

JPL/EMD/ES-WASHERY/2023/89

Date: 08/09/2023

The Member Secretary,  
Chhattisgarh Environment Conservation Board,  
Paryavas Bhavan, North Block Sec.19  
Naya Raipur (CG) -490099

**Sub.:-** Submission of "Environmental Statement" for 4.75MTPA Coal Washery (800TPH) of Jindal Power Limited at Tamnar, District Raigarh (C.G) for the Financial Year of 2022-2023.

Dear Sir,

This has reference to above mentioned subject. Enclosed please find herewith the "Annual Environmental Statement" for the Financial Year of 2022-2023 in prescribed **Form V** for 4.75MTPA Coal Washery (800TPH) of Jindal Power Limited, Tamnar, District Raigarh (C.G).

This is for your kind information please.

Thanking you,

Yours faithfully

For Jindal Power Limited,



HOD  
Environment Management Department

Encl: As above

CC: Regional Officer,  
Chhattisgarh Environment Conservation Board,  
TV Tower Road, Raigarh, C.G

: For your kind perusal and record please

**Jindal Power Limited**

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Registered Office Tamnar 496 107, District Raigarh, Chhattisgarh

**ENVIRONMENTAL STATEMENT**

***FOR***  
**4.75 MTPA COAL WASHERY**  
**(800 TPH)**

**FOR THE YEAR - 2022-2023**

***SUBMITTED TO***  
**CHHATTISGARH ENVIRONMENT**  
**CONSERVATION BOARD, RAIPUR**  
**(C.G.)**

***BY***



**JINDAL POWER LIMITED**  
**TAMNAR**

## FORM -V (See Rule 14)

**(Environmental Statement for the Financial Year 2022-2023)**

### PART A

**(i) Name and address of the owner/ occupier of the industry operation or process.**

C. N. Singh  
ED & Plant Head,  
O.P. Jindal Super Thermal Power Plant,  
Jindal Power Ltd,  
Vill: Tamnar, Distt: Raigarh  
Chhattisgarh-496107

**(ii) Industry category Primary-(STC Code) Secondary-(STC Code).**

Primary-(STC Code): Medium Scale

Secondary-(STC Code): Red

**(iii) Production capacity- Units**

Name of Product	As per Consent
Washed Coal	4.75 Million Tonnes /Annum (800TPH)

**(iv) Year of establishment:**

Production Date: 18<sup>th</sup> February 2013.

**(v) Date of the last Environmental Statement submitted**

Vide Letter No. JPL/EMD/ES-WASHERY/2022/144, dated: 02.09.2022

**PART B****Water and Raw Material Consumption****1. Water consumption m<sup>3</sup>/ day**

<b>Sources Name</b>	<b>Total Water consumption m<sup>3</sup>/ day</b>
Process	383.44
Domestic	N.A.*

\*Domestic water consumption of Washery is included in domestic water consumption for Plant.

<b>Name of Products</b>	<b>Process water consumption per unit of products</b>	
	<b>During the previous financial year (2021-2022)</b>	<b>During the current financial year (2022-2023)</b>
Washed Coal	0.057 m <sup>3</sup> / t	0.051 m <sup>3</sup> / t

**2. Raw material consumption**

<b>Name of raw materials*</b>	<b>Name of Products</b>	<b>Consumption of raw material per unit of Output</b>	
		<b>During the previous financial year (2021-2022)</b>	<b>During the current financial year (2022-2023)</b>
Magnetite	Washed Coal	0.372 Kg/t	0.346 Kg/t
Cationic	Washed Coal	0.966 ml/t	0.789 ml/t
Anionic	Washed Coal	15.146 g/t	18.23 g/t

\*Industry may use codes if disclosing details of raw materials would violate contractual obligations, otherwise all industries have to name the raw material used.

