

JSWSL/ENV/MT/MoEF&CC/HYR/2024-25/102
25th November 2024

To,
The Director
Regional office
Ministry of Environment Forest and Climate Change
1st Floor, Additional office block for GPOA,
Shastri Bhawan, Haddows Road,
Nungambakkam, Chennai -600006

Dear Sir,

Sub: JSW Steel Ltd., Salem Works - EC- Six Monthly Compliance Status Report submission for the period April - September 2024 - Reg.

Ref: Environmental Clearances F. No. J-11011/281/2006-IA. II(I) dated 07.07.2017, EC amendment dated 07.08.2019 and EC dated 10.02.2020

With reference to the above subject, we are hereby enclosing the six-monthly condition compliance status report of the Environmental Clearances issued by your good office on 07.07.2017, 07.08.2019, and 10.02.2020 for the period of April to September 2024.

We kindly request you to acknowledge the receipt of this letter for our records.

Thanking you,

Yours faithfully,

For JSW Steel Limited., Salem Works


B N S Prakash Rao
EVP- Plant Head

Encl: Conditions Compliance status report for the period April to September 2024

Cc:

Regional Directorate, Central Pollution Control Board,
77-A, Padi, Ambattur Industrial Estate Road, Mogappair, Chennai, Tamil Nadu -58

The Member Secretary, Tamil Nadu Pollution Control Board,
100, Anna Salai, Guindy, Chennai – 600 032.

The Joint Chief Environmental Engineer (M), TNPCB, Salem Region, No # 9, 4th
Cross Street, Brindhavan road, Fairlands, Salem -636016.

Salem Works

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**SIX MONTHLY CONDITION COMPLIANCE REPORT OF
ENVIRONMENT CLEARANCE (EC)
for
1.15 MTPA INTEGRATED STEEL PLANT**

Reporting Period: April 2024 to September 2024



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

Submitted to

REGIONAL OFFICE, MoEF&CC

Shastri Bhawan, Haddows road, Nungambakkam,
Chennai -600006

**REGIONAL DIRECTORATE, CPCB,
Ambattur Industrial Estate Road, Mogappair,
Chennai, Tamil Nadu -58**

**JCEE (M), TNPCB, SALEM REGION,
Fairlands, Salem -16**

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JSW STEEL LTD., SALEM WORKS
COMPLIANCE STATUS REPORT TO ENVIRONMENTAL CLEARANCE (EC)
Compliance status report to the EC dated.10.02.2020 as on 30.03.2024

The approved projects in the EC dated 10.02.2020 and the present status is given below

Sl. No	Facilities	Project status	CTO-EXP-II	CTO-EXP-III
1	COP #1 stack replacement by 2 number of stacks	Completed		√
	COP #2 stack replacement by 2 number of stacks	Yet to start		
2	Sinter plant sinter cooler waste heat diversion to GGBFS	Completed		√
3	Emission reduction project in SP#2-WGF	Under progress		
4	GGBFS (0.8 MTPA)	Completed		√
5	LRF#1 stack modification	Completed		√
6	Additional one LRF with VD system (BF gas fired boilers 2 Nos)	Yet to start		
7	Fume exhaust system in CCM#1 & 3	Yet to start		
8	ABGM in CCM#1 & 2	Completed		√
9	Pickling & Annealing Steel	Completed	√	
10	Emission reduction project in CPP#2 coal based boiler	Completed	√	
11	DG set - 8 No's (6 Nos for Steel and 2 Nos for CPII)	Completed		√ (6 No.)
12	Paver block making facility	Completed		√
13	Acid fumes extraction system in Etching lab	Completed		√
14	Slag crushing unit	Completed		√
15	Batching plant	Completed		√
16	Coke cutter dedusting system in COP	Completed		√
17	COP #3 stack modification	Completed		√
18	WHRB#3 stack modification	Completed		√
19	Steam exhaust system#2 in CCM#3	Completed		√
20	Thermic fluid heater for ATFD in pickling plant ETP	Yet to start		

*** Steel Ball making facility of 0.20 MTPA added within the existing production capacity of 1.15 MTPA, No Increase In Pollution Load (NIPL) certificate obtained for the same from SPCB dated 28.11.2022.

Compliance to EC Conditions of 0.8 MTPA Slag grinding unit, new facilities related to value addition and technological upgradation within the existing 1.3 MTPA integrated steel plant premises. The manufacturing facilities details as per EC dated 10.02.2020 is given below

Sl. No	Manufacturing Units	Existing Capacity (MTPA)	Proposed Expansion (MTPA)	Total Capacity after Expansion (MTPA)	Project execution phase and current status
1	Coke Oven Plant -1 (Non – Recovery Type)	0.50	-	0.5	Nil
2	Sinter Plant – 1 (20 Sqm)	0.175	-	0	Nil
3	Sinter Plant – 2 (90 Sqm)	1.06	-	1.06	Nil
4	Sinter Plant – 3 (90 Sqm)	-	1.06	1.06	Yet to start (Phase #2)
5	Blast Furnace – 1 (402 to 650Cubic Meter)	0.367	0.316	0.683	Yet to start (Phase #2).
6	Blast Furnace – 2 (550 to 650Cubic Meter)	0.578	0.105	0.683	Completed in Phase#1
7	Energy Optimizing Furnace – 1 (65T)	0.41	0.23	0.64	Completed in Phase#1
8	Energy Optimizing Furnace – 2 (65T)	0.62	-	0.62	Nil
9	Ladle Furnace - 1 with Common VD (45 T to 65 T)	45 T/heat	20 T/heat	65 T/heat	Completed in Phase#1
10	Ladle Furnace – 2 (65 T)	65 T/heat	-	65 T/heat	Nil
11	Ladle Furnace - 3 common VD (65 T)	65 T/heat	-	65 T/heat	Nil
12	Ladle Furnace - 4 (65 T)	65 T/heat	-	65 T/heat	Nil
13	Continuous Casting Machine - 1	0.35	-	0.35	Nil
14	Continuous Casting Machine - 2	0.50	-	0.50	Nil
15	Continuous Casting Machine - 3	-	0.45	0.45	Completed in phase#1
16	Bar & Rod Mill Augmentation	0.4	0.08	0.48	Completed in phase#1
17	Blooming Mill Augmentation	0.36	0.12	0.48	Completed in phase#1
18	Pickling and Annealing Steel unit	-	0.06	0.06	Completed in phase#1

19	Peeled and ground	-	0.04	0.04	0.01 MTPA completed in phase #1. Balance yet to start (phase#2)
20	Air Separation Plant 1	150 T/day	-	150 T/day	Nil
21	Air Separation Plant 2	390 T/day	-	390 T/day	Nil
22	Air Separation Plant 3	-	250 T/day	250 T/day	Yet to start (Phase #2)
23	Captive Power Plant -1	7 MW	-	7 MW	Power generation has been stopped from 01.10.2021 and the product withdrawn from the CTO
24	Captive Power Plant -2	2 x 30 MW		2 x30 MW	In operations
25	Captive Power Plant -3 (Unit 3 of CPP#2)	-	1 x 30 MW	1 x 30 MW	Completed in phase#1

Type of Condition	Sl. No.	EC Condition	Compliance Status	Comment by JSW
A. Specific Conditions	i.	Particulate emission from the rod mill of slag grinding unit shall be less than 10 mg/Nm ³ .	Complied	The slag grinding facility for Ground Granulated Blast Furnace Slag (GGBFS) at JSW Salem Works has been operational since May 27, 2022. A bag filter system has been installed as an air pollution control measure. According to the latest survey by the Tamil Nadu Pollution Control Board (TNPCB), the particulate emissions are recorded at 8 mg/Nm ³ , demonstrating compliance with regulatory standards. The detail is given in Annexure #2
	ii.	Green belt shall be developed in an area of 85 ha (210 acres) in and around the plant in a time frame of two years.	Complied	We at JSWSL Salem Works expanded our green cover to encompass approximately 91 hectares, which is about 34% of the total land area. With a tree survival rate between 85-90%, this effort demonstrates ongoing dedication to environmental stewardship.
B. General Conditions I. Statutory Compliance	i.	The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board / Committee.	Complied	We have obtained CTO under Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974. The CTO, granted by the Tamil Nadu Pollution Control Board (TNPCB) is valid until March 31, 2026.
	ii.	The project proponent shall obtain the necessary permission from the Central Ground Water Authority, in case of drawl of ground water / from the competent authority concerned in case of drawl of surface water required for the project.	Being Complied	We have obtained NOC from concerned department for drawl of ground water (80 KLD) which is only for domestic application. The NOC is annexed as Annexure 1 to this report. The NOC renewal application under progress.
	iii.	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	Complied	We have obtained authorization from TNPCB under Hazardous and other Waste Management Rules, 2016. This authorization is valid until March 31, 2026.
II. Air quality monitoring and preservation	i.	The project proponent shall install 24x7 continuous emission monitoring system at process stacks to monitor stack emission with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. 277(E) dated 31st March 2012 (Integrated iron & Steel); G.S.R. 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plant) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited	Being Complied	We have installed 32 nos. of dust analyzers (both in process and non process stacks) & 11 nos. of gaseous emission monitoring systems as per CTO condition and the real time data of SPM, SO ₂ , NO _x and CO are transmitted to the Care Air Centre of TNPCB and CPCB servers. Air Quality Monitoring is being done by TNPCB biannually and Manual monitoring is conducted by a NABL accredited external laboratory (Air quality as applicable to the Integrated iron and Steel plant, Thermal Power Plant) on a monthly basis and the monthly report submitted to SPCB. Latest report of TNPCB survey and Monthly Environment monitoring reports are given in Annexure 2 & 3
	ii.	The project proponent shall monitor fugitive emissions in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986.	Being Complied	In compliance with the Environment (Protection) Rules, 1986, as outlined in G.S.R. 277(E) dated March 31, 2012, for Integrated Iron & Steel plants and S.O. 3305(E) dated December 7, 2015, for Thermal Power Plants, we conduct monthly monitoring of fugitive emissions. This monitoring is performed by an external laboratory accredited by NABL, while the Tamil Nadu Pollution Control Board (TNPCB) conducts biannual surveys. The fugitive emission levels are consistently within the prescribed standards.
	iii.	The project proponent shall install system to carryout Continuous Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM ₁₀ and PM _{2.5} in reference to PM emission, and SO ₂ and NO _x in reference to SO ₂ and NO _x emissions) within and outside the plant area at least at four locations (one within and three outside the plant area at an angle of 120° each), covering upwind and downwind directions.	Complied	In consultation with the Tamil Nadu Pollution Control Board (TNPCB), 4 No. of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed within the plant premises at locations of PM ₁₀ , PM _{2.5} , SO ₂ , NO _x and CO. The real time parameters are connected to Care Air Centre of TNPCB
	iv.	The cameras shall be installed at suitable locations for 24x7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one-month recordings.	Complied	There are three coke oven batteries installed adjacent to each other in the Coke Oven Plant. An IP camera has been installed in the top of the COP area to monitor battery emissions on the both sides with recording option and the minimum preservation time is one month.
	v.	Sampling facility at process stacks and at quenching towers shall be provided as per CPCB guidelines for manual monitoring of emissions.	Complied	Sampling facilities at process stacks are provided for manual monitoring of emissions as per the guidelines issued by CPCB and we have installed wet type coke quenching system at NR type COP.
	vi.	The project proponent shall submit monthly summary report of continuous stack emission and air quality monitoring and results of manual stack monitoring and manual monitoring of air quality/fugitive emissions to Regional Office of MoEF&CC, Zonal Office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	Being Complied	Monthly summary report of continuous stack emission and ambient air quality monitoring and results of manual stack monitoring and manual monitoring of air quality/fugitive emissions are being submitted along with six monthly compliance reports to Regional Office of MoEF&CC, Zonal Office of CPCB and Regional Office of SPCB. Please refer Annexure 2 & 3 The last six monthly compliance report submitted to MoEF&CC online dated 30.05.2024.

Type of Condition	Sl. No.	EC Condition	Compliance Status	Comment by JSW
II. Air quality monitoring and preservation	vii.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Complied	Adequate Air Pollution Control measures are installed in the respective process and raw material handling areas. Water sprinklers, dry & wet fog systems, GI sheets (as dust barrier) are provided in raw material handling areas to control fugitive emission. The details of APC installed are given in Annexure 4
	viii.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Complied	We have installed appropriate leakage detection systems like DP meters and mechanized bag cleaning like auto timer based cleaning system facilities are provided in respective bag filter systems.
	ix.	Secondary emission control system shall be provided at SMS converters.	Complied	Dedicated secondary de-dusting systems at Energy Optimizing Furnace (EOF) & Ladle Refining Furnace (LRF) installed to control the secondary emission.
	x.	Pollution control system in the steel plant shall be provided as per the CREP guidelines of CPCB.	Complied	As per the CREP guidelines of CPCB, Pollution control systems are provided. Details are given in Annexure 5
	xi.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, and roofs regularly.	Complied	3 No. of road sweeping machines dedicatedly for road cleaning applications and Mobile vacuum cleaners are also provided to clean shop floors, roofs regularly.
	xii.	Recycle and reuse iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting/agglomeration.	Being Complied	Sinter Plant is functioning as Wealth from waste and Iron ore fines, coal and coke fines, lime fines and such other fines collected in the pollution control devices are reused in the sinter plant for agglomeration processes which is direct replacement to the Iron Ore.
	xiii.	The project proponent use leak proof trucks/dumpers carrying coal and other raw materials and cover them with tarpaulin.	Being Complied	A Standard Operating Procedure (SOP) has been developed to avoid spillage and leakage. Trucks/dumpers carrying coal and other raw materials are covered with tarpaulin. Leak proof trucks are used for fly ash transportation and other materials.
	xiv.	Facilities for spillage collection shall be provided for coal and coke on wharf of coke oven batteries (Chain conveyors, land based industrial vacuum cleaning facility).	Being Complied	We have installed a closed conveyor system for coking coal charging to stamping station. Dedicated coal charging and coke pushing systems are installed to avoid any spillage of coal and coke. There is a periodical cleaning schedule to ensure in case of any minor spillages.
	xv.	Land-based APC system shall be installed to control coke pushing emissions.	Not applicable	Land-based APC systems are mainly applicable to recovery type coke ovens to control the coke pushing emissions, where ovens will be operated under positive pressure and vertical loading. Our coke oven plant is non-recovery type installed in 2007 with capacity 0.50 MTPA. These are heat recovery coke ovens which operate in highly negative pressure to suck hot flue gases for heat recovery with no significant emissions. Hence process design does not demand installation of Land-based APC system in to the existing non-recovery type coke ovens. However, dedicated dedusting systems are installed in the coke pushing cars.
	xvi.	Monitor CO, HC and O ₂ in flue gases of the coke oven battery to detect combustion efficiency and cross leakages in the combustion chamber.	Not applicable	Our Coke Oven Plant is Non Recovery and requirement of monitoring of HC, CO and O ₂ were intended for recovery type of coke ovens where in the cross over leakage anticipated. However, Monitoring of CO and O ₂ is done in WHRBs where the COP gas is directly coupled for heat recovery.
	xvii.	Vapor absorption system shall be provided in place of vapor compression system for cooling of coke oven gas in case of recovery type coke ovens.	Not applicable	JSW Salem works installed a Non Recovery Coke Oven and hence the condition is not applicable
	xviii.	In case concentrated ammonia liquor is incinerated, adopt high temperature incineration to destroy Dioxins and Furans, Suitable NOx control facility shall be provided to meet the prescribed standards.	Not applicable	JSW Salem works installed a Non Recovery Coke Oven and hence the condition is not applicable
	xix.	The coke oven gas shall be subjected to desulphurization if the Sulphur content in the coal exceeds 1%.	Complied	The coal usage in coke oven contains Sulphur content less than 1%.
	xx.	Wind shelter fence and chemical spraying shall be provided on the raw material stock piles.	Complied	GI sheets cover (as dust barrier), wind nets, water sprinkler systems and dry/wet fog systems are provided in raw material stock yards and piles to suppress fugitive emissions during handling.
	xxi.	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil cellars.	Being Complied	Ventilation system for adequate air changes for all tunnels, motor houses, Oil cellars are being complied as per the CEIG rules.
	xxii.	The project proponent shall install Dry Gas Cleaning Plant with bag filter for Blast Furnace and SMS converter.	Partially Complied	The existing steel plant consist of small capacity Blast Furnaces (BF#1 402 m ³ with 0.367 MTPA & BF#2 650 m ³ with 0.683 MTPA capacity) in Iron Zone and EOFs (EOF#1 with the capacity of 0.64 & EOF#2 with the capacity of 0.62 MTPA) in SMS zone. The BF#1 & EOF#1 were installed in the year 1998 with wet type gas cleaning system and BF#2 & EOF#2 were installed in 2007. BF#2 installed with Dry type gas cleaning system during establishment stage itself and EOF#2 installed with wet type gas cleaning system which is the best available technology at that time. There is no modification proposed in the EOF 1 and 2 and the BF#1 GCP will be modified to Dry GCP during the phase#2 expansion.
	xxiii.	Dry quenching (CDQ) system shall be installed along with power generation facility from waste heat recovery from hot coke.	Not applicable	The existing coke ovens (Non-recovery type) were installed with wet quenching in line with the EC approved in 2007. There is no modification proposed in the existing coke ovens. However, the installation of CDQ matter has been taken up with the OEM and it is reported that installation of CDQ within the existing capacity of 0.5 MTPA Coke Oven is not technically feasible and viable.

