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JSL
JINDAL STAINLESS

JSL/JRD/ENV/2025-26/09

Date: 28.05.2025

To

Deputy Director General of Forests (C)
Ministry of Environment, Forest & Climate Change
Integrated Regional Office
A/3, Chandrasekharpur
Bhubaneswar-751023

Sub: Half Yearly Compliance Report of Environment Clearance for the period from October, 2024 to March, 2025.

Ref: i. Environment Clearance vide Letter No. J-11011/281/2007-IA.II (I), Dated. 16.06.2023
ii. Environment Clearance vide Letter No. IA -J-11011/281/2007-IA-II (I), dated 01.06.2022
iii. Environment Clearance vide Letter No. J-11011/281/2007-IA-II (I), dated 18.09.2019
iv. Environment Clearance vide Letter No. IA-J-11011/281/2007-IA-II(I), dated 17.05.2018
v. Environment Clearance vide Letter No. IA-J-11011/281/2007-IA-II(I), dated 01.11.2007
vi. Environment Clearance vide Letter No. IA-J-13011/05/2006-IA-II(I), dated 30.11.2006

Dear Sir,

With reference to the above Environment Clearances, please find enclosed herewith the half yearly compliance report for the stipulated conditions for the period from October, 2024 to March, 2025.

The soft copy of the same has also been sent to email –id roez.bsr-mef@nic.in.

Thanking You,

Yours faithfully,
For **Jindal Stainless Limited**

Maitreyee Deb
Maitreyee Deb
Head-Environment

GOVT. OF INDIA
MoEF & CC Integrated R.O.
Bhubaneswar-751023
30 MAY 2025
RECEIVED

No. ... Dt. ...
RECEIVED
31 MAY 2025
S.P.C. BOARD
BHUBANESWAR

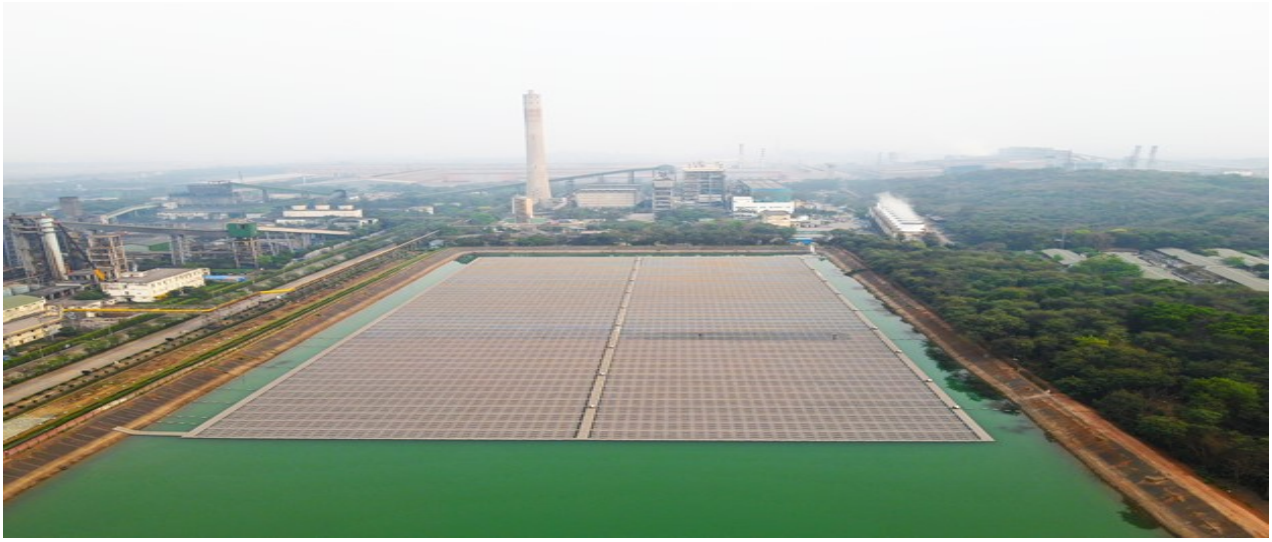
Enc: As Above

Copy to:

1. The Zonal Officer, Central Pollution Control Board, Southern Conclave Block 502, 5th & 6th Floors, 1582 Rajdanga Main Road, Kolkata - 700107.

