

JSWSL/CPPII/ENV/VT/Form-V/2023-24/97

26th September 2023

To:

The District Environmental Engineer
Tamil Nadu Pollution Control Board
1.276, Meyyanur Main Road,
Siva Tower, Salem – 4.

Dear Sir,

Sub: CPP II - Submission of Environmental Statement (Form-V) for the financial year 2022-23

Ref: CTO dated 08.04.2022 - General Condition 16C under Water Act, 1974

Please find enclosed herewith the Environment Statement duly filled in Form-V under the Environmental (Protection) Act, 1986 for the period of **April 2022 – March 2023**.

This is for your kind information and kindly acknowledge the receipt of the same.

Thanking you,

For JSW Steel Limited, CPP-II



BNS Prakash Rao
Executive Vice President

Encl: as above

CC:

The Joint Chief Environmental Engineer (M),
Tamil Nadu Pollution Control Board
Salem Region, No # 9, 4th Cross street, Brindhavan road,
Fairlands, Salem -16

The Member Secretary,
Tamil Nadu Pollution Control Board
76, Mount Salai, Guindy,
Chennai – 600 032

Salem Works

P.O. Pottaneri, Mecheri,
Mettur - Tk, Salem - Dt. Pin : 636 453
Tamilnadu, India.

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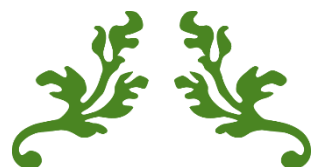
Registered Office

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ENVIRONMENTAL STATEMENT

[Form – V]

Reporting Period : FY 2022 - 2023



JSW Steel Limited, CPP-II Salem Works



Submitted by:
JSW Steel Limited., Salem Works,
Pottaneri (P.O), Mecheri,
Mettur-(Tk), Salem(Dt)
Tamil Nadu, India, 636453

FORM-V

(Rule 14 of The Environment Protection, 1986)

Environmental Statement for the financial year ending on 31st March 2023

PART-A

1	Name and address of the owner, occupier of the industry Operation or process	Mr. B. N. S. Prakash Rao Executive Vice President JSW Steel Limited, Salem Works Pottaneri & M. Kalipatti Village Salem District – 636 453
2	Industry category Primary	Red – Large
3	Production Capacity	Captive power - 3 X 30 MW
4	Year of establishment	2006 & 2019
5	Date of the last Environmental Statement submitted.	23.09.2022

Production details against the Consent quantity

Sl. No.	Description	Unit	Consented Quantity	Actual Quantity
Product details				
1	Power generation (Captive)	MW	90	63.5

PART - B

Water and Raw Material Consumption:

1. Water consumption in m³/d @ 365 days

1. Process : 38 m³/day
2. Cooling : 3337 m³/day
3. Domestic : 62 m³/day

Sl. No.	Name of Products	Process (specific) Water consumption per unit of products	
		During the previous Financial year (2021-2022)	During the current Financial year (2022-2023)
1	Captive power (m ³ /MWH)	2.25	2.20*

* 2 no. of WCC & 1 no. of ACC

2. Raw material consumption and production

Sl. No.	Name of raw materials	Name of Products	Consumption of raw material per unit of output	
			During the financial year (2021 – 22)	During the financial year (2022 – 23)
1	Coal (MT)	Power Generation	143259	117523
2	Biomass (MT)		0	6007
3	LDO (KL)		12.1	15.8
4	Bed Material (MT)		574	311.5

Part C

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

(a) Water Environment:

Sl. No.	Pollutants	Quantity of Pollutants discharged (Kg/day)	Concentration of Pollutants discharged (mg/l)	Percentage of variation from prescribed standards with reasons.
1	Pollutants discharged due to the treated sewage of Plant STP	NA	NA	--

As per the CTO the approved quantity of sewage generation is about 3.7 KLD which is treated through septic tank and followed by soak pit.

As per the CTO the approved quantity of trade effluent generation is 705 KLD from CPP II – 90 MW and the year average trade effluent generation is about 474 KLD and the same is sent to Steel Plant Guard Pond facility for collection, storage, treatment and reuse in Steel plant as per the Consent. In the CPP II online analyzers like pH, TSS and Temperature are installed (trade effluent pit discharge) and the real time values are connected with WQW, TNPCB and CPCB servers. There is no Sewage or trade effluent discharge within or outside the premises.