Type of Condition	Sl. No.	EC Condition	Compliance Status	Comment by JSW
III. Water Quality Monitoring and Preservation	i	The project proponent shall install 24x7 continuous effluent monitoring system with respect to standards prescribed in Environment (Protection) Rules 1986 vide G.S.R. 277(E) dated 31st March 2012 (Integrated iron & Steel); G.S.R. 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plant) as amended from time to time and connected to SPCB and CPCB online servers and calibrate these system from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories. The project proponent shall monitor regularly ground water quality at least twice a year (pre and post monsoon) at sufficient numbers of piezometers/sampling wells in the plant and adjacent areas through labs recognized under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Complied	We have installed electromagnetic flow meters (EMFM) at multiple water consumption monitoring points to continuously track effluent flow. The real-time flow data is directly connected to TNPCB and CPCB servers. A dedicated EMFM is also installed at the effluent treatment plant (ETP) discharge point, along with an IP camera equipped with PTZ functionality, ensuring there is no overflow of trade effluent from the guard pond. All analyzers meet standards for the Iron & Steel and Thermal Power Plant sectors, and EMFM units and sensors are calibrated according to supplier specifications. Groundwater quality around the plant is monitored monthly or quarterly by the TNPCB and an NABL-accredited laboratory. Additionally, piezometric sampling bore wells within the plant premises are regularly tested by an NABL-accredited lab on a monthly basis.
	ii	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water quality to Regional Office of MoEF&CC, Zonal Office of CPCB and Regional Office of SPCB along with six-monthly monitoring report.	Being Complied	Monthly summary reports of continuous effluent monitoring, results of manual effluent testing and manual monitoring of ground water quality by TNPCB & NABL accredited laboratory are being submitted to the Regional Office of MoEF&CC, Zonal Office of CPCB and Regional Office of SPCB along with the six-monthly monitoring report. Please refer Annexure 6
	iii.	The project proponent shall provide the ETP for coke oven and by-product to meet the standards prescribed in G.S.R. 277(E) dated 31st March 2012 (Integrated iron & Steel); G.S.R. 414 (E) dated 30th May 2008 (Sponge Iron) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plant) as amended from time to time.	Being Complied	The Coke Oven plant installed is non-recovery type and hence the condition is not applicable. Sponge iron plant not installed in our plant. In the additional 1 x 30 MW CPP (TPP) an Air-Cooled Condenser (ACC) has been installed, replacing the conventional Water-Cooled Condenser. This eliminates the use of significant quantities of water for cooling. Furthermore, the entire quantity of trade effluent generated, approximately 705 KLD, is directed to the Steel Plant Guard Pond for treatment. Post-treatment, the water is effectively reused within the steel plant, ensuring resource optimization and adherence to sustainable water management practices.
	iv.	Adhere to 'Zero Liquid Discharge'	Being Complied	We have established Zero Effluent Discharge (ZLD) system and wastewater generated from the various process of steel plant and Thermal Power Plant is collected in a guard pond at steel plant premises and after pre treatment, the treated wastewater is 100% reused in steel plant process as per the CTO under water Act. To treat the effluent arising out of the pickling plant and etching lab a dedicated ETP with the facility of Pretreatment, Ultra filter, Multistage RO plant, MEE and ATFD installed. The treated wastewater is reused in pickling process and etching lab.
	v	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Being Complied	Sewage Treatment Plants are provided for treatment of domestic wastewater and treated water is meeting the prescribed standards. Treated water sample is being collected by TNPCB & NABL accredited laboratory on monthly basis and the results are well within the prescribed standards. Please refer Annexure 7
	vi	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run off.	Complied	Various collection pits are provided in the RMHS and transfer areas to arrest/minimise the run-off and ensure there is no water pollution due to surface run off.
	vii	Tyre washing facilities shall be provided at the entrance of the plant gates.	Complied	Tyre washing unit is provided at the entrance of the plant gate to control the fugitive emission from vehicular movement.
	viii.	CO ₂ injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.	Being Complied	We are using treated wastewater as makeup for gas cleaning unit (GCP) where the pH is about 6.5 -7.0 and hence alkalinity of existing circulating water is under control. Hence addition of CO ₂ injection is not anticipated.
	ix.	The project proponent shall practice rainwater harvesting to maximum possible extent.	Complied	We have implemented a comprehensive rainwater harvesting initiative, featuring four strategically located ponds to optimize water conservation. Two ponds are situated near the township on the East side, with capacities of 17,500 KL and 1,08,000 KL, respectively. Whereas within the plant premises, one pond near the RO plant area holds 15,000 KL, and another behind the guest house accommodates 5,000 KL. Together, these systems provide a total collection capacity of approximately 1,46,000 KL. The harvested rainwater is effectively utilized for secondary applications within the steel plant and contributes to groundwater recharge.
	x	Treated water from ETP of COBP shall not be used for coke quenching.	Not applicable	Not applicable. Our Coke oven plant is non-recovery type.
	xi	Water meters shall be provided at the inlet to all unit processes in the steel plants.	Complied	Water meters are provided at the inlet to all unit processes in our steel plant.
	xii	The project proponent shall make efforts to minimize water consumption in the steel plant complex by segregation of used water, practicing cascade use and by recycling treated water.	Being Complied	JSW Salem Works ensures compliance with water conservation measures by implementing maximum efforts to minimize water consumption. Key initiatives include the installation of a Reverse Osmosis (RO) plant, optimizing cooling water cycles of concentration (COC), and adopting Best Available Technologies (BAT), such as Air-Cooled Condensers instead of Water-Cooled Condensers.

Type of Condition	Sl. No.	EC Condition	Compliance Status	Comment by JSW
IV. Noise Monitoring And Preservation	i.	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Complied	Noise level is being monitored on regular basis by a NABL accredited laboratory & TNPCB and the results are well within the standards and reports are being submitted to the Regional Officer of the Ministry as a part of six-monthly compliance report. Kindly refer Annexure 8
	ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz.75 dB(A) during day time and 70 dB(A) during night time.	Complied	The ambient noise levels are being monitored on monthly basis and the results are well within the prescribed limit of 75 dB(A) during day time and 70 dB(A) during night time and reports are being submitted to the Regional Office of the Ministry as a part of six-monthly compliance report. The report details (ROA) are given in Annexure 8
V. Energy Conservation Measures	i.	The project proponent shall provide TRTs to recover energy from top gases of Blast Furnaces.	Not applicable	The capacity of the existing furnaces is very small and operating at low top pressure (< 1.3 bar). Hence, it is not technically feasible to install TRT in the existing blast furnaces. There is no modification in the existing BFs in the EC approved now.
	ii.	Coke Dry quenching (CDQ) shall be provided for coke quenching for both recovery and non-recovery type coke ovens.	Not applicable	The existing coke ovens (Non-recovery type) were installed with wet quenching in line with the EC approved in 2007. There is no modification proposed in the existing coke ovens in the recently approved EC dated 10.02.2020. However, the installation of CDQ matter has been taken up with the OEM and it is reported that installation of CDQ within the existing capacity of 0.5 MTPA Coke Oven is not technically feasible and viable.
	iii.	Waste heat shall be recovered from Sinter Plants coolers and Sinter Machines.	Complied	As part of our compliance efforts, waste heat from the Sinter plant cooler is diverted to the BF Slag grinding unit to recover sensible heat.
	iv.	Use torpedo ladle for hot metal transfer as far as possible. If ladles not used, provide covers for open top ladles.	Not applicable	Usage of torpedo ladle is mostly applicable to larger capacity of BF. Our BF capacity is smaller, ladle covering is done by means of heat insulating compounds such as dry rice husk.
	v.	Use hot charging of slabs and billets/blooms as far as possible.	Being Complied	Based on the product specification, hot charging is done for billets/blooms. Slabs are not produced in our facility.
	vi.	Waste heat recovery systems shall be provided in all units where the flue gas or process gas exceeds 300°C.	Complied	Waste heat recovery boilers are in operation to recover maximum heat from flue gas and produce energy. Waste heat from Sinter plant cooler is diverted to the BF Slag grinding unit to recover sensible heat.
	vii.	Explore feasibility to install WHRS at Waste Gases from BF stoves; Sinter Machine; Sinter Cooler, and all reheating furnaces and if feasible shall be installed.	Being Complied	We have installed various type of waste heat recovery boilers to recover maximum heat from flue gases. Waste heat from Sinter plant cooler is diverted to the BF Slag grinding unit to recover sensible heat. BF gas is utilized in Mills for Reheating furnaces, BF stoves and CPPs for steam generation. Power generation is maximized up to 70% through waste heat recovery system and rest is balanced through coal based with grid support.
	viii.	Restrict Gas flaring to < 1%	Complied	BF waste gas is maximum used in all the shop floors as gaseous fuel where by usage of fossil fuel is optimized. To the effective utilization online monitoring system(SCADA) is installed to maximize the BF gas utilization.
	ix.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly.	Being Complied	Solar panels with a total capacity of 75 kW have been installed, comprising 50 kW at the canteen, 10 kW at the R&D building, and 5 KW at the MRSS. The average power generation is approximately 225 kWh, with further installations planned in a phased manner. Recently, an additional 10 kW solar panel installation at the Air Separation Plant (ASP) has been completed.
	x.	Provide LED lights in their officers and residential areas.	Being Complied	We have taken action to install LED based lightings in the offices and township area and the replacement of sodium vapour lamp to LED is increased up to 1300 KW. Further, planned to install LED lights all over plant.
	xi.	Ensure installation of regenerative type burners on all reheating furnaces.	Being Complied	BF gas is used as fuel and regenerative type burners are installed in reheating furnaces (Mills).
VI. Waste Management	i.	An attrition grinding unit to improve the bulk density of BF granulated slag from 1.0 to 1.5 kg/l shall be installed to use slag as river sand in construction industry.	Complied	BF slag grinding unit is under operation to produce ground granulated BF slag which is directly sold to cement industries and open market as a value addition product.
	ii.	In case of Non-Recovery coke ovens, the gas main carrying hot flue gases to the boiler shall be insulated to conserve heat and to maximize heat recovery.	Being Complied	We have installed a Non Recovery Type Coke Oven plant with the capacity of 0.5 MTPA and the gas main carrying hot flue gases to the boilers is completely insulated to conserve heat and to maximize heat recovery.
	iii.	Tar Sludge and waste oil shall be blended with coal charged in coke ovens (applicable only to recovery coke ovens).	Not applicable	We have installed non-recovery type coke oven and hence the general condition not applicable.
	iv.	Carbon recovery plant to recover the elemental carbon present in GCP slurries for use in Sinter plant shall be installed.	Complied	The existing facility of BF#1, EOF#1 & EOF#2 are installed with wet gas cleaning plant and after thickener treatment, the unit is treating the GCP slurry in a sludge handling unit and the dried sludge (carbon recovery) is reused in sinter plant.
	v.	Waste recycling plant shall be installed to recover scrap, metallic and flux for recycling to sinter plant and SMS.	Being Complied	A slag crushing facility to handle SMS slag to segregate iron bearing materials as scrap which is reused in SMS process where by certain level of GHG emission is reduced. SMS slag is crushed in to various sizes and used for various processes/application.
	vi.	Used refractories shall be recycled as far as possible.	Being Complied	Refractories are being selected to withstand high temperature whose shelf-life is longer whereby generations of used refractories are lesser. The used refractories are sent to recyclers.
Type of Condition	Sl. No.	EC Condition	Compliance Status	Comment by JSW

VI. Waste Management	vii.	SMS slag after metal recovery in waste recycling facility shall be conditioned and used for road making, railway track ballast and other applications. The project proponent shall install a waste recycling facility to recover metallic and flux for recycle to sinter plant. The project proponent shall establish linkage for 100% reuse of rejects from Waste Recycling Plant.	Being Complied	We have installed a slag crushing facility to handle SMS slag to segregate iron bearing materials as scrap and reused in SMS process where by certain level of GHG emission is reduced. SMS slag is sent for metal recovery system and the crushed slag with various sizes is reused in internal applications like sinter plant, EOF as hearth layer and cooling media respectively and to cement industries. Portion of crushed slag is used in paver block facility as replacement to the natural aggregate and by this reuse of rejects being ensured.
	viii.	100% utilization of fly ash shall be ensured. All the fly ash shall be provided to cement and brick manufacturers for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	Being Complied	A coal-based boiler is installed in 2006 and imported coal with low ash is used as fuel and the boiler is being operated with flexible load to cater the captive power requirement. Fly ash generated from the coal based boilers is 100% sent to local fly ash brick manufacturers.
	ix.	Oil collection pits shall be provided in oil cellars to collect and reuse/recycle spilled oil. Oil collection trays shall be provided under coils on saddles in cold rolled coil storage area.	Being Complied	Oil collection pits are provided in oil cellars to collect and reuse the spilled oil. Cold rolled products are not applicable to our plant.
	x.	The waste oil, grease and other hazardous waste like acidic sludge from pickling, galvanizing, chrome plating mills etc. shall be disposed of as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016. Coal tar sludge / decanter shall be recycled to coke ovens.	Being Complied	The Waste oil, grease and other hazardous wastes like acidic sludge from pickling is disposed as per the Hazardous & Other waste (Management & Transboundary Movement) Rules, 2016 as amended. Our coke oven plant is Non Recovery Type. Hence, Coal tar sludge / decanter sludge is not generated during our plant operations.
	xi.	Kitchen waste shall be composted or converted to biogas for further use.	Being Complied	A Biogas plant is installed at the canteen area and kitchen waste is converted into biogas and the same is used in the canteen as alternative fuel to LPG.
VII. Green Belt	i.	Green belt shall be developed in an area equal to 33% of the plant area with native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	Being Complied	Our greening initiatives within the Plant and Township premises have resulted in covering 91 hectares by October 2024, constituting about 34.07% of the total land area. The plantation demonstrates a survival rate of 85-90%. The plant greenbelt layout attached as Annexure 9
	ii.	The project proponent shall prepare GHG emissions inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	Being Complied	The GHG emissions inventory for the plant, along with the carbon sequestration data, including contributions from plantation activities, is prepared and submitted annually.
VIII. Public Hearing and Human health issues	i.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Being Complied	Study on Risk and Disaster Management Plan was conducted and the detailed report was submitted on 01.02.2018 and the updated one submitted to local administration on 16.06.2022
	ii.	The project proponent shall carry out heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protection Equipment (PPE) as per the norms of Factory Act.	Being Complied	OHC team periodically conduct Heat stress analysis for the workmen working in high temperature work zone and suitable Personal Protection Equipment (PPE)s and other adequate requirements are provided as per the norms of Factory Act.
	iii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Agreed to Comply	Currently, there are no ongoing expansion activities. Provisions will be made for the expansion project activities and as per the condition temporary structure will be removed after the completion of expansion activities.
	iv.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Being Complied	Annual Health Check-ups conducted as per the Factories Act for all employees on yearly basis and records are being maintained in the OHC.
IX. Corporate Environmental Responsibility	i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-IA.III dated 1st May 2018, as applicable, regarding Corporate Environmental Responsibility.	Being Complied	In line with the Corporate Environmental Responsibility (CER), all actions are being implemented, and progress reports are regularly submitted as Annexure 10 alongwith the six-monthly compliance reports. Changes based on the evolving needs of the surrounding villages have been reviewed, and the revised ESC action plan status was communicated to the MoEF&CC through their letter dated September 26, 2020.
	ii.	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental / forest / wildlife norms / conditions and / or shareholders' / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Being Complied	We have adopted sustainable development principles and goals, with environmental and other related policies duly approved by the Board of Directors. Systems are in place to monitor and report any deviations or violations of environmental norms and conditions. Any such deviations are documented and reported as part of the six-monthly compliance reports.

Type of Condition	Sl. No.	EC Condition	Compliance Status	Comment by JSW
IX. Corporate Environmental Responsibility	iii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	Being Complied	A dedicated Environmental cell is in place with qualified personnel under the control of Senior Executive, who is reporting directly to the head of the organization.
	iv.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional office along with the Six Monthly Compliance Report.	Being Complied	EMP implementation with action plan and environmental conditions along with responsibility matrix is implemented and year wise funds (CAPEX) earmarked for environmental protection measures are kept as separate account and not diverted for any other purposes. The details are submitted along with six monthly compliance report. The capex cost spent on EMP during H1 of FY 2024 is ₹ 1.55 Crores and opex is ₹ 4.1 Crores
	v.	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	Being Complied	Self-environmental audit is being conducted annually. Environment Audit is being carried out by external agencies once in year and confirming with the standard of ISO 14001:2015.
	vi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Iron and Steel plants shall be implemented.	Being Complied	All the recommendations of the Charter on the Corporate Responsibility for the Environmental Protection (CREP) issued for the steel plants are implemented and the compliance status report Annexure 5 is being submitted along with six monthly compliance report.
X. Miscellaneous	i.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising in at least in two local newspapers of the District or State of which one shall be in the vernacular language within seven days and in addition, this shall also be displayed in the project proponent's website permanently.	Complied	Environmental Clearance accorded from MoEF&CC dated on 10.02.2020 and the same was advertised in two local newspapers on 14.02.2020 (Dinamani and The New Indian Express) which are widely circulated in the region of which Tamil is the vernacular language of the locality concerned. EC accorded is displayed in our website.
	ii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied	We have submitted the copy of the environmental clearance dated 10.02.2020 to the Heads of local bodies on 30.05.2020 and Panchayats on 20.02.2020
	iii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	Being Complied	The compliance of the stipulated Environment Clearance conditions including results of monitored data is uploaded on our website at half-yearly basis and the latest one uploaded to website on 01.06.2024
	iv.	The project proponent shall monitor the criteria pollutants level namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	Complied	The criteria pollutant levels namely; PM ₁₀ , PM _{2.5} , SO ₂ , NO _x , CO are displayed near the entrance of main gates of our company in the public domain & also uploaded in our website as in the six-monthly compliance report.
	v.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest & Climate Change at environmental clearance portal.	Being Complied	Six-monthly reports on the status of the compliance of the stipulated EC are being uploaded to the website of the ministry of Environment, Forest & Climate Change, Parivesh portal.
	vi.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	Being Complied	The Environmental Statement as prescribed under the Environment (Protection) Rules, 1986, for each financial year ending 31st March in Form-V is being submitted every year and displayed on the website of the company. For FY 2024 the report has been submitted on 25.09.2024.
	vii.	The Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Being Complied	Date of financial closure and land development work has been informed to the JCEE of TNPCB, Salem dated 25.11.2020 and the same has been communicated through six monthly compliance report.
	viii.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Agreed to Comply	Abide by the order
	ix.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Agreed to Comply	Abide by the order

Type of Condition	Sl. No.	EC Condition	Compliance Status	Comment by JSW
X. Miscellaneous	x.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Agreed to Comply	Abide by the order
	xi.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Agreed to Comply	Abide by the order
	xii.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Agreed to Comply	Abide by the order
	xiii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Agreed to Comply	Abide by the order
	xiv.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports	Agreed to Comply	Abide by the order
	xv.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	Agreed to Comply	Abide by the order
	xvi.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010	Agreed to Comply	Abide by the order

Compliance status to the EC (Amendment) dated 07.08.2019

Subject: Expansion of integrated Steel Plant (1.0 MTPA to 1.3 MTPA) of M/s. JSW Steel Ltd., Located at Mecheri, Taluk Mettur, District Salem, Tamil Nadu – Amendment in Environmental Clearance issued dated 07.07.2017 – Reg.

Reference: F.No.J-11011/281/2006-IA.II (I) dated 07.08.2019

PRESENT STATUS OF THE PROJECT:

1.This refers to the application of M/s. JSW Steel Limited made vide proposal no. IA/TN/IND/26508/2015 dated 15th March, 2019 along with Form I and sought for amendment in the **specific condition no. vii pertaining to zero liquid discharge of the Environmental Clearance accorded by the Ministry vide letter no. F. No. J-11011/281/2006-IA-11(1) dated 7th July, 2017.**

2.As per specific condition no. vii. "no effluent shall be discharged outside the plant premises and Zero discharge shall be adopted". Project proponent sought amendment in the condition as "Zero discharge for the complete steel plant complex including CPPs".

The compliance status for the EC conditions to the EC Amendment dated 07.08.2019 is given in this report.

Type of Condition	Sl. No.	EC Condition	Compliance Status	Comment by JSW
Amended Specific Condition	i.	The specific condition no. vii given at paragraph no.26 of the EC accorded vide letter dated 07/07/2017 shall read as below: "No effluent shall be discharged outside the plant premises and 'zero' discharge for the complete steel plant complex including Captive Power Plants (CPPs) shall be adopted.	Being Complied	<p>Our plant adheres to Zero Wastewater Discharge policy, ensuring no effluent is discharged outside the premises, except for rainwater and surface runoff during the monsoon.</p> <p>CCTVs and Electromagnetic Flow Meters (EMFM) have been installed at the Guard Pond inlet, outlet and overflow point of the guard pond, where the process wastewater is collected for treatment. Zero wastewater discharge is consistently maintained across the entire steel plant, including the Captive Power Plant (CPP).</p> <p>As per the latest Consent to Operate dated 08.04.2022 (CTO) for CPP II (3 x 30 MW), all wastewater generated from CPP II is directed to the steel plant's guard pond for collection, treatment, and subsequent reuse in the steel plant. This treated water is effectively utilized for cooling, dust suppression, and gardening purposes,</p>

Compliance status to the EC (Amendment) dated 07.07.2017

Subject: Expansion of integrated Steel Plant (1.0 MTPA to 1.3 MTPA) of M/s. JSW Steel Ltd., Located at Mecheri, Taluk Mettur, District Salem, Tamil Nadu – Environmental Clearance under EIA notification, 2006 – Reg.

Reference: F. No J-11011/281/2006-IA. II (I) dated 07.07.2017

PRESENT STATUS OF THE PROJECT:

With respect to the EC F. No. J-11011/281/2006-IA.II (I) dated 7th July 2017, Consent to Establish (CTE) was obtained from Tamil Nadu Pollution Control Board dated 23.09.2017 to the establishment of steel plant from 1.0 - 1.30 MTPA and additional CPP of 1 x 30 MW. As per the CTE 1.15 MTPA of Steel products with 1 x7 MW power generation in CPP#1 and Captive Power plant of 90 MW (2x30 MW in CPP-II and 1 x30 MW-expansion) were established and for that CTO also were obtained on 25.06.2019 for Steel plant and CPP II. Now the unit is withdrawn the product of existing 1 x 7 MW of CPP#1 from the Steel plant CTO. The current CTO is valid up to 31.03.2026 for steel plant and CPP II the CTO is valid till 31.03.2027.