**PART C**

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

Pollutants	Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants discharged (mass/volume)			Percentage of variation from Prescribed standards with reasons.
		Min	Max	Avg	
(a) Water*	No discharge	No discharge			Not applicable
(b) Air : Fugitive Emission					
		Min	Max	Avg	
i) PM-10 $\mu\text{g}/\text{m}^3$	Not applicable	53.42	60.54	57.49	Within prescribed standards
ii) PM-2.5 $\mu\text{g}/\text{m}^3$	Not applicable	19.93	22.68	21.44	Within prescribed standards
iii) SO <sub>2</sub> $\mu\text{g}/\text{m}^3$	Not applicable	11.63	16.20	14.75	Within prescribed standards
iv) NO <sub>x</sub> $\mu\text{g}/\text{m}^3$	Not applicable	22.72	27.47	26.19	Within prescribed standards
v)CO $\text{mg}/\text{m}^3$	Not applicable	0.47	0.65	0.58	Within prescribed standards

**\*Note** – Coal washery has been designed based on zero discharge technology; hence no effluent is being discharged outside from the plant premises. The effluent from coal washery is treated in Thickener & Multi roll belt press filter and recycle/reuse in the process.

**PART-D  
HAZARDOUS WASTE**

**(As specified under Hazardous Wastes Management, Handling & Transboundary Movement Rules, 2008).**

Hazardous Waste	Total Quantity (Kg)	
	During the previous financial year (2021-2022)	During the current financial year (2022-2023)
1. From Process	Used oil – 2.44 MT	Used oil – 2.62 MT
2. From Pollution Control Facilities	Not applicable	Not applicable

**PART – E****SOLID WASTES: (Washery Rejects)**

Solid Wastes	Total Quantity (MT )	
	During the previous financial year (2021-2022)	During the current financial year (2022-2023)
a. From Process	203072 MT	632473 MT
b. From Pollution Control Facilities	Not applicable	Not applicable
c. Quantity recycled or re- utilized within the unit.	-	-

**PART- F**

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

**1. Characteristics of Solid waste (Washery Rejects):**

Washery reject contains ash and moisture.

**2. Disposal of Solid (Washery Rejects):**

Rejects are stacking in vacant place and it will be backfilled in the mine voids in alternate layers of rejects and mine waste.

### **PART G**

#### **Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.**

- JPL has taken every possible measure to mitigate the environmental pollution during washery operation.
- Effective dust suppression system has been provided. The washery is based on wet process entirely hence reducing the fugitive emissions. Two bag filters one at each Crusher House and Screen House in CHP have been provided. All the transfer & junction points have been covered and water sprinkling through perforated pipelines has been provided.
- Developments of green belt have been done. Approx. 21720 saplings have been planted at Coal washery and CHP area since year 2006 to March 2023. All these measures have positive impact towards environmental protection and mineral conservation.

### **PART. H**

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

- Additional reservoirs of capacity 40,000 m<sup>3</sup> and 54,00 m<sup>3</sup> have been developed to harvest the rain water collected through interconnecting drains.
- Coal fines generated during cleaning and washing from different transfer points, conveyors etc. are collected through interconnected drains and pumped to the intermediate slurry sump. The fines slurry collected in the intermediate slurry sump is then pumped to the settling tanks for recovery of fines and recycling of water for sprinkling purposes.
- The Coal Washery plant is designed based on zero-discharge concept. Effluent generated from coal washing process is being treated in Thickener and Multi Roll Belt Press filter. The treated wastewater is being reused in the plant operations. The mine sump water is used as raw water for washery operations.
- Regular monitoring of Ambient Air Quality in the coal washery to keep track at existing Ambient Air Quality scenario of the surrounding area and appropriate & timely action is being taken to minimize the Suspended Particulate Matter.
- Wheel washing system installed at CHP & Washery area for incoming and outgoing vehicles.
- Regular Uses of 02 nos of Truck mounted Fog cannon with water sprinkling system for mitigation of fugitive dust at source.