(b) Air Environment

Details of the Stack Emission from the Plant

The details of the average stack emission for the year 2022 – 23 are given below

Sl. No.	Pollutants prescribed	Prescribed limits	Quantity of pollution Discharged (kg/day)	Con. of pollution in Discharged (mg/Nm ³)	% of variation from Prescribed Standards with reasons.
1	SPM	50	95	26.6	Air quality parameters are within the prescribed standards by TNPCB.
2	SO ₂	--	1264	525	
3	NO _x	--	1092	453	

PART-D

HAZARDOUS WASTES (Generation)

As specified under Hazardous and other Wastes (Management & Transboundary Movement) rules 2016.

(a) From process

Sl. No.	Hazardous Wastes generated	Authorization Qty. as per HWA (MT/Annum)	Total Quantity (MT)	
			During previous financial year (2021 – 2022)	During current financial year (2022 – 2023)
1	3.3 - Sludge and filters contaminated with oil	0.5	-	-
2	5.1 - Used / Spent oil	3.5	3.29	1.41
3	5.2 - Wastes / Residues containing oil (Used Grease)	2.5	-	0.23
4	5.2 - Waste / Residues containing oil (Oil Soaked cotton Waste)	3.5	0.64	0.62
5	33.1 - Discarded containers / Barrels / Liners contaminated with hazardous waste / Chemicals	2.0	0.85	0.17
6	35.3 - Chemical Sludge from wastewater treatment	20.0	0.09	1.69
7	35.3 - Chemical Sludge from wastewater treatment (ESEP)*	5.0	0	0

- As per the CTO dated 08.04.2022 unit 3 Trade Effluent 5 KLD is also connected with Steel Plant Guard Pond for treatment and disposal. Hence, Elevated Solar Evaporation Pan not applicable and salt generation also not applicable

(b) From Air Pollution Control Facilities

No Hazardous waste generated from APC measures.

The Batteries (Management & Handling) Rules, 2001 Disposal

Sl. No.	Battery Waste disposal	Total Quantity (MT) Disposal	
		During the previous financial year (2021– 2022)	During the current financial year (2022 – 2023)
1	Lead and lead compounds (Used Battery)	1.88	0.290

PART – E

SOLID WASTE (Generation)

Sl. No.	Solid Wastes	Total Quantity (MT)	
		During the previous financial year (2021– 2022)	During the current financial year (2022– 2023)
a.	From Process		
i	Used Bed material	2796.12	756
ii	Fly ash	NA	NA

b.	From Pollution Control Facility		
i	Fly Ash including ESP	9407.7	8198
c.	Quantity of recycled or re-utilized within the plant		
i	Used Bed Material	2042.3	740
ii	Fly Ash	0	0
d.	Sold/Disposed		
i	Fly ash	9435.94	8133