2. The Member Secretary, SPCB, Parivesh Bhawan, A/118, Nilakahanta Nagar, Unit-VIII, Odisha, Bhubaneswar-751012.

JINDAL STAINLESS LIMITED



HALF YEARLY EC COMPLIANCE REPORT

OCTOBER, 2024 TO MARCH, 2025

Kalinganagar Industrial Complex, Duburi, Dist. Jajpur - 755026, Odisha, India,
Tel: +91 06726 266031 – 33 ;Fax: +91 06726 266006; E-mail: info.jajpur@jindalsteel.com

Status of compliance of environment clearance conditions of expansion of crude steel production from 2.2 MTPA to 4.5 MTPA and Cold Rolling Mill From 1.6 MTAP to 2.6 MTPA

(REF: IA -J-11011/281/2007-IA-II (I), Dated. 1st June 2022 & 16th June 2023,

A. Specific conditions:

Sl. No.	Condition	Compliance Status
i.	Three tier Green Belt shall be developed in a time frame of one year covering 35% of total area (as committed by PP) with native species all along the periphery of the project site of adequate width and tree density shall not be less than 2500 per ha. The survival rate of green belt developed shall be monitored on periodic basis to ensure that damaged plants are replaced with new plants in the subsequent years. Compliance status in this regard shall be submitted to concern Regional Office of the MoEF&CC.	• JSL has planted 2,81,804 nos. of trees with native species till date inside the plant premises with three tier design. • Survival rates of plants are being monitored, and 23302 nos. damage plants have been replaced in FY 24-25 to maintain the tree density as per the requirement.
ii.	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	All the vacant areas adjacent plant operation are either covered with green grass or paved through concreting or paver block.
iii.	41,784 m^3 /day of water requirement after the proposed expansion shall be met from Brahmani River and by Internal recycling after prior approval of the Competent Authority. No ground water abstraction is permitted.	• The present water consumption of JSL is in average 21,735 m^3/day in FY 24-25. • Treated water from RO installed at CPP is being reused as cooling tower makeup. • No ground water is being used.
iv.	Cold Rolling Mill shall have its independent ETP. Hazardous waste generated in CRM shall be sent to TSDF	• Two nos. of ETPs of capacity 750m^3/day and 1560m^3/day have been installed for treatment of effluent water generated from

Sl. No.	Condition	Compliance Status
	and oily waste shall be sent to registered recyclers. Acid Recovery Plant shall be provided in CRM.	Cold Rolling Mill. • ETP sludge generated in CRM ETP is being partially reused for making Briquette which is subsequently used Ferro Alloy making and the rest is being sent to SPCB approved CHWTSDF site of M/s Re Sustainability Limited, Sukinda. • Two nos. of Acid recovery plants have been installed at Cold Rolling Mill.
v.	Covered sheds and toe walls shall be provided for raw material storage to check any attrition of raw materials. Storage sheds shall have garland drains, material traps and shall be built on concrete platforms.	• The raw materials like coal and chrome ore are kept on Concrete flooring and covered by tarpaulin. • Toe walls, garland drains and settling pits have been made to control material loss.
vi.	Top Recovery Turbine, Dry Gas Cleaning and Stove gas waste heat recovery systems shall be installed in BF.	Top recovery Turbine, Dry Gas Cleaning and stove waste gas recovery will be installed along with Blast Furnace under JSL Ferrous Limited against the EC condition, issued to JSL Ferrous Limited, vide letter No. J-11011/2811/2007–IA–II(I), dated: 16.06.2023.
vii.	Sinter Plant shall be equipped with a Sinter cooler waste recovery system and suitable technology for controlling dioxins and furans emissions from the plant.	Sinter Plant hot gas heat re utilization system will be installed under the EC issued to JSL Ferrous Limited, vide letter No. J-11011/2811/2007–IA–II(I), dated: 16.06.2023
viii.	TCLP analysis of the AOD slag shall be carried out periodically. In the case of the presence of hazardous material, the same shall be sent to TSDF. In case of non-hazardous material, AOD slag shall	TCLP analysis of AOD slag is being carried out yearly. From the periodical analysis, it was seen that AOD slag does not contain any hazardous material prescribed in schedule -2 of Hazardous and other waste management rule 2016 as

