



SCIENTIFIC RESEARCH LABORATORY

(Analytical & Environmental Engineering Laboratory)

Laboratory Recognised By Ministry of Environment, Forest and Climate Change, Government of India
Laboratory Recognised By West Bengal Pollution Control Board
An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 (OHSAS) Certified



TC-7649

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[ULR- TC764923000002762F]

[Format No. : SRL / FRM / 17]

TEST REPORT

[Report No. SRL / TPCL(J) / WW-897-2023 Dated: 26.09.2023]

A. SAMPLE DETAILS:-

Name & Address of the Customer	:	The Tata Power Company Limited Jojobera Power Plant Jamshedpur - 831 016		
Sample Type	:	Waste Water		
Sampling Location	:	ETP Inlet		
Sample Identification No.	:	WW- 897-2023		
Test Requirement	:	Chemical		
Sampling Method	:	APHA 23 rd Edition, 1060B		
Sample Collected By	:	Scientific Research Laboratory		
Sample Preservation	:	Preserved	Environmental Condition	: Partly Cloudy
Water Sampling Date	:	16.09.2023	Sample Receiving Date	: 16.09.2023
Analysis Started On	:	16.09.2023	Analysis Completed On	: 26.09.2023

B. RESULTS

Sl. No.	Parameters	Unit	Minimum Detection Limit	Results	Test Specification
				WW-897-2023	
1.	Colour,	Hazen Units	5	10.0	APHA 23 rd Edition, 2120 B
2.	pH	--	2	7.60	APHA 23 rd Edition., 4500-H+B
3.	Total Dissolved Solids	mg/L	10	1110	APHA 23 rd Edition., 2540 C
4.	Total Suspended Solids	mg/L	2	88	APHA 23 rd Edition., 2540 D
5.	Dissolved Oxygen	mg/L	1	5.0	APHA 23 rd Edition, 4500 O C
6.	Chemical Oxygen Demand	mg/L	8	86	APHA 23 rd Edition, 5230 B
7.	Biochemical Oxygen Demand 3 Days at 27°C	mg/L	2	26	IS 3025 (Part 44) : 1993
8.	Oil & Grease(Hexane Extract)	mg/L	5	<5	APHA 23 rd Edition., 5230 B

Dr. Jyotirmoy Majumdar
(Authorized Signatory)

-----End of Test Report-----
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[ULR- TC764923000002763F]

[Format No. : SRL / FRM / 17]

TEST REPORT

[Report No. SRL / TPCL(J) / WW-898-2023 Dated: 26.09.2023]

A. SAMPLE DETAILS:-

Name & Address of the Customer	The Tata Power Company Limited Jojobera Power Plant Jamshedpur - 831 016		
Sample Type	Waste Water		
Sampling Location	ETP Outlet		
Sample Identification No.	WW- 898-2023		
Test Requirement	Chemical		
Sampling Method	APHA 23 rd Edition, 1060B		
Sample Collected By	Scientific Research Laboratory		
Sample Preservation	Preserved	Environmental Condition	Partly Cloudy
Water Sampling Date	16.09.2023	Sample Receiving Date	16.09.2023
Analysis Started On	16.09.2023	Analysis Completed On	26.09.2023

B. RESULTS

Sl. No.	Parameters	Unit	Minimum Detection Limit	Results	Test Specification	Standard/ Limit*
				WW-898-2023		
1.	Colour,	Hazen Units	5	5.0	APHA 23 rd Edition, 2120 B	--
2.	pH	--	2	7.36	APHA 23 rd Edition., 4500-H+B	5.5 to 9
3.	Total Dissolved Solids	mg/L	10	534	APHA 23 rd Edition., 2540 C	--
4.	Total Suspended Solids	mg/L	2	32	APHA 23 rd Edition., 2540 D	100
5.	Dissolved Oxygen	mg/L	1	5.8	APHA 23 rd Edition, 4500 O C	--
6.	Chemical Oxygen Demand	mg/L	8	21	APHA 23 rd Edition, 5230 B	250
7.	Biochemical Oxygen Demand 3 Days at 27°C	mg/L	2	4	IS 3025 (Part 44) : 1993	30
8.	Oil & Grease(Hexane Extract)	mg/L	5	<5	APHA 23 rd Edition., 5230 B	10

Note: * EPA Notification [S.O. 844(E), dt 19th Nov; 1996]

Dr. Jyotirmoy Majumdar
(Authorized Signatory)

-----End of Test Report-----

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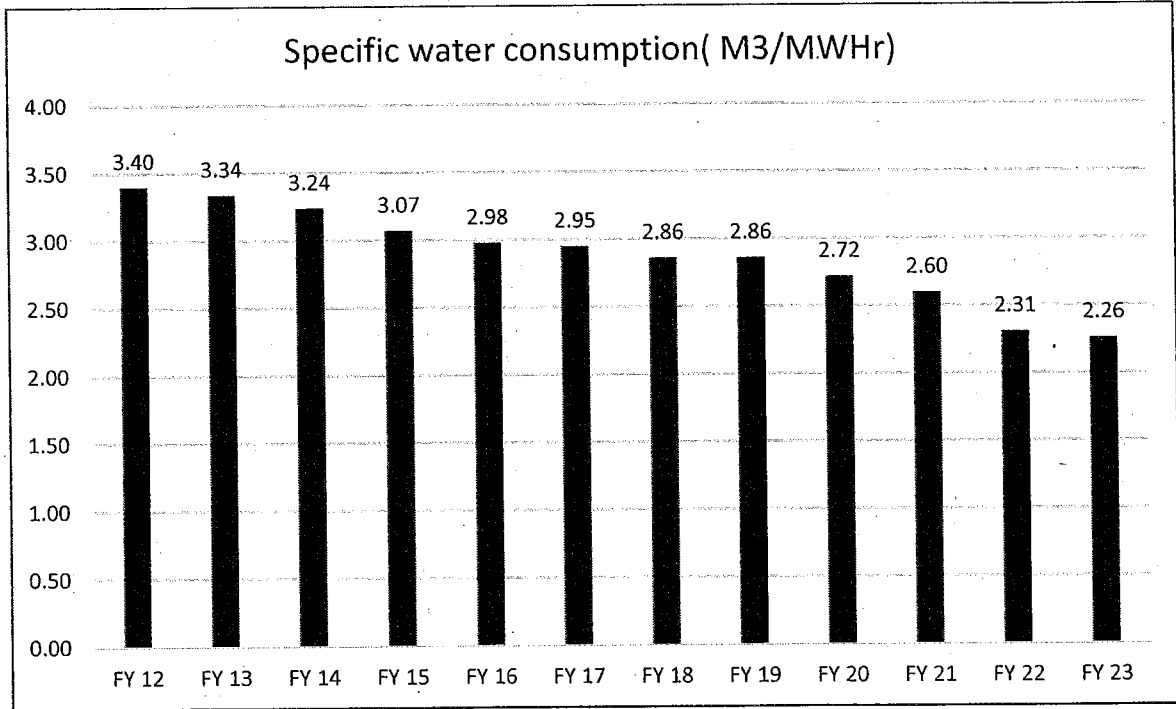
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Road map Compliance for Fly Ash Utilization FY22-23

S.No.	Description	Unit	Total Fly Ash Utilization in FY:22-23
A	Ash Generation (Fly Ash + Bed Ash)	MT	1044334
B	Ash Utilization:	MT	
(i)	Fly ash based products viz. bricks, blocks, tiles, fibre cement sheets, pipes, boards, panels;	MT	3117
(ii)	Cement manufacturing, ready mix concrete;	MT	595411
(iii)	Construction of road and fly over embankment, Ash and Geo-polymer based construction material;	MT	47302
	Construction of dam;	MT	
	Filling up of low lying area;	MT	399110
	Filling of mine voids;	MT	
	Manufacturing of sintered or cold bonded ash aggregate;	MT	
	Agriculture in a controlled manner based on soil testing;	MT	
	Construction of shoreline protection structures in coastal districts;	MT	
	Export of ash to other countries;	MT	
(iv)	Any other eco-friendly purpose as notified from time to time.	MT	
	Total Ash Utilization	MT	1044940
C	Ash Utilization Percentage	%	100.06

Proactive action for Environmental Improvement

- 100 % Fly ash utilization as per Govt. approved guidelines.
- Continuous operation of effluent treatment plant for recycling of wastewater is in place. The treated ETP water is being used in various plant process and ZLD (zero liquid discharge) is maintained.
- 301 no of new saplings planted from the local species in plant area in H1-FY24. Total 384 nos. of new saplings planted from the local species in plant area in FY22-23.
- The construction work for installation of FGD and DE NOx system is in progress for Jojobera. The actual work progress for FGD and DE NOx installation is 75% as on 30 September' 2023.
- Sp. raw water consumption recorded 2.26 M3/ MWH in FY 2022-23 against statutory limit 3.5 M3/MWH. The year wise improvement is graphically represented below.