PART – F

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

TPA- Tonnes Per Annum

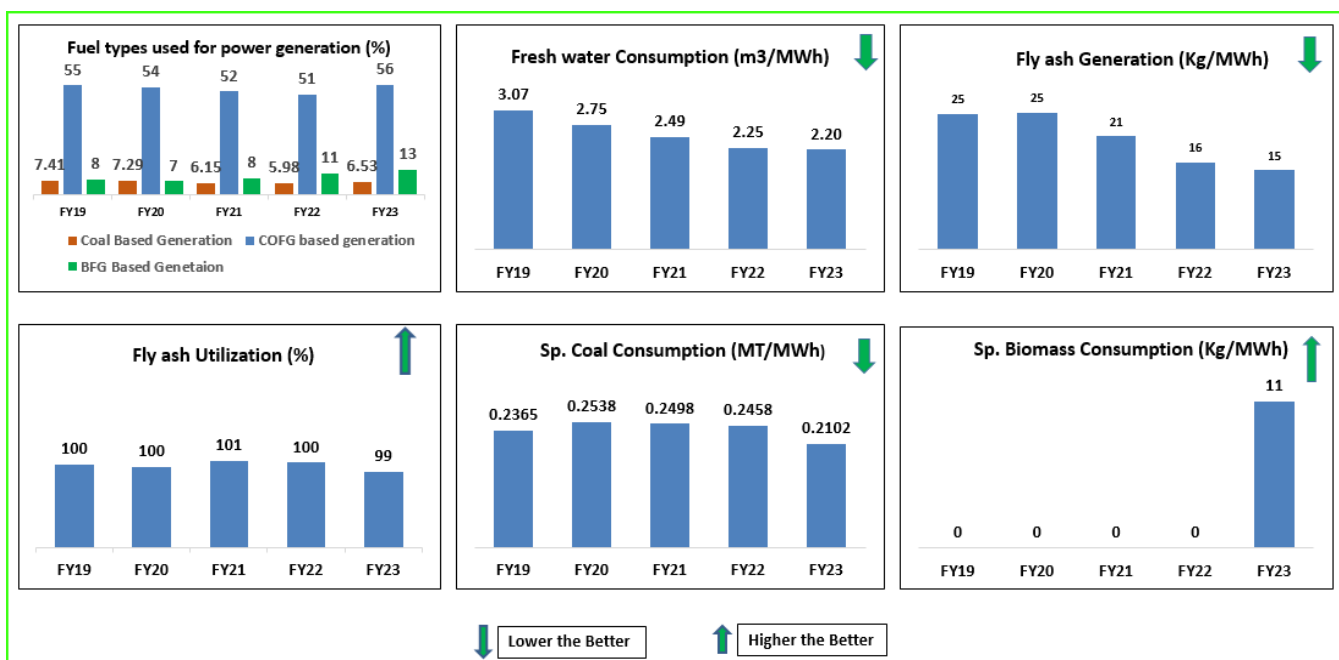
Sl. No.	Description of the Waste	Characteristics	Disposal Quantity (TPA)	Method of Disposal
Non Hazardous Waste				
1	Used Bed Material	Non Hazardous	740	Reused in AFBC boiler
2	Fly Ash	Non Hazardous	8133	100% disposed to Fly ash bricks manufacturing units .
Hazardous Waste				
1	Waste / Residues containing oil (Oil soaked cotton waste)	Hazardous	0.95	Sent to TNPCB authorized agency
2	Waste / Residues containing oil (Used Grease)	Hazardous	0.23	Sent to TNPCB authorized agency
3	Used / Spent oil (Litres / Year)	Hazardous	1.41	Sent to TNPCB authorized agency
4	Discarded containers / Barrels / Liners contaminated with hazardous waste / Chemicals	Hazardous	0.17	Sent to TNPCB authorized agency
5	Sludge and filters contaminated with oil (Furnace oil cleaning sludge once in 5 Years)	Hazardous	-	As per the CTO dated 08.04.2022 unit 3 Trade Effluent 5 KLD is also connected with Steel Plant Guard Pond for treatment and disposal. Hence, Elevated Solar Evaporation Pan not applicable and salt generation also not applicable

PART-G

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

The implementation of ISO 14001 lead to cost savings through the reduction of waste, energy consumption, and other resources and enhanced its overall competitiveness. Pollution control measures adopted have several positive impacts on conservation of natural resources and cost savings. These measures often brought resource conservation & waste reduction, energy efficiency, water conservation and improvement in the air quality.

Sl. No.	Measures adopted	Impact on Conservation of natural resources
1	Minimize Coal consumption	Maximize power generation through Waste heat and usage of Biomass in coal based boiler. Resulted in reduction of CO2 emission as well as minimize the natural resource depletion. (Graph attached below)
2	Water/Effluent	As a part of long term planning targets set and achieved for reduction of specific water consumption and it is a continual process. (Graph attached below). Out of 90 MW power generation 60 MW generation is installed with Water Cooled condenser and 30 MW is installed with Air Cooled Condenser. (Graph attached below)
3	Fly ash utilization	Since minimize the usage of coal consumption for power generation with low ash coal (8-10%) the entire fly ash generated from the coal based boiler is 100 % disposed to Fly ash brick manufactures. (Graph attached below)
4	Sustainable Practices	Use of sensible heat, BF gas as fuel in order to reduce fuel/energy consumption and intern reducing GHG emissions to achieve Annual targets.



PART – H

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

- ❖ Captive Power Plant (CPP II) is located within the steel plant premises and CPP II also covered green belt for the area of 33 %
- ❖ About 10256 Tree saplings planted in & around the plant premises during FY 2023 and so far the total quantity of tree plantation is about 2.62 Lakhs with the survival rate of 90%. CO₂ sequestration study is conducted during FY 2023. Total quantum carbon sequestration by the existing green belt in the Year 2022-23 is 5699 MT. For the FY 2024 the tree plantation target is 11000 no. of saplings.