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## PART – I

### MISCELLANEOUS:

#### **Any other particulars in respect of environmental protection and abatement of pollution.**

**Control of Fugitive Emission:** Dust suppression system has been installed at Dumper Unloading Hopper (DUH) and transfer points of Coal Handling Plant. Two bag filters one at each Crusher House and Screen House in CHP have been provided.

**Green Belt Development:** Approx. 21720 saplings have been planted at Coal washery and CHP area since year 2006 to March 2023.

**House Keeping:** All the internal roads have been made pucca at CHP area. Good housekeeping practices are being adopted. Domestic Housekeeping like collection of domestic garbage (Mines & CHP), garden waste, civil debris is done in an efficient manner.

**Environment Management activities through CSR:** The unit has also under taken Environment Management initiatives through its CSR wing called "JSP Foundation" registered under the Company Act. At present it is working in 44 adopted villages in the vicinity of Power project, Mines and Water Reservoir area. OPJSKS has undertaken a number of innovative programmes in the area of environment protection such as pond deepening, mass plantation & distribution of saplings, construction of Biogas plant construction of Pucca roads, celebration of World Environment Day, Earth Day etc.

**Integrated Management System:** JPL has implemented the integrated management system as per ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environment Management System), ISO 45001:2018 (Occupational Health & Safety Assessment Series) and 50001:2018 (Energy Management system).

**Environmental Awareness Program:** To promote the environmental awareness for employee as well as the stakeholders, we have celebrated Earth Day, World Environment Day, and Ozone Day. In these occasion various environmental awareness program like poster, slogan, essay writing, quiz competition, Skits Play, etc. have been organized in nearby village schools. Environmental rally was organized covering the nearby villages for mass campaigning.



**Training & Development:** JPL has conducted following training programs to creating awareness among employees towards Environmental Management.

Sl. N.	Title of the Training	Faculty	Venue
1	Ash Dyke Management	External Trainer	JIPT
2	Environmental Factors in ESG Rating	External Trainer	Online
3	Performance and efficiency Monitoring	Internal Trainer	JIPT
4	Water Treatment Plant	Internal Trainer	JPL Tamnar
5	Safe Handling of Chlorine in WTP area	Internal Trainer	JPL Tamnar
6	Work Place Ergonomics & Occupational Health	External Trainer	JIPT
7	Ash Handling Plant - O&M	Internal Trainer	JPL Tamnar
8	First Aid	External Trainer	JIPT
9	Coal quality & its impact on boiler performance and combustion optimization	External Trainer	JIPT
10	Condenser Cooling Water Treatment	Internal Trainer	JIPT
11	Cardiopulmonary resuscitation (CPR)	Internal Trainer	JIPT
12	Basic Instrumentation & Control	Internal Trainer	JIPT
13	General Plant Safety Introduction & Legal Compliance	Internal Trainer	JIPT
14	Operation & Maintenance of dense phase ash conveying system.	Internal Trainer	JIPT
15	Safe handling & maintenance of chlorine	Internal Trainer	JIPT
16	Plant performance and efficiency monitoring and optimization	Internal Trainer	JIPT
17	Behaviour Based Safety	External Trainer	JIPT
18	Construction features of Pumps , Operation & Maintenance practices"	Internal Trainer	JIPT
19	Basic Life Support - BLS	Internal Trainer	JIPT
20	Awareness of ISO 27001:2013 (ISMS)	External Trainer	JIPT
21	Harness Solar Energy and Power the Planet	External Trainer	JIPT
22	Lightning Protection system	Internal Trainer	JIPT
23	Solar PV system design	External Trainer	JIPT
24	In-pit Crushing & Conveying system in mine	External Trainer	VTC Office
26	Cooling water & Boiler water treatment in Power Plant	Internal Trainer	JIPT
27	Defensive Driving	External Trainer	JIPT