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Annex-V

[ULR NO: TC76492300000935F]

[FORMAT NO. SRL / FRM / 21]

AMBIENT NOISE MONITORING

Customer Name & Address	: M/s. Tata Power Limited P.O.: Rahargora, Jojobera Jamshedpur - 831016		
Sample Identification No.	: ANQ - 375 - 2023 TO ANQ - 390 - 2023		
Sampling Date	: 07.04.2023	Barometric Pressure	: 754 mm Hg.
Sample Receiving/Analysis Starting On	: 07.04.2023	Analysis Completed on	: 25.04.2023
RESULTS OF AMBIENT NOISE LEVEL MEASUREMENT			
[SRL/TPCL/ ANQ - 375 - 2023 TO ANQ - 390 - 2023 Dated: 25.04.2023]			

SAMPLE .NO.	Monitoring Date	SAMPLING LOCATION	Leq dB(A) [Day Time]	Leq dB(A) [Night Time]
ANQ - 375 - 2023	07.04.2023	E.T.P Area	70.41	66.56
ANQ - 376 - 2023	07.04.2023	SSF Area	72.48	68.36
ANQ - 377 - 2023	07.04.2023	CHP Area	74.37	64.50
ANQ - 378 - 2023	07.04.2023	Ash Plant Area	71.61	63.39
ANQ - 379 - 2023	07.04.2023	Office Building	64.49	61.52
ANQ - 380 - 2023	07.04.2023	Near by Canteen	65.29	60.40
ANQ - 381 - 2023	07.04.2023	Security Gate	73.56	64.43
ANQ - 382 - 2023	07.04.2023	Near DG Room (DM Plant)	72.54	69.57
ANQ - 383 - 2023	07.04.2023	Gadra Collage	72.53	66.26
ANQ - 384 - 2023	07.04.2023	AVN School	71.75	63.12
ANQ - 385 - 2023	07.04.2023	Sharma School	71.62	63.21
ANQ - 386 - 2023	07.04.2023	Panchayat Bhavan	73.69	68.36
ANQ - 387 - 2023	07.04.2023	Govindpur Market	74.68	67.21
ANQ - 388 - 2023	07.04.2023	Basic School	71.04	65.41
ANQ - 389 - 2023	07.04.2023	Subhash Nagar	70.56	67.26
ANQ - 390 - 2023	07.04.2023	Post Office Gadra	72.61	65.20

NOISE : (AMBIENT STANDARDS)

CATEGORY OF AREA	Leq, Noise Levels dB(A)	
	DAY TIME	NIGHT TIME
INDUSTRIAL AREA	75	70
COMMERCIAL AREA	65	55
RESIDENTIAL AREA	55	45
SILENCE ZONE	50	40
NOTE-1	Day time is reckoned in between 6 A.M., AND 10 P.M.,	
NOTE-2	Night time is reckoned in between 10 P.M., AND 6 A.M.	

—End of Test Report—

Gautam Chowdhury
(Authorized Signatory)

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[ULR NO: TC764923000001297F]

[FORMAT NO. SRL / FRM / 21]

AMBIENT NOISE MONITORING

Customer Name & Address	M/s. Tata Power Company Limited P.O.: Rahargora, Jojobera Jamshedpur - 831016		
Sample Identification No.	ANQ - 435 - 2023 TO ANQ - 442 - 2023 & ANQ - 448 - 2023 TO ANQ - 455 - 2023		
Sampling Date	11.05.2023	Barometric Pressure	754 mm Hg.
Sample Receiving/Analysis Starting On	11.05.2023	Analysis Completed on	25.05.2023

RESULTS OF AMBIENT NOISE LEVEL MEASUREMENT

[SRL/TPCL/ ANQ - 435 - 2023 TO ANQ - 442 - 2023 & ANQ - 448 - 2023 TO ANQ - 455 - 2023 Dated: 25.05.2023]

SAMPLE .NO.	Monitoring Date	SAMPLING LOCATION	Leq dB(A) [Day Time]	Leq dB(A) [Night Time]
ANQ - 435 - 2023	11.05.2023	E.T.P Area	71.41	66.68
ANQ - 436 - 2023	11.05.2023	SSF Area	72.46	68.48
ANQ - 437 - 2023	11.05.2023	CHP Area	73.89	64.48
ANQ - 438 - 2023	11.05.2023	Ash Plant Area	72.16	63.10
ANQ - 439 - 2023	11.05.2023	Office Building	64.28	62.09
ANQ - 440 - 2023	11.05.2023	Near by Canteen	65.47	61.53
ANQ - 441 - 2023	11.05.2023	Security Gate	73.42	64.12
ANQ - 442 - 2023	11.05.2023	Near DG Room (DM Plant)	73.13	69.19
ANQ - 448 - 2023	11.05.2023	Gadra College	72.52	65.72
ANQ - 449 - 2023	11.05.2023	AVN School	71.86	63.13
ANQ - 450 - 2023	12.05.2023	Sharma School	71.92	63.50
ANQ - 451 - 2023	12.05.2023	Panchayat Bhavan	73.60	68.61
ANQ - 452 - 2023	12.05.2023	Govindpur Market	74.63	67.21
ANQ - 453 - 2023	12.05.2023	Basic School	71.67	65.66
ANQ - 454 - 2023	12.05.2023	Subhash Nagar	71.32	67.26
ANQ - 455 - 2023	12.05.2023	Post Office Gadra	72.66	65.40

NOISE : (AMBIENT STANDARDS)

CATEGORY OF AREA	Leq, Noise Levels dB(A)	
	DAY TIME	NIGHT TIME
INDUSTRIAL AREA	75	70
COMMERCIAL AREA	65	55
RESIDENTIAL AREA	55	45
SILENCE ZONE	50	40
NOTE-1	Day time is reckoned in between 6 A.M., AND 10 P.M.,	
NOTE-2	Night time is reckoned in between 10 P.M., AND 6 A.M.	

—End of Test Report—

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[ULR NO: TC764923000001767F]

[FORMAT NO. SRL / FRM / 21]

AMBIENT NOISE MONITORING

Customer Name & Address	: M/s. Tata Power Company Limited P.O.: Rahargora, Jojobera Jamshedpur - 831016		
Sample Identification No.	: ANQ - 544 - 2023 TO ANQ - 559 - 2023		
Sampling Date	: 12.06.2023 & 13.06.2023	Barometric Pressure	: 754 mm Hg.
Sample Receiving/Analysis Starting On	: 13.06.2023	Analysis Completed on	: 23.06.2023
RESULTS OF AMBIENT NOISE LEVEL MEASUREMENT			
[SRL/TPCL/ ANQ - 544 - 2023 TO ANQ - 559 - 2023 Dated: 23.06.2023]			

SAMPLE .NO.	Monitoring Date	SAMPLING LOCATION	Leq dB(A) [Day Time]	Leq dB(A) [Night Time]
ANQ - 544 - 2023	12.06.2023	E.T.P Area	71.44	66.41
ANQ - 545 - 2023	12.06.2023	SSF Area	72.58	67.61
ANQ - 546 - 2023	12.06.2023	CHP Area	74.68	65.40
ANQ - 547 - 2023	12.06.2023	Ash Plant Area	72.41	63.63
ANQ - 548 - 2023	12.06.2023	Office Building	65.86	62.03
ANQ - 549 - 2023	12.06.2023	Near by Canteen	73.28	62.53
ANQ - 550 - 2023	12.06.2023	Security Gate	74.20	64.19
ANQ - 551 - 2023	12.06.2023	Near DG Room (DM Plant)	73.15	69.63
ANQ - 552 - 2023	12.06.2023	Gadra College	72.91	66.20
ANQ - 553 - 2023	12.06.2023	AVN School	72.15	64.19
ANQ - 554 - 2023	13.06.2023	Sharma School	72.29	63.59
ANQ - 555 - 2023	13.06.2023	Panchayat Bhavan	73.82	68.58
ANQ - 556 - 2023	13.06.2023	Govindpur Market	74.39	67.97
ANQ - 557 - 2023	13.06.2023	Basic School	72.03	65.75
ANQ - 558 - 2023	13.06.2023	Subhash Nagar	72.04	67.03
ANQ - 559 - 2023	13.06.2023	Post Office Gadra	72.82	63.59

NOISE : (AMBIENT STANDARDS)

CATEGORY OF AREA	Leq, Noise Levels dB(A)	
	DAY TIME	NIGHT TIME
INDUSTRIAL AREA	75	70
COMMERCIAL AREA	65	55
RESIDENTIAL AREA	55	45
SILENCE ZONE	50	40
NOTE-1	Day time is reckoned in between 6 A.M., AND 10 P.M.,	
NOTE-2	Night time is reckoned in between 10 P.M., AND 6 A.M.	

—End of Test Report—

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E-mail : nirajksingh2003@yahoo.co.in.