Sl. No.	Month	Total no. of trees planted
1	Apr-22	158
2	May-22	1232
3	Jun-22	678
4	Jul-22	420
5	Aug-22	498
6	Sep-22	690
7	Oct-22	937
8	Nov-22	1913
9	Dec-22	1085
10	Jan-23	1205
11	Feb-23	948
12	Mar-23	492
	2022-23	10256

- ❖ Rain water harvesting capacity enhancement with this overall capacity is 71850 m³.
- ❖ Wastewater segregation project to avoid mixing with storm water drains.
- ❖ Climate Action plan road map till 2030 to minimize GHG emissions
- ❖ CCTV installation for monitoring fugitive emission within the premises.

World Environment day celebration June 2022



World Environment Day Celebration June 2022



World Water day celebration April 2023



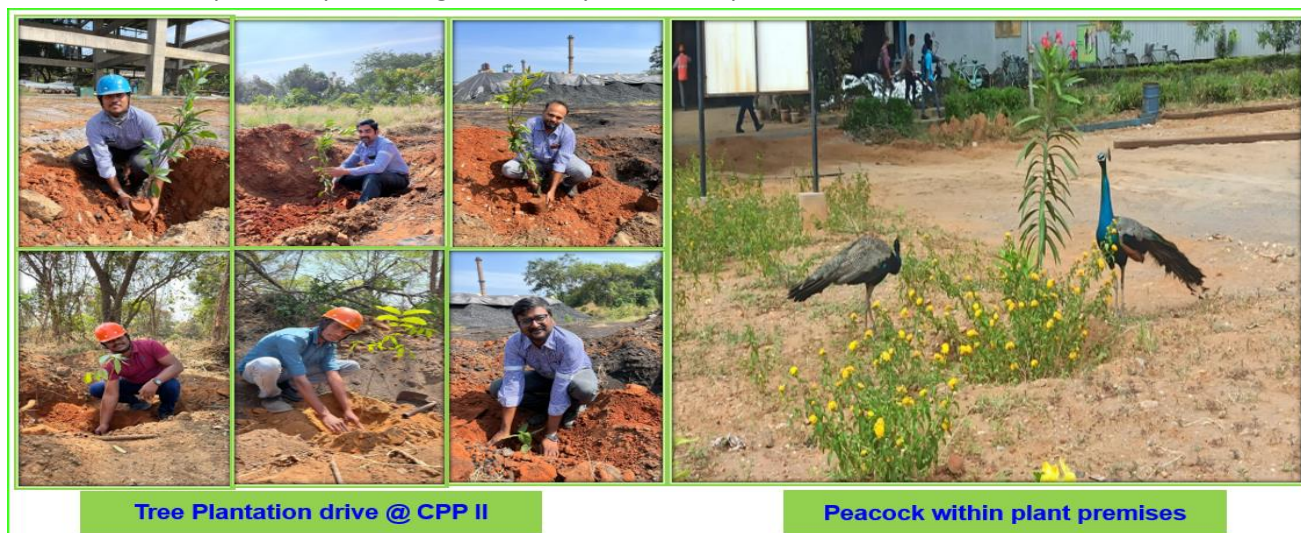
PART – I
MISCELLANEOUS

Any other particulars in respect of Environmental protection and abatement of pollution.

❖ **Tree Plantation Details:**

During Fiscal Year 2023, our commitment to environmental sustainability was exemplified through an extensive tree plantation initiative at our plant. Our efforts in nurturing the environment and enhancing the green cover were driven by a deep sense of responsibility.

Throughout FY 23, we achieved an impressive milestone, with our total green belt area reaching an impressive 91.28% of the plant's total area. This substantial green belt coverage signifies our dedication to mitigating environmental impact and preserving biodiversity within our premises.



One of the notable achievements of the fiscal year was the planting of 10,200 trees. This accomplishment underscores our relentless pursuit of fostering a greener and healthier ecosystem. These newly planted trees not only contribute to improving air quality but also enhance the overall aesthetics of our plant.

Our commitment to tree plantation is aligned with our broader sustainability goals, aiming to reduce our carbon footprint and contribute positively to the local environment. As we move forward, we remain resolute in our efforts to nurture and protect the environment, understanding that our actions today will shape a more sustainable tomorrow. Carbon Sequestration by greenery is being estimated every year and the rate of carbon offset is about 3750 MT per Annum. As a continual improvement it is targeted to plant more than 15000 Nos. of tree sapling in the FY23.