Sl. No.	Condition	Compliance Status
	be utilized at project site for brick manufacturing and construction work after the recovery of metal.	amended. The slag after metal recovery is being used as low lying area filling and with construction of ongoing projects and road construction.
ix.	The Oil scum and oily waste from CRM shall be sent to registered recyclers	Oily scum generated from CRM is being sent to authorize recyclers. Yearly return for the same is submitted to the State Pollution Control Board yearly.
x.	Following additional arrangements to control fugitive dust shall be provided: a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage areas (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas. b. Proper covered vehicles shall be used while transporting materials. c. Wheel washing mechanisms shall be provided in terms of entry and exit gates with complete recirculation system.	To control the fugitive dust emission from different vulnerable sources following measures have been taken a. Dry fog systems have been installed at conveyors' discharge points and gun sprinklers have also been installed at raw material storage yard to control fugitive emission. Portable mist cannons have been provided to control dust in fly ash loading area. b. All the raw materials are transported through rail and covered vehicles are provided during transportation through road. c. Wheel washing system with complete water recirculation has been installed near ash loading area.
xi.	All internal road and connecting road from project site to main highway shall be developed and maintained with suitable Million Axle Standard (MSA) as per the traffic load due to existing and proposed project.	All the internal roads and connecting roads from project site to main highway are made with RCC/Paver blocks.
xii.	Performance tests shall be conducted on all pollution control systems every year	NIT Rourkela has conducted the performance test of all pollution control devices, and the report has

Sl. No.	Condition	Compliance Status
	and the report shall be submitted to the Regional Office of the MoEF&CC.	been submitted to the IRO office of MoEF&CC vide letter no. JSL/JRD/ENV/2025-26/02 dated 08.04.2025.
xiii.	Particulate matter emission from stacks shall be less than 30 mg/Nm3.	ESPs and Bag Filters have been installed to control the Particulate Matter emission from stacks to control the dust within 30 mg/Nm^3 for all new units like Pellet Plat and CRM. Both manual and online stack monitoring are being carried out and the results are attached as **Appendix- A & B.**
xiv.	85-90 % of billets shall be rolled directly in hot stage. RHF shall operate using only Light Diesel Oil as a fuel.	Slabs from SMS are being rolled directly in hot stage. RHF operates using COG & LPG as a fuel which are greener than LDO.
xv.	Submerged Arc Furnace and Electric Arc Furnace shall be of closed type with 4th hole extraction system.	Electric Arc Furnace are of closed type with tap hole system.
xvi.	The progress made in CER shall be submitted along with six monthly compliance report to the IRO and also upload on the company web site.	The implementation status of the Corporate Environment Responsibility (CER) related activities is enclosed as **Annexure – I.** Which is being submitted along with the Six-monthly compliance report and uploaded on the website.

B. General Condition

Sl. No.	Condition	Compliance Status
I.	**Statutory Compliance**	
i.	The Environment Clearance (EC) granted to the project/ activity is strictly under the provisions of the EIA Notification, 2006 and its amendments issued from time to time. It does not tantamount/ construe to approvals/ consent/ permissions etc., required to be obtained or standards/conditions to be followed under any other Acts/Rules/Subordinate legislation, etc., as may be applicable to the project.	All applicable acts/rules/subordinate legislation are being followed during operation.
II.	**Air quality monitoring and preservation**	
i.	24x7 continuous emission monitoring system at process stacks to monitor stack emission as well as four Continuous Ambient Air Quality Station (CAAQS) for monitoring AAQ parameters with respect to standards prescribed in Environment (Protection) Rules 1986 as amended from time to time. The CEMS and CAAQMS shall be connected to SPCB and CPCB online servers and calibrate these systems from time to time according to equipment supplier specification through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	All process stacks are equipped with 24x7 Continuous Emission Monitoring System which are directly connected to CPCB and OSPCB server. Four continuous on-line ambient air quality monitoring, CAAQMS have been installed in consultation with SPCB and the data is continuously transmitted to both SPCB & CPCB server. To maintain reliability and accuracy of the analyzer, periodical calibration is being performed.