[ULR NO: TC764923000001989F]

[FORMAT NO. SRL / FRM / 21]

AMBIENT NOISE MONITORING

Customer Name & Address	: M/s. Tata Power Company Limited P.O.: Rahargora, Jojobera Jamshedpur - 831016		
Sample Identification No.	: ANQ - 678 - 2023 TO ANQ - 693 - 2023		
Sampling Date	: 13.07.2023	Barometric Pressure	: 754 mm Hg.
Sample Receiving/Analysis Starting On	: 13.07.2023	Analysis Completed on	: 23.07.2023
RESULTS OF AMBIENT NOISE LEVEL MEASUREMENT			
[SRL/TPCL/ ANQ - 678 - 2023 TO ANQ - 693 - 2023 Dated: 23.07.2023]			

SAMPLE .NO.	Monitoring Date	SAMPLING LOCATION	Leq dB(A) [Day Time]	Leq dB(A) [Night Time]
ANQ - 678 - 2023	13.07.2023	E.T.P Area	71.39	65.43
ANQ - 679 - 2023	13.07.2023	SSF Area	72.37	67.41
ANQ - 680 - 2023	13.07.2023	CHP Area	73.66	63.45
ANQ - 681 - 2023	13.07.2023	Ash Plant Area	71.41	62.49
ANQ - 682 - 2023	13.07.2023	Office Building	63.59	62.39
ANQ - 683 - 2023	13.07.2023	Near by Canteen	65.49	60.68
ANQ - 684 - 2023	13.07.2023	Security Gate	73.48	64.57
ANQ - 685 - 2023	13.07.2023	Near DG Room (DM Plant)	73.55	68.18
ANQ - 686 - 2023	13.07.2023	Gadra College	73.49	65.70
ANQ - 687 - 2023	13.07.2023	AVN School	71.54	62.47
ANQ - 688 - 2023	13.07.2023	Sharma School	70.63	61.57
ANQ - 689 - 2023	13.07.2023	Panchayat Bhavan	72.61	67.44
ANQ - 690 - 2023	13.07.2023	Govindpur Market	74.48	67.40
ANQ - 691 - 2023	13.07.2023	Basic School	70.61	64.48
ANQ - 692 - 2023	13.07.2023	Subhash Nagar	70.43	66.44
ANQ - 693 - 2023	13.07.2023	Post Office Gadra	71.63	64.63

NOISE : (AMBIENT STANDARDS)

CATEGORY OF AREA	Leq, Noise Levels dB(A)	
	DAY TIME	NIGHT TIME
INDUSTRIAL AREA	75	70
COMMERCIAL AREA	65	55
RESIDENTIAL AREA	55	45
SILENCE ZONE	50	40
NOTE-1	Day time is reckoned in between 6 A.M., AND 10 P.M.,	
NOTE-2	Night time is reckoned in between 10 P.M., AND 6 A.M.	

—End of Test Report—

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[ULR NO: TC76492300002479F]

[FORMAT NO. SRL / FRM / 21]

AMBIENT NOISE MONITORING

Customer Name & Address	: M/s. Tata Power Company Limited P.O.: Rahargora, Jojobera Jamshedpur - 831016		
Sample Identification No.	: ANQ - 803 - 2023 TO ANQ - 818 - 2023		
Sampling Date	: 14.08.2023	Barometric Pressure	: 748 mm Hg.
Sample Receiving/Analysis Starting On	: 14.08.2023	Analysis Completed on	: 23.08.2023
RESULTS OF AMBIENT NOISE LEVEL MEASUREMENT			
[SRL/TPCL/ ANQ - 803 - 2023 TO ANQ - 818 - 2023 Dated: 23.08.2023]			

SAMPLE .NO.	Monitoring Date	SAMPLING LOCATION	Leq dB(A) [Day Time]	Leq dB(A) [Night Time]
ANQ - 803 - 2023	14.08.2023	E.T.P Area	70.79	65.28
ANQ - 804 - 2023	14.08.2023	SSF Area	74.77	65.31
ANQ - 805 - 2023	14.08.2023	CHP Area	72.74	65.22
ANQ - 806 - 2023	14.08.2023	Ash Plant Area	71.68	63.34
ANQ - 807 - 2023	14.08.2023	Office Building	63.65	61.30
ANQ - 808 - 2023	14.08.2023	Near by Canteen	71.46	62.20
ANQ - 809 - 2023	14.08.2023	Security Gate	73.70	67.45
ANQ - 810 - 2023	14.08.2023	Near DG Room (DM Plant)	74.50	67.43
ANQ - 811 - 2023	14.08.2023	Gadra College	71.47	64.46
ANQ - 812 - 2023	14.08.2023	AVN School	71.82	67.41
ANQ - 813 - 2023	14.08.2023	Sharma School	64.91	60.64
ANQ - 814 - 2023	14.08.2023	Panchayat Bhavan	74.64	64.27
ANQ - 815 - 2023	14.08.2023	Govindpur Market	71.68	68.44
ANQ - 816 - 2023	14.08.2023	Basic School	71.48	65.50
ANQ - 817 - 2023	14.08.2023	Subhash Nagar	71.75	63.49
ANQ - 818 - 2023	14.08.2023	Post Office Gadra	72.67	65.51

NOISE : (AMBIENT STANDARDS)

CATEGORY OF AREA	Leq, Noise Levels dB(A)	
	DAY TIME	NIGHT TIME
INDUSTRIAL AREA	75	70
COMMERCIAL AREA	65	55
RESIDENTIAL AREA	55	45
SILENCE ZONE	50	40

NOTE-1 Day time is reckoned in between 6 A.M., AND 10 P.M.,
NOTE-2 Night time is reckoned in between 10 P.M., AND 6 A.M.

—End of Test Report—

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[ULR NO: TC764923000002728F]

[FORMAT NO. SRL / FRM / 21]

AMBIENT NOISE MONITORING

Customer Name & Address	: M/s. Tata Power Company Limited P.O.: Rahargora, Jojobera Jamshedpur - 831016		
Sample Identification No.	: ANQ - 876 - 2023 TO ANQ - 891 - 2023		
Sampling Date	: 15.09.2023	Barometric Pressure	: 750 mm Hg.
Sample Receiving/Analysis Starting On	: 15.09.2023	Analysis Completed on	: 20.09.2023
RESULTS OF AMBIENT NOISE LEVEL MEASUREMENT			
[SRL/TPCL/ ANQ - 876 - 2023 TO ANQ - 891 - 2023 Dated: 20.09.2023]			

SAMPLE .NO.	Monitoring Date	SAMPLING LOCATION	Leq dB(A) [Day Time]	Leq dB(A) [Night Time]
ANQ - 803 - 2023	15.09.2023	E.T.P Area	69.31	65.59
ANQ - 804 - 2023	15.09.2023	SSF Area	70.48	66.52
ANQ - 805 - 2023	15.09.2023	CHP Area	75.29	66.43
ANQ - 806 - 2023	15.09.2023	Ash Plant Area	70.44	62.34
ANQ - 807 - 2023	15.09.2023	Office Building	63.55	60.44
ANQ - 808 - 2023	15.09.2023	Near by Canteen	64.51	60.23
ANQ - 809 - 2023	15.09.2023	Security Gate	74.56	62.37
ANQ - 810 - 2023	15.09.2023	Near DG Room (DM Plant)	73.55	63.40
ANQ - 811 - 2023	15.09.2023	Gadra College	70.61	68.54
ANQ - 812 - 2023	15.09.2023	AVN School	72.54	61.54
ANQ - 813 - 2023	15.09.2023	Sharma School	70.66	62.49
ANQ - 814 - 2023	15.09.2023	Panchayat Bhavan	72.48	67.38
ANQ - 815 - 2023	15.09.2023	Govindpur Market	73.57	66.41
ANQ - 816 - 2023	15.09.2023	Basic School	70.61	64.46
ANQ - 817 - 2023	15.09.2023	Subhash Nagar	70.42	66.40
ANQ - 818 - 2023	15.09.2023	Post Office Gadra	70.61	65.42

NOISE : (AMBIENT STANDARDS)

CATEGORY OF AREA	Leq, Noise Levels dB(A)	
	DAY TIME	NIGHT TIME
INDUSTRIAL AREA	75	70
COMMERCIAL AREA	65	55
RESIDENTIAL AREA	55	45
SILENCE ZONE	50	40
NOTE-1	Day time is reckoned in between 6 A.M., AND 10 P.M.,	
NOTE-2	Night time is reckoned in between 10 P.M., AND 6 A.M.	

