



JPP/ 162/2023

Date : 15/09/2023

To  
The Member Secretary  
Jharkhand State Pollution Control Board  
TA Division Building (Ground Floor)  
HEC Campus, Dhurwa,  
Ranchi – 834 004

**Sub : Submission of Environmental Statement for the FY 2022-23.**

Dear Sir,

Please find the "Environment Statement" for Tata Power Co. Ltd; Jojobera Power Plant, Jamshedpur for the period 1st April 2022 to 31<sup>st</sup> March 2023 enclosed here with.

We trust you will find the above in order.

Thanking you,

Yours faithfully  
For The Tata Power Co. Ltd.

*Handwritten signature*  
(Jagmit Singh Sidhu)  
CEO-IEL & Chief-Jamshedpur Operations

Encl: as above.

CC : The Regional Officer, JSPCB, MB / 15, New Housing Colony, Adityapur,  
Jamshedpur – 13. (With enclosures)

**TATA POWER**

The Tata Power Company Limited  
Jojobera Power Plant, Jamshedpur - 831016  
Tel 91 657 2276879, 6511543

Registered Office Bombay House 24 Homi Mody Street Mumbai 400 001

**FORM – V**

(See rule 14)

**Environmental Statement for the financial year ending the  
31<sup>st</sup> March 2023.**

**PART – A**

- (i) Name and address of the Owner / occupier of the industry : Mr. Praveer Sinha  
Designation: - CEO & Managing Director  
Address: - Flat No. 22 A B  
New Akash Ganga Chsi  
89 Bhulabha Desai Road,  
Cumballa Hill,  
Mumbai - 400026.
- (ii) Industry category : Not applicable  
Primary – (SC Code),  
Secondary – (SIC Code)
- (iii) Production capacity (Units) : 67.5 MW - One no.  
120 MW - Four Nos.
- (iv) Year of establishment/COD : Unit #1 - 67.5 MW -1997  
Unit #2 - 120 MW - 2001  
Unit #3 - 120 MW - 2002  
Unit #4 - 120 MW - 2005  
Unit # 5 -120 MW - 2011
- (v) Date of the last Environmental Statement submitted. : 05.08.2022

**PART – B**

**Water and Raw Material Consumption**

(1) Water consumption m<sup>3</sup> / d (for Current FY22-23) : 24140.55 m<sup>3</sup> / d

Process : 2879.98 m<sup>3</sup> / d  
Cooling : 21119.82 m<sup>3</sup> / d  
Domestic : 140.75 m<sup>3</sup> / d

Name of products	water consumption per unit of product output	
	During the previous financial year (2021-22) (Unit 1-5)	During the current financial year (2022-23) (Unit 1-5)
Power (MWH)	2.31 m <sup>3</sup> / MWh	2.26 m <sup>3</sup> / MWh

(2) Raw Material consumption :

Name of the raw material	Name of products	Consumption of raw material per unit of output	
		During the previous financial year (2021–22) (Unit 1-5)	During the current financial year (2022–23) (Unit 1-5)
Coal	Electric Power	658.6 kg / MWh	650.9 kg / MWh
LDO	Electric Power	0.445 L/MWh	0.364 L/MWh

**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 in Discharged (mass / volume)	Percentage of Variation from prescribed Standards with reasons
<b>A) Water</b>	NIL ( No Discharge )		
<b>B) Air (stack)</b>		Yearly Average	
SPM (mg/Nm <sup>3</sup> )	Annexure-I attached.	53.10	Within prescribed standard.
SO <sub>2</sub> (mg/Nm <sup>3</sup> )		750.24	To comply with new norms of SO <sub>2</sub> and NO <sub>x</sub> ,FGD installation under progress.
NO <sub>x</sub> (mg/Nm <sup>3</sup> )		481.41	

**PART – D**

**HAZARDOUS WASTES  
(AS SPECIFIED UNDER HAZARDOUS WASTES (MANAGEMENT, HANDLING AND TRANSBOUNDARY MOVEMENT RULES, 2016)**

Hazardous Waste	Total Quantity (kg / years)	
	During the previous financial year (2021-22) (Unit 1-5)	During the current financial year (2022-23) (Unit 1-5)
a) From process	Used Oil –37910 Liters	Used Oil –3730 Liters
b) From Pollution Control facilities	Nil	Nil

**PART – E**

**Solid Waste**

Solid Waste	Total Quantity (MT / year)	
	During the previous financial year 2021-22 (unit 1-5)	During the current financial year 2022-23 (unit 1-5)
a) From process (Ash)	1004222	1044334
b) From Pollution Control Facilities	NIL	NIL
c) Recycled/ Utilised ash for making cement by other cement plants by Bulker , Ready mix concrete and Bricks manufacturers.	688725	150603
d) Sold (to Nuvoco cement)	Nil	447925
e) Utilized for development of low lying areas and NHAI	325254	446412

