JINDAL POWER

JPL/EMD/ES-WASHERY/2021/ 145

Date: 15/09/2021

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 2020-2021.

Dear Sir,

This has reference to above mentioned subject. Enclosed please find herewith the "**Annual Environmental Statement**" for the Financial Year of 2020-2021 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

FORM -V
(See Rule 14)

(Environmental Statement for the Financial Year 2020-2021)

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: 18th February 2013.

(v) Date of the last Environmental Statement submitted

Vide Letter No. **JPL/EMD/ES-WASHERY/2020/347, dated: 09.09.2020**

PART B

Water and Raw Material Consumption

1. Water consumption m^3/ day

Sources Name	Total Water consumption m^3/ day
Process	14.52
Domestic	N.A.

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

Name of Products	Process water consumption per unit of products	
	During the previous financial year (2019-2020)	During the current financial year (2020-2021)
Washed Coal	Washery has not been operated during the FY-2019-20. Separation has been done through crushing & Screening.	0.010 m^3/ t

2. Raw material consumption

Name of raw materials*	Name of Products	Consumption of raw material per unit of Output	
		During the previous financial year (2019-2020)	During the current financial year (2020-2021)
Magnetite	Washed Coal	Washery has not been operated during the FY-2019-20. Separation has been done through crushing & Screening.	0.1197 Kg/t
Cationic	Washed Coal	Washery has not been operated during the FY-2019-20. Separation has been done through crushing & Screening.	0.0798 ml/t
Anionic	Washed Coal	Washery has not been operated during the FY-2019-20. Separation has been done through crushing & Screening.	1.9954 g/t

* During the FY-2019-20 the separation has been done through crushing & screening.
*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.
(a) Water*	No discharge	No discharge			Not applicable
(b) Air : Fugitive Emission					
		Min	Max	Avg	
i) PM-10 $\mu g/m^3$	Not applicable	32.43	79.81	61.42	Within prescribed standards
ii) PM-2.5 $\mu g/m^3$	Not applicable	12.54	37.99	24.59	Within prescribed standards
iii) SO_2 $\mu g/m^3$	Not applicable	8.46	16.40	12.33	Within prescribed standards
iv) NO_X $\mu g/m^3$	Not applicable	20.44	27.60	23.64	Within prescribed standards
v)CO mg/m^3	Not applicable	0.36	0.79	0.60	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 & OTHER WASTES (MANAGEMENT AND TRANSBOUNDARY MOVEMENT) RULES, 2016 & as amended time to time)

Hazardous Waste	Total Quantity (Kg)	
	During the previous financial year (2019-2020)	During the current financial year (2020-2021)
1. From Process	Used oil – 0.0 KL	Used oil – 0.0 KL
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 (2019-2020)	During the current financial year (2020-2021)
a. From Process	Washery has not been operated during the FY-2019-20. Separation has been done through crushing & Screening.	56466 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. 21430 saplings have been planted at Coal washery and CHP area since year 2006 to March 2021. 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^3 and 54,00 m^3 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.

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. 21430 saplings have been planted at Coal washery and CHP area since year 2006 to March 2021.

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 "O.P. Jindal Samaj Kalyan Samiti (OPJSKS)" registered under the Societies Registration Act, 1973. At present it is working in 36 adopted villages in the vicinity of Power project, Mines and Water Reservoir area. OPJSKS has been undertaking 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).

Implementation of FIVE-S Work Place Management System: JPL has implemented Five-S Work Place Management System in Plant, Colony, Mines, Washery and Rabo dam area for proper Housekeeping and Cleanness. Recently JPL has been certified for **Five-S Certificate** by Quality Circle Forum of India (QCFI).

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.

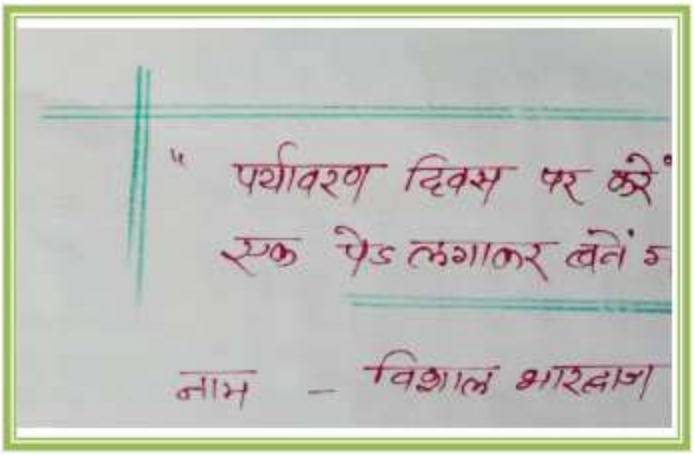
Sl. No	Title of the Training	Faculty	Venue
1	IMS Awareness	Internal Trainer	JPL Tamnar
2	Training on "Firefighting & Safety & Demo"	Internal Trainer	JPL Tamnar
3	Ash Water System	Internal Trainer	JPL Tamnar
4	EnMS Audit	External Trainer	JPL Tamnar
5	Occupational Health & Hazards	External Trainer	DGFASLI Ministry of labor & Employeement
6	Water Optimization	External Trainer	Mission Energy
7	Sox Nox	External Trainer	Mission Energy
8	Fly Ash Dumping	Internal Trainer	JPL Tamnar
9	Hydrogen Plant	Internal Trainer	JPL Tamnar
10	Fire Hazards and its Precaution/Prevention	Internal Trainer	JPL Tamnar
11	Electrical hazards precautions & Prevention	Internal Trainer	JPL Tamnar
12	Optimization of Auxiliary Power Consumption	Internal Trainer	JPL Tamnar

Awards:

- 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.
- 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.
- 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 (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.
- Genentech Award -2014 in "Gold Category" in Thermal Power sector in India.
- Greentech CSR Award-2014
- Genentech Award -2013 in "Platinum Category" (Highest category) in Thermal Power sector in India.
- Greentech CSR Award-2013.
- Greentech Environment Gold Award-2012.
- 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.

PHOTOGRAPHS OF ENVIRONMENTAL AWARENESS PROGRAM

Plantation program at Jindal Power Limited



Slogan competition organized on the occasion of WED-21

Online poster competition organized on the occasion of WED-2021

CERTIFICATES & PHOTOGRAPHS OF ENVIRONMENT AWARDS RECEIVED.

Certificate of Green Rating Project Award

Certificate of Greentech Award

ISO certificates