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Annex-VII

[ULR- TC76492300002117F]

[Format No. : SRL / FRM / 17]

TEST REPORT

[Report No. SRL / TPCL(J) / GW-305-2023 Dated: 27.07.2023]

A. SAMPLE DETAILS:-

Name & Address of the Customer	The Tata Power Company Limited Jojobera Power Plant, Jamshedpur - 831 016		
Sample Type	Ground Water		
Sampling Location	Jemco Ash Pond 1		
Sample Identification No.	GW- 305-2023		
Test Requirement	Chemical		
Sampling Method	APHA 23 rd Edition, 1060B		
Sample Collected By	Scientific Research Laboratory		
Sample Preservation	Preserved	Environmental Condition	Clear
Water Sampling Date	15.07.2023	Sample Receiving Date	15.07.2023
Analysis Started On	15.07.2023	Analysis Completed On	27.07.2023

B. RESULTS

Sl. No	Characteristic	Minimum Detection Limit	*Requirement (Acceptable Limit)	*Permissible Limits in the Absence of Alternate Source	Results	Test Method Specification
					GW-305-2023	
Organoleptic and Physical Parameters (Foreword and Clause 4)						
i)	Colour, Hazen Units, Max.	5	5	15	<5.0	APHA 23 rd Edition, 2120 B
ii)	Odour	-	Agreeable	Agreeable	Agreeable	IS: 3025 (Part 5) - 1983
iii)	pH Value	2	6.5 to 8.5	No Relaxation	7.34	APHA 23 rd Edition, 4500-H+B
iv)	Turbidity, NTU, Max.	1	1	5	<1	APHA 23 rd Edition, 2130B
v)	Total Dissolved Solids, mg/L, Max.	10	500	2000	220	APHA 23 rd Edition, 2540 C
General Parameters Concerning Substances Undesirable in Excessive Amounts (Foreword and Clause 4)						
i)	Aluminium (as Al), mg/L, Max	0.01	0.03	0.2	<0.01	APHA 23 rd Edition, 3500 -Al B
ii)	Anionic Detergents (as MBAS), mg/l, Max.	0.1	0.2	1.0	<0.1	APHA 23 rd Edition, 5540 C
iii)	Boron (as B), mg/L, Max	1	0.5	1	<1.0	APHA 23 rd Edition, 4500-B C
iv)	Calcium (as Ca), mg/L, Max	2	75	200	30.0	APHA 23 rd Edition, 3500-Ca B
v)	Chloride (as Cl), mg/L, Max.	2	250	1000	27.0	APHA 23 rd Edition, 4500 -Cl B
vi)	Copper (as Cu), mg/L, Max.	0.05	0.05	1.5	<0.05	APHA 23 rd Edition, 3111 B
vii)	Fluoride (as F), mg/L, Max	0.05	1.0	1.5	0.60	APHA 23 rd Edition, 4500 -F D
viii)	Free Residual Chlorine, mg/L, Min	0.1	0.2	1	<0.1	IS 3025 (Part 26)-1986
ix)	Iron (as Fe), mg/L, Max.	0.1	0.3	No Relaxation	<0.1	APHA 23 rd Edition, 3500-Fe B
x)	Manganese (as Mn), mg/L, Max.	0.05	0.1	0.3	<0.05	APHA 23 rd Edition, 3111 B
xi)	Nitrate (as NO ₃), mg/L, Max.	0.5	45	No Relaxation	<0.5	APHA 23 rd Edition, 4500-NO ₃ -B

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[ULR- TC764923000002117F]

[Format No. : SRL / FRM / 17]

TEST REPORT

[Report No. SRL / TPCL(J) / GW-305-2023 Dated: 27.07.2023]

A. SAMPLE DETAILS:-

Name & Address of the Customer	: The Tata Power Company Limited Jojobera Power Plant Jamshedpur - 831 016		
Sample Type	: Ground Water		
Sampling Location	: Jemco Ash Pond 1		
Sample Identification No.	: GW- 305-2023		
Test Requirement	: Chemical		
Sampling Method	: APHA 23 rd Edition, 1060B		
Sample Collected By	: Scientific Research Laboratory		
Sample Preservation	: Preserved	Environmental Condition	: Clear
Water Sampling Date	: 15.07.2023	Sample Receiving Date	: 15.07.2023
Analysis Started On	: 15.07.2023	Analysis Completed On	: 27.07.2023

B. RESULTS

Sl. No.	Characteristic	Minimum Detection Limit	*Requirement (Acceptable Limit)	*Permissible Limits in the Absence of Alternate Source	Results	Test Method Specification
					GW-305-2023	
General Parameters Concerning Substances Undesirable in Excessive Amounts (Foreword and Clause 4)						
xii)	Phenolic Compounds (as C ₆ H ₅ OH), mg/L, Max	0.002	0.001	0.002	<0.002	APHA 23 rd Edition, 5530 C
xlii)	Selenium (as Se), mg/L, Max.	0.005	0.01	No Relaxation	<0.005	APHA 23 rd Edition, 3114 C
xiv)	Silver (as Ag), mg/l	0.1	0.1	No Relaxation	<0.1	APHA 23 rd Edition, 3111 B
xv)	Sulphate (as SO ₄), mg/L, Max.	2.5	200	400	18.3	APHA 23 rd Edition, 4500-SO ₄ ²⁻ E
xvi)	Sulphide (as S), mg/l	0.5	0.05	No Relaxation	<0.5	APHA 23 rd Edition, 4500 S ²⁻ F
xvii)	Total Alkalinity, as Calcium Carbonate, mg/L, Max	5	200	600	90.0	APHA 23 rd Edition, 2320 B
xviii)	Total Hardness (as CaCO ₃), mg/L, Max.	5	200	600	120	APHA 23 rd Edition, 2340 C
xix)	Zinc (as Zn), mg/L, Max	0.01	5.0	15	0.028	APHA 23 rd Edition, 3111 B
Parameters Concerning Toxic Substances (Foreword and Clause 4)						
i)	Cadmium (as Cd), mg/L, Max	0.02	0.003	No Relaxation	<0.02	APHA 23 rd Edition, 3111 B
ii)	Cyanide (as CN), mg/L, Max	0.02	0.05	No Relaxation	<0.02	APHA 23 rd Edition, 4500 -CN- E
iii)	Lead (as Pb), mg/L, Max	0.1	0.01	No Relaxation	<0.1	APHA 23 rd Edition, 3111 B
iv)	Mercury (as Hg), mg/L, Max	0.001	0.001	No Relaxation	<0.001	APHA 23 rd Edition, 3112 B
v)	Nickel (as Ni), mg/L, Max.	0.05	0.02	No Relaxation	<0.05	APHA 23 rd Edition, 3111 B
vi)	Total Arsenic (as As), mg/L, Max	0.01	0.01	0.05	<0.01	APHA 23 rd Edition, 3114 C
vii)	Total Chromium (as Cr), mg/L, Max	0.05	0.05	No Relaxation	<0.05	APHA 23 rd Edition, 3111 B

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[ULR- TC76492300002116F]

[Format No. : SRL / FRM / 17]

TEST REPORT

[Report No. SRL / TPCL(J) / GW-304-2023 Dated: 27.07.2023]

A. SAMPLE DETAILS:-

Name & Address of the Customer	: The Tata Power Company Limited Jobbera Power Plant Jamshedpur - 831 016		
Sample Type	: Ground Water		
Sampling Location	: Material Gate		
Sample Identification No.	: GW- 304-2023		
Test Requirement	: Chemical		
Sampling Method	: APHA 23 rd Edition, 1060B		
Sample Collected By	: Scientific Research Laboratory		
Sample Preservation	: Preserved	Environmental Condition	: Clear
Water Sampling Date	: 15.07.2023	Sample Receiving Date	: 15.07.2023
Analysis Started On	: 15.07.2023	Analysis Completed On	: 27.07.2023

B. RESULTS

Sl. No.	Characteristic	Minimum Detection Limit	*Requirement (Acceptable Limit)	*Permissible Limits in the Absence of Alternate Source	Results	Test Method Specification
					GW-304-2023	
Organoleptic and Physical Parameters (Foreword and Clause 4)						
i)	Colour, Hazen Units, Max.	5	5	15	<5.0	APHA 23 rd Edition, 2120 B
ii)	Odour	-	Agreeable	Agreeable	Agreeable	IS: 3025 (Part 5) - 1983
iii)	pH Value	2	6.5 to 8.5	No Relaxation	7.38	APHA 23 rd Edition, 4500-H+ B
iv)	Turbidity, NTU, Max.	1	1	5	<1	APHA 23 rd Edition, 2130B
v)	Total Dissolved Solids, mg/L, Max.	10	500	2000	208	APHA 23 rd Edition, 2540 C
General Parameters Concerning Substances Undesirable in Excessive Amounts (Foreword and Clause 4)						
i)	Aluminium (as Al), mg/L, Max	0.01	0.03	0.2	<0.01	APHA 23 rd Edition, 3500 -Al B
ii)	Anionic Detergents (as MBAS), mg/l, Max.	0.1	0.2	1.0	<0.1	APHA 23 rd Edition, 5540 C
iii)	Boron (as B), mg/L, Max	1	0.5	1	<1.0	APHA 23 rd Edition, 4500-B C
iv)	Calcium (as Ca), mg/L, Max	2	75	200	25.0	APHA 23 rd Edition, 3500-Ca B
v)	Chloride (as Cl), mg/L, Max.	2	250	1000	19.0	APHA 23 rd Edition, 4500 -Cl B
vi)	Copper (as Cu), mg/L, Max.	0.05	0.05	1.5	<0.05	APHA 23 rd Edition, 3111 B
vii)	Fluoride (as F), mg/L, Max	0.05	1.0	1.5	0.63	APHA 23 rd Edition, 4500 -F D
viii)	Free Residual Chlorine, mg/L, Min	0.1	0.2	1	<0.1	IS 3025 (Part 26)-1986
ix)	Iron (as Fe), mg/L, Max.	0.1	0.3	No Relaxation	<0.1	APHA 23 rd Edition, 3500-Fe B
x)	Manganese (as Mn), mg/L, Max.	0.05	0.1	0.3	<0.05	APHA 23 rd Edition, 3111 B
xi)	Nitrate (as NO ₃), mg/L, Max.	0.5	45	No Relaxation	<0.5	APHA 23 rd Edition, 4500-NO ₃ -B