ii.	The project proponent shall monitor fugitive emissions in the plant premises at least once every quarter through laboratories recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Fugitive emission monitoring at various locations is being carried out through NABL accredited laboratory on a monthly basis. The monitoring report is attached as **Appendix –A.**
iii.	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.	Bag Filters and ESPs are provided to control point source and fugitive dust emission from Process and vulnerable sources like material handling, processing and transfer points. In addition, DFDS and water sprinklers have also been provided at all the dust generating points like raw material storage yard, conveying road dust suppression etc.
iv.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Mechanized bag cleaning facilitiy is an integral part of the Bag-filters, provided to always check on pressure drop along the bags.
v.	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.	The fines collected from processes of Ferro Alloy, Steel Melting Shop, Briquette Plant and Cold Rolling Mill are being re-used for Briquette making which in turn is being used in Ferro Alloy making.
vi.	The project proponent shall ensure covered transportation and conveying of ore, coal and other raw material to prevent spillage and dust generation.	All the raw materials are transported through rail and covered vehicles to prevent spillage and dust generation.
vii.	The project proponent shall provide primary and secondary fume extraction system at all melting furnaces.	Primary and secondary fume extraction systems have been provided at all melting furnaces in Ferro Alloys. Common fume extraction has been provided for Steel melting shop as per design of technology supplier.

viii.	Design the ventilation system for adequate air changes as per prevailing norms for all tunnels, motor houses, Oil Cellars.	All the ventilation system for adequate air changes has been designed as per design document for all tunnels, motor houses and shop floors.
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 (G.S.R 414 (E) dated 30th May 2008; G.S.R 277 (E) dated 31st March 2012 (applicable to IF/EAF); S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) 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.	Continuous Effluent Monitoring System has been installed at both the ETP of Cold Rolling Mill for monitoring of parameters like pH, TSS, BOD, COD, Fluoride and Cr^{+6} and connected to SPCB/CPCB server. Online analyzers installed in ETP are being calibrated periodically through NABL approved laboratory.
ii.	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.	Ground water quality is monitored in core zone & buffer zone twice a year (pre- and post-monsoon) through NABL accredited laboratory. The lastest ground water monitoring report is enclosed as **Appendix – A.**
iii.	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Sewage Treatment Plants of capacity 100 KLD has been installed for the treatment of domestic waste water. The treated water is being regularly analyzed by an approved NABL accredited laboratory.
iv.	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31st March 2012 as amended from time	Two nos. of ETPs of capacity 750m^3/day and 1560m^3/day have been installed for treatment of effluent water generated from CRM. The Outlet is being analyzed periodically as per applicable

	to time.	parameters of GSR G.S.R 277 (E) 31st March 2012. The report is enclosed as Appendix – A.
v.	Garland drains and collection pits shall be provided for each stockpile to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off.	Garland drains and collection pits have been provided at raw material storage area to arrest the runoff in the event of heavy rains and to check the water pollution due to surface runoff.
vi.	Tyre washing facilities shall be provided at the entrance/exit of the plant gates.	Wheel washing system with complete water recirculation system has been installed at Ash loading area.
IV. Noise monitoring and prevention		
i.	Noise quality shall be monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000, and report in this regard shall be submitted to the Regional Officer of the Ministry as a part of six-monthly compliance report.	Ambient noise as well as work zone noise is being monitored monthly and submitted to the Regional Officer of the Ministry as a part of six-monthly compliance report. (**Enclosed as Appendix-A)**
V. Energy Conservation measures		
i.	Energy Conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize energy consumption.	• All work areas and streetlights are converted to LED lights at JSL premises. • Floating solar project has been installed at water reservoir of JSL for generation of 7.3 MWp power and Roof top solar installed for 14.4 MWp as RE power.
VI. Waste Management		
i.	Used refractories shall be recycled.	Used refractories generated from SMS partially are being recycled in the process itself and the rest are sold to recycler.
ii.	Kitchen waste shall be composted or converted to biogas for further use.	An Organic Waste Converter of capacity 100 kg/day is operating. A new OWC of 500 kg/day has been installed for conversion of kitchen waste to compost;