Corporate Social Responsibility:

JSW is committed to improving the quality of life of the community. Our focus has been on all round improvement of the community through our Corporate Social Responsibility (CSR) and Corporate Environment Responsibility (CER). Our company has a robust CSR policy with emphasis on areas like Livelihood Initiatives, Education, Health, Infrastructure and Environment. Our strong association with Stakeholders i.e. local leaders and partnership helps us to understand the community needs and widen our reach. The CSR & CER details are attached as **Annexure I**

ANNEXURE 1

CSR DETAILS

CSR REPORT FOR THE PERIOD OF APRIL 2022 TO MARCH 2023

Background

JSW is deeply conscious of its vision and responsibilities to the community around the plant. Empowering citizen with better health, education and employment opportunities is JSW's mission. JSW is committed to improve the quality of life of surrounding community through Corporate Social Responsibility (CSR) programmes. We have well laid down community development program under CSR. Our focus is on

- Health
- Education
- Environment
- Women Empowerment
- Sports and
- Rural Infrastructure Development.



People in Pottaneri, M.Kalipatti, Kuttapatti, Viruthasampatti, Gonur Panchayats and Mecheri Town are covered under CSR projects. Our CSR spent for the financial year 2022-23 is Rs. 4.27 Crores.

HEALTH – UPGRADATION OF MECHERI PHC

Mecheri Primary Health Care Center is main PHC which is accessing by more than 25 villages. On an every basis 500 patients are utilising the benefit of this particular PHC especially 200 pre and post natal women are accessing from surrounding villages for their routine checkup and delivery. We have renovated New born baby stabilizer unit with setting up of permanent 4 bedded breathing equipments, operation theater, delivery hall and toilets. This unit is used for all kind of issues of new born baby. This intervention is much more needed for the benefit of pre and post natal mothers.



EDUCATION – EARLY INTERVENTION CENTER

JSW – CSR handed over therapy and learning materials to 3 Early Intervention Centers of Mecheri, Nangavalli & Kolathur. Material includes Physio & Speech therapy unit, sensory unit, smart TVs, learning equipment's and so forth. The material worth is Rs. 9,62,397/- These 3 centers are being accessed by 427 special children from 15 panchayats & 3 unions. This intervention is to ensure an inclusive, equitable learning environment for special children and to make them self-dependent by giving them required therapy. Through this intervention we are addressing the needs of (0 to 18) age groups of special children.



HEALTH – EYE SCREENING TO SCHOOL STUDENTS



JSW – CSR screened 14228 students from 43 schools and villages. Through this intervention we have addressed vision related issues and distributed 562 spectacles to needed students. All 43 schools are from DIZ. And also given awareness on intakes in order to prevent eye related



issues.

SPORTS – CHESS TOURNAMENT AT SALEM

JSW - CSR organized and inaugurated Chess Tournament for the Salem district school students. This intervention would lead children to participate in State and National level tournament. Playing chess shall improve children's cognitive skills such as memory, planning and problem solving. Through this initiative we have engaged 1500 students from across Salem district. Most importantly the school administration and parents were encouraged students to participate in the tournament. The worth of project is Rs.500000/-.



WOMEN EMPOWERMENT PROGRAMME - BPO



JSW – CSR initiated BPO with 50 female candidates. We are empowering women to be economically independent by creating employment opportunities for them. We have recruited candidates from economically weaker section families (Direct Impact Zone) to improve their standards of living by creating employment opportunities for rural women. Empowering them to be economically independent.

EDUCATION – UDAAN SCHOLARSHIP

We have been offering every year JSW Udaan Scholarship to surrounding students those who pursuing their higher education. We have sponsored scholarship worth of Rs. 80,00,000/- this FY-2022-23 with an aim of make education accessible to youth of our surrounding community. This year covered 214 deserving students from Salem district especially have first priority to M. Kalipatti and Pottaneri Panchayats through our initiative.



EDUCATION – JSW ASPIRE PROGRAM



In order to improve life skills among young generation. We have initiated life skill training program, through this initiatives targeted 1500 students from 7 government schools within radiation of 5 km. Through this initiative enhancing skills of children's life skills, carrier counselling, problem solving & critical thinking. This initiative is not only targeted schools children but also educating their parents on importance of education and conducting activities to create awareness among parents. Also established Community Learning Center (CLC) at community level to reach children as well their parents. Also encouraged children to participate National days such as National Girl child day, Children's Day, Ocean Day, Nutrition day and so forth.