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[Format No. : SRL / FRM / 17]

TEST REPORT

[Report No. SRL / TPCL(J) / GW-304-2023 Dated: 27.07.2023]

A. SAMPLE DETAILS:-

Name & Address of the Customer	The Tata Power Company Limited Jojobera Power Plant Jamshedpur - 831 016		
Sample Type	Ground Water		
Sampling Location	Material Gate		
Sample Identification No.	GW- 304-2023		
Test Requirement	Chemical		
Sampling Method	APHA 23 rd Edition, 1060B		
Sample Collected By	Scientific Research Laboratory		
Sample Preservation	Preserved	Environmental Condition	Clear
Water Sampling Date	15.07.2023	Sample Receiving Date	15.07.2023
Analysis Started On	15.07.2023	Analysis Completed On	27.07.2023

B. RESULTS

Sl. No.	Characteristic	Minimum Detection Limit	*Requirement (Acceptable Limit)	*Permissible Limits in the Absence of Alternate Source	Results	Test Method Specification
					GW-304-2023	
General Parameters Concerning Substances Undesirable in Excessive Amounts (Foreword and Clause 4)						
xii)	Phenolic Compounds (as C ₆ H ₅ OH), mg/L, Max	0.002	0.001	0.002	<0.002	APHA 23 rd Edition, 5530 C
xiii)	Selenium (as Se), mg/L, Max.	0.005	0.01	No Relaxation	<0.005	APHA 23 rd Edition, 3114 C
xiv)	Silver (as Ag), mg/l	0.1	0.1	No Relaxation	<0.1	APHA 23 rd Edition, 3111 B
xv)	Sulphate (as SO ₄), mg/L, Max.	2.5	200	400	20.3	APHA 23 rd Edition, 4500-SO ₄ ²⁻ E
xvi)	Sulphide (as S), mg/l	0.5	0.05	No Relaxation	<0.5	APHA 23 rd Edition, 4500 S ²⁻ F
xvii)	Total Alkalinity, as Calcium Carbonate, mg/L, Max	5	200	600	86.0	APHA 23 rd Edition, 2320 B
xviii)	Total Hardness (as CaCO ₃), mg/L, Max.	5	200	600	110	APHA 23 rd Edition, 2340 C
Xix)	Zinc (as Zn), mg/L, Max	0.01	5.0	15	0.042	APHA 23 rd Edition, 3111 B
Parameters Concerning Toxic Substances (Foreword and Clause 4)						
i)	Cadmium (as Cd), mg/L, Max	0.02	0.003	No Relaxation	<0.02	APHA 23 rd Edition, 3111 B
ii)	Cyanide (as CN), mg/L, Max	0.02	0.05	No Relaxation	<0.02	APHA 23 rd Edition, 4500 -CN- E
iii)	Lead (as Pb), mg/L, Max	0.1	0.01	No Relaxation	<0.1	APHA 23 rd Edition, 3111 B
iv)	Mercury (as Hg), mg/L, Max	0.001	0.001	No Relaxation	<0.001	APHA 23 rd Edition, 3112 B
v)	Nickel (as Ni), mg/L, Max.	0.05	0.02	No Relaxation	<0.05	APHA 23 rd Edition, 3111 B
vi)	Total Arsenic (as As), mg/L, Max	0.01	0.01	0.05	<0.01	APHA 23 rd Edition, 3114 C
vii)	Total Chromium (as Cr), mg/L, Max	0.05	0.05	No Relaxation	<0.05	APHA 23 rd Edition, 3111 B

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STATUS REPORT ON AFFORSTATION PLAN

1. Trees planted : 24000 between June'2001 to Oct'2001
Planted trees maintained up to March 2003
2. Planted 6521 trees between January 2003 to March 2003
3. Planted 1120 trees between April'2003 to September 2003
4. Planted 200 trees between April'2005 to September 2005
5. Planted 100 trees between October 2005 to March 2006 in phased manner.
6. Planted 500 trees between April 2006 and September 2006.
7. Planted 500 trees between October 2006 to March 2007.
8. Planted 300 trees between April 2007 to September 2007
9. Planted 800 trees between October 2007 to March 2008
10. Planted 300 trees between April 2008 to September 2008
11. Planted 300 trees between Oct 2008 to March'2009
12. Planted 300 trees between April 2009 to Sept'2009
13. Planted 2000 trees between October 2009 to March 2010
14. Planted 3993 trees between April 2010 to September 2010
15. Planted 1007 trees between October 2010 to April 2011
16. Planted 400 trees between April 2011 to September 2011
17. Planted 400 trees between October 2011 to March 2012
18. Planted 400 trees between April 2012 to September 2012
19. Planted 50 trees between October 2012 to March 2013
20. Planted 250 trees between April 2013 to March 2014
21. Planted 350 trees between April 2014 to September 2014
22. Planted 300 trees between October 2014 to March 2015
23. Planted 1591 trees between April 2015 to March 2016
24. Planted 651 trees between April 2016 to September 2016
25. Planted 827 trees between October'2016 to March 2017
26. Planted 500 trees between April'17 to March'18.
27. Planted 560 trees between April'18 to March'19.
28. Planted 1150 trees between April'19 to March '20.
29. Planted 424 trees between April 20 to March 21
30. Planted 491 trees between April 21 to Mar 22
31. Planted 384 trees between April 22 to Mar 23
32. Planted 301 trees between Apr'23 to Sep'23

Total No. of sapling planted 50970 nos. till Sep' 23.

Green Belt: 47.44 Acres

*Green coverage: 33.17 %

*TREE DENSITY = Approx. 1511 per Hectare

*Source: Third Party Tree Census of Jojobera Power Plant in 2017.

Species of plants taken up for forestation- Refer next page.

S. No.	Scientific Name	Common Name
Shrubs		
1	<i>Lagascea mollis</i>	American soft head
2	<i>Cassia tora</i>	Pot cassia
3	<i>Hibiscus rosasinensis</i>	Shoe flower
4	<i>Lantana camera</i>	Lantana
Trees		
5	<i>Shorea robusta</i>	Sal
6	<i>Tectona grandis</i>	Teak
7	<i>Butea monosperma</i>	Flame of the forest
8	<i>Dendrocalamus strictus</i>	Bans
9	<i>Polyalthia longifolia</i>	Mast tree
10	<i>Acacia nilotica</i>	Babul
11	<i>Dalbergia sisoo</i>	Sisoo
12	<i>Terminalia cremulata</i>	Senha
13	<i>Lagerstroemia parviflora</i>	Lendya
14	<i>Bauhinia variegata</i>	Kachnar
15	<i>Ficus Bengalensis</i>	Vad
16	<i>Ficus religiosa</i>	Peepal
17	<i>Feucana leucocephala</i>	Subabul
18	<i>Terminalia catappa</i>	Jungli Badam
19	<i>Anogeissus latifolia</i>	Dhaura
20	<i>Maduca indica</i>	Mohwa
21	<i>Albizia lebbeck</i>	Black sirish
22	<i>Emblica officinalis</i>	Amla
23	<i>Terminalia arjuna</i>	Arjuna

Operational Expenditure for Environment during FY 2022-23 (Jojobera Station)			
Sl. No	Activity/Category	Condition reference	FY 2022-23 (In Rs.)
1	Environment Monitoring jobs	EC unit 5 (iv)(v)(vii)(xvi)(xvii) ,CTO Unit 5 A (xi)	2617880
2	Green Belt Development & Maintenance	EC unit 5 (xviii),CTO Unit 5 A (ix)	1818380
3	O & M of ETP & STP	EC unit 5 (IX &X),CTO Unit 5 A (x)	4122920
4	ETP Water treatment chemical cost		791780
5	O & M of CAAQMS	CTO unit 5 (i)	1752414
6	Mobile water sprinkler	EC unit 5 (xvii),CTO Unit 5 B (viii)	2410311
7	Ground water level monitoring		98535
8	Misc. Environment Consultancy services		2407200
9	Analysis of Flue gas		89680
10	Radioactivity test of Coal and Ash		64192
11	Ash compliance audit		407282
12	Biodegradable Waste converter System		422204
13	Tree Inventory & Carbon Sequestration job		322140
Total Expenditure			17324919



SCIENTIFIC RESEARCH LABORATORY

(Analytical & Environmental Engineering Laboratory)

Laboratory Recognised By Jharkhand State Pollution Control Board
An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 (OHSAS) Certified

Annex-X

90, Lake East (4th Road) Santoshpur, Jadavpur, Kolkata - 700 075
Tele Fax : (033) 2416 2267, Tel.: (033) 2416 1311
E-mail : jyotirmoysrl@gmail.com, srlkolenvironmental@gmail.com
Website : www.srlkolkata.com

C-144, Aman Green City, Pundang, Ranchi - 834004, Jharkhand
Tel. : 06512950060, Mobile : 9470130700
E-mail : nirajksingh2003@yahoo.co.in.