**PART – F**

Wastes and their characteristics	<b>Used Oil – Liquid Hydrocarbon (Category 5.1)</b> mineral/synthetic oil used for lubrication		
	<b>Parameter</b>	<b>Maximum Permissible Limit</b>	<b>Test Result</b>
	Polychlorinated biphenyls (PCBs)	< 2.0 ppm by Gas Liquid Chromatography (GLC) using electron capture detector (ECD)	0.5
	Lead	100 ppm (Max)	3.5
	Arsenic	<5 ppm	2.4
	Cadmium + Chromium + Nickel	<500 ppm	130
	Polyaromatic hydrocarbons (PAH)	< 6%	2.6

**PART – G**

**Impact of pollution control measures on:**

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

1. ETP installed for the treatment of Industrial (Process) effluent.
2. STP installed for the treatment of Domestic effluent.
3. Ash water recovery system has been installed and implemented.
4. Implemented Rain water harvesting system.

The treated effluent from ETP and STP is being recycled in the process for conservation of natural resources (Fresh water).

Conservation of natural resources ( sp.water reduction w.r.t previous year )	0.05 M3/MWH
Conservation of natural resources ( sp.LDO reduction w.r.t previous year )	0.082 L/MWH
Cost of production	Rs. 13.80 / MWH

**PART – H**

Additional measures / investment proposal environmental protection including Abatement of pollution prevention of pollution :

- (1) The installation of FGD system is going on to comply the new emission norms and more than 70% progress achieved. Installation of DE NOx system in U#4 & U5 have completed.
- (2) We have installed CAAQMS (continuous Ambient Air Quality Monitoring System) for online ambient air quality monitoring.
- (3) For the control of Air Pollution ESP, Flue gas stack of 107 and 150 meter height, Dust suppression system have been installed.
- (4) For control of Water pollution- ETP and STP have been installed for the treatment of Industrial and Domestic effluent respectively. Maintained zero liquid discharge through continuous operation of effluent treatment plant.
- (5) Water sprinkling on road by water tanker is being done to minimize fugitive dust arises from transportation of vehicle. We have also procured movable Road cleaner to clean the road dust inside the plant.
- (6) Rain water harvesting system has been implemented by adopting Roof top rain water harvesting system.
- (7) Green belt has been developed in and around plant premises.
- (8) Environment monitoring /sampling has been done by NABL certified Third party inside and outside the plant.
- (9) Biodegradable waste converter system installed to treat biodegradable waste and utilizes as compost.
- (10) 50.76 KWp Solar Panel installed in Jojobera Power Plant for switch yard control room auxiliary power consumption.
- (11) We have installed dust extraction system and water sprinkling system in coal rake unloading and wagon tipping areas.

PART – I

<p>Any other particulars for improving the quality environment</p>	<ol style="list-style-type: none"><li>1) 384 Nos. of new saplings planted inside &amp; outside of the plant.</li><li>2) 5S technique is being implemented in Power Station for the betterment of work environment.</li><li>(3) Continuous operation of effluent treatment plant for recycling of waste water is in place.</li><li>(4) The specific water consumption is 2.26 M3/MWHR in FY 23 against the applicable norms of 3.5 M3/MWHR.</li><li>(5) Operation of sewage treatment plant on regular basis. The treated water is being utilized in cooling purpose as per CEA recommendation.</li><li>(6) For controlling fugitive dust in the plant, regular sprinkling of water through tanker is being carried out.</li><li>(7) Good housekeeping is being maintained in and around the plant.</li></ol>
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**Stack Analysis Report : FY 2022-23 : ( ANNEX - I )**