		compost is used as fertilizer for greenbelt development.
VII. Green Belt		
i	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.	The GHG Inventory has been prepared to assess the baseline emission.
ii	Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon budgeting/balancing, carbon sequestration activities and carbon capture, use and storage and offsetting strategies. Further, the report shall also contain time bound action plan to reduce its carbon intensity of its operations and supply chains, energy transition pathway from fossil fuels to Renewable energy etc. All these activities/ assessments should be measurable and monitorable with defined time frames.	**Short term Target:** • Energy efficiency (renewable energy through Power Purchase Agreements (PPAs). • Conduct energy audits and implement quick-win measures to optimize energy consumption in existing processes (e.g., lighting upgrades, process optimization). **Long term Target:** • Continue to monitor and enhance emissions reduction targets aligned with the Paris Agreement goals. • Analyze the feasibility of carbon capture and storage (CCS) technologies.
VIII. Public hearing and Human health issues		
i	An emergency preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	• Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) has been prepared and regular mock drill being conducted to verify effectiveness of the plan. • All inputs for the Disaster Management Plan have been provided to the District Administration for preparation of Offsite Disaster management plan.

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.	Heat stress analysis at high temperature work zone has been carried out by third party and Personal Protective Equipment (PPE) as per the norms of Factory Act is being provided to the workman.
iii	Occupational health surveillance of the workers shall be done on a regular basis and records maintained.	Annual health checkups of workers are being carried out and records are being maintained. Specialty and super specialty health services are being provided to employees/workers and their dependants by reputed hospitals.
IX. Environment Management		
i.	The project proponent shall comply with the provisions contained in this Ministry's OM vide F. No. 22-65/2017-IA.III dated 30/09/2020. As part of Corporate Environment Responsibility (CER) activity, PP has committed to adopt 20 nearby villages for development activities. Out of 20 villages PP has already identified six villages namely Tikar, Kumbhiragadia, Manpur, Balungabandhi, Marurtikar and Khurunti villages.	Different development works have been taken up in consultation with community representatives. The following development initiatives have been taken at the identified villages. **Tikar:** New establishment of community hall, Establishment of Homeopathy centre, Support for cultivation of Betel vine, Mobile medical camp and other live hood programmes through Self Help Group (SHG). **Kumbhiragadia:** ASMITA Boutique, Tailoring Training Centres, Boutique centers, Farm income generating activities such as dairy, goat rearing, sheep rearing, poultry, mushroom cultivation and other livelihood programmes through SHG. **Manpur:** Set up of Pump house with Pipeline laying, Bore well with electrification, Installation of street light, Regular water sprinkling on the village road etc. **Balungabandhi:**