The compliance status for the EC conditions to the EC Dated 07.07.2017 is given in this report.

Type of Condition	Sl. No.	EC Condition	Compliance Status	Comment by JSW
A. Specific Conditions	i.	The occupational health survey of the active workmen involved shall be carried as per the ILO guidelines and all the employees shall cover in every 5 years @ 20% every year.	Being Complied	An Occupational Health Survey (OHS) for active workmen is conducted annually in compliance with ILO guidelines, ensuring 100% coverage of all employees.
	ii.	The amount allocated for ESC i.e. Rs 13 Crores shall be provided as CAPEX and the ESC shall be treated as project and monitored annually and the report of same shall be submitted to Regional office of MoEF&CC.	Being Complied	An amount of Rs.13 Crores has been allocated for Enterprise Social Commitment (ESC) under CAPEX, with the action plans currently being implemented. The expansion activities are planned in a phased manner: Phase I: Increasing capacity from 1.0 MTPA to 1.15 MTPA. Phase II: Further expanding capacity from 1.15 MTPA to 1.3 MTPA. The total estimated cost for the expansion is Rs.1025 Crores. Phase-I activities have been completed, with an expenditure of approximately ₹660 Crores. As of 30.09.2024, Rs.7.8 Crores has been spent under the ESC allocation.
	iii.	The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.	Being Complied	Solar panels with a total capacity of 75 kW have been installed, comprising 50 kW at the canteen, 10 kW at the R&D building, and 5 MW at the MRSS. The average power generation is approximately 12 kWh, with further installations planned in a phased manner. Recently, an additional 10 kW solar panel installation at the Air Separation Plant (ASP) has been completed.
	iv.	The project proponent shall provide for LED lights in their offices and residential areas.	Being Complied	Being Complied, we have taken action to install LED based lightings in the offices and township area and the replacement of sodium vapour lamp to LED is increased up to 1300 KW. Further, planned to install LED lights all over plant.
	v.	The project proponent should install 24X7 air monitoring devices to monitor air emission and submit report to Ministry and its Regional Office.	Being Complied	We have installed 32 Nos. of dust analyzers & 11 Nos. gaseous emission monitoring systems as per CTO condition and the real time data of SPM, SO ₂ , NO _x and CO are transmitted to the Care Air Centre of TNPCB and CPCB servers. A copy of the report is attached as Annexure 2
	vi.	The ETP for Blast furnace effluent should be designed to meet Cyanide standards as notified by the MoEF&CC.	Being Complied	Our plant operates two blast furnaces. Blast Furnace #1 is equipped with a wet-type gas cleaning plant (GCP), while Blast Furnace #2 features a dry-type GCP. Cyanide levels have not been detected in the effluent from Blast Furnace #1. This is consistently verified through periodic analysis conducted by an external NABL-accredited laboratory. Additionally, the State Pollution Control Board (SPCB) collects effluent samples from the guard pond on a monthly basis, with results confirming the absence of cyanides.
	vii.	No effluent shall be discharged outside the plant premises and 'zero' discharge shall be adopted.	Being Complied	We have established Zero Effluent (Wastewater) Discharge system and wastewater generated from the various process of steel plant and Thermal Power Plant is collected in a guard pond at steel plant premises and treated wastewater is 100% reused in steel plant process as per the CTO under water Act. To treat the effluent arising out of the pickling plant and etching lab a dedicated ETP with the facility of Pretreatment, Ultra filter, Multistage RO plant, MEE and ATFD installed. The treated wastewater is reused in pickling process and etching lab.
	viii.	The ETP for coke oven by-product should be designed to meet EPA notified standards especially the cyanide and phenol.	Being Complied	The Coke Oven plant installed is non-recovery type and hence the condition is not applicable to our operations.
	ix.	Coke oven plant should meet visible emission standards notified by the MoEF&CC.	Being Complied	As per EPA notification 2012 which is applicable to the Integrated Iron & Steel refer the visible emissions to by-product type coke oven. The Coke Oven Plant installed at our site is non recovery type which operated under negative pressure and horizontal loading thereby no visible emissions are noticed. However, we have installed a dedicated mobile type dedusting system in the both coke pushing cars.
	x.	The standards issued by the Ministry vide G.S.R. 277(E) dated 31 st March 2012 shall be strictly adhered to and the standards prescribed for the Coke oven plant shall be monitored and the report should be submitted along with the six-monthly compliance report.	Being Complied	The standards issued by the Ministry vide G.S.R. 277(E) dated 31 st March 2012 are related to emission standards of Iron and Steel plant. As per the standard the emission related to coke oven plant is applicable to by product type and our Coke Oven plant is of non-recovery type. Emission standards with respect to stack (NR type COP waste gas is used for steam generation and COP stacks are functioning as emergency stack) and fugitive emissions to the COP are being monitored and the results are submitted along with the six-monthly compliance report. Since, our plant is non-recovery type COP, ETP is not anticipated for COP. All other emissions & effluent parameters related to sinter plant, blast furnace, steel making shop, mills are being monitored monthly and the values are well within the standard prescribed. The six months monitoring results (maximum, minimum and average) by TNPCB and NABL accredited laboratory for stack emissions are given in Annexure 2 and Effluent quality monitoring results are given in Annexure 6

Type of Condition	Sl. No.	EC Condition	Compliance Status	Remarks
A. Specific Conditions	xi.	The emission standards specified in the Environmental (Protection) Amendment Rules, 2015 issued by vide S.O. 3305 (E) dated 7 th December 2015 for the Thermal Power Plant shall be strictly adhered to.	Being Complied	Air Quality Monitoring is being done by SPCB biannually and manual monitoring is conducted by a NABL accredited external laboratory for Steel and TPP. Air quality Monitoring as applicable to the Thermal power plant with respect to the emission standards specified in the Environmental (Protection) Amendment Rules, 2015 issued by vide S.O. 3305 (E) dated 7 th December 2015) on a monthly basis and we are submitting the monthly report to SPCB. Latest report of SPCB survey and Monthly Environment monitoring reports are given in Annexure 2 & 3
	xii.	The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November 2009 shall be followed.	Being Complied	We are adhering to the National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November 2009.
	xiii.	On-line ambient air quality monitoring and continuous stack monitoring facilities for all the stacks shall be provided and sufficient air pollution control devices viz. Electrostatic precipitator (ESP), and bag filters etc. shall be provided.	Being Complied	We have installed 4 Nos. of Continuous Ambient Air Quality monitoring stations to carry out the ambient air quality monitoring, and the real time parameters are connected with CAC, TNPCB, Chennai. Online continuous stack monitoring systems (as per MoEF&CC standard) are installed in all process and non-process stacks to monitor SPM, SO ₂ & NO _x Further adequate Air Pollution Control measures in the respective process and raw material handling areas like water sprinklers, dry & wet fog systems, GI sheets are provided in raw material handling areas to control fugitive emission. As per the recent survey report of the TNPCB the stack and fugitive emission values are well within the standards. The details of APC installed are given in Annexure 4
	xiv.	A statement on carbon budgeting including the quantum of equivalent CO ₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO ₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.	Being Complied	The GHG emissions inventory and carbon sequestration activities, including plantation efforts, for the Financial Year 2024 have been prepared and submitted annually along with the half-yearly compliance reports. The statement on carbon budgeting for FY 2025 will be submitted by March 2025
	xv.	For the employees working in high temperature zones falling in the plant operation areas, the total shift duration will be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipment, garments and gears such as head gear, clothing, gloves, eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc.	Being Complied	Employees working in high-temperature zones are rotated to alternate roles to ensure no individual is exposed to temperatures exceeding 50°C for more than one hour continuously. Adequate ventilation is maintained in these areas, and tasks requiring exposure to temperatures up to 45°C, such as handling hot metal or crude steel, are limited to 10-15 minutes as per operational requirements. To prioritize worker safety, proper personal protective equipment (PPE) is provided, including aluminum-coated garments, headgear, gloves, eye protection, and other necessary gear. Additionally, arrangements are in place to supply sufficient hydration options such as drinking water, buttermilk, and lime juice to prevent dehydration and ensure employee well-being.
	xvi.	In-plant control measures and dust suppression system shall be provided to control fugitive emissions from all the vulnerable sources. Dust extraction and suppression system shall be provided at all the transfer points, coal handling plant and coke sorting plant of coke oven plant. Bag filters shall be provided to hoods and dust collectors to coal and coke handling to control dust emissions. Water sprinkling system shall be provided to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials etc.	Being Complied	Dust suppression systems are provided to control fugitive emissions from all the vulnerable sources like raw material unloading and storage yards. Bag filters and Dry & Wet fog systems are provided in raw material transfer points, coal handling and coke sorting plant of coke oven. To control dust emission bag filters are provided in coal handling area of COP. Water sprinkler systems are provided in various locations to control secondary fugitive dust emissions generated during screening, loading, unloading, handling and storage of raw materials. A tyre washing unit is installed in the main gate entry to control dust emission due to vehicular movement

Type of Condition	Sl. No.	EC Condition	Compliance Status	Remarks
A. Specific Conditions	xvii.	Gaseous emission levels including secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry vide G.S.R. 414(E) dated 30 th May, 2008 and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	Being Complied	The G.S.R. 414(E) dated 30 th May, 2008 is related to sponge iron plant. JSW Salem works not installed any Sponge Iron Plant. Hence, it is not applicable. In this connection, a representation is submitted to MoEF&CC dated 22.07.17.
	xviii.	Hot gases from DRI Kiln should be passed through dust settling chamber (DSC) to remove coarse solids and After Burning Chamber (ABC) to burn CO completely and used in Waste Heat Recovery (WHRB). The gas then shall be cleaned in ESP before dispersion out into the atmosphere through ID fan and stack. ESP shall be installed to control the particulate emission from WHRB.	Not Applicable	The existing and expansion of the steel plant is following blast furnace route and there is no Direct Reduced Iron (DRI) process in our operations. Hence, it is not applicable.
	xix.	Efforts shall further be made to use maximum water from the rain water harvesting sources. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement.	Complied	We have implemented a comprehensive rainwater harvesting initiative, featuring four strategically located ponds to optimize water conservation. Two ponds are situated near the township on the East side, with capacities of 17,500 KL and 1,08,000 KL, respectively whereas within the plant premises, one pond near the RO plant area holds 15,000 KL, and another behind the guest house accommodates 5,000 KL. Together, these systems provide a total collection capacity of approximately 1,46,000 KL. The harvested rainwater is effectively utilized for secondary applications within the steel plant and contributes to groundwater recharge.
	xx.	Risk and Disaster Management Plan along with the mitigation measures shall be prepared and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.	Complied	Study on Risk and Disaster Management Plan was conducted and the detailed report was submitted on 01.02.2018 and the updated one submitted to local administration on 16.06.2022
	xxi.	All the blast furnace (BF) slag shall be granulated and provided to cement manufacturers for further utilization. Flue dust from sinter plant and SMS and sludge from BF shall be re-used in sinter plant. Coke breeze from coke oven plant shall be used in sinter and pellet plant. SMS slag shall be given for metal recovery and properly utilized. All the other solid waste including broken refractory mass shall be properly disposed off in environment-friendly manner.	Complied	All the Blast Furnace Slag is converted to Granulated slag and now sending to GGBFS unit for value added product. Flue dust from blast furnace, sludge from BF & EOF, Coke breeze from coke oven plant are re-used in sinter plant. Pellet plant is not installed in our process. SMS slag is subjected to magnetic separation for metal recovery and after crushing further reused in internal applications including paver block making facility and sold to cement industries. The refractories are being selected to withstand high temperature whose self-life is longer whereby generations of used refractories are lesser. The used refractories are sent to recyclers.
	xxii.	Coal and coke fines shall be recycled and reused in the process. The breeze coke and dust from the air pollution control system shall be reused in sinter plant. The waste oil shall be properly disposed of as per the Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016.	Being Complied	Coal and coke fines are recycled and reused in the Sinter plant and Blast Furnace. Coke breeze and dust from the air pollution control systems are collected and reused in the Sinter Plant. The waste oil generated from the process is being disposed to authorized vendor as per the Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016.
	xxiii.	Green belt shall be developed in 33 % of plant area. Selection of plant species shall be as per the CPCB guidelines in consultation with the DFO.	Complied	As of Sep 2024, JSW Salem Works has expanded its green cover to encompass approximately 91 hectares, which is about 34% of the total land area. With a tree survival rate between 85-90%, this effort demonstrates ongoing dedication to environmental stewardship.
	xxiv.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Steel plants and Coke Oven Plants shall be implemented.	Complied	All recommendations outlined in the Charter on Corporate Responsibility for Environmental Protection (CREP) for steel plants have been fully implemented. The updated compliance status report is enclosed herewith as Annexure 5
	xxv.	At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.	Being Complied	In line with the EC Specific Condition (ii), Rs. 13 crores have been allocated toward Environmental Safeguards and Commitments (ESC). Activity details, along with a time-bound action plan addressing public hearing concerns and local needs, have been prepared, and implementation is underway as per the defined schedule. The expansion activities are planned in two phases: Phase-I: Expansion from 1.0 MTPA to 1.15 MTPA, completed at a cost of Rs. 660 crores. An amount of . 7.81 crores has been spent toward ESC till September 2024. Phase-II: Expansion from 1.15 MTPA to 1.3 MTPA will be undertaken within the validity period of the EC. Based on local requirements, the ESC expenditure heads have been slightly revised, and the updates were communicated to your office via email dated 26.09.2020. JSWSL Salem Works assures full adherence to its commitments, with detailed information provided in Annexure 11 .

Type of Condition	Sl. No.	EC Condition	Compliance Status	Remarks
A. Specific Conditions	xxvi.	The proponent shall prepare a detailed CSR plan for every year for the next 5 years for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Health, Skill Development and infrastructure requirements such as strengthening of village roads, avenue plantation, etc.) activities in consultation with the local communities and administration. The CSR plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the plan shall be submitted as part of the compliance report to RO. The details of the CSR plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company. The plan so prepared shall be based on SMART (Specific, Measurable, Achievable, Relevant and Time bound) concept. The expenditure should be aimed at sustainable development and direct free distribution and temporary relief should not be included.	Being Complied	CSR plan for 5 years (from 2017 to 2022) is prepared as per condition and activities are completed. The updated report of CSR for FY 2025 (till September 2024) is attached as Annexure 11
	xxvii	All the commitments made to the public during the Public Hearing /Public Consultation meeting shall be satisfactorily implemented and a separate budget for implementing the same shall be allocated and information submitted to the Ministry's Regional Office at Chennai	Complied	Commitments made to the public during Public Hearing is satisfactorily implemented and a compliance report has been already submitted to the RO,MoEF&CC,Chennai
	xxviii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Agreed to Comply	Currently, there are no ongoing expansion activities. Provisions will be made for the expansion project activities and as per the condition temporary structure will be removed after the completion of expansion activities.

Type of Condition	Sl. No.	EC Condition	Compliance Status	Remarks
B. General Conditions	i.	The project authorities must strictly Adhere to the stipulations made by the concerned State Pollution Control Board and the State Government.	Agreed to Comply	We are adhering to the stipulations made by the SPCB.
	ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Being Complied	There is no further expansion or modification in the plant is carried out without prior approval of Ministry of Environment, Forests and Climate Change (MoEF&CC)
	iii.	At least four ambient air quality monitoring stations (AAQMS) should be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , PM _{2.5} , SO ₂ and NO _x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Chennai and the SPCB/CPCB once in six months.	Complied	In consultation with the Tamil Nadu Pollution Control Board (TNPCB), 4 No. of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) have been installed within the plant premises boundary of to monitor PM ₁₀ , PM _{2.5} , SO ₂ , and NO _x . Ambient Air Quality and stack emission data are regularly monitored and submitted to the Ministry of Environment, Forest, and Climate Change (MoEF&CC), the Regional Office in Chennai, and the State and Central Pollution Control Boards (SPCB/CPCB) on half yearly basis.
	iv.	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	Being Complied	Industrial wastewater is being collected, treated and reused 100% for secondary applications such as cooling, dust suppression and plantation purpose. Quality parameters are conformed to the prescribed standards under GSR 422 (E) dated 19th May, 1993 and 31st December 1993. The treated wastewater analysis report given by TNPCB & NABL accredited laboratory is given in Annexure 6
	v.	The overall noise levels in and around the plant shall be kept well within the standards 85 dB(A) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dB(A) during day time and 70 dB(A) during night time.	Being Complied	Source and Ambient noise levels are measured in and around the plant areas on monthly basis and control measures like acoustic hoods, silencers, and enclosures are provided wherever required. The noise levels of source and ambient are well within the standards prescribed under EPA Rules, 1989. Apart from this visual display boards are displayed to wear earplug, ear muff as PPE wherever required. The noise monitoring results by NABL accredited laboratory is enclosed in Annexure 8
	vi.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Being Complied	Health surveillance (Annual Health Check-up) is being conducted for all employees on yearly basis and records are being maintained in the Occupational Health Centre.
	vii.	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Being Complied	We have implemented a comprehensive rainwater harvesting initiative, featuring four strategically located ponds to optimize water conservation. Two ponds are situated near the township on the East side, with capacities of 17,500 KL and 1,08,000 KL, respectively. Whereas within the plant premises, one pond near the RO plant area holds 15,000 KL, and another behind the guest house accommodates 5,000 KL. Together, these systems provide a total collection capacity of approximately 1,46,000 KL. The harvested rainwater is effectively utilized for secondary applications within the steel plant and contributes to groundwater recharge.
	viii.	The project proponent shall also comply with all the environmental protection measures and safeguards recommend in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	Complied	To comply the environmental protection measures and safeguards as per the recommendation of EIA/EMP report for controlling air emissions including fugitive, water reduction, Zero Wastewater Discharge, Waste Minimization and maximum waste utilization. Apart from the above we are undertaking socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply, health care and formation of former producer organisation, etc. The details are given Annexure 11 in the six monthly report of CSR.
	ix.	Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEF&CC) as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Chennai. The funds so provided shall not be diverted for any other purpose.	Being Complied	From April 2024 to September 2024, approximately Rs. 1.55 crores have been spent as capital costs on environmental pollution control measures. Additionally, around Rs. 4.1 Crores have been incurred as recurring costs for these measures.

Type of Condition	Sl. No.	EC Condition	Compliance Status	Remarks
B. General Conditions	x.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/ Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Complied	Copy of clearance letter is submitted to local administration on 14.07.2017 as well as uploaded to our website.
	xi.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF&CC at Chennai. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Being Complied	The compliance of the stipulated environment clearance conditions including results of monitored data is uploaded on their website once in six months and periodically updated as informed. Simultaneously the compliance reports are being submitted (email) to the Regional Office of the MoEF&CC at Chennai and CPCB Regional Office Chennai & TNPCB Chennai. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x and stack emission are displayed near the entrance of both gates of the company in the public domain.
	xii.	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Chennai/CPCB/SPCB shall monitor the stipulated conditions.	Being Complied	Environmental conditions and compliance status report including results of monitored data are being submitted once in six months to the Regional Office of MoEF&CC, at Chennai and CPCB Regional Office Chennai & TNPCB Chennai.
	xiii.	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Office of the MoEF&CC at Chennai by e-mail.	Being Complied	Environmental statement for each financial year ending 31st March in Form-V and status of compliance of environmental conditions is being submitted to the Regional Office of the MoEF&CC at Chennai. For the FY 2024, the report was submitted on 25.09.2024. The same was uploaded on our company website.
	xiv.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be sent at website of the Ministry of Environment, Forests, and Climate Change (MoEF&CC) at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Chennai.	Complied	Environmental Clearance accorded from MoEF&CC dated on 07.07.2017 and the details have been advertised in Dinamani and The Indian Express on 14.07.2017. The same was advertised two local newspapers (Dinamani and The Indian Express) which are widely circulated in the region of which Tamil is the vernacular language of the locality concerned. A copy of the same is submitted to the MoEF&CC Regional office at Chennai on 15.07.2017
	xv.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	Complied	Date of financial closure and land development work is informed to Regional Office vide letter dated 12.10.2017.