Stack connected to individual units	Parameters	Frequency of Measurement	Apr'22		May'22		June'22		July'22		Aug'22		Sep'22		Oct'22		Nov'22		Dec'22		Jan'23		Feb'23		Mar'23				
			STACK UH1	Pass A	Pass B	STACK UH1	Pass A	Pass B	STACK UH1	Pass A	Pass B	STACK UH1	Pass A	Pass B	STACK UH1	Pass A	Pass B	STACK UH1	Pass A	Pass B	STACK UH1	Pass A	Pass B	STACK UH1	Pass A	Pass B	STACK UH1	Pass A	Pass B
STACK (U # 1)	Stack		21.04.2022	Pass A	Pass B	03.05.2022	Pass A	Pass B	13.06.2022	Pass A	Pass B	08.08.2022	Pass A	Pass B	15.09.2022	Pass A	Pass B	02.11.2022	Pass A	Pass B	05.12.2022	Pass A	Pass B	06.02.2023	Pass A	Pass B	13.03.2023		
	Date		67.77	68	69.43	70.13	65.75	64.16	61.13	57.56	61.13	62.94	58.64	55.89	61.48	63.22	59.34	58.02	61.48	63.22	59.34	58.02	55.12	50.48	49.02	46.88	51.39	54.84	
	SPM in mg/Nm <sup>3</sup>		750.43	751.25	766.79	776.28	768.89	785.94	821.1	811.48	777.56	768.86	747.87	758.51	600.57	569.58	611.3	532.36	600.57	569.58	611.3	532.36	606.07	617.05	586.24	599.39	549.87	578.53	
	SO <sub>2</sub> in mg/Nm <sup>3</sup>		465.02	480.12	477.13	494.10	465.50	470.89	490.6	477.11	445.38	445.07	442.54	441.01	427.41	445.06	422.08	429.25	427.41	445.06	422.08	429.25	429.54	459.02	453.14	441.27	446.69	451.89	
	NO <sub>2</sub> in mg/Nm <sup>3</sup>		05.04.2022	Pass A	Pass B	03.05.2022	Pass A	Pass B	13.06.2022	Pass A	Pass B	08.08.2022	Pass A	Pass B	15.09.2022	Pass A	Pass B	02.11.2022	Pass A	Pass B	05.12.2022	Pass A	Pass B	06.02.2023	Pass A	Pass B	13.03.2023	Pass A	Pass B
STACK (U # 2)	Stack		05.04.2022	Pass A	Pass B	03.05.2022	Pass A	Pass B	13.06.2022	Pass A	Pass B	08.08.2022	Pass A	Pass B	15.09.2022	Pass A	Pass B	02.11.2022	Pass A	Pass B	05.12.2022	Pass A	Pass B	06.02.2023	Pass A	Pass B	13.03.2023	Pass A	Pass B
	Date		69.47	69.75	71.69	71.50	65.60	68.71	59.74	62.75	65.51	64.31	66.45	68.55	66.37	64.75	55.08	55.76	66.45	68.55	55.08	55.76	49.69	52.93	49.82	54.08	51.57	52.97	
	SPM in mg/Nm <sup>3</sup>		751.67	764.27	771.92	782.43	769.79	747.15	722.56	697.17	699.65	723.49	723.71	765.04	727.13	729.92	712.41	745.23	713.63	733.52	690.73	734.32	683.42	712.09	665.76	684.98	665.76	684.98	
	SO <sub>2</sub> in mg/Nm <sup>3</sup>		528.94	546.79	547.04	560.24	506.02	525.90	500.57	501.04	468.45	476.14	446.43	436.77	458.04	436.24	435.48	451.86	439.18	454.93	468.47	471.89	463.04	480.29	466.69	485.58	466.69	485.58	
	NO <sub>2</sub> in mg/Nm <sup>3</sup>		06.04.2022	Pass A	Pass B	04.05.2022	Pass A	Pass B	14.06.2022	Pass A	Pass B	08.08.2022	Pass A	Pass B	16.09.2022	Pass A	Pass B	03.11.2022	Pass A	Pass B	06.12.2022	Pass A	Pass B	07.02.2023	Pass A	Pass B	14.03.2023	Pass A	Pass B
STACK (U # 3)	Stack		06.04.2022	Pass A	Pass B	04.05.2022	Pass A	Pass B	14.06.2022	Pass A	Pass B	08.08.2022	Pass A	Pass B	16.09.2022	Pass A	Pass B	03.11.2022	Pass A	Pass B	06.12.2022	Pass A	Pass B	07.02.2023	Pass A	Pass B	14.03.2023	Pass A	Pass B
	Date		70.79	71.35	69.49	69.51	69.03	69.38	64.08	67.83	66.84	67.8	68.31	67.89	65.21	43.98	46.52	44.76	44.76	44.76	44.76	44.76	36.84	39.84	41.87	36.64	48.31	52.45	
	SPM in mg/Nm <sup>3</sup>		790.55	793.78	776.01	790.14	830.47	813.29	819.76	829.01	770.07	756.4	759.79	768.66	764.72	750.18	768.77	786.47	759.18	759.12	681.00	711.41	740.37	769.83	729.48	745.71	740.37	769.83	