DETAILS OF ASH SAMPLE

[Format No. : SRL / FRM / 51]

Name & Address of the Customer : The Tata Power Company Limited
Jojobera Power Plant
Jamshedpur - 831 016

Sampling Location/Mark : HEAVY METAL ANALYSIS IN BOTTOM ASH

Sample Identification No. : MISC. ASH-212-2023

Sample Collected By : Scientific Research Laboratory


Environmental Condition : Dry

Sample Receiving/Analysis Starting On : 14.07.2023 Analysis Completed On : 10.08.2023

TEST REPORT OF BOTTOM ASH SAMPLE [HEAVY METAL] [SRL/ TPCL (J) / MISC. ASH-212-2023 Dated: 10.08.2023]

Sl. No.	PARAMETERS	Unit	Results
			MISC. ASH-212-2023
1.	Total Arsenic (as As)	mg/kg	0.038
2.	Cadmium (as Cd)	mg/kg	<0.5
3.	Mercury (as Hg)	mg/kg	<0.1
4.	Copper (as Cu)	mg/kg	23.5
5.	Lead (as Pb)	mg/kg	9.1
6.	Nickel (as Ni)	mg/kg	14.6
7.	Zinc (as Zn)	mg/kg	58.9
8.	Chromium (as Cr)	mg/kg	40.6
9.	Manganese (as Mn)	mg/kg	62.5
10.	Silver (as Ag)	mg/kg	<1
11.	Iron (as Fe)	mg/kg	5.3
12.	Cobalt (as Co)	mg/kg	1.9

For Scientific Research Laboratory


Tripti Ghosh
(Senior Chemist)

- The test report shall not be reproduced, except in full, without written approval of the company.
- Results relate only to the parameters tested.
- No Repeat Analysis will be entertained after 15 days from the date of reporting.
- All relevant information of customers regarding testing are treated as "Confidential".

CSR Highlights for April'23 to Sep'23 (H1-FY 24)

A. Education Program:

1. **English learning improvement** – Total no. of 1948 students from class I to VIII benefited by this program. Tata power has supported Six government Schools nearby Jojobera power plant.
 - **Adult Literacy: No. of Beneficiaries-249, No. of Centers- 55**, which is run by 55 students who are ambassador for spreading functional literacy and digital numeracy.
 - **Eco Club: No. of participants- 850** children are the part of ECO club member.
 - **Digital Literacy:** 660 Students used tablets for exploring internet, google search, learning rhymes, word meaning, story, cartoons videos and basic knowledge of computer through Digital Mobile Van and BUJUS classes.
 - **Diva's Club:** 470 Adolescent Girls participated and watched documentary video on various issues related to girls like early Marriage, girl's education, health etc.
 - **Library Club:** 600 Students participated and discussed about National Book Day.
 - **School Vocational Training:** 150 Students of Class VI to VIII Trained for Domestic electrician.
 - **Remedial Classes:** 410 Students are learning Science, math and English through remedial class.
 - **Career Counselling:** Counselling done for 470 students near Govt. Schools near Jojobera.

2. **Lab on Bike-**To Increase in awareness, curiosity, confidence and science knowledge we have implemented Lab on bike projects for 10 Government School near Jojobera.
 - Science Lab is set up on a bike with a teacher who is covering schools as per schedule.
 - Students learn science by doing experiments.
 - Participation on Science fair, Urja Mela etc.

3. **Woman Literacy Centre:** 4 Woman literacy Centre covering 100 Woman for functional literacy programme including digital and financial literacy.

Resource Mobilization and Partnership:

1. **BYJU's App Support:** Partnership with Byjus's to reinforce the learning of students. The apps were installed on the parent's mobile. Whatever the students learn in schools can explore more on these topics via Byju's app and our teachers monitor and even assign task to make students practically understand the topic.
2. **Katha:** Partnership with Katha online story telling platform, Delhi where children are learning by watching the cartoon, rhymes and stories.
3. **Jangla (UK):** Jangla has provided free Wi-Fi setup box for schools, through these students and teacher are able to learn online, explore internet.

4. **National Minority Finance Development Corporation (NMFDC):** NMFDC has provided the Digital van which is moving to government school and community for digital learning among students, WSHG group and community member.
5. **TCE: Tata Consulting Engineers** has provided Laptop for Digital Van.
6. **EY Stem: for girls:** EY Stem education provided online STEM classes for girl.



B. Entrepreneurship/ Livelihood

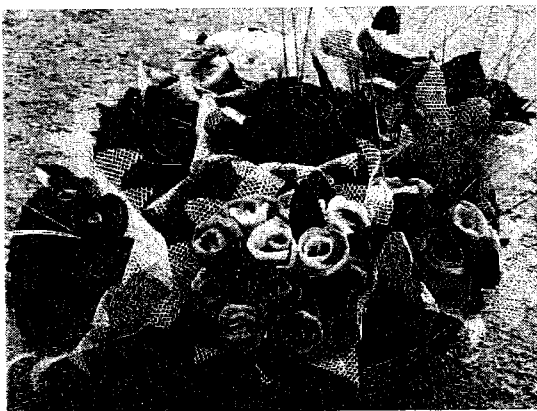
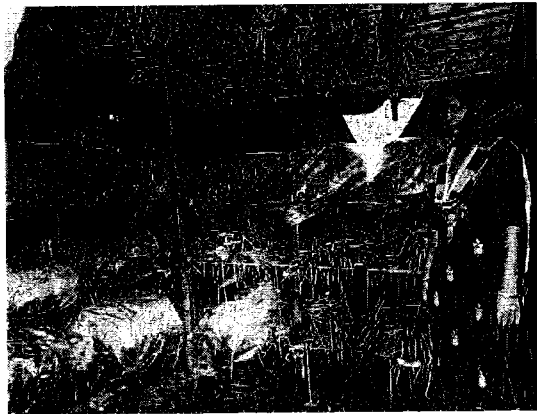
- **Anokha Dhaga Project:** Under livelihood Project through Dhaaga 714 women trained under the project in different activities as bellow
 - i. Stitching activities
 - ii. Embroidery- Chikankari, Kantha
 - iii. Screen Printing
 - iv. Jute Handicrafts
 - v. Batik work
 - vi. Macramé work
 - vii. Tie & Dye work
 - viii. Upskilling for old and new beneficiaries
- More than 118717 **products** produced/stitched during the project period, and the revenue was of **Rs. 17.13 lakhs** during the project period, orders from corporates, individuals, exhibitions, local partners, etc.
- Under livelihood Project through Dhaaga, SHG member's (73) per month average income was more than **INR 5000.00** including their own initiatives.
- Training of SHG members for producing Katran product via waste cloths.
- Under **Resource Mobilization/partnerships Rs. 6.60 lakhs** were mobilized through partnering for livelihood program under Dhaaga from Stone Soup, Himalaya, Jangala- UK, Eco Femme, Kalamandir and others.
- More than 30 types of products produced this year.
- Participated in than 5 exhibitions by SHGs.
- All 13 SHGs under Anokha Dhaaga registered under Jharkhand State Livelihood Missions and received a grant of INR 10000.00
- A parent SHG converted into Private Limited Company for creating work orders and marketing of products in the name of "**Just Right Hands Pvt. Comp. Ltd**" with an investment of 3 lacks by philanthropy donation.





2: **SHGs and FPO's-** To augment income level of underprivileged, handholding support was provided to 210 (comprising 2564 women members) Self-help Groups (SHGs) at Jojobera.