ANNEXURE 1
WATER DRAWL NOC



**GOVERNMENT OF TAMIL NADU
WATER RESOURCE DEPARTMENT**

From:

Er.S.Prabakaran, B.E.,
Chief Engineer, WRD,
State Ground & Surface Water
Resources Data Centre
Tharamani, Chennai 600 113.
Phone : 91-44-22542223 (Direct)
91-44-22541526/27(Board)

Email: cegwchennai@gmail.com

Web site: www.groundwatertnpwd.org

To:

M/s. JSW Steel Limited,,
Salem Works,
Pottaneri (Po), Mecheri,
Mettur Taluk,
Salem District-636453

Lr.No. OT 8 /AG-2/17/2024/Renewal – NOC/SLM/2024 dated: 05.01.2024.

Sir,

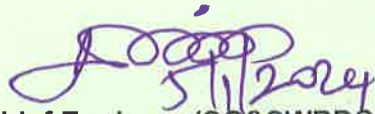
Sub: "Renewal of No Objection Certificate" for drawal of groundwater to
"M/s. JSW Steel Limited", Pottaneri & M.Kalipatty Village, Pottaneri Firka,
Mechery Block, Mettur Taluk, Salem District – 6th Renewal of NOC issued-
Reg.

Ref: 1.This Office Lr.No. OT 8 / AG-2 /759/ Renewal of NOC / SLM / 2022
dated:06.10.2022.
2.The firm Renewal of NOC application date:20.06.2023.
3.This Office Lr.No:233DD(G)/AG-VI/Renewal of
NOC/2023 Dt:04.07.2023.
4.SE,GWC,ThanjavurLr.No:234^S/AG/T.F44C(SLM)/NOC/GWC/TNJ/2023
Dt:21.12.2023.

Please find the enclosed "Renewal of No Objection Certificate", for drawal of groundwater to "M/s.JSW Steel Limited", Pottaneri & M.Kalipatty Village, PottaneriFirka, Mechery Block, Mettur Taluk, Salem District. As per the G.O.(Ms).No 142 PW(R2)Department dt:23.07.2014, NOC for water based industries should be renewed every year. You are requested to strictly adhere to the quantity permitted and conditions mentioned in the certificate and apply for renewal of NOC before two... months from the date of expiry, i.e., **26.07.2024** without fail. If you fail to apply for renewal of NOC, it will be treated as "illegal" and informed to District Monitoring Committee to seal the bore well in your unit as per Madras High Court Orders in WP.No.28535 of 2014 & WP.No.16299/2018.

Enclosure:

1. Renewal of No Objection Certificate


Chief Engineer (SG&SWRDC)
WRD,Tharamani,Chennai-113



Certificate No. 17/2024(R-6)

Dated: 05.01.2024

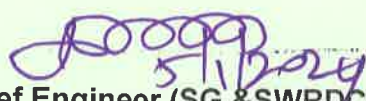
**GOVERNMENT OF TAMIL NADU
WATER RESOURCES DEPARTMENT
STATE GROUND & SURFACE WATER RESOURCES DATA
CENTRE CHENNAI – 113**

Renewal of No Objection Certificate

This is to certify that “M/s. JSW Steel Limited”, Pottaneri & M.Kalipatty Village, Pottaneri Firka, Mechery Block, Mettur Taluk, Salem District is hereby given the “Renewal of No Objection Certificate” for the drawal of total quantity of 80,000LPD (Eighty Thousand litres per day) of groundwater for the purpose of “Drinking & Domestic” use from the Groundwater structure listed below with strict adherence of stipulated conditions.

Sl. No	Referred Well / Bore Well & SF. No	Village / Firka	Co-ordinates		Quantity Permittedfor Pumping in LPD
			Latitude	Longitude	
1.	Bore Well-1 / 309	Pottaneri / Pottaneri	11 ⁰ 49'00'' N	77 ⁰ 54'59'' E	20,000
2.	Bore Well-2 / 310	M.Kalipatty / Pottaneri	11 ⁰ 48'34'' N	77 ⁰ 55'23'' E	20,000
3.	Bore Well-3 / 311		11 ⁰ 48'57'' N	77 ⁰ 55'13'' E	20,000
4.	Bore Well-4 / 314		11 ⁰ 48'51'' N	77 ⁰ 55'09'' E	20,000
Total					80,000

This renewal certificate is valid from 27.07.2023 to 26.07.2024 and Renewal of NOC is issued under the conditions laid down.


Chief Engineer (SG & SWRDC),
WRD, Tharamani, Chennai-113

Renewal of NOC Conditions pertaining to M/s. JSW Steel Limited, Salem District

- 1 ~~This No Objection certificate issued for ground water extraction applies to the referred ground water abstraction structure only.~~
- 2 All the **other ground water abstraction structures** (dug wells/bore wells/dug-cum bore wells) other than the permitted one inside the plant area **should not be considered** for this permission.
- 3 Such structures as said in Condition No.2 should be closed or used only for **Rain water harvesting** purposes.
- 4 This Certificate is applicable for drawal of permitted Quantity of ground water only and **not for transportation.**
- 5 The Company should install necessary "flow meters" to the referred well /bore well and monitor the quantity which should not exceed the permitted level. **Proper Records** should be maintained continuously from the date of drawal. Monthly statement of daily drawal of water should be sent to the Executive Engineer, Groundwater Division, Salem as per format enclosed.
- 6 As and when the officials of Ground Water Wing of WRD inspect the site/premises, perusal of drawal records and water quality observations should be allowed.
- 7 **Rain water harvesting structure** is to be established as per the direction of this department. Rain water harvesting structures already exist inside the plant premises, it should be maintained properly.
- 8 **Violation of the above stipulations in any form may lead to cancellation of the permission accorded by the Government.**
- 9 The Company should be ready to pay the **levy/charges for drawal of ground water** for commercial purposes, if Government / Ground Water Authority imposes any such orders in future.
- 10 It is also informed that during the renewal of the NOC, depending upon the hydrogeological condition the category of the area and the site conditions, the quantity will be vary from permitted quantity.
- 11 The handed over Bore Well to this Department for Water Level monitoring purpose should be maintained properly. The firm has to take the water level in the first week of every month & maintain a monthly water level Register and the Assistant Geologist concerned should monitor the water level data and also check whenever required.
- 12 As per the G.O.(Ms).No 142 PW(R2)Department dt:23.07.2014, NOC for water based industries should be renewed every year
- 13 This No Objection Certificate is applicable **only for the purpose of "Drinking& Domestic"**, if any deviation in the usage of ground water is found, the NOC accorded is automatically deemed to be cancelled.
- 14 The **Executive Engineer, Ground Water Division** of the respective District **would inspect** either the rain water harvesting structures established in the premises of the firm or the records maintained or even the drawal of ground water as and when needed and it is the mandatory of the firm to maintain the Rain water harvesting structure/ structures properly and show the records needed.
- 15 **If any information / Documents submitted by this firm is found to false / in correct or any data provided by the firm is found to be incorrect, the NOC issued to the firm will be cancelled by this department without any prior notice.**


Chief Engineer, SG & SWRDC,
WRD, Tharamani, Chennai-113.

JSW/SLM/BOREWELL/2024-25/001

2nd July 2024

To

The Chief Engineer

State Ground and Surface Water Resources Data Centre,

Tharamani,

Chennai - 600 113.

Dear Sir

Sub: Request for Renewal of No Objection Certificate for drawal of ground water from 4 Nos of bore wells located inside our steel plant at Pottaneri – M.Kalipatti Village, Mecheri, Salem District.- Reg.

Ref: No Objection Certificate Number OT 8/AG-2/17/2024/Renewal - NOC/SLM/2024 dated 05.01.2024.


With reference to the above cited subject, The No Objection Certificate Number: OT 8/AG-2/17/2024/Renewal - NOC/SLM/2024 dated 05.01.2024 is getting expired on 26.07.2024.

In this regard herewith we are submitting the duly filled application and Online payment receipt of E-Challan No: 20240702022849 dated 02.07.2024 of Rs.24000 for NOC renewal.

We request you to kindly issue No Objection certificate for drawl of ground water for the purpose of Drinking & Domestic use from 4 bore wells for the year 2024-2025.

Thanking you,

For JSW Steel Limited,


BNS Prakash Rao,
Executive Vice President & Plant Head.

Received: *APP. J. K. S. M.*

Date : *31.7.24*

O/o. Chief Engineer,
SG & SWRDC, Taramani
Chennai - 113

Sign:-

31/7/24

Salem Works

P.O. Pottaneri, Mecheri,

Mettur - Tk, Salem - Dt. Pin : 636 453

Tamilnadu, India.

CIN No L27102MH1994PLC152925

T +91 4298 272000

www.jsw.in

Registered Office

JSW Centre

Bandra Kurla Complex

Bandra East, Mumbai 400 051

T +91 22 4286 1000

F +91 22 4286 3000



O P Jindal Group

ANNEXURE 2

STACK EMISSION MONITORING REPORT

OF TNPCB & NABL ACCREDITED

LABORATORY

Annexure 2

**Stack emission monitoring report of TNPCB & NABL accredited laboratory for the period
April 24 to Sep '24.**

I. Stack emission monitoring results of TNPCB					
Sl. No	Stack attached to	Discharge rate in (Nm ³ /hr)	Pollutants Concentration (mg/Nm ³)		
			PM	SO ₂	NO _x
1	Sinter Plant - I - Sinter Machine	74929	36	-	-
2	Sinter Plant - I - Cooling System	71741	15	-	-
3	Sinter Plant - I Dedusting System	132531	26	-	-
4	Sinter Plant - I RMHS	19283	57	-	-
5	Sinter Plant - II - Sinter Machine	344355	21	-	-
6	Sinter Plant - II - Cooling & De-dusting System	369977	42	-	-
7	Sinter Plant - II - RMHS	82030	65	-	-
8	COP - Coke cutter	33518	46	-	-
9	Coke Oven - WHRB -I	49832	32	133	26
10	Coke Oven - WHRB -III	49031	40	144	38
11	Coke Oven - WHRB -V	49808	44	149	32
12	BF Gas Fired Boiler	31894	31	53	15
13	Blast Furnace - I - Hot stove	46287	18	16	12
14	Blast Furnace - I - Stock House & RMHS	51019	47	-	-
15	Blast Furnace - I - Cast House	229896	53	-	-
16	Blast Furnace - II - Hot stove	70595	22	16	11
17	Blast Furnace - II - Stock House & RMHS	309189	39	-	-
18	Blast Furnace - II - Cast House	449643	42	-	-
19	Blast Furnace - II - PCI	26841	83	-	-
20	Process Boiler	44107	18	112	49
21	Energy Optimizing Furnace -I	63432	42	-	-
22	Energy Optimizing Furnace -II	65132	46	-	-
23	EOF Secondary dedusting system I & II	298381	41	-	-
24	Ladle Refining Furnace - 1 & 4 primary & LRF 1 to 4 Secondary dedusting	300001	44	-	-
25	Ladle Refining Furnace - 2 & 3	63682	37	-	-
26	VD boiler	12510	35	48	24
27	CCM-I ABGM - 1	27631	46	-	-
28	CCM-II ABGM - 2	34335	49	-	-
29	CCM-III Steam Exhaust 1	19008	3.9	-	-
30	CCM-III ABGM - 3	14664	44	-	-
31	BLM - Re Heating Furnace -I	29130	35	-	-
32	BLM - Re Heating Furnace -II	33641	37	-	-
33	BRM - Re Heating Furnace	76825	31	-	-
34	Pickling Plant - Acid Fumes Exhaust System Stack	18344	20	3	12
35	Pickling Plant - Acid - Hot Water Generator Stack	1268	23	3	11
36	Pickling Plant - MEE Thermic Fluid Stack	6318	26	13	19
37	GGBFS Grinding Mill Stack	121633	8	-	-
38	Batching Plant I Cement Silo vent stack	435	27	-	-
39	DG Set I (625 KVA) EOF 1	882	25	11	18
40	DG Set (1250 KVA) CCM 3	3619	28	11	17
41	DG Set (650 KVA) BRM	1853	26	13	17
42	AFBC - Boiler	160519	27	192	127
43	COAL CRUSHER CPP 2	4764	55	-	-
44	CPP II COAL SCREENING SECTION	8269	49	-	-
45	DG Set (500 KVA) CPP 2	1109	45	38.4	19.2

II. Stack emission monitoring report of NABL accredited Laboratory					
Stack No.	Source name	Stack emission Average (mg/Nm ³)			Discharge (Nm ³ /hr)
		PM	SO ₂	NO _x	
1	Sinter Machine (Sinter Plant I)	122.1	56.0	50.3	85428
2	Cooling System (Sinter Plant I)	29.7	-	-	99671
3	Dedusting System (Sinter Plant I)	28.4	-	-	144021
4	Dust Extraction System For RMHS (Sinter Plant I)	29.1	-	-	23882
5	Sinter Machine (Sinter Plant II)	72.9	53.3	50.3	502027
6	Plant Dedusting and Cooling (Sinter Plant II)	49.4	-	-	470594
7	Crushing of Fuel & Raw Materials (Sinter Plant II)	42.1	-	-	117426
8	Coke Oven Chimney 1A & 1B (Coke Oven) -Emergency stack	-	-	-	-
9	Coke Oven Chimney II (Coke Oven) -Emergency stack	-	-	-	-
10	Coke Oven Chimney III (Coke Oven) -Emergency stack	-	-	-	-
11	Coke cutter dedusting system stack (Coke Oven)	33.7	-	-	46753
12	Coke Dryer dedusting system stack (Coke Oven)	33.8	-	-	119422
13	Waste Heat Recovery Boiler I (Coke Oven)	27.9	336.5	272.1	54169
14	Waste Heat Recovery Boiler II (Coke Oven)	28.5	342.7	270.7	54764
15	Waste Heat Recovery Boiler III (Coke Oven)	32.1	344.7	267.7	54724
16	Waste Heat Recovery Boiler IV (Coke Oven)	31.8	340.7	259.9	47799
17	Waste Heat Recovery Boiler V (Coke Oven)	30.4	335.1	256.6	54523
18	Hot Stove (Blast Furnace I)	27.5	51.7	50.2	47948
19	Stock House Dedusting System (Blast Furnace I)	43.4	-	-	82629
20	Cast House Dedusting System (Blast Furnace I)	45.5	-	-	293824
21	GCP Flare (Blast Furnace I) -Emergency stack	-	-	-	-
22	Hot Stove (Blast Furnace II)	26.9	56.5	50.2	62843
23	Stock House Dedusting & RMHS (Blast Furnace II)	33	-	-	265011
24	Cast House Dedusting System (Blast Furnace II)	31	-	-	535931
25	GCP Flare (Blast Furnace II) -Emergency stack	-	-	-	-
26	Pulverized Coal Injection (Blast Furnace)	54.9	-	-	55985
27	Process Boiler (1*25 TPH) and (1*8 TPH) (Common Stack)	36.3	47.5	40.7	19439
28	Energy Optimizing Furnace (Steel Melting Shop I)	54.2	53.9	47.6	51023
29	Energy Optimizing Furnace (Steel Melting Shop II)	56.6	52.8	43.9	50719
30	Secondary Dedusting System EOF I&II (Combined SMS II)	44.4	-	-	418890
31	Ladle Furnaces (Steel Melting Shop I)	40.0	48.0	35.2	21365
32	Ladle Furnaces(Common Stack) (Steel Melting Shop II)	39.6	48.5	36.4	51089
33	Ladle Furnaces -1 & 4(65 T/Heat Each) Primary & 1 to 4 Secondary Dedusting (Steel Melting Shop)	40.5	-	-	421072
34	Vacuum Degasing Unit (Boiler) (Steel Melting Shop II)	32.5	49.6	43.7	20559
35	Continuous Casting Machine (Steel Melting Shop I)	30.4	-	-	28210
36	Billet grinding machine stack - ABGM -1	38.2	-	-	27900
37	CCM#II Steam exhaust system -1	30.2	-	-	25509
38	CCM#II Steam exhaust system -2	31.4	-	-	25974
39	CCM#II Cut fumes Exhaust system	35.1	-	-	59297
40	Billet grinding machine stack -ABGM - 2	46.6	-	-	34609
41	CCM#III Steam exhaust system 1	32.8	-	-	32586
42	CCM#II Steam exhaust system stack #2	30.7	-	-	33469
43	Billet grinding machine stack -ABGM - 3	47.2	-	-	22459
44	Re-heating Furnace - Chimney- 1 (BLM)	31.7	44.3	38.0	25240
45	Re-heating Furnace - Chimney- 2 (BLM)	60.6	53	46	28261
46	Reheating Furnace Chimney 1 & 2	66.3	54	46	53736
47	Pickling Plant- Acid - Hot water Generator Stack	33.6	46	61	1848
48	Picklig plant - ARP - Hot water Generator	-	-	-	-
49	Pickling plant - MEE – Thermic fluid Heater	36	41	62	6477
50	Pickling Plant- Acid Fumes exhaust system stack	18.7	-	-	21545.1
51	BF Slag Grinding mill stack	7.5	-	-	140732
52	BF Slag Grinding unit- Sinter waste Gas	-	-	-	-
53	BF Slag Grinding unit- Hot Air Generator	-	-	-	-
54	Batching plant#1 Cement silo vent stack	32.7	-	-	2523.0
55	Batching plant#2 Cement silo vent stack	-	-	-	-
56	BF Gas Fired Boiler	33.4	55.5	49.8	55774
57	AFBC Boiler	26.2	532	438	112669
58	Coal crusher	38.0	-	-	5766
59	Coal screening	40.3	-	-	15345
60	Raw Material Transfer and Discharge Point	42.6	-	-	1666

ANNEXURE 3

**ONLINE STACK EMISSION MONITORING &
AMBIENT AIR QUALITY MONITORING
REPORT**

Stack No.	Source name	Parameter	UoM	Month					
		Month		Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
26	Waste Heat Recovery Boiler I (Coke Oven)	SPM	mg/Nm ³	28.23	16.32	19.58	20.57	23.29	28.78
		SO ₂	mg/Nm ³	200.08	129.93	22.60	37.59	40.37	45.55
27	Waste Heat Recovery Boiler II (Coke Oven)	SPM	mg/Nm ³	18.22	25.52	19.52	31.83	25.34	19.60
		SO ₂	mg/Nm ³	240.77	238.63	241.86	278.82	311.36	297.06
28	Waste Heat Recovery Boiler III (Coke Oven)	SPM	mg/Nm ³	29.04	19.90	27.95	41.57	21.48	17.41
		SO ₂	mg/Nm ³	162.99	56.58	36.51	63.14	17.43	9.46
29	Waste Heat Recovery Boiler IV (Coke Oven)	SPM	mg/Nm ³	NA					18
		SO ₂	mg/Nm ³	NA					186
30	Waste Heat Recovery Boiler V (Coke Oven)	SPM	mg/Nm ³	NA					19
		SO ₂	mg/Nm ³	NA					148
31	BF Gas Fired Boiler	SPM	mg/Nm ³	17.16	30.35	33.43	31.12	32.97	32.93
32	Reheating Furnace (Bar & Rod Mill)	SPM	mg/Nm ³	44.32	41.63	66.58	67.57	65.70	54.83
		SO ₂	mg/Nm ³	33.54	29.63	44.01	40.11	33.60	NA
33	Sinter Machine (Sinter Plant II)	SPM	mg/Nm ³	55.54	50.76	50.73	33.27	55.85	44.49
		SO ₂	mg/Nm ³	61.04	40.86	48.47	33.27	22.27	NA
34	Plant Dedusting and Cooling (Sinter Plant II)	SPM	mg/Nm ³	39.75	27.31	31.43	33.32	35.39	29.98
35	Crushing of Fuel & Raw Materials (Sinter Plant II)	SPM	mg/Nm ³	19.32	6.83	34.49	35.00	37.77	31.13
36	Hot Stove (Blast Furnace II)	SPM	mg/Nm ³	13.09	21.19	21.24	23.19	18.48	9.62
		SO ₂	mg/Nm ³	53.58	54.97	58.62	60.19	49.52	37.14
		NOx	mg/Nm ³	32.08	30.88	34.00	35.21	27.05	21.55
		CO	ppm	994.37	994.97	999.97	1070.34	857.45	650.39
37	GCP Flare (Blast Furnace II) -Emergency stack	NA	NA	NA					
		NA	NA	NA					
38	Stock House Dedusting & RMHS (Blast Furnace II)	SPM	mg/Nm ³	22.36	25.57	22.09	13.09	19.25	15.66
		SO ₂	mg/Nm ³	3.93	4.20	4.50	6.39	2.89	NA
39	Cast House Dedusting System (Blast Furnace II)	SPM	mg/Nm ³	18.30	21.17	21.66	24.24	23.15	18.93
		SO ₂	mg/Nm ³	5.48	5.26	3.04	1.35	4.95	NA
40	Pulverized Coal Injection (Blast Furnace)	SPM	mg/Nm ³	11.65	39.82	22.18	21.29	29.09	22.51
		SO ₂	mg/Nm ³	16.19	28.10	13.95	25.07	8.84	NA
41	CPPII-AFBC Boiler	SPM	mg/Nm ³	24.76	28.17	28.15	19.93	23.85	21.13
		SO ₂	mg/Nm ³	389.35	301.06	411.09	458.32	344.75	311.35
		NOx	mg/Nm ³	206.27	207.54	286.04	324.95	238.49	171.40