**Awards:**

- ❖ 22<sup>nd</sup> Annual Greentech Environment Award 2022.
- ❖ Platinum Award " for the Grow Care India Environment Award 2022.
- ❖ Apex India Green Leaf Award 2022.
- ❖ CEE Environment Excellence Award 2022.
- ❖ Runner Up Award in the 'Safety Category' by the Jury of the Economic Times Energy Team. ET Energy Leadership Summit and Award- 2022.
- ❖ Quality Circle teams bagged GOLD award at "Chapter Convention on Quality Concepts (CCQC-2022), Bhilai Chhattisgarh.
- ❖ Quality Circle's bagged prestigious "Par Excellence" Awards @ National Convention on Quality Concepts (NCQC -2022, Aurangabad).
- ❖ Platinum Award" Under Apex India Occupational Health & Safety Award 2022.
- ❖ "Platinum Award" Grow Care India Environment Award, 2021 for outstanding achievement in the field of Environment Management under the aegis of Grow Care India Environment Award, 2021.
- ❖ "Platinum Award" Under Apex India Green Leaf Award 2021 for Environment Excellence Category.
- ❖ Par Excellence Awards at National Convention on Quality Concepts (NCQC-2021).
- ❖ Recertification of ISO 50001:2018 (Energy Management System) from TUV NORD
- ❖ ATD BEST Award 2019 ATD formerly known as ASTD (American Society for Training & Development), USA.
- ❖ Golden Globe Tigers Award & People First HR Excellence Awards 2019.
- ❖ Jindal Power Limited Quality Circle teams bagged "Par Excellence" and "Excellence" Awards at National Convention on Quality Concepts (NCQC-2018), held at Gwalior.
- ❖ Won the 16th Annual Genentech Award -2015 in "Gold Category" in Thermal Power sector in India.
- ❖ ENERGY EFFICIENCY AWARD 2015 in the Category: Power (>1000 MW) by CREDA at Raipur, Chhattisgarh, on 9th of August, 2015 in recognition and appreciation of our unrelenting efforts in Energy Efficiency during 2014-15.

- ❖ Jindal Power Limited (3400 MW) has been awarded Re-certification of ISO 9001:2015, ISO 14001:2015 and BS OHSAS 18001:2007 by TUV NORD GMBH certification agency, Germany.
- ❖ Genentech Award -2014 in "Gold Category" in Thermal Power sector in India.
- ❖ Greentech CSR Award-2014
- ❖ Frost & Sullivan's Green Manufacturing Excellence Awards 2013.
- ❖ Won the par excellence & excellence award from QCFI for the Year 2013.
- ❖ Won the First Prize" in the Annual Flower & Vegetable Show organized by TRL Krosaki Refractory's Ltd. for the Year 2013.
- ❖ Genentech Award -2013 in "Platinum Category" (Highest category) in Thermal Power sector in India.
- ❖ Greentech CSR Award-2013.
- ❖ Jindal Power limited (JPL) has been ranked 5th with 2 Leaves Award in green rating project of thermal power plants in the country conducted by Centre for Science and Environment (CSE), New Delhi.
- ❖ Greentech Environment Gold Award-2012.

**PHOTOGRAPHS OF ENVIRONMENTAL AWARENESS PROGRAM**



Plantation program at Jindal Power Limited



Online poster competition organized on the occasion of WED-2022





Plantation Program & conclusion ceremony organized on the occasion of WED-2022



**CERTIFICATES & PHOTOGRAPHS OF ENVIRONMENT AWARDS RECEIVED.**



**Greentech Environment Award 2022**



**Certificate of Apex Green Leaf Award 2022**



**Apex Green Leaf Award 2022**



**Certificate of Apex Green Leaf Award 2022**



Grow Care Award 2022



Certificate of Grow Care Award 2022



CEE Environment Excellence Award 2022



Certificate of CEE Environment Excellence Award 2022