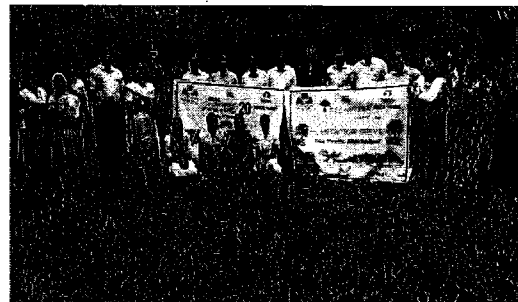
- Tribal Art & Painting-majority of tribal community is involved in this activity to make tribal people aware of their culture and to generate income out of this activity. By providing proper training to 41 members to build up their skill this training has been taken place. They are skilled up and later participants are linked with exhibitions for being motivated to go further.
- Training & handholding on paper craft and Bamboo Craft - 40 SHG's are involve in paper crafts & bamboo Craft and producing the home decorative items.
- More than 278 beneficiaries were facilitated for Government schemes through which 65.65 lakh resources were mobilized.
- Income generated from different trades Rs 34.33 Lac.
- In FY23, 10 new SHGs with 126 Members (comprising women) were formed along with bank linkages.
- SHGs were introduced to Paddy and Milky Mushroom cultivation. 200 SHGs are engaged in mushroom cultivation through ~ 550 beds. The income raised from cultivation would amount to Rs. 1.50 lakh. Mushroom byproduct training like- Mushroom Badi, Pickle, Cookies, Soup, Powder etc has been given to more than 100 women of different SHGs.
- Kitchen Gardening/Backyard farming: Women are encouraged to undertake kitchen gardening/ backyard farming. At present, ~ 300 members are involved in kitchen gardening/ Backyard Farming in total 22 acre of land. Total net income generated from kitchen gardening/backyard farming is ₹6.33 lakh.
- Training & Handholding on Production of Bio degradable Leaf/paper plates & Cups to 20 beneficiaries and revenue generated is Rs. 1.60 lakhs.
- Book Keeping Training & Capacity Building of SHG leaders (No of Beneficiaries-126)-orientation for capacity building of SHG members have been taken place and for record maintaining.
- Strengthening, Consolidation & Handholding of 210 SHGs & 10 V.Os

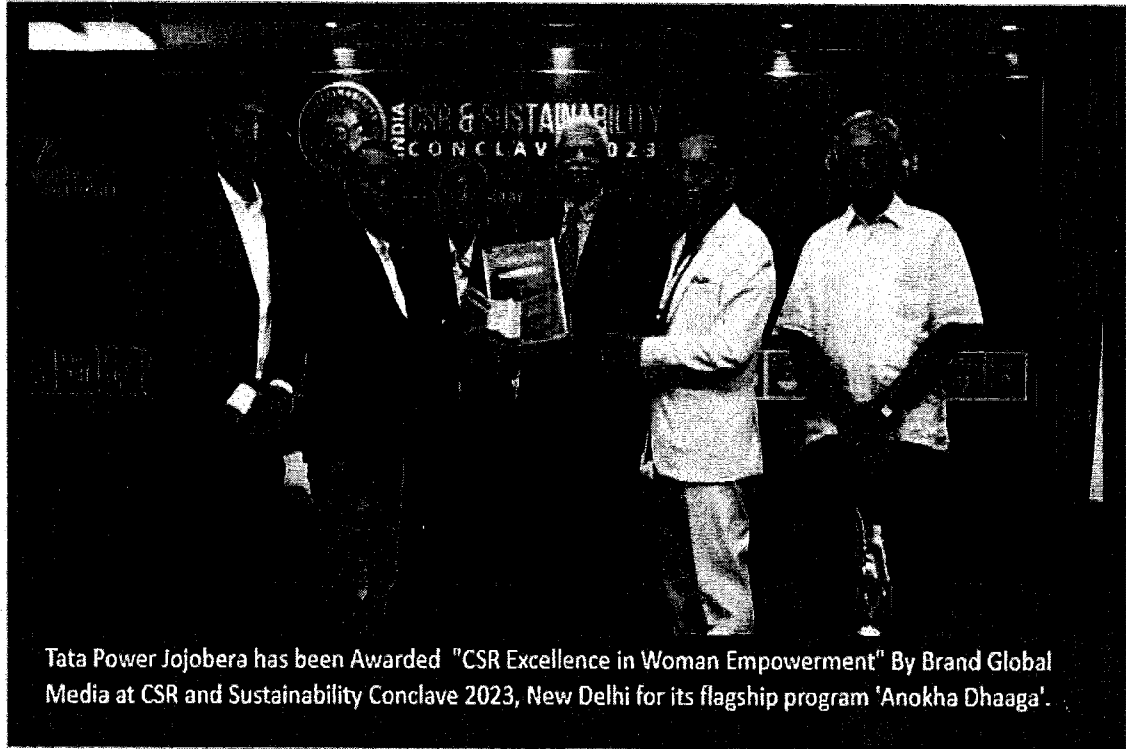
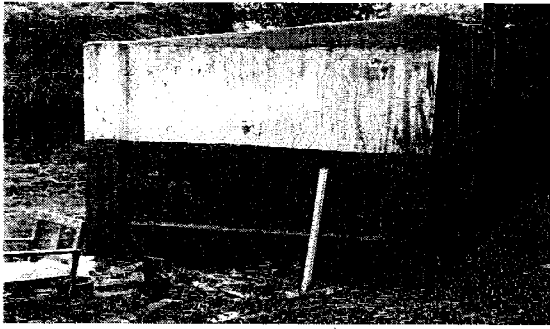




Others:

- 1) Under Stakeholder engagement, cleaning and spraying of bleaching powder was undertaken, street Lights & sports item distribution was organized for betterment of community in the surrounding area.
- 2) Supported to 55 disable person at R. P Patel Cheshire Home at Patel Bagan by providing them basic need item like soap, detergent, snacks & fruits, grocery items etc.
- 3) Employee volunteering has been undertaken on various issues like No Tobacco, Environment day, Tata Volunteering Week and clocked 900+ Volunteering hours to cover 3588 Beneficiaries.
- 4) Tree Mitra/ Plantation- 200+ Plant sample has been planted. The purpose of tree plantation is to save the endangered environment and to beautify our life. Trees are valuable gifts of nature. As we know that trees are the foremost source for producing oxygen in the environment, they help to reduce the level of CO2. Saplings were sown to strengthen them economically and socially.
- 5) White washing and repairing work is done at probation home Ghagidih, Jamshedpur.
- 6) The Tata Power Company Limited Jojobera Power Plant's has been awarded for "Excellence in Woman Empowerment" at CSR and sustainability conclave, New Delhi 2023 by Brands Global Media.





Tata Power Jojobera has been Awarded "CSR Excellence in Woman Empowerment" By Brand Global Media at CSR and Sustainability Conclave 2023, New Delhi for its flagship program 'Anokha Dhaaga'.

Jobbera Power Plant, Tata Power, Jamshedpur
Fly Ash Generation & Utilisation (Station)

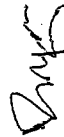
UNIT# 1 to 4	Reports Unit # 1 to 4												Station (April-23 to June-23)									
	Apr-23				May-23				Jun-23				Station (April-23 to June-23)									
	UNIT# 1	UNIT# 2	UNIT# 3	UNIT# 4	TOTAL	UNIT# 1	UNIT# 2	UNIT# 3	UNIT# 4	TOTAL	UNIT# 1	UNIT# 2	UNIT# 3	UNIT# 4	TOTAL	UNIT# 1	UNIT# 2	UNIT# 3	UNIT# 4	TOTAL		
Description																						
Middling(as fired) -MT	0	23442	29397	0	52839	5657	0	7211	26376	39244	12013	0	0	50860	62873	17670	23442	36608	77236	154955		
lb Valley & others (as fired) -MT	30254	29375	25981	53492	139102	24000	53008	46245	24975	148228	15131	54312	51176	0	120619	69385	136695	123402	78467	407949		
TOTAL COAL -MT	30254	52817	55378	53492	191941	29658	53008	53456	51350	187472	27143	54312	51176	50860	183491	87055	160137	160010	155703	562904		
TOTAL ASH GEN-MT	10235	22853	23854	18246	75188	10469	23140	23462	19790	76861	10072	22098	19589	23793	75552	30776	68091	66905	61829	227601		
Total ASH UTILISATION -MT	8338	18617	19432	14864	61252	7464	16497	16728	14109	54798	7174	15740	13953	16948	53815	22976	50855	50113	45921	169865		
% TOTAL ASH UTILISATION	81.46	81.47	81.46	81.46	81.47	71.29	71.29	71.29	71.29	71.29	71.23	71.23	71.23	71.23	71.23	75	75	75	74	75		



Basudev Pansdah
Chief - O&M


Mukul Singh
Head-Env

Jojobera Power Plant, Tata Power, Jamshedpur
Fly Ash Generation & Utilisation (Station)

Description	UNIT# 5		(April-23 to June-23)	
	Apr-23 UNIT# 5	May-23 UNIT# 5	Jun-23 UNIT# 5	TOTAL
Middling(as fired) -MT	50701	54728	50795	156224
lb Valley & others (as fired) -MT	0	0	0	0
TOTAL COAL -MT	50701	54728	50795	156224
TOTAL ASH GEN-MT	21969	23581	22811	68361
Total ASH UTILISATION -MT	17897	16812	16248	50958
% TOTAL ASH UTILISATION	81.47	71.29	71.23	74.54

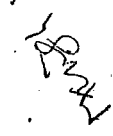

Basudev Hansdah
Chief- O&M


Mukul Singh
Head-Env

Jobbera Power Plant, Tata Power, Jamshedpur
Fly Ash Generation & Utilisation (Station)