II. Continuous Ambient Air Quality Monitoring Results (April 24 to Sep '24.)

Month	CAAQMS#1					CAAQMS#2		
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	CO	PM ₁₀	PM _{2.5}	SO ₂
UoM	µg/m ³	µg/m ³	µg/m ³	µg/m ³	mg/m ³	µg/m ³	µg/m ³	µg/m ³
Apr-24	38	24	10	9	0.8	62	29	14
May-24	33	20	9	8	0.9	30	26	20
Jun-24	22	15	8	7	0.6	27	19	18
Jul-24	20	14	8	9	0.5	20	17	18
Aug-24	27	14	9	9	0.4	23	13	23
Sep-24	24	19	7	11	0.3	30	24	16

Month	CAAQMS#3			CAAQMS#4		
	PM ₁₀	PM _{2.5}	SO ₂	PM ₁₀	PM _{2.5}	SO ₂
UoM	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³	µg/m ³
Apr-24	51	26	23	43	25	22
May-24	53	23	22	23	20	23
Jun-24	51	26	29	36	17	24
Jul-24	46	18	36	29	15	24
Aug-24	36	11	28	37	16	13
Sep-24	34	10	52	27	17	9

Tolerance limit: PM₁₀: 100 µg/m³, PM_{2.5}: 60 µg/m³, NO_x: 80 µg/m³, SO₂: 80 µg/m³, CO: 1 hr avg - 4 mg/m³, 8 hr avg - 2 mg/m³

The results are well within the prescribed standards.

III. Ambient Air Quality Monitoring results of NABL Accredited laboratory								
Month	AQ-1 (Unit - µg/m3)				AQ-2 (Unit - µg/m3)			
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂
Apr-24	48.65	18.46	10.26	17.03	50.54	19.23	10.55	18.30
May-24	48.25	19.15	10.78	17.89	48.77	19.25	11.08	19.22
Jun-24	44.87	18.19	10.46	16.63	45.36	18.29	10.75	17.87
Jul-24	39.80	15.86	9.74	15.58	40.08	15.92	9.98	16.74
Aug-24	47.39	21.06	9.44	14.49	47.72	19.95	9.68	15.57
Sep-24	51.13	24.45	9.76	13.33	50.41	23.02	10.00	14.32
Month	AQ-3 (Unit - µg/m3)				AQ-4 (Unit - µg/m3)			
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂
Apr-24	51.40	19.90	10.90	17.80	48.90	18.80	9.30	16.00
May-24	49.20	20.00	11.40	18.70	48.60	18.90	9.80	16.80
Jun-24	44.10	19.00	11.10	17.40	45.20	17.90	9.50	15.60
Jul-24	40.30	16.50	10.30	16.30	40.30	15.60	8.80	14.60
Aug-24	47.90	20.30	10.00	17.00	48.20	19.30	8.30	15.80
Sep-24	52.80	22.40	10.30	15.60	52.40	20.90	8.60	14.60
Month	AQ-5 (Unit - µg/m3)				AQ-6 (Unit - µg/m3)			
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂
Apr-24	54.90	21.30	12.10	19.20	55.00	22.20	10.40	21.20
May-24	49.40	21.40	12.70	20.20	49.80	22.30	10.90	22.30
Jun-24	43.60	20.30	12.30	18.80	43.90	21.20	10.60	20.70
Jul-24	40.70	17.80	11.40	17.60	41.50	18.40	9.80	19.40
Aug-24	44.30	19.80	11.10	18.30	45.20	20.40	9.60	20.20
Sep-24	49.00	23.20	11.50	16.80	47.00	21.30	9.90	18.50
Month	AQ-7 (Unit - µg/m3)				AQ-8 (Unit - µg/m3)			
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂
Apr-24	50.19	19.23	10.26	17.03	52.96	19.23	10.26	17.41
May-24	47.10	19.31	10.78	17.89	48.24	19.30	10.77	18.27
Jun-24	40.74	17.42	10.14	15.47	44.86	18.33	10.45	16.99
Jul-24	40.71	17.42	10.14	15.81	39.15	17.42	10.14	15.81
Aug-24	44.90	19.32	10.07	14.54	42.66	18.88	9.35	14.54
Sep-24	46.02	20.15	10.41	13.38	45.50	19.70	9.70	13.40
Month	AQ-9 (Unit - µg/m3)				AQ-10 (Unit - µg/m3)			
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂
Apr-24	54.71	20.94	10.91	17.17	50.76	20.28	18.81	18.74
May-24	48.20	21.11	11.40	17.92	49.61	20.60	19.76	19.68
Jun-24	44.30	18.20	10.90	14.90	43.80	18.20	19.40	16.90
Jul-24	39.40	17.30	10.60	13.80	40.50	17.30	9.90	15.70
Aug-24	44.00	19.20	10.20	12.50	47.10	20.50	10.00	13.30
Sep-24	46.60	20.00	10.60	11.50	47.50	20.70	10.30	12.30
Month	AQ-11 (Unit - µg/m3)				AQ-12 (Unit - µg/m3)			
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂
Apr-24	56.5	22.57	12.22	19.99	55.93	21.80	10.98	20.73
May-24	48.77	22.95	12.83	20.99	47.02	22.16	11.53	21.77
Jun-24	44.70	22.00	12.70	19.30	43.40	19.90	11.50	20.60
Jul-24	39.50	20.90	12.30	18.00	41.50	18.40	9.80	19.40
Aug-24	48.50	25.90	11.20	15.20	44.30	21.00	10.50	17.60
Sep-24	50.20	24.60	11.60	14.00	46.10	21.90	10.80	16.20

Tolerance limit: PM10: 100 µg/m³, PM2.5: 60 µg/m³, NO₂: 80 µg/m³, SO₂: 80 µg/m³

AAQ1: Mr.Murugesan - Pottaneri, AAQ2:Mr. Gopal - Malamannor, AAQ3:Mr.Surendran -Kavundanoor, AAQ4:Mr.Manivasagam - Soliyur, AAQ5:New Guest House - Township, AAQ6: Mr.Sellappan – Pudur

IV. Analysis of Ambient Air Quality Monitoring results

PM ₁₀ in µg/m ³												
Location	AQ-1	AQ-2	AQ-3	AQ-4	AQ-5	AQ-6	AQ-7	AQ-8	AQ-9	AQ-10	AQ-11	AQ-12
Minimum	39.80	40.08	40.30	40.30	40.70	41.50	40.71	39.15	39.40	40.50	39.50	41.50
Maximum	51.13	50.54	52.80	52.40	54.90	55.00	50.19	52.96	54.71	50.76	56.50	55.93
Average	46.68	47.15	47.62	47.27	46.98	47.07	44.94	45.56	46.20	46.55	48.03	46.38
Standard deviation	3.93	3.96	4.68	4.11	5.11	4.79	3.71	4.73	5.12	3.81	5.68	5.07
98 th Percentile	50.88	50.53	52.66	52.05	54.35	54.48	49.88	52.49	54.06	50.65	55.87	55.04

PM _{2.5} in µg/m ³												
Location	AQ1	AQ-2	AQ-3	AQ-4	AQ-5	AQ-6	AQ-7	AQ-8	AQ-9	AQ-10	AQ-11	AQ-12
Minimum	15.86	15.92	16.50	15.60	17.80	18.40	17.42	17.42	17.30	17.30	20.90	18.40
Maximum	24.45	23.02	22.40	20.90	23.20	22.30	20.15	19.70	21.11	20.70	25.90	22.16
Average	19.53	19.28	19.68	18.57	20.63	20.97	18.81	18.81	19.46	19.60	23.15	20.86
Standard deviation	2.94	2.31	1.92	1.75	1.81	1.44	1.13	0.82	1.52	1.47	1.81	1.46
98 th Percentile	24.11	22.71	22.19	20.74	23.02	22.29	20.07	19.66	21.09	20.69	25.77	22.13

SO ₂ in µg/m ³												
Location	AQ-1	AQ-2	AQ-3	AQ-4	AQ-5	AQ-6	AQ-7	AQ-8	AQ-9	AQ-10	AQ-11	AQ-12
Minimum	9.44	9.68	10.00	8.30	11.10	9.60	10.07	9.35	10.20	9.90	11.20	9.80
Maximum	10.78	11.08	11.40	9.80	12.70	10.90	10.78	10.77	11.40	19.76	12.83	11.53
Average	10.07	10.34	10.67	9.05	11.85	10.20	10.30	10.11	10.77	14.70	12.14	10.85
Standard deviation	0.51	0.54	0.55	0.58	0.61	0.51	0.26	0.51	0.40	5.08	0.63	0.65
98 th Percentile	10.75	11.05	11.37	9.77	12.66	10.87	10.74	10.74	11.35	19.72	12.82	11.53

NO ₂ in µg/m ³												
Location	AQ-1	AQ-2	AQ-3	AQ-4	AQ-5	AQ-6	AQ-7	AQ-8	AQ-9	AQ-10	AQ-11	AQ-12
Minimum	13.33	14.32	15.60	14.60	16.80	18.50	13.38	13.40	11.50	12.30	14.00	16.20
Maximum	17.89	19.22	18.70	16.80	20.20	22.30	17.89	18.27	17.92	19.68	20.99	21.77
Average	15.83	17.00	17.13	15.57	18.48	20.38	15.69	16.07	14.63	16.10	17.91	19.38
Standard deviation	1.70	1.83	1.10	0.85	1.20	1.34	1.63	1.84	2.54	2.93	2.77	2.11
98 th Percentile	17.80	19.13	18.61	16.72	20.10	22.19	17.80	18.18	17.85	19.59	20.89	21.67

Tolerance limit: PM₁₀: 100 µg/m³, PM_{2.5}: 60 µg/m³, NO₂: 80 µg/m³, SO₂: 80 µg/m³

AAQ1: Mr.Murugesan - Pottaneri, AAQ2:Mr. Gopal - Malamannor, AAQ3:Mr.Surendran -Kavundanoor, AAQ4:Mr.Manivasagam - Soliyur, AAQ5:New Guest House - Township, AAQ6: Mr.Sellappan – Pudur panakadu, AAQ7:Mr.Gandhi – Kuttapatti Pudur, AAQ8:Mr.Santhanam - Ervadi, AAQ9:Mr. Arunasalam - Ervadi, AAQ10:Mr.Thangavel – Amarathan Kadu, AAQ11:Mr. Mahalingam – Kattuvalavu, Pottaneri, AAQ12:Mr. Venkatesan – Pottaneri.

The results are within the norms prescribed by CPCB.

ANNEXURE 4
DETAILS OF APC MEASURES PROVIDED
IN STEEL & CPPII

Annexure -4

Details of Air Pollution Control measures provided in Steel & CPPII

Stack No	Stack attached to	Stack Type	Air Pollution Control Equipment (APC)
1	SP#1 - Sinter machine waste gas fan stack	Process	ESP with stack
2	SP#1 - Cooling system stack	Non- Process	ESP with stack
3	SP#1 - Dedusting system stack	Non- Process	Bag Filters with stack
4	SP#1 - RMHS dust extraction system	Non- Process	Bag Filters with stack
5	BF#1 - Hot stove stack	Process	Stack
6	BF#1 - GCP flare stack (Emergency stack)	Non- Process	Venturi Scrubber with stack
7	BF#1 - Stock house dedusting	Non- Process	Bag Filters with stack
8	BF#1- Cast house dedusting system stack	Non- Process	Bag Filters with stack
9	Process Boilers (1 x 25 TPH & 1 X 8 TPH)	Process	Common Stack
10	EOF#1- Primary dedusting system stack	Process	Venturi Scrubber with stack
11	CCM#3 -Billet grinding machine stack	Non- Process	Bag Filters with stack
12	CCM#1 Steam exhaust system stack	Non- Process	Stack
13	EOF#2 - Primary dedusting system stack	Process	Venturi Scrubber with stack
14	EOF#1&2 - Secondary dedusting system stack	Non- Process	Bag Filter with stack
15	LRF#1 - Primary & LRF#1 to 4 secondary dedusting system stack	Non- Process	Bag Filter with stack
16	LRF#2,3,4 - Primary dedusting system stack	Process	Bag Filter with stack
17	Vacuum degassing boiler#1 & #2 stack	Process	Stack
18	CCM#2 Steam exhaust system stack #1 & #2	Non- Process	Stack
19	CCM#2 - Cut fumes exhaust system stack	Non- Process	Stack
20	BLM - Reheating furnace stack #1	Process	Stack
21	BLM - Reheating furnace stack #2	Process	Stack
22	Coke Quenching Tower	Non- Process	Grit Arrestor stack
23	COP - Coke oven battery #1 emergency stack# 1A & 1B	Process	Stack
24	COP - Coke oven battery#2 emergency stack	Process	Stack
25	COP - Coke oven battery#3 emergency stack	Process	Stack
26	COP - Waste Heat Recovery Boiler # 1 stack	Process	Stack
27	COP - Waste Heat Recovery Boiler # 2 stack	Process	Stack
28	COP - Waste Heat Recovery Boiler # 3 stack	Process	Stack
29	COP - Waste Heat Recovery Boiler # 4 stack	Process	Stack
30	COP - Waste Heat Recovery Boiler # 5 stack	Process	Stack
31	BF Gas Fired Boiler	Process	Stack
32	Limekiln(Not in Operation)	Non- Process	Not in operation
33	BRM- Reheating furnace stack #1 & 2	Process	Stack
34	SP#2 - Sinter machine waste gas fan stack	Process	ESP with stack

Stack No	Stack attached to	Stack Type	Air Pollution Control Equipment (APC)
35	SP#2 - Dedusting and cooling system stack	Non- Process	ESP with stack
36	SP#2 - Crushing of fuel and raw materials dedusting stack	Non- Process	Bag Filters with stack
37	BF#2- Hot stove stack	Process	Stack
38	BF#2 - GCP flare stack (Emergency stack)	Non- Process	Bag Filters with stack
39	BF#2 - Stock house dedusting & RMH system stack	Non- Process	Bag Filters with stack
40	BF#2 - Cast house dedusting system stack	Non- Process	Bag Filters with stack
41	BF - Pulverised Coal Injection unit	Non- Process	Bag Filters with stack
42	COP-DG Set -625 KVA Stack	Non- Process	Acoustic enclosures with Stack
43	EOF#1 - DG Set -625 KVA stack	Non- Process	Acoustic enclosures with Stack
44	EOF#1 - DG Set -625 KVA stack	Non- Process	Acoustic enclosures with Stack
45	CCM#3 - Steam exhaust system stack #1	Non- Process	Stack
46	Process Boilers area - DG set -1250 KVA stack	Non- Process	Acoustic enclosures with Stack
47	Pickling Plant- Acid Fumes exhaust system stack	Non- Process	Wet scrubber with stack
48	Pickling Plant- Acid bath - Hot water Generator Stack	Process	Stack
49	Pickling Plant- ARP - Hot water Generator Stack	Process	Stack
50	Pickling Plant- MEE – Thermic fluid Heater Stack	Process	Stack
51	BF Slag Grinding mill stack	Non- Process	Bag Filters with stack
52	BF Slag Grinding unit-Sinter waste Gas- Emergency stack	Non- Process	Damper with vent stack
53	BF Slag Grinding unit- Hot Air Generator - Emergency stack	Non- Process	Damper with vent stack from HAG
54	CCM#1 -Billet grinding machine stack	Non- Process	Stack
55	CCM#2 -Billet grinding machine stack	Non- Process	Stack
56	EOF#2 - DG Set - 1250 KVA Stack	Non- Process -Emergency stack	Acoustic enclosures with stack
57	CCM#3 - DG Set - 1250 KVA stack	Non- Process -Emergency stack	Acoustic enclosures with stack
58	EOF#1 - DG Set -275 KVA Stack	Non- Process -Emergency stack	Acoustic enclosures with stack
59	EOF#2 - DG Set - 275 KVA Stack	Non- Process -Emergency stack	Acoustic enclosures with stack
60	BRM - DG set - 650 KVA - stack	Non- Process -Emergency stack	Acoustic enclosures with stack
61	Pickling plant - DG Set - 400 KVA - stack	Non- Process -Emergency stack	Acoustic enclosures with stack
62	Batching plant#1 Cement silo vent stack	Non- Process	Bag Filters with stack
63	Batching plant#2 Cement silo vent stack	Non- Process	Bag Filters with stack
64	COP - Coke cutter dedusting system stack	Non- Process	Bag Filters with stack
65	CCM#3 - Steam exhaust system stack #2	Non- Process	Stack
66	Coal fired boiler (127 T/HR)	Process	ESP with stack
67	Coal crusher house	Non- Process	Bag Filters with stack
68	Coal screening section	Non- Process	Bag Filters with stack
69	Raw material transfer and discharge point	Non- Process	Bag Filters with stack
70	Fly ash storage silo	Non- Process	Bag Filters with stack
71	Bottom ash storage silo	Non- Process	Bag Filters with stack
72	Diesel generator set – 500 KVA	Non- Process -Emergency stack	Stack
73	Diesel generator set – 275 KVA	Non- Process -Emergency stack	stack

ANNEXURE 5

COMPLIANCE STATUS REPORT TO THE

CREP CONDITIONS

Annexure 5

Compliance status report for the conditions prescribed in the Corporate Responsibility for Environmental Protection (CREP) to our plant

S.No	Condition	Compliance status/Action taken
1	Coke Oven Plant: To meet the parameters PLD (% leaking doors), PLL (% leaking lids), PLO (% leaking off take) of the notified standards under EPA. To rebuild at least 40% of the coke oven batteries* in next 10 years by December 2012.	Our COP Non-recovery type coke oven and this requirement is not applicable.
2	Steel Melting Shop Fugitive Emission Status To reduce 30% by March 2004 and 100% by March 2008 (including installation of secondary de-dusting facilities).	SMS comprises of an Energy Optimizing Furnace wherein a “wet scrubbing system” comprising of a Down comer, quench chamber, venturi scrubber and cyclone separator and the cleaned gas sent through a chimney. The secondary steel making unit viz. Ladle Furnace is already equipped with a dry scrubbing system comprising of bag filters, belt conveyors and dust silo. The dust is being collected and reused in the Sinter Plant. Dedicated secondary dedusting systems are installed in EOF & LRF and fugitive emissions are significantly reduced. Dedicated dust monitoring systems are installed in the respective stacks and the real time parameters are connected with CAC, TNPCB
3	Blast Furnace - Direct inject of reducing agents in blast furnace.	Pulverized Coal injection system installed and commissioned along with bag filter as an air pollution control measures (bag filter with stack) to reduce emission during direct injection. The rate of pulverised coal injection is increased (upto approx. 137 kg/THM) and the implementation resulted in reduction of coke consumption in BF which leads to energy saving.
4	Solid Waste/Hazardous Waste Management Utilization of Steel Melting Shop (SMS) / Blast Furnace (BF) slag as per the following. <ul style="list-style-type: none"> • By 2004 – 70% • By 2006 – 80% and • By 2007 – 100% Hazardous Waste: - Charge of tar sludge/ETP sludge to coke oven by June 2003. - Inventorization of Hazardous waste as per Hazardous waste (M & H) Rules, 1989 as amended in 2000 and implementation of the rules by December 2003. (Tar sludge, acid sludge, waste lubricating oil and type fuel fall in the category of HZ).	All the Blast Furnace Slag is converted to Granulated slag and sold to cement industries. Flue dust from sinter plant, BF, SMS, sludge from BF & EOF and coke breeze from coke oven plant is re-used in sinter plant. Pellet plant is not installed in our operation. SMS slag is sent for metal recovery system and after crushing reused internal applications & sent cement industries. A ready mix concrete unit is installed. A unique initiative, Paver block unit by using crushed EOF slag. Refractories are selected to withstand high temperature whose shelf life is longer and generation of used refractories are lesser. The same will be recycled in downstream applications and also sold to customers involved with recycling and the disposal is in environment friendly manner. Our coke oven plant is non-recovery type and hence Tar sludge & ETP sludge is not applicable. The waste oil and other hazardous wastes generated is being disposed to authorized vendors as per the Hazardous and Other Waste (Management and Transboundary Movement) Rules, 2016.
5	Water Conservation / Water Pollution - To reduce specific water consumption to 5 m ³ / t for long products and 8 m ³ / t for flat products by December 2005.	We are presently manufacturing only long products and our specific water consumption is well within the prescribed limit
6	Installation of continuous stack monitoring	There are 26 nos. of Process stacks. Dust & Gaseous emission monitoring systems are installed as per CTO condition and the real time data of SPM, SO ₂ & NO _x are transmitted to the Care Air Centre of TNPCB and CPCB servers. There are 34 nos. of Non-process stacks. Dust emission monitoring systems are installed as per CTO condition and the real time data of SPM are transmitted to the Care Air Centre of TNPCB and CPCB servers. Apart from the above, TNPCB is conducting bi-annual survey and Manual monitoring is being conducted by a NABL accredited external laboratory on monthly basis. The monitoring results are well within the permissible limits.

