3	11.7	0.391
Dec-21		24.2	48.9	6.2	11.5	0.395
Jan-22		18.2	40.3	6.3	11.9	0.374
Feb-22		21.1	43.9	5.8	11.6	0.352
Mar-22		23.1	47.9	6.2	11.6	0.373
Near H_2 Gas Cylinder Shed						
Month	**Particulars**	**$PM_{2.5}$ ($\mu g/m^3$)**	**PM_{10} ($\mu g/m^3$)**	**SO_2 ($\mu g/m^3$)**	**NO_2 ($\mu g/m^3$)**	**CO (mg/m^3)**
Apr-21	Monthly Average	28.7	61.4	7.9	12.7	0.526
May-21		22.3	48.1	7.0	11.8	0.500
Jun-21		17.3	40.8	6.4	12.1	0.429
Jul-21		17.5	36.3	4.7	11.1	0.403
Aug-21		15.3	31.9	5.6	11.2	0.364
Sep-21		21.9	40.8	6.6	12.2	0.403
Oct-21		23.7	58.6	7.2	13.2	0.498
Nov-21		27.3	60.7	7.0	12.6	0.522
Dec-21		30.2	61.0	7.6	13.1	0.529
Jan-22		23.6	50.6	7.0	13.0	0.468
Feb-22		25.6	51.7	6.7	12.7	0.515
Mar-22		26.9	59.4	7.5	12.4	0.501
Near Watch Tower 22 (Cement Grinding Unit)						
Month	**Particulars**	**$PM_{2.5}$ ($\mu g/m^3$)**	**PM_{10} ($\mu g/m^3$)**	**SO_2 ($\mu g/m^3$)**	**NO_2 ($\mu g/m^3$)**	**CO (mg/m^3)**
Apr-21	Monthly Average	30.1	62.8	7.6	15.0	0.548
May-21		19.8	42.6	6.7	12.2	0.504
Jun-21		17.8	44.8	6.9	12.3	0.442
Jul-21		17.1	37.3	5.2	12.2	0.420
Aug-21		17.6	34.4	5.6	12.7	0.391
Sep-21		23.3	47.0	6.3	12.8	0.477
Oct-21		24.1	56.9	6.5	12.2	0.518
Nov-21		30.4	64.9	7.3	13.4	0.578
Dec-21		27.3	56.2	5.8	12.7	0.473
Jan-22		22.6	48.2	6.1	12.4	0.409
Feb-22		24.9	51.3	6.5	13.2	0.462
Mar-22		30.6	66.1	7.8	13.7	0.503
Near Fuel Storage Tank						
Month	**Particulars**	**$PM_{2.5}$ ($\mu g/m^3$)**	**PM_{10} ($\mu g/m^3$)**	**SO_2 ($\mu g/m^3$)**	**NO_2 ($\mu g/m^3$)**	**CO (mg/m^3)**
Apr-21	Monthly Average	38.4	73.0	7.6	15.9	0.630
May-21		23.5	50.7	6.0	15.3	0.578
Jun-21		20.2	43.5	5.3	12.6	0.497
Jul-21		19.1	39.2	5.2	12.8	0.444
Aug-21		18.0	36.6	5.7	13.0	0.430
Sep-21		28.1	53.2	6.8	13.2	0.626
Oct-21		27.6	58.5	6.6	13.3	0.557
Nov-21		34.7	69.8	7.6	13.9	0.632
Dec-21		28.3	62.0	6.6	12.5	0.537
Jan-22		26.9	56.3	6.7	12.6	0.497
Feb-22		28.2	59.9	7.2	13.1	0.540
Mar-22		30.6	66.5	7.6	12.5	0.517