Description	Reports Unit # 1 to 4																			
	Jul-23				Aug-23				Sep-23				Station (July-23 to Sept-23)							
	UNIT# 1	UNIT# 2	UNIT# 3	UNIT# 4	TOTAL	UNIT# 1	UNIT# 2	UNIT# 3	UNIT# 4	TOTAL	UNIT# 1	UNIT# 2	UNIT# 3	UNIT# 4	TOTAL	UNIT# 1	UNIT# 2	UNIT# 3	UNIT# 4	TOTAL
Middling (as fired) -MT	713	0	0	0	713	0	2057	1536	0	3593	0	12253	11323	0	23576	713	14310	12859	0	27882
lb Valley & others (as fired) -MT	29414	58537	52680	50590	191222	27186	53162	52261	50065	182674	25867	43668	44231	54053	167818	82467	155367	149172	154708	541714
TOTAL COAL -MT	30127	58537	52680	50590	191934	27186	55219	53797	50065	186267	25867	55921	55554	54053	191394	83180	169677	162031	154708	569596
TOTAL ASH GEN-MT	10541	22025	19335	22915	74816	8039	18971	20202	21428	68640	7684	22687	22402	22986	75759	26264	63683	61939	67329	219215
Total ASH UTILISATION -MT	9113	19041	16717	19812	64683	6578	15522	16529	17533	56162	6979	20607	20348	20878	68812	22670	55170	53594	58223	189657
% TOTAL ASH UTILISATION	86.45	86.45	86.46	86.46	86.46	81.83	81.82	81.82	81.82	81.82	90.83	90.83	90.83	90.83	90.83	86.32	86.63	86.53	86.48	86.52


Basudev Haridash
Chief- O&M


Mukul Singh
Head-Env

Jojobera Power Plant, Tata Power, Jamshedpur

Fly Ash Generation & Utilisation (Station)

UNIT# 5	Jul-23		Aug-23		Sep-23		(July-23 to Sept-23)
	Description	UNIT# 5	Description	UNIT# 5	Description	UNIT# 5	
	Middling(as fired) -MT	49770		47496		46656	143922
	lb Valley & others (as fired) -MT	0		0		0	0
	TOTAL COAL -MT	49770		47496		46656	143922
	TOTAL ASH GEN-MT	22110		19577		19840	61527
	Total ASH UTILISATION -MT	19116		16018		18019	53153
	% TOTAL ASH UTILISATION	86.46		81.82		90.82	86.39

Mukul Singh
Mukul Singh
Head-Env

Basudev Hansdah
Basudev Hansdah
Chief- O&M

Compliance status for Office Memorandum - Amendment in Environment Clearance for change in coal source by MOEF & CC dated 11.11.2020

S No	Conditions	Compliance Status
a)	Details regarding change in source (location of the source, proposed quantity, distance from the power plant and mode of transportation), quality (Ash, Sulphur, Moisture content and Calorific value) shall be informed to the Ministry and its concerned Regional Office. The quantity of coal transported from each source along with the mode of transportation shall be submitted as part of EC Compliance Report	We have not changed the source of coal in April'23 to September'23.
b)	The applicable flue gas emissions standards for Particulate Matter, Sulphur Dioxide, Oxides of Nitrogen and Mercury shall be complied inline with Ministry's Notification vide S.O. 3305(E) dated 7.12.2015 and subsequent emissions. A progress of implementation and its compliance shall be submitted as part of Compliance Report	We have already placed the work order for installation of FGD (Flue gas desulfurization) system and approx. 75% work has been completed. The status of compliance for emission norms in line with Ministry's Notification vide S.O. 3305(E) dated 7.12.2015 and subsequent amendments is being attached as Annex XIV.
c)	Ash content in the Coal and Coal transportation is governed by the Ministry's Notification vide S.O. 1561 (E) dated 21.5.2020. As far as possible, Coal transportation shall be done by rail/ conveyer or other eco-friendly modes. However, road transportation is allowed with tarpaulin covered trucks till the railway/ conveyor belt infrastructure is made available. A progress (Physical and financial) of rail connectivity from nearest railway siding or conveyor connectivity to the power plant shall be submitted in the EC compliance report.	We are transporting most of the coal by rail network and only a small quantity (0.44% in April'23 to Sep'23) is transported by tarpaulin covered trucks.
d)	Additional ash pond is not allowed due to increase in ash content in the raw coal as against the ash pond permitted in the Environmental Clearance. The 100% flyash utilisation is to be achieved within 4 years in line with Flyash Notifications dated 14.9.1999, 27.8.2003, 3.11.2009 & 25.1.2016 and amended time to time or extant regulations on Fly ash Utilisation.	The Fly ash utilization is 100.06 % for the year 2022-23.
e)	In case of exceptional circumstances, project proponents may approach the Ministry for seeking permission to use an emergency ash pond with cogent reasons, if any.	Not Applicable
f)	The details regarding monthly generation, utilisation and disposal of flyash (including bottom ash) shall be submitted to the Ministry and its Regional Office.	The details regarding monthly generation, utilisation and disposal of fly ash (including bottom ash) are attached as Annex XII.

Month	Apr-23			May-23			Jun-23			Jul-23			Aug-23			Sep-23			Total Source Wise			
	By Rail Network	By RCR Network	By Road Network	By Rail Network	By RCR Network	By Road Network	By Rail Network	By RCR Network	By Road Network	By Rail Network	By RCR Network	By Road Network	By Rail Network	By RCR Network	By Road Network	Total Rail Network	Total RCR Network	Total Road Network	Total Rail Network	Total RCR Network	Total Road Network	
CCL	3616.50	85992.89	0.00	0.00	70924.56	0.00	18243.23	70856.19	0.00	64078.22	50330.17	0.00	35483.76	50861.28	0.00	157093.18	351467.31	0.00	157093.18	351467.31	0.00	
MIDD	30270.42	0.00	0.00	49344.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14858.41	0.00	0.00	120866.02	0.00	0.00	120866.02	0.00	0.00	
ECL	7786.06	0.00	0.00	27644.80	0.00	15777.25	0.00	15455.89	0.00	19839.99	0.00	0.00	11544.82	0.00	0.00	98059.81	0.00	0.00	98059.81	0.00	0.00	
MCL	14223.81	4133.15	0.00	7100.11	8323.35	0.00	7984.61	3253.15	0.00	16308.31	0.00	0.00	27711.34	0.00	0.00	84222.10	15709.65	0.00	84222.10	15709.65	0.00	
NCL	7749.67	0.00	0.00	3871.10	0.00	0.00	8081.03	0.00	0.00	15967.05	0.00	0.00	3981.55	0.00	0.00	47497.36	0.00	0.00	47497.36	0.00	0.00	
TAILING	0.00	0.00	0.00	0.00	0.00	129.21	0.00	0.00	6152.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6281.83	
PRIVATE COAL(UNIT#4)	0.00	0.00	0.00	0.00	0.00	0.00	7654.05	0.00	0.00	22491.34	0.00	0.00	7691.20	0.00	0.00	37836.59	0.00	0.00	37836.59	0.00	0.00	
MIDDLING COAL(UNIT#4)	0.00	0.00	0.00	0.00	0.00	0.00	100466.40	0.00	0.00	62999.22	0.00	0.00	42198.17	0.00	0.00	225264.09	0.00	0.00	225264.09	0.00	0.00	
IEL(UNIT#5)	32663.65	0.00	0.00	74800.50	0.00	0.00	23603.35	0.00	0.00	55336.66	0.00	0.00	72273.16	0.00	0.00	296698.43	0.00	0.00	296698.43	0.00	0.00	
Total Qty.	96520.11	90126.04	0.00	162760.65	79248.01	129.21	181809.92	74089.34	6152.62	252637.69	50330.17	0.00	224037.58	50861.28	0.00	149771.63	22522.12	0.00	149771.63	22522.12	0.00	6281.83

75

Emission Norms as per New Emission rules SO 3305 (E) dated 07.12.2015 and subsequent Amendments								
SI No	Parameter	Unit	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	
1	PM	mg/NM3	100	100	100	50	50	
2	SOx	mg/NM3	600	600	600	600	600	
3	NOx	mg/NM3	600	600	600	450	450	
4	Hg	mg/NM3	Not Applicable	Not Applicable	Not Applicable	0.03	0.03	
5	Specific water consumption	M3/MWHR	3.5					

Compliance Status of New Emission rules SO 3305 (E) dated 07.12.2015 and subsequent Amendments								
SI No	Parameter	Unit	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	
1	PM	mg/NM3	Complying	Complying	Complying	Complying	Complying	
2	SOx	mg/NM3	Not Complying	Not Complying	Not Complying	Not Complying	Not Complying	
3	NOx	mg/NM3	Complying	Complying	Complying	Not Complying	Not Complying	
4	Hg	mg/NM3	Not Applicable	Not Applicable	Not Applicable	Complying	Complying	
5	Specific water consumption	M3/MWHR	Complying					

- Note : 1. Work for FGD Installation under Progress.
2. Work for DeNOx installation Unit 4 & 5 under Progress.