S.No	Condition	Compliance status/Action taken
7	The unit shall operate the existing pollution control equipment efficiently and to keep proper record of run hours, failure time and efficiency with immediate effect. Compliance report in this regard be submitted to TNPCB every three months.	The pollution control equipments are being operated efficiently and proper records are maintained for running hours, failure time and efficiency. Any failure leads to APC is resulted exceedance alarm from TNPCB server and justification along with corrective action reports are being submitted to TNPCB on monthly basis.
8	To implement the recommendations of Life Cycle Assessment (LCA) Study sponsored by MoEF by December 2003.	Being Complied.
9	<p>The industry will initiate the steps to adopt the following clean technologies/measures to improve the performance of industry towards production, energy and environment.</p> <ul style="list-style-type: none"> ✓ Energy recovery of top blast furnace (BF) gas. ✓ Use of tar-free runner linings. ✓ De-dusting of cast house at tap holes, runners, skimmers ladle and charging points. ✓ Suppression of fugitive emissions using nitrogen gas or other inert gas. ✓ To study the possibility of slag and fly ash transportation back to the abandoned mines, to fill up the cavities through empty railway wagons while they return back to the mines and its implementation. ✓ Processing of the waste containing flux & ferrous wastes through waste recycling plant. ✓ To implement rainwater harvesting. ✓ Reduction of green house gases by, <ul style="list-style-type: none"> • Reduction in power consumption. • Use of by-products gases for power generation. • Promotion of energy optimization technology including energy audit. • To set targets for resource conservation such as raw material, energy and water consumption to match International Standards. • Up-gradation in the monitoring and analysis facilities for air and water pollutants. Also to impart elaborate training to the manpower so that realistic data is obtained in the environmental monitoring laboratories. • To improve over all house keeping. 	<p>Our BF gas pressure (plant capacity is 0.683 MTPA only) is not adequate to install TRT.</p> <p>Our coke oven plant is non-recovery type and hence not applicable.</p> <p>The de-dusting system commissioned at BF-I & II cast house covering tap holes, runners, skimmers ladles and charging points.</p> <p>Water sprinkling system, Dry & Wet fog systems and the compressed air are used for suppression of fugitive emissions.</p> <p>Since we are purchasing raw materials from outside sources, it is not applicable.</p> <p>The waste containing flux & ferrous waste is utilized to the maximum extent possible in the sinter plant. 100 % of waste containing flux and ferrous is utilized in the plant.</p> <p>Four rain water harvesting ponds are provided. Two are in the plant premises and two are in township.</p> <p>Various initiatives and measures are being taken to reduce the GHG emissions and present level of GHG emission is 2.73 MT of CO₂/TCS. Major focus are being given to maximise the waste heat utilisation, Renewable energy and resource conservation.</p> <p>To reduce the power consumption VFDs are being installed wherever possible. LED lights are installed to replace the sodium vapor lamps and many Kaizens are implemented to conserve power.</p> <p>By product BF gas is being used as fuel in Power Plant for power generation.</p> <p>All the upcoming projects are wetted to the best energy consumption through selection of equipments. Energy audit is being carried out and implementations are done in phased manner to minimize the energy consumption of GCal.</p> <p>Raw material, Energy and water consumption targets are being fixed as a key performance indicator with reference to WSA guidelines and actions are being implemented to match the international standards through Best Available Technology.</p> <p>A separate Environment cell is already available and full-fledged lab set up and need based training is being imparted to the monitoring personnels as and when required. Presently the monitoring and analysis being done through M/s Nawal Analytal Labs India Pvt Ltd.</p> <p>5S system is being followed to maintain and improve housekeeping throughout the plant. Due to the implementation, saving in area, inventory control, retrieval time period and standardization practices are well improved.</p>

ANNEXURE 6

**ONLINE EFFLUENT MONITORING REPORT
AND EFFLUENT & GROUND WATER
QUALITY MANUAL MONITORING REPORT
OF TNPCB & NABL ACCREDITED
LABORATORY**

Annexure 6
Online effluent monitoring report

I. Online effluent monitoring report

S.No	Description	UoM	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	Effluent Inlet flow	m ³	85741.47	81071.5	75824.31	82357.75	79595.25	79234.94
2	Treated effluent water reuse in process	m ³	100278.92	74367.91	71480.53	82373.34	77050.50	87698.31
3	ETP outlet discharge flow	m ³	0	0	0	0	0	0

Note; Consented Trade effluent generation 2935 KLD

III. Treated trade effluent of Steel Guard bond water by NABL accredited laboratory

S.No	Parameter	Unit	TNPCB Tolerance Limit	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	Temperature	°C	40	27	27	27	27	27	27
2	pH @ 250C	-	5.5 to 9.0	7.56	7.39	7.18	7.26	7.19	7.76
3	Particles size	-	Shall Pass 850 µ IS Sieve	Test Pass	Test Pass	Test Pass	Test Pass	Test Pass	Test Pass
4	Total Suspended Solids	mg/L	100	7	6	8	BLQ[LOQ-5.0]	BLQ[LOQ-5.0]	14
5	Total Dissolved Solids	mg/L	2100	1852	1453	1462	1508	1532	1179
6	Free Residual Chlorine	mg/L	1	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]
7	Sulphate as SO4	mg/L	1000	172.86	144.29	162.94	157.52	149.72	116.24
8	Sulphide as S	mg/L	2	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]
9	Chloride as Cl	mg/L	1000	487.83	385.27	394.2	407.75	387.61	349.89
10	Fluoride as F	mg/L	2	0.46	0.41	0.46	0.44	0.46	0.36
11	Chemical Oxygen Demand	mg/L	250	32.3	35.71	33.73	37.85	36.72	31.74
12	BOD, 3 days @27°C	mg/L	30	8.09	9.18	9.98	8.19	8.16	9.96
13	Oil & Grease	mg/L	10	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]
14	Ammoniacal Nitrogen as N	mg/L	50	0.69	0.6	0.63	0.68	0.71	0.54
15	Free Ammonia as NH3	mg/L	30	0.84	0.73	0.77	0.83	0.87	0.66
16	Total Kjeldahl Nitrogen	mg/L	100	9.42	9.07	12.5	8.53	8.05	25.5
17	Dissolved Phosphate as PO4	mg/L	5	0.29	0.32	0.36	0.39	0.37	0.16
18	Phenolics Compound as C6H5OH	mg/L	1	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]
19	Cyanide as CN	mg/L	0.2	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]
20	Residual Sodium Carbonate	mg/L	-	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]
21	Copper as Cu	mg/L	3	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
22	Nickel as Ni	mg/L	3	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
23	T. Chromium as Cr	mg/L	2	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
24	Zinc as Zn	mg/L	1	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]
25	Arsenic as As	mg/L	0.2	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]
26	Lead as Pb	mg/L	0.1	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
27	Cadmium as Cd	mg/L	2	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]
28	Selenium as Se	mg/L	0.05	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]
29	Boron as B	mg/L	2	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
30	Mercury as Hg	mg/L	0.01	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]
31	Hex. Chromium as Cr6+	mg/L	0.1	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]

III. Treated trade effluent of CPP-II-Cooling tower water by NABL accredited laboratory									
S. No	PARAMETER	UNITS	TNPCB Tolerance Limit	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
				TTRADE EFFLUENT CPP-II 2 x 30 MW & 1x 30 MW	TTRADE EFFLUENT CPP-II 2 x 30 MW & 1x 30 MW	TTRADE EFFLUENT CPP-II 2 x 30 MW & 1x 30 MW	TTRADE EFFLUENT CPP-II 2 x 30 MW & 1x 30 MW	TTRADE EFFLUENT CPP-II 2 x 30 MW & 1x 30 MW	TTRADE EFFLUENT CPP-II 2 x 30 MW & 1x 30 MW
1	Temperature	°C	40	27	27	27	27	27	27
2	pH @ 250C	-	5.5 to 9.0	7.59	6.42	6.95	7.08	6.62	7.17
3	Particles size	-	Shall Pass 850 µ IS Sieve	Test Pass	Test Pass	Test Pass	Test Pass	Test Pass	Test Pass
4	Total Suspended Solids	mg/L	100	10	8	6	7	11	10
5	Total Dissolved Solids	mg/L	2100	1528	1617	1528	1580	1790	1611
6	Free Residual Chlorine	mg/L	1	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]
7	Sulphate as SO4	mg/L	1000	156.72	158	147.52	139.27	187.5	146.25
8	Sulphide as S	mg/L	2	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]	BLQ[LOQ-0.5]
9	Chloride as Cl	mg/L	1000	473.04	517.07	433.62	442.98	568.83	466.67
10	Fluoride as F	mg/L	2	0.46	0.52	0.41	0.43	0.54	0.51
11	Chemical Oxygen Demand	mg/L	250	28.22	32.26	26.78	28.88	70.45	63.48
12	BOD, 3 days @27°C	mg/L	30	6.07	7.14	5.44	6.14	16.32	13.94
13	Oil & Grease	mg/L	10	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]	BLQ[LOQ-2.0]
14	Ammoniacal Nitrogen as N	mg/L	50	0.48	0.52	0.69	0.72	0.68	0.58
15	Free Ammonia as NH3	mg/L	30	0.59	0.63	0.84	0.87	0.83	0.71
16	Total Kjeldahl Nitrogen	mg/L	100	5.43	6.65	6.25	6.82	8.35	6.96
17	Dissolved Phosphate as PO4	mg/L	5	0.12	0.16	0.09	0.11	0.13	0.12
18	Phenolic Compound as C6H5OH	mg/L	1	BLQ[LOQ- 0.0001]	BLQ[LOQ- 0.0001]	BLQ[LOQ- 0.0001]	BLQ[LOQ- 0.0001]	BLQ[LOQ-0.0001]	BLQ[LOQ-0.0001]
19	Cyanide as CN	mg/L	0.2	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]	BLQ[LOQ-0.1]
20	Residual Sodium Carbonate	mg/L	-	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]	BLQ[LOQ-1.0]
21	Copper as Cu	mg/L	3	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
22	Nickel as Ni	mg/L	3	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
23	T. Chromium as Cr	mg/L	2	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
24	Zinc as Zn	mg/L	1	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]
25	Arsenic as As	mg/L	0.2	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]
26	Lead as Pb	mg/L	0.1	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
27	Cadmium as Cd	mg/L	2	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]	BLQ[LOQ-0.01]
28	Selenium as Se	mg/L	0.05	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]
29	Boron as B	mg/L	2	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]
30	Mercury as Hg	mg/L	0.01	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]	BLQ[LOQ-0.001]
31	Hex. Chromium as Cr6+	mg/L	0.1	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]	BLQ[LOQ-0.05]

IV. Result of analysis of steel treated trade effluent by TNPCB									
S.No	Parameters	Unit	TNPCB Tolerance Limit	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	pH at 25°C	Number	5.5-9.0	7.87	7.47	7.96	8.14	7.27	7.64
2	TSS at 103°C - at 105°C	mg/L	100	16	12	8	8	8	4
3	Total Dissolved Solids at 180°C	mg/L	2100	2308	1132	1176	1000	1328	1004
4	Chloride as Cl	mg/L	1000	580	300	360	330	320	290
5	Sulphate as SO ₄	mg/L	1000	724	219	240	105	388	177
6	Oil & Grease	mg/L	10	<3	<3	<3	<3	<3	<3
7	BOD (at 27°C for 3 days)	mg/L	30	7.2	3	3.9	6.5	6	7.2
8	COD	mg/L	250	48	56	48	48	72	48
9	Phenolic Compounds	mg/L	1	<0.01	<0.01	<0.01	<0.01	0.696	0.056
10	Ammonical nitrogen as NH ₃ -N	mg/L	50	1.68	0.56	1.12	1.12	<0.01	<0.01
11	Cyanide	mg/L	0.2	<0.008	<0.008	<0.008	<0.008	0.56	0.56
12	Total Kjeldhal Nitrogen	mg/L	100	3.9	1.68	2.80	2.8	1.68	1.68
13	Sulphide	mg/L	2	<1	<1	<1	<1	1.6	0.26
14	Total Residual Chlorine	mg/L		<1	<1	<1	<1	<0.05	<0.05
15	Dissolved Phosphate	mg/L	5	0.537	0.352	0.32	0.63	<0.05	<0.05
16	Hexavalent Chromium	mg/L	0.1	<0.05	<0.05	<0.05	<0.05	1.539	0.694
17	Total Chromium	mg/L	2	<0.05	<0.05	<0.05	<0.05	<0.008	<0.008
18	Fluoride as F	mg/L	2	1.589	0.1	0.088	0.1	2.0496	<0.3
19	Zinc	mg/L	1	<0.03	<0.03	<0.03	0.1008	<0.002	<0.002
20	Lead	mg/L	0.1	<0.3	<0.3	<0.3	<0.3	<1	<1
21	Cadmium	mg/L	2	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01
22	Nickel	mg/L	3	<1	<1	<1	<1	<0.01	<0.01
23	Boron	mg/L	2	<0.002	<0.002	<0.002	<0.002	<0.1	<0.02
24	Free Ammonia	mg/L	30	2.0496	0.6832	1.3664	1.3664	<0.02	<0.02
26	Mercury	mg/L		***	***	***	-	***	***
27	Arsenic	mg/L		***	***	***	-	***	***

IV. Result of analysis of CPPII- treated trade effluent by TNPCB									
S.No	Parameters	Unit	TNPCB Tolerance Limit	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	pH at 25°C	Number	5.5-9.0	7.61	7.11	7.57	7.92	6.86	6.80
2	TSS at 103°C - at 105°C	mg/L	100	20	12	8	4	4	4
3	Total Dissolved Solids at 180°C	mg/L	2100	2216	1592	1564	1680	1084	1600
4	Chloride as Cl	mg/L	1000	320	350	460	350	355	220
5	Sulphate as SO ₄	mg/L	1000	994	532	196	617	250	488
6	Oil & Grease	mg/L	10	<3	<3	<3	<3	<3	<3
7	BOD (at 27°C for 3 days)	mg/L	30	4.5	4.8	3.60	3.60	4.20	5.70
8	COD	mg/L	250	48	40	56.00	40.00	56.00	32.00
9	Phenolic Compounds	mg/L	1	<0.01	<0.01	<0.01	<0.01	0.33	0.11
10	Ammonical nitrogen as NH ₃ -N	mg/L	50	1.68	1.68	1.12	1.68	<0.01	<0.01
11	Cyanide	mg/L	0.2	<0.008	<0.008	<0.008	<0.008	1.12	0.56
12	Total Kjeldhal Nitrogen	mg/L	100	3.92	2.80	2.24	3.92	2.24	1.68
13	Sulphide	mg/L	2	<1	<1	<1	<1	1.6	0.26
14	Total Residual Chlorine	mg/L		<1	<1	<1	<1	<0.05	<0.05
15	Dissolved Phosphate	mg/L	5	0.485	0.308	0.25	0.57	<0.05	<0.05
16	Hexavalent Chromium	mg/L	0.1	<0.05	<0.05	<0.05	<0.05	1.322	0.7
17	Total Chromium	mg/L	2	<0.05	<0.05	<0.05	<0.05	<0.008	<0.008
18	Fluoride as F	mg/L	2	1.394	0.178	0.188	0.094	1.3664	2.0496
19	Zinc	mg/L	1	<0.03	<0.03	<0.03	0.2286	<0.002	<0.002
20	Lead	mg/L	0.1	<0.3	<0.3	<0.3	<0.3	<1	<1
21	Cadmium	mg/L	2	<0.05	<0.05	<0.05	0.1893	<0.1	<0.01
22	Nickel	mg/L	3	<1	<1	<1	0.1146	<0.01	<0.01
23	Boron	mg/L	2	<0.002	<0.002	<0.002	<0.002	<0.1	<0.02
24	Free Ammonia	mg/L	30	2.0496	2.0496	1.3664	2.0496	<0.02	<0.02
26	Mercury	mg/L		***	***	***	-	***	***
27	Arsenic	mg/L		***	***	***	-	***	***

V.Result of analysis of ground water by NABL accredited laboratory

[illegible]

Annexure 5. Result of analysis of ground water by NABL accredited laboratory

[illegible]

VI. Result of analysis of ground water by TNPCB

S.No.	Parameters	Unit	OPEN WELL - Tmt.Kaliamm al teacher, Pottaneri	GOVT. Bore well , Kavundanoor	Mr. Selvam Bore Well Karapattipalla m	BORE WELL Thiru Velliyan, Moorthipatti	GOVT BORE WELL - Moorthipatti	OPEN WELL - Thiru. Venkatesan, Pottaneri	OPEN WELL - Thiru. Rajamani, Kuttapatti Pudur	GOVT BORE WELL , Kuttapatti Pudur	OPEN WELL - Thiru. Balan, Pudur Panankadu	GOVT BORE WELL, ERVADI	GOVT BORE WELL, PARYNAGA R
1	Conductivity at 25° C	µmhos/cm	2980	3530	1986	1681	1950	2710	3920	3470	2850	2590	3220
2	pH at 25° C	Number	8.25	8.49	8.06	8.26	8.29	8.51	8.36	8.36	8.24	8.09	8.19
3	Total Dissolved Solids at 180° C	mg/L	2508	2500	1280	1196	1704	2300	3296	2540	2340	2076	2704
4	Chloride as Cl	mg/L	410	610	380	260	290	330	700	540	500	450	450
5	Sulphate as SO4	mg/L	514	289	79	41	288	377	515	407	348	276	477
6	BOD (at 27° C for 3 days)	mg/L	2.4	<2	2.4	2.4	2.4	2.7	2.4	2.1	2.4	2.1	2.4
7	COD	mg/L	48	32	48	40	56	40	36	48	36	24	24
8	Fluoride as F	mg/L	0.128	0.139	0.111	0.106	0.122	0.133	0.177	0.100	0.122	0.111	0.100
9	Total Hardness as CaCO3	mg/L	1290	1010	660	580	640	780	970	660	630	700	1480
10	Alkalinity CaCO3	mg/L	176	392	180	304	240	480	356	84	388	356	156
11	Iron Total as Fe	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
12	Calcium as Ca	mg/L	200	108	116	88	116	48	124	76	92	100	240
13	Magnesium as Mg	mg/L	192	180	90	87	85	160	160	114	97	109	214
14	Sodium as Na	mg/L	172	346	170	141	168	290	425	427	415	155	68
15	Potassium as K	mg/L	23	12	13	8	11	45	18	9	6	25	50

ANNEXURE 7

TREATED SEWAGE QUALITY

MONITORING REPORT OF TNPCB & NABL

ACCREDITED LABORATORY

Annexure 7

Treated sewage quality monitoring report of TNPCB & NABL accredited laboratory for the period of April 2024 to Sep 24.)