		Medical health camp, Buck Ram support to SHG, goat rearing, sheep rearing, poultry, mushroom cultivation and other livelihood programmes through SHG. **Marurtikar:** Pond cleaning, goat rearing, sheep rearing, poultry, mushroom cultivation and other livelihood programmes through SHG. **Khurunti:** ASMITA safety jacket production center and other livelihood programmes through SHG.
ii	The company shall have a well-laid-down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe 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 a defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stakeholders. The copy of the board's resolution in this regard shall be submitted to the MoEF&CC as a part of a six-monthly report.	The company has laid down dedicated Environmental Policy duly approved by the Board of Directors and is committed to maintaining proper checks & balances for integrating environment review and action.
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 report to the head of the organization	JSL has a well-equipped Environment department with qualified and experienced officers led by a senior level executive as Head Environment who directly reports to the Site Head.
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 it 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.	• Advertisement on grant of Environment Clearance had been published in newspapers namely ORISSA POST (English) and PRAMEYA (Odia) on 07.06.2022 respectively for EC granted on 01.06.2022. • Advertisement on grant of Environment Clearance had been published in newspapers namely ORISSA POST & The New Indian Express (English) and Dharitri & Pragativadi (Odia) on 22.06.2023 respectively for EC granted on 16.06.2023. • Environmental Clearance is displayed on the website of the company permanently.
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.	• The copies of the environmental clearance had been submitted to the Heads of local bodies, Panchayats on 09.06.2022 for EC granted on 01.06.2022. • The copies of the environmental clearance have been submitted to the Heads of local bodies, Panchayats on 29.06.2023 for EC granted on 16.06.2023.
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.	• Six-monthly reports on the status of compliance of the stipulated environmental conditions uploaded on the company website and being updated on a half-yearly basis.
iv.	The project proponent shall monitor the criteria pollutants level namely, PM10, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the projects and display the same at a convenient	• Both online and manual Stack Monitoring and ambient air quality monitoring are being carried out and related data are being displayed on the display board installed at main gate for public view.

	location for disclosure to the public and put on the website of the company.	• The Monitoring data along with half yearly EC compliance is being uploaded to the company website.
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 and Climate Change at environment clearance portal.	Six-monthly reports on the status of compliance of the stipulated environmental conditions are being submitted to MOEF&CC and also uploaded on MoEF&CC website (Parivesh Website)
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	Environmental statement for each financial year in Form-V is submitted to SPCB, Odisha within stipulated timeline. The last report submitted on 30.09.2024 which is also displayed on company website.
vii.	The project proponent 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.	The OSPCB, Odisha has issued **"**Consent to Operate**"** for starting operation of the plant which is valid till 31st March 2027.
viii.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitments made during Public Hearing and that during their presentation to the Expert Appraisal Committee.	The project proponent is continuously implementing and tracking all the commitments made in EIA/EMP report and commitment made in Public Hearing. Detailed status of which is enclosed as **Annexure- I.**
ix.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of	All the future expansion will be routed through MoEF&CC in accordance with the prevailing rules and guidelines.

	Environment, Forests and Climate Change (MoEF&CC).	
x.	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	All the data/information submitted is factual and correct.
xi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	The project proponent is implementing all the relevant conditions.
xii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time-bound manner shall implement these conditions.	All the existing and any additional condition is being implemented on priority.
xiii.	The Regional Office of this Ministry shall monitor compliance with 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.	All cooperation is being extended to the Regional Officer to furnish any data/information and monitoring reports.
xiv.	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.	Any such appeal shall be routed through the NGT if required.

Status of compliance of environment clearance conditions of expansion of crude steel production from 0.8 MTPA to 2.2 MTPA and Cold Rolling Mill From 0.8 MTAP to 1.6 MTPA
(REF: J-11011/281/2007-IA-II (I), Dated. 18th September 2019)

A. Specific conditions

Sl. no.	Condition	Compliance status
i.	The CER shall be completed within a time frame of three years.	Activities under CER are being undertaken in line with the commencement of the expansion project. Detailed report is enclosed as **– II**.
ii.	An action plan for rainwater harvesting measures at plant sites shall be submitted to the regional office indicating quantity of rainwater to be harvested from the roof tops and storm water drains to recharge the ground water and to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.	• Rainwater harvesting for collection and utilization of rooftop water has been implemented at Store-2. • An earthen pit for collection of surface runoff collection has been constructed. • Surface runoff is being collected in Surface Runoff Treatment System (SRTS), treated and further reused. • The Surface runoff also being diverted to Settling Pit and harvested water is being reused in low end application. • A detailed report on Rainwater Harvesting measures at the plant site has already been submitted to the Regional Office of MoEF&CC, Bhubaneswar.
iii.	The company shall establish separate environmental management cell for JSL & JCL respectively	Environment Management Cell has been established for JSL & JCL.

iv.	Greenbelt shall be in an area of 40 ha. Outside the factory premises and the implementation status shall be reported to the Regional Office of MoEF&CC.	Greenbelt has been developed in an area of 47 ha outside plant premises at Telibahali, Nadiabhanga.Gosala, Ambasara and Badhagaon.