EDUCATION –SCHOOL INFRASTRUCTURE - METTUR

We have renovate six classrooms which is 100 years old school. The classroom conditions were in unusable condition and there were no adequate and good learning atmosphere for students come from rural background. By renovating six classrooms we have created good learning environment to students as well school administration. This is the only school in Mettur reagon is being accessed by more than 1000 students. And these students are from socio-economically weaker session. We have ensured quality infrastructure with the worth of 17,00000/-



EDUCATION – SCHOOL INFRA - THANEER KUTTAPPATI



We have renovated Thaneer Kuttappati Primay School. This school is being accessed by 45 students from rural areas. The classroom conditions were poorest hence based on the need we have renovated entire primary school with the following facilities: building renovation, water facilities, renovated toilet, paver block, wall paintings for visual learning and fencing. Creating good atmosphere is one of our primary focus, especially surrounding government schools, in line with that we have been renovating surrounding schools. At presnt the school adminstation, students and parents are pleased with our intervention.

SPORTS – SPORTS MATERIALS FOR GOVT SCHOOLS

JSW – CSR handed over the sports materials to 7 government higher secondary schools and 14 middle schools which are surrounded by our plant. Given 35 types of sports materials. This initiative would encourage students and physical education teachers to engage in sports activities on every day basis. The worth of the sports equipment is Rs.12,62,175/-. Through this initiative we could engage more than 5000 students in sports activities.



ENVIRONMENT – MHAVANAM PROJECT



We have established the Mahavanam forest at Vanavasi – Government Higher Secondary School in 20,000 sqft with 3500 saplings and it includes 18 varieties of fruit bearing plants and 22 native species. Mahavanam is one of the methods to increase green cover at Salem location. Developing Mahavanam would contribute significantly to control human pollution and contribute towards global climate change; JSW-CSR is intended to bring sustainable change in the surrounding environment by involving in the development of forest to increase green cover at around plant and Salem. On an average, one acre of new forest can sequester about 2.5 tons of carbon annually. In one year, an acre of forest can absorb twice the CO2 produced by the average car's annual

mileage.

HEALTH – UPGRADATION OF PHC

JSW – CSR constructed patient waiting hall in Kuttappatti PHC. In kuttapati panchayat this is the main PHC, every week pre and post natal mother check-up happening in this PHC. On weekly basis 100 -150 pre and post natal mothers for their regular check-ups. Due to insufficient space the patients were sitting or standing outside, especially patient were facing difficulties during rainy and sunny seasons. The Block Medical Officer, workers and patients are expressing their gratitue for our contribution.



SPORTS – SILAMBAM ART



JSW – CSR is initiated Silambam art activity to surrounding government school students from 5 schools. We have trained 200 students on Silambam art. Also these 200 students were participated in World Record Event and shown their potential in Silambam art.

The amount spent on the CSR activities during the period of October to March 2023 is given in the Table 1

Table 1 : CSR spent details for the period October – March 2023

S. No	CSR Activities	Amount Spent Rs.in lakhs	Remarks
1	FPO Agri Livelihoods	19.64	Work Completed
2	Greenery Development	0	Work Completed
3	Health Outreach Program-Camps	10	Work Completed
4	JSW Aspire Project	41.37	Work Completed
5	JSW UDAAN Scholarship	74.33	Work Completed
6	Promote Rural Sports	30	Work Completed
7	Support to BPO	36.46	Work Completed
8	Support to Kingston Engg College	130	Work Completed
9	School Infrastructure	29.02	Work Completed
Total		370.82	

The amount spent on the CSR activities during the period of April to March 2023 is given in the Table 2

Table 2: CSR spent details for FY 2023

S. No	CSR Activity	April 22 – September 23 (in lakhs)	October 22 – March 23 (in lakhs)	Total Spent (in lakhs)
1	Ensuring access to drinking water	15.1	0	15.1
2	FPO Agri Livelihoods	0	19.64	19.64
3	Greenery Development	23.6	0	23.6
4	Health Outreach Program-Camps	0	10	10
5	JSW Aspire Project	0	41.37	41.37
6	JSW UDAAN Scholarship	0	74.33	74.33
7	Promote Rural Sports	0	30	30
8	Support to BPO	14.06	36.46	50.52
9	Support to Kingston Engg College	0	130	130
10	Women's livelihood projects	4.28	0	4.28
11	School Infrastructure	0	29.02	29.02
Total		57.04	370.82	427.86