Result of analysis of treated sewage by TNPCB (Plant STP)

S.No	Parameter	Unit	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	pH @ 25°C	Number	8.38	7.55	8.26	8.54	7.44	7.55
2	TSS at 103°C - 105°C	mg/l	12	12	8	4	4	4
3	BOD (at 27°C for 3 days)	mg/l	6.9	4.5	3.6	4.2	5.5	5.4

Result of analysis of treated sewage by TNPCB (Township STP)

S.No	Parameter	Unit	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	pH @ 25°C	Number	8.10	7.45	8.40	8.5	7.33	7.56
2	TSS at 103°C - 105°C	mg/l	16	12	8	8	4	4
3	BOD (at 27°C for 3 days)	mg/l	6.6	4.5	4.5	3.6	4.2	4.8

Result of analysis of treated sewage by NABL accredited laboratory (Plant STP)

S.No	Parameter	Unit	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	PH 25 C	--	7.54	7.62	7.51	7.58	7.12	6.86
2	Total Suspended Solids	mg/l	BLQ[LOQ-5.0]	BLQ[LOQ-5.0]	BLQ[LOQ-5.0]	8	7	7
3	Total Dissolved Solids	mg/l	7.08	8.16	8.17	7.16	8.16	8.85

Result of analysis of treated sewage by NABL accredited laboratory (Township STP)

S.No	Parameter	Unit	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24
1	PH @ 25oC	--	7.24	7.64	7.35	7.45	7.94	7.85
2	Total Suspended Solids	mg/l	BLQ[LOQ-5.0]	BLQ[LOQ-5.0]	BLQ[LOQ-5.0]	12	14	11
3	Total Dissolved Solids	mg/l	8.09	8.16	8.17	8.19	8.16	7.16

ANNEXURE 8
AMBIENT NOISE LEVEL MONITORING
REPORT OF NABL ACCREDITED
LABORATORY

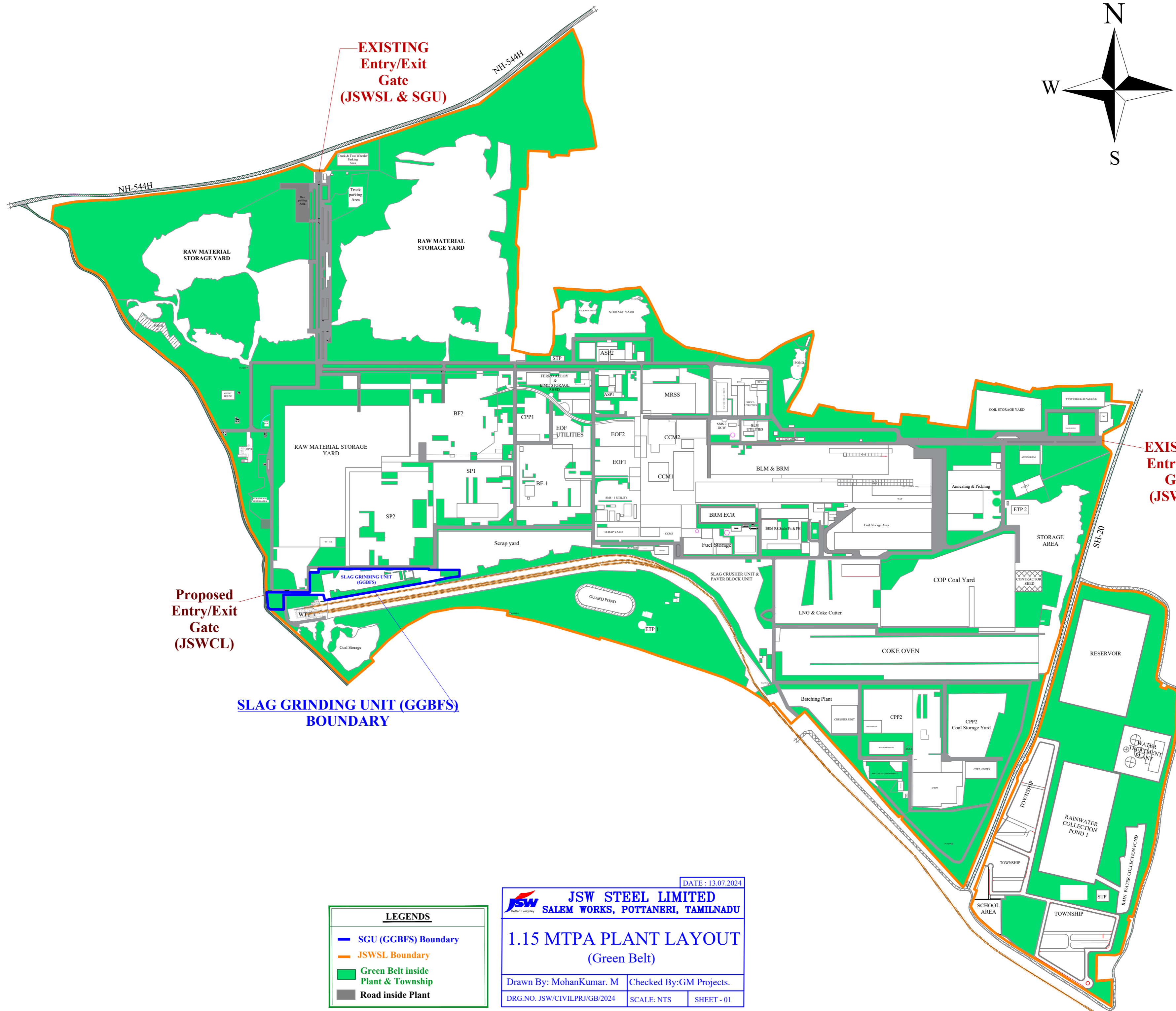
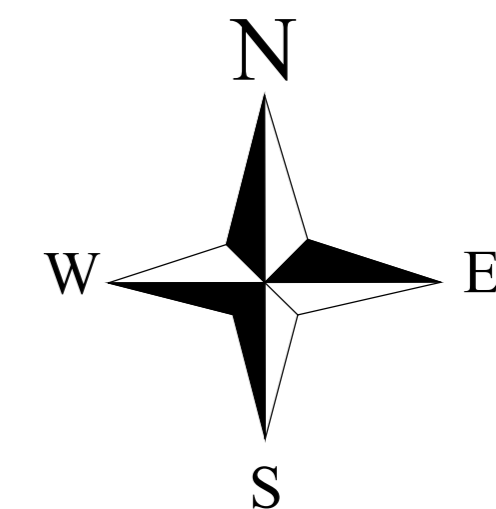
Annexure -8
Ambient Noise level monitoring report of NABL accredited laboratory for the period of April '24 to Sep '24
I. Ambient Noise Monitoring results (April '24 to Sep '24)

S.No	Location	Day Time Noise Level in dB(A)									
		Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Maximum	Minimum	Average	STD Deviation
1	New Land area JSW Boundary	55.8	52.6	50.3	51.2	52.6	54.9	55.8	50.3	52.9	2.1
2	Open field – Near thangamapuri stores, Malamanoor.	59.7	55.3	52.9	53.8	55.7	56.8	59.7	52.9	55.7	2.4
3	Nearby Mr.Chinnamuthu House, Malamanoor.	60.5	59.5	58.1	59.2	54.1	53.4	60.5	53.4	57.5	3.0
4	NearMadhayen Temple at Coconut Farm.	58.3	60.7	61.5	62.9	63.9	51.6	63.9	51.6	59.8	4.5
5	Eastern Gate of JSW.	56.7	53.6	51.8	53.4	52	58.5	58.5	51.8	54.3	2.7
6	In front of Occupational in Health Centre.	63.9	61	62.5	62	63.2	60.2	63.9	60.2	62.1	1.4
7	Near Pickling & Phosphating Plant 2 KLD ETP	60.8	62.6	63.7	64.9	60.6	59.3	64.9	59.3	62.0	2.1
8	Reservoir Premises.	59.1	57	55.2	57.9	55.6	56.4	59.1	55.2	56.9	1.5
9	Executive Staff Quarters, JSW.	60.6	61.2	62.9	62.1	64.8	56.7	64.8	56.7	61.4	2.7
10	Nearby Railway Crossing kuttappatti village.	61.8	60.8	61.7	60.8	62.9	61.3	62.9	60.8	61.6	0.8
11	Near Thiru. Santhanam House, Earvadi Village.	57.9	56.4	55.6	57.6	54.1	52.3	57.9	52.3	55.7	2.1
12	At Coconut Farm, Nearby Railway crossing.	59.2	57.1	54.1	56.5	56.9	54.5	59.2	54.1	56.4	1.9
13	At Parrynagar JSW Boundary	56.1	55.6	50.9	48.6	41.5	62.4	62.4	41.5	52.5	7.2
14	Nearby Over Head Tank JSW Boundary	57	52.8	53.4	52.9	53.8	63.2	63.2	52.8	55.5	4.1
15	Open Agricultural field. West Compound Wall	51.7	50.6	48.7	46.7	45.7	53.7	53.7	45.7	49.5	3.1
16	Nearby Compound Wall opposite to Kaveri Guest House Premises	63.8	62.1	63.6	62.6	65	60.1	65.0	60.1	62.9	1.7
17	Open Field, Pottaneri Village.	59.7	55.7	52.9	51.7	52.9	57.6	59.7	51.7	55.1	3.1
18	Nearby Compound Wall opposite to Raw Material Storage Yard (Iron Ore).	63.4	62.9	61.4	60.6	61.5	59.7	63.4	59.7	61.6	1.4

S.No	Location	Night Time Noise Level in dB(A)									
		Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Maximum	Minimum	Average	STD Deviation
1	New Land area JSW Boundary	46.7	45.1	43.5	41.2	40.3	52.4	52.4	40.3	44.9	4.4
2	Open field – Near thangamapuri stores, Malamanoor.	49.2	48.4	47.2	48.1	46.6	49.1	49.2	46.6	48.1	1.0
3	Nearby Mr.Chinnamuthu House, Malamanoor.	46.9	42.6	40.6	45.8	44.3	43.9	46.9	40.6	44.0	2.2
4	NearMadhayen Temple at Coconut Farm.	52.8	50.3	51.4	50.6	51.6	42.4	52.8	42.4	49.9	3.8
5	Eastern Gate of JSW.	51	52.9	52.6	50.7	52.8	51.5	52.9	50.7	51.9	1.0
6	In front of Occupational in Health Centre.	49.7	46.9	45.9	47.1	49.4	55.3	55.3	45.9	49.1	3.4
7	Near Pickling & Phosphating Plant 2 KLD ETP	52.3	51.7	52.1	55.4	56.8	53.4	56.8	51.7	53.6	2.1
8	Reservoir Premises.	50.5	49.5	46.7	41.7	42.9	48.9	50.5	41.7	46.7	3.6
9	Executive Staff Quarters, JSW.	51.6	48.8	45.3	47.9	45	43.2	51.6	43.2	47.0	3.1
10	Nearby Railway Crossing kuttappatti village.	49.7	47.1	44.9	49.1	46.7	48.6	49.7	44.9	47.7	1.8
11	Near Thiru. Santhanam House, Earvadi Village.	48.2	49.3	48.6	45.6	44.3	42.1	49.3	42.1	46.4	2.8
12	At Coconut Farm, Nearby Railway crossing.	46.7	45.8	44.2	45.1	46.9	43.6	46.9	43.6	45.4	1.3
13	At Parrynagar JSW Boundary	48.5	47.2	45.1	46.3	45	52.3	52.3	45.0	47.4	2.7
14	Nearby Over Head Tank JSW Boundary	44.3	44.3	45.9	44.6	49.1	53.1	53.1	44.3	46.9	3.6
15	Open Agricultural field. West Compound Wall	45.9	43.1	42.8	48.1	50.6	46.5	50.6	42.8	46.2	3.0
16	Nearby Compound Wall opposite to Kaveri Guest House Premises	55.1	54.9	51.6	55.3	56.1	44.1	56.1	44.1	52.9	4.6
17	Open Field, Pottaneri Village.	50.7	49	48.1	47.8	48.9	43.8	50.7	43.8	48.1	2.3
18	Nearby Compound Wall opposite to Raw Material Storage Yard (Iron Ore).	48.9	47.5	46.3	41.9	43.5	44.7	48.9	41.9	45.5	2.6

Standard limit for Ambient noise level at Daytime is 75 dB (A), Standard limit for Ambient noise level at Nighttime is 70 dB (A).
The ambient noise level monitoring results are within the CPCB norms.

ANNEXURE 9
GREENBELT LAYOUT



Proposed
Entry/Exit
Gate
(JSWCL)

SLAG GRINDING UNIT (GGBFS)
BOUNDARY

EXISTING
Entry/Exit
Gate
(JSWSL)

LEGENDS	
	SGU (GGBFS) Boundary
	JSWSL Boundary
	Green Belt inside Plant & Township
	Road inside Plant

JSW STEEL LIMITED SALEM WORKS, POTTANERI, TAMILNADU		
1.15 MTPA PLANT LAYOUT (Green Belt)		
Drawn By: MohanKumar. M	Checked By:GM Projects.	
DRG.NO. JSW/CIVILPRJ/GB/2024	SCALE: NTS	SHEET - 01

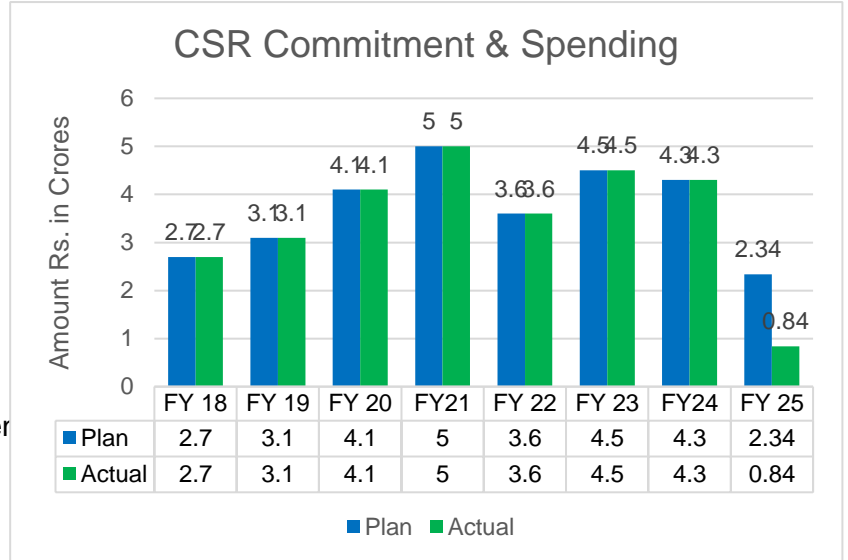
DATE : 13.07.2024

ANNEXURE 10
REPORT OF CER ACTIVITIES

CSR REPORT FOR THE PERIOD OF APRIL 2024 TO SEPTEMBER 2024

JSW is deeply conscious of its vision and responsibilities to the communities 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 communities through Corporate Social Responsibility (CSR) programs. We have well-laid community development programs under CSR. Our focus is on,

- Health
- Education
- Environment
- Women Empowerment
- Agri Livelihood
- Rural Infrastructure Development



People in Pottaneri, M.Kalipatti, Kuttapatti, Viruthasampatti, Gonur Panchayats and Mecheri Town are covered under our CSR projects. Our CSR spending for the financial year 2024-25 is Rs. 2.34 Crores.

INAUGURATED PRIMARY HEALTH CARE CENTRE

A new constructed Sub-health and wellness center has been inaugurated by Chief Operating Officer (COO), JSW Foundation in Pottaneri village. Which has a total population of 2,000 residents. This facility shall make easy accessible and timely health services can avail at our community. Previously, villagers had to travel Mecheri PHC to receive basic health care, with the construction of this health center, community can get essential services directly within the village. Through this intervention JSW Foundation developed healthcare more accessible and convenient for everyone. The primary health care center is equipped with basic facilities. Especially this sub center will be very helpful to the Pre and Post antenatal mothers to get their monthly checkups within their village itself. We aimed to access all residents, regardless of their economic status or mobility, have access to the care they need. This wellness center would help to improve the healthier community. Overall we have created a platform for the needy to utilize this wellness center



JSW UDAAN SCHOLARSHIP EVENT

We have organized JSW UDAAN Scholarship event which is aimed to give financial assistance to nearby meritorious students from Salem district. This year, the program has achieved a significant milestone. On July 27, 2024, a total of 208 deserving students from Salem District were awarded scholarships, with the cumulative value of these scholarships totaling of Rs.70,17,433 (Seventy Lakhs Seventeen Thousand Four Hundred Thirty-Three Rupees Only). This financial support is intended to complete or pursue their formal education without financial constraints.



ANGANWADI CENTRE INAUGURATION

JSW Foundation is newly constructed a anganwadi centre at Sevalanoor village, Pottaneri Panchayet. This centre is being accessed by 15 children and designed to provide a safe nurturing environment for early childhood education. The Anganwadi centre is inaugurated by our Plant Head, GM HR, Child Development Project Officer (CDPO) and Local MLA. This initiative represents a significant step forward in enhancing early childhood education in Sevalanoor village. Top of Form



JSW ASPIRE ACTIVITIES

Our JSW ASPIRE team is reaching out every door step of ASPIRE students. On yearly basis two parents meeting shall be conducted to parents of CLC students'. Parents are told to create a study corner for their children at home, support them on their study, not to allow to use mobile phones, purchase dictionary and other study materials which supports them on self-development. Parents are requested to monitor their children on daily basis.



WORLD ENVIRONMENTAL DAY CELEBRATION – JSW ASPIRE ACTIVITIES:

On the occasion of Environment Day, saplings were planted, symbolizing our commitment to environmental sustainability. This initiative is not merely a planting the saplings but a proactive step towards creating a greener and healthier environment for present and future generations.



GLITTERING “SUSTAINABLE AGRICULTURE LIVELIHOOD DEVELOPMENT (SALID) PROJECT



In sustainable agriculture livelihood development project, a core theme of focusing on doubling the income of 4000 families in 4 panchayats from surrounding villages. The project drew a diverse audience of 158 participants. Attendees included project beneficiaries, members of the Farmers' Interested Group (FIG), and women from Self-Help Groups (SHGs).

The launch program featured seven exhibit stalls that showcased a variety of agricultural products and related initiatives. The SALID project stall included information boards detailing ongoing activities, fresh creeper vegetables from beneficiary farms, and integrated pest management tools such as solar light traps, pheromone traps, and yellow sticky traps. The inauguration ceremony was graced by distinguished guests, including Shri Harshavardhan Vinayak Nawathe, COO of JSW Foundation Mumbai; Shri B.N.S. Prakash Rao, Plant Head, JSW Steel, Salem; Shri Radha Krishnan Konda, COO, Hand in Hand India; Shri G. Kannan, Vice President, NRM, Hand in Hand India; and Shri Bharathi Palanisamy, Head CSR, JSW Salem. The event underscored several key aspects: the addition of new shareholders to the MFPCL FPO, the

distribution of saplings and red gram seeds to beneficiaries, and testimonials from farmers highlighting the positive impact of the project interventions on their livelihood.