	SO <sub>2</sub> in mg/Nm <sup>3</sup>		555.2	573.86	566.22	572.68	547.57	537.48	536.36	556.96	500.27	490.17	450.33	448.45	442.96	457.34	455.41	454.17	450.97	446.09	424.46	447.69	473.94	469.62	448.53	465.94	473.94	469.62	
	NO <sub>2</sub> in mg/Nm <sup>3</sup>		06.04.2022	Pass A	Pass B	04.05.2022	Pass A	Pass B	14.06.2022	Pass A	Pass B	08.08.2022	Pass A	Pass B	16.09.2022	Pass A	Pass B	03.11.2022	Pass A	Pass B	06.12.2022	Pass A	Pass B	07.02.2023	Pass A	Pass B	14.03.2023	Pass A	Pass B
STACK (U # 4)	Stack		06.04.2022	Pass A	Pass B	04.05.2022	Pass A	Pass B	14.06.2022	Pass A	Pass B	08.08.2022	Pass A	Pass B	16.09.2022	Pass A	Pass B	03.11.2022	Pass A	Pass B	06.12.2022	Pass A	Pass B	07.02.2023	Pass A	Pass B	14.03.2023	Pass A	Pass B
	Date		47.51	47	48.27	48.05	46.85	46.24	41.83	44.59	45.88	48.92	42.18	44.32	45.16	48.39	45.50	47.31	47.27	48.86	47.27	48.86	42.63	44.01	44.70	42.54	44.70	42.54	
	SPM in mg/Nm <sup>3</sup>		916.2	910.23	900.58	895.77	892.38	884.48	855.03	839.94	879.56	926.58	875.57	909.9	876.80	932.21	613.95	640.23	613.15	644.74	681.00	711.41	740.37	769.83	729.48	745.71	740.37	769.83	
	SO <sub>2</sub> in mg/Nm <sup>3</sup>		471.03	481.68	478.58	487.12	462.49	472.61	461.63	465.63	489.69	494.02	510.74	528.64	478.34	498.72	488.01	473.44	497.3	487.33	424.46	447.69	473.94	469.62	448.53	465.94	473.94	469.62	
	NO <sub>2</sub> in mg/Nm <sup>3</sup>		07.04.2022	Pass A	Pass B	05.05.2022	Pass A	Pass B	15.06.2022	Pass A	Pass B	09.08.2022	Pass A	Pass B	19.09.2022	Pass A	Pass B	04.11.2022	Pass A	Pass B	07.12.2022	Pass A	Pass B	14.01.2023	Pass A	Pass B	27.03.2023	Pass A	Pass B
STACK (U # 5)	Stack		07.04.2022	Pass A	Pass B	05.05.2022	Pass A	Pass B	15.06.2022	Pass A	Pass B	09.08.2022	Pass A	Pass B	19.09.2022	Pass A	Pass B	04.11.2022	Pass A	Pass B	07.12.2022	Pass A	Pass B	14.01.2023	Pass A	Pass B	27.03.2023	Pass A	Pass B
	Date		44.64	44.56	46.24	46.94	46.83	44.98	46.24	42.86	49.86	48.9	42.72	43.3	46.50	49.64	36.46	39.12	36.74	37.66	38.39	37.58	29.00	27.97	30.45	28.89	30.45	28.89	
	SPM in mg/Nm <sup>3</sup>		862.12	861.58	884.75	897.05	859.52	862.40	889.03	854.94	847.95	872.89	860.18	846.36	834.03	812.63	630.94	665.43	633.5	647.34	667.11	711.07	672.03	654.39	664.45	664.45	664.45	664.45	
	SO <sub>2</sub> in mg/Nm <sup>3</sup>		498.47	509.82	513.86	525.04	491.08	473.54	518.49	498.32	513.57	512.61	528.54	524.46	495.73	513.98	492.81	513.34	496.15	504.09	470.22	488.66	481.92	496.10	448.15	448.15	448.15	448.15	
	NO <sub>2</sub> in mg/Nm <sup>3</sup>		Unit-1	Unit-2	Unit-3	Unit-4	Unit-5	Yearly Average																					
SPM in mg/Nm <sup>3</sup>		59.54	61.21	57.81	45.82	41.10	53.10																						
SO <sub>2</sub> in mg/Nm <sup>3</sup>		688.11	727.17	769.34	788.42	778.16	750.24																						
NO <sub>2</sub> in mg/Nm <sup>3</sup>		452.26	481.42	490.44	483.97	498.98	481.41																						

Stack	Unit-1	Unit-2	Unit-3	Unit-4	Unit-5	Yearly Average
SPM in mg/Nm <sup>3</sup>	59.54	61.21	57.81	45.82	41.10	53.10
SO <sub>2</sub> in mg/Nm <sup>3</sup>	688.11	727.17	769.34	788.42	778.16	750.24
NO <sub>2</sub> in mg/Nm <sup>3</sup>	452.26	481.42	490.44	483.97	498.98	481.41