The basic essential outcome heads of farming families are being addressed by the project interventions towards the achievement of Crop productivity and milk productivity enhancement

Minimizing the cost of production of all farming activities

Way forward to additional income generation by Market linkage schemes by FPO, farming and non-farming enterprises and Capacity building activities of community level organizations like FPO, FIG, women SHGs of villages. By this impactful project,

JSW foundation is addressing farming families who are benefitted and resulted with the economic

development of their livelihood and assuring the ecological and environmental safe atmosphere created against the globally present climate resilience nature as well.

PROJECT INTERVENTIONS CHECK DAM: The masonry check dam in Kuppanur village, Viruthasampatti Panchayat, has been successfully completed. The construction involved jungle clearance, earthwork, and revetment work. With a water storage capacity of 7,000 cubic meters, the dam will transform approximately 45 acres of previously uncultivable land into arable land, benefiting 60 new farming families. Additionally, it will directly recharge 46 borewells and 34 open wells. Overall, 180 farming families in Viruthasampatti Panchayat will be benefited from the check dam.



AGRI-LIVELIHOOD: HAND IN HAND INTERVENTION:

Renovation of Pudur pond have been completed securing 70 lakhs liters per annum, 4450 saplings introduced on 61 acres of agriculture land. Fodder crop introduced on 3.5 acres owned by 35 farmers. Creeper vegetables introduced to 20 farmer's field. 14 trainings were organized for FIGs MCD location was identified and vendor finalization is under progress. Technology transfer- Trial for Yellow Sticky trap.

ADDITIONAL INCOME GENERATION: Five farmers were identified for the enterprise activity. Milking machine – Mr.Kesavan owns 6 cows and milk is the major income.

- Mrs. Kanjana- Single woman with her mother, owning one cow and requiring loan amount for purchasing another cow.
- Mr. Ponnusamy – Country hen farming



GENERAL BOARD MEETING FOR THE FARMERS:



For the FY 2023-24 fiscal year general board meeting were conducted for the FPO shareholders. 652 farmers were participated in the meeting. Farmers were expressed their needs and demands in the market. Had discussion on how to increase our business activities. Mecheri Farmer producer's company. Sixth year Annual General body meeting was conducted successfully in FPO premises. Higher officials from Agr marketing and Agriculture department of Mecheri block participated and given positive feedback about the performance, keeping up of records with transparency, Timely submission of reports etc. Annual report speech was delivered by CEO. We CSR Team, elaborately explained to shareholders, about financial & moral support

facilitated by JSW to FPO. Benefits being effected to shareholders through Climate resilient Agri Project activities, were explained by me as project manager. Around 250 shareholders attended the AGB meeting

AGRICULTURAL INTERVENTIONS – KVK

Krishi Vigyan Kendra (KVK) technical team is visiting the farmers and selecting and given various awareness sessions for the farmers technically. Such as: Sustaining the income of farmers of JSW operational area through IFS, the topics were covered during the meetings are Fundamentals of organic farming, Soil enrichment with organic materials, Organic composting methods, Principles of natural farming, Soil health and enrichment, Use of bio inputs, Mulching and ground cover techniques to various farmers.



CENTER FOR ENVIRONMENT EDUCATION:



In the process of availing approval from the Block Educational Officer (BEO) and other educational authorities. Some of the schools agreed to execute the activities even without approved in those schools we have initiated activities and decomposing lab created. In Government Boys' Higher Secondary School, Mecheri have created decomposing lab on 21st Aug. Where students of eco club made charts on their own concept on bio degradable and non-bio degradable waste and different kind of materials were decomposed in the tray for example: dead insect, leather belt, plastics, banana skin, batteries, cloth etc. so that students can understand how much time it takes for each

material to decompose and what is the impact on using non- bio degradable materials.

CENTER FOR ENVIRONMENT EDUCATION:

The CEE team have issued journal and badge to selected students in Govt. Middle School, Virudhasambatti. Activities are initiated in the schools on how to keep our surroundings clean and to wash our hands. Explained the importance of waste segregation these activities are being conducted in 4 Government schools the total number of students covered under this project is 350 students.



SWACHHATA HI SEVA (SHS) 2024

We have engaged young generations to spread an awareness on "Swachhata Hi Seva" focusing on instilling the values of cleanliness and environmental responsibility among school children, conducted drawing and speech completions on the theme of "Swachhata Hi Seva". Through this initiative we have imparted the importance of environmental cleanliness and how to protect our environment by segregating of wastes that are produced by ourselves, the total student participated in the event is 1150 children. In the event children are showcased their skills and exhibited in the schools and community. And demonstrated procedure of washing hands and usage of plastics. Overall, this initiative was a resounding success, not only in terms of participation but also in raising awareness about the importance of cleanliness and environmental stewardship. By empowering the youth to take an active role in promoting these values, we are cultivating a generation that prioritizes sustainability and hygiene, ultimately contributing to a cleaner and healthier future for all. Also engaged 250 farmers from the community and 389 students from Industrial Training Institute, Mettur.

These activities not only provided a platform for creativity but also encouraged students to express their thoughts on the importance of cleanliness and sustainability. Their skills were prominently exhibited, inspiring peers and community members alike.



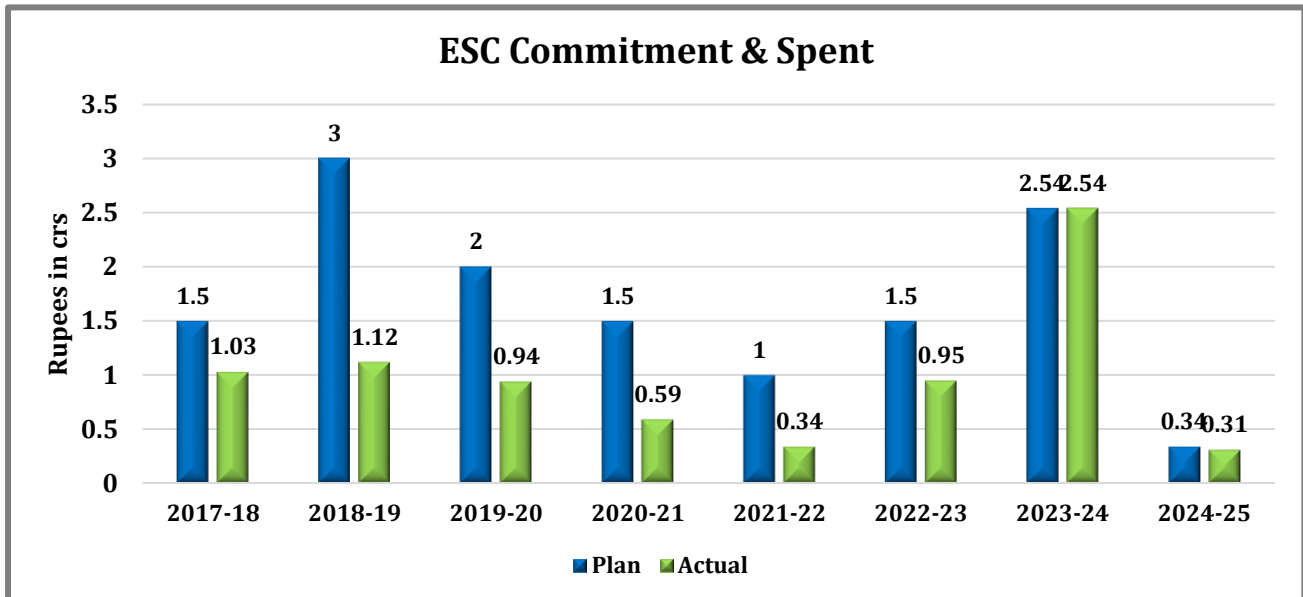
Table 1 : CSR committed & spent details for the period April 2024 – September 2024 (FY25)

Sl. No.	Activitiy	Committed in lakhs(INR) for FY 25	Spent in lakhs(INR) till Sep 2024	Remarks
1	Climate resilient Agri - KVK	19.99	19.99	Completed
2	Climate resilient Agri - FPC	50.00	37.99	On-Going
3	JSW Aspire Project	47.99	24.50	On-Going
4	JSW Green Schools	2.90	1.45	On-Going
5	Program Support-Comm Devp	2.00	0.77	On-Going
6	Increasing Green Cover	19.59	0	On-Going
7	Developing Public Health Facility	29.65	0	On-Going
8	Integrated Water Resource Management	27.95	0	On-Going
9	Infra support to educational inst	34.33	0	On-Going
	Total	234.4	84.7	

ESC REPORT FOR THE PERIOD OF APRIL 2024 TO SEPTEMBER 2024

JSW Steel Ltd., Salem works is the only Integrated steel plant in Tamil Nadu and presently operating with production capacity of 1.15 MTPA. JSW Steel Limited, Salem works is highly committed to protect the environment with distinctive focus on Triple bottom growth for sustainable development. The organization has always maintained Statutory and Regulatory compliances and believes in maintaining harmony with all the stake holders and contributes to societal support activities like:

- Supplying drinking water
- Sanitation facilities
- Road repair/constructions
- Health camps
- Education activities, etc.



EYE SCREENING AT ITI, METTUR:

We have screened 369 students from Industrial Training Institute (ITI), Mettur. The eye screening project was conducted by India Vision Institute (IVI). Through this intervention we are intended to clear the vision issues for the students. Majority of the students are from interior areas. Hence this initiative is very much useful for them and addressing their vision issues.



YOGA EDUCATION:

Teaching yoga at two villages of (Virudhasampatti & Moorthipatti) to individuals of all ages, from school children to the elderly, offers a myriad of benefits that enhance physical, mental, and emotional well-being. Yoga education transcends age barriers, providing valuable tools for self-awareness, stress management, and overall health improvement. Regardless of age, yoga serves as a holistic approach to wellness, promoting harmony between body, mind, and spirit. Its accessible and adaptable nature makes it suitable for individuals of all fitness levels and abilities, offering a lifelong journey towards holistic health and self-discovery. Through this initiative we are addressing 830 community member's needs.



INTERNATIONAL YOGA DAY CELEBRATION:

On the occasion of International Yoga Day, a significant event was organized at government schools and within communities. The event drew enthusiastic participation from a diverse group with 750 students from government schools and 200 community members. Beyond yoga, the event also took as an opportunity to create environmental consciousness by distributing 600 saplings to the surrounding communities. This activity aimed to promote environmental sustainability and encourage the community to contribute actively to greener surroundings.

Overall, International Yoga Day at government schools and in communities was a very good success, leaving a lasting impact on all participants and encouraging them to integrate yoga and environmental consciousness into their daily lives.



LIVELIHOOD TRAINING FOR UNEMPLOYED WOMEN IN THE COMMUNITY:

We have created a platform to empower unemployed women by offering them a tailoring skill development program. This initiative aims to provide women with not just a means to earn a livelihood but also a pathway to independence and self-sufficiency. Our tailoring skill development program is designed to equip women with practical skills that are in demand, thereby enhancing their employability and income-generating potential. The platform provides a supportive environment where women can learn, practice, and grow professionally. Eventually, our goal is to break the cycle of poverty and dependency by empowering women through skills training and economic opportunities. We believe that by investing in women, we can create lasting impacts that benefit not only individuals but also society as a whole. Through this tailoring program we are training 76 women from 2 villages of Moorthipatti and Virudhasampatti.



AWARENESS ON NO-TOBACCO DAY:

On No-Tobacco Day, we took proactive steps to raise awareness within our community by organizing a rally focused on the harmful effects of tobacco use. Through this initiative, we aimed to educate individuals about the health risks associated with smoking and other forms of tobacco consumption, as well as the importance of leading tobacco-free lifestyles. In this rally 150 members were participated.

The rally served as a powerful platform for community members to come together and advocate for positive change. Participants marched through the streets, carrying banners and placards



YOGA FELICITATION PROGRAM

Yoga felicitation program was organized by the JSW and World Community Service Centre (WCSC) on July 23rd, 2024. We are proud to share that we have successfully trained 840 community members in mental wellness, significantly enhancing the overall well-being. This program covered various aspects of mental health, manage stress, recognize health issues, de-addiction and so forth. We have transformed two villages into models of peace and harmony. mental wellness and mutual support are prioritized. Our initiatives have not only improved individual well-being but have also fostered a sense of unity tranquility within these communities. Through this initiative we have turned as positive villages.



INAUGURATED SANITATION BLOCK

Inaugurated sanitation block at Government Model School, Kadayambatti. Total strength of the school is 547, the school Head Master, teachers and students were expressing their gratitude for our contribution of construction of toilet. Through our intervention promoting hygienic practices that are essential for good health and well-being of school students and addressed issues of open toilet that too allotted for girls' by considering their safety. The establishment of a clean and accessible toilet facility encourages students to adopt responsible behaviors and reinforces the importance of maintaining cleanliness. Also contributing towards the protecting environmental pollution. Moreover, this project is aligned with broader governmental efforts to improve sanitation and public health, particularly in schools where children spend significant amounts of time. By investing in such infrastructure, the government is not only addressing immediate health concerns but also empowering future generations to prioritize hygiene and environmental stewardship.



INAUGURATED SANITATION BLOCK

Inaugurated sanitation block at Government Primary School, Thethigiripatti. Total strength of the school is 140, the school Head Master, teachers and students were expressing their gratitude for our contribution of construction of toilet. Through our intervention promoting hygienic practices that are essential for good health and well-being of school students and addressed issues of open toilet that too allotted for girls' by considering their safety. The establishment of a clean and accessible toilet facility encourages students to adopt responsible behaviors and reinforces the importance of maintaining cleanliness. Also contributing towards the protecting environmental pollution. Moreover, this project is aligned with broader governmental efforts to improve sanitation and public health, particularly in schools where children spend significant amounts of time. By investing in such infrastructure, the government is not only addressing immediate health concerns but also empowering future generations to prioritize hygiene and environmental stewardship.



SUPPORTED LUNCH FOR ZONAL SPORTS:

The zonal sports meet committee, Kamlapuram Government Higher Secondary School, Omalor block, requested us to support lunch for committee members and students. We have supported lunch for 1500 students and organizers worth of Rs.44000/-.

Enterprise Social Commitment (ESC) commitment submitted during Environment Impact Assessment(EIA) Study 2017 to MoEF & CC is given in Table 2

Table 2 : Fund Allocation for Enterprise Social Commitment (ESC) as per EC dated 07.07.2017 (Rs. In Crs)

Sl.No	Description of activities	No's of facility	Amount committed in five years (Rs. In Crs)					Total Rs in Crs
			Year I	Year II	Year III	Year IV	Year V	
1	Toilets	2000	0.5	0.75	0.75	0.5	0.5	3
2	Health center	1	0.25	0.25	0.25	0.25	0	1
3	Community hall	2	0	0.5	0.5	0	0	1
4	Hospital	1	0.5	0.5	0.5	0.25	0.25	2
5	Modern school New with GYM and Play ground	1	0	0	1	0.5	0.5	2
6	Watershed program	1	0	0.25	0.25	0.25	0.25	1
7	Water body strengthening/ Drinking water bore well drilling		0	0.25	0.25	0.25	0.25	1
8	Drainage		0.25	0.25	0.25	0.25	0	1
9	Government school improvement	1	0	0.25	0.25	0.25	0.25	1
Total			1.5	3	4	2.5	2	13

The actual amount spent on ESC till June 2020 is given in Table 3
Table 3 : The actual amount spent on ESC till June 2020 (Rs. In Crs)

Sl. No	Description of activities	No's	Year I (Jul'17 to Dec'17)		Year II (Jan'18 to Dec'18)		Year III (Jan'19 to Dec'19)		Year IV (Jan'20 to Jun'20)		Total Rs . (in Crs)	
			Committed	Spent	Committed	Spent	Committed	Spent	Committed	Spent	Committed	Spent
1	Toilets	2000	0.5	0.32	0.75	0.19	0.75	0.04	0.5	0	3	0.55
2	Health center	1	0.25	0	0.25	0	0.25	0.22	0.25	0.21	1	0.43
3	Community hall	2	0	0	0.5	0	0.5	0	0	0	1	0
4	Hospital	1	0.5	0	0.5	0	0.5	0	0.25	0.25	2	0.25
5	Modern school New with GYM and Play ground	1	0	0	0	0	1	0	0.5	0	2	0
6	Watershed program	1	0	0.24	0.25	0	0.25	0.21	0.25	0	1	0.45
7	Water body strengthening/ Drinking water bore well drilling		0	0	0.25	0.2	0.25	0.2	0.25	0.11	1	0.51
8	Drainage		0.25	0	0.25	0.39	0.25	0.1	0.25	0	1	0.49
9	Government school improvement	1	0	0.47	0.25	0.34	0.25	0.17	0.25	0.02	1	1
Total			1.5	1.03	3.0	1.12	4.0	0.94	2.5	0.593	13.0	3.68

Enterprise Social Commitment (ESC) revised commitment submitted to MoEF&CC dated 26.09.2020 is given in Table 4

Table 4 : Revised Fund Allocation for ESC as per letter submitted to MoEFCC (Rs. In Crs)

Sl.No	Sectors	Details	Total Rs in Cr
			Commitment
1	Health	Health & Eye Camps to public and school students , Hospital improvement	1.22
2	Education	School library support , career guidance , sports support , Anganwadi support , class toppers prize to school students, School Technology improvement	1.22
3	Infrastructure Development	School and Educational institution infrastructure improvement , village infrastructure improvement , toilet construction in schools and villages , village library support , Drainage improvement , road improvement , water body improvement , desilting of channels, pond and reservoir	4.7
4	Livelihood support	Need based training (Eg Tailoring , ARI , Zardoshi) to women , Spoken English training to unemployed youth to increase their employability level, organic training to farmers , agricultural inputs to Farmers , exposures trips to farmers , sponsorship to farmers for various training	1.18
5	Others	Waste Management support , sports related support in schools and Villages, awareness creation programs in schools and villages and other need based activities	1
Total in Rs. Crs (shall be spent)			9.32
Total spent Crs. Till June 2020			3.68
Total in Rs. Crs (as the commitment made)			13.00

Total Amount spent on Enterprise Social Commitment (ESC) from July 2020 to March 2022 is given in Table 5

Table 5 ESC spent from July 2020 to March 2022

Sl. No.	Description of activities	ESC fund Rs. in Crs	
		Committed	Spent
1	Health	0.13	0.14
2	Education	0.23	0.01
3	Infrastructure Development	0.63	0.19
4	Livelihood support	0.00	0.00
5	Others	0.00	0.00
	Total in Crs.	0.99	0.34

Total Amount spent on Enterprise Social Commitment (ESC) from April 2022 to September 2024 is given in Table 6

Table 6: ESC spent details from April 22 to September 24

Sl. No.	Description of activities	April – March 23		April – March 24		April – September 24		Total spent in Crs from July 2017 onwards to till September 24 (Rs. in Crs)
		Committed (Rs in Crs)	Spent (Rs in Crs)	Committed (Rs in Crs)	Spent (Rs in Crs)	Committed (Rs in Crs)	Spent (Rs in Crs)	
1	Health	0.25	0.08	0.43	0.43	0.125	0.125	0.63
2	Education	0.65	0.51	0.48	0.48	0.0083	0.0083	1.82
3	Infrastructure Development	0.15	0.08	1.13	1.13	0.1122	0.1122	1.22
4	Livelihood support	0.2	0	0.00	0.00	0.00	0.00	0
5	Others	0.25	0.28	0.5	0.5	0.0658	0.0658	0.84
	Total in Crs	1.5	0.95	2.54	2.54	0.31	0.31	3.80
	ESC spent from 2017 onwards to till September 24	(3.68+0.34+3.80)						7.82