B. General condition

Sl .No.	Condition	Compliance status
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.	Consent to Establish issued by SPCB, Odisha vide SPCB Letter No. 3824/IND-II-CTE-6225, dated 21.03.2020 and amendment vide letter no. No. 5449/IND-II-CTE-6892, dated 20.03.2025. Consent to Operate has been obtained vide SPCB letter no. 6518/IND-I-CON-5136, Dated 28.03.2025 and 6522/IND-I-CON-5136, Dated 28.03.2025 valid up to 31.03.2027.
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.	No ground water is being extracted. Water is being sourced from the Bramhani River within the permissible water drawl capacity of the water resource Dept., Odisha.
iii.	The project proponent shall obtain authorization under the Hazardous and other Waste Management Rules, 2016 as amended from time to time.	The plant has already obtained authorization under Hazardous and other Waste Management Rules, 2016 and amended there-off for present facilities from SPCB, Odisha, which is valid till 31.03.2027.
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 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) 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.	• All process stacks are equipped with 24x7 Continuous Emission Monitoring System which are directly connected to CPCB and OSPCB server. • Four continuous on-line ambient air quality monitoring systems (CAAQMS) have been installed in consultation with SPCB, and the data is continuously transmitted to both SPCB & CPCB server. • All the online analyzers are being periodically calibrated through NABL accredited laboratories.
ii.	The project shall monitor fugitive emission in the plant premises at least once in every quarter through labs recognized under Environment (Protection) Act, 1986 or NABL accredited laboratories.	Fugitive emission monitoring is being carried out monthly through third party laboratories having NABL accreditation.
iii.	The project proponent shall install system 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 NOx in reference to SO_2 and NOx emissions) within and outside the plant area (at least four locations one within and three outside the plant area at an angle of 120^o each), covering upwind and downwind directions.	• JSL has already installed 4 nos. of CAAQMS having parameter PM_{10}, $PM_{2.5}$, SO_2, NOx & CO at strategic locations of JSL premises and data is being sent to SPCB/CPCB server. • The locations are approved by Regional Office of State Pollution Control Board.
iv.	The camera shall be installed at suitable locations for 24x7 recordings of battery emissions on both sides of coke oven batteries and videos should be preserved for at least one month recording.	Coke Oven Plant is operating under the entity of Jindal Coke Limited with a separate EC vide, vide letter No. IA–J–11011/111/2018–IA–II(I), dated: 25.05.2018. The related compliance has been shared separately by Jindal Coke Limited.

v.	Sampling facility at process stacks and quenching towers shall be provided as per CPCB guidelines for manual monitoring of stacks.	Coke Oven Plant is operating under the entity of Jindal Coke Limited with a separate EC vide, vide letter No. IA–J–11011/111/2018–IA–II(I), dated: 25.05.2018. The related compliance has been shared separately by Jindal Coke Limited.
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.	Manual monitoring of ambient air quality / stack monitoring is being carried out periodically. Manual Stack monitoring and ambient air quality monitoring data is annexed as **Appendix – A.** The monthly summary report of continuous stack emission and air quality monitoring data is annexed as **Appendix – B.** The report is being submitted to the Regional Office of MoEF&CC, Zonal Office of CPCB and Regional office of SPCB.
vii.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust form all vulnerable sources, so as to comply prescribed stack emission and fugitive emission standards.	Appropriate Air Pollution control devices like ESPs, Bag Filters, Dry Fog Systems have been provided to control stack emission and fugitive dust emissions.
viii.	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Mechanized bag cleaning facilities have been installed for better maintenance of bags.
ix.	Secondary emission control systems shall be provided at SMS Converters.	Two nos. of pulse jet type bag filter having capacity of 11,56,000 M^3/hr. each has been installed at the EAF & AOD furnaces for taking care of secondary emission.
x.	Pollution control system on the Steel Plant shall be provided as per the CREP Guidelines of CPCB.	All the pollution control equipment installed is as per CREP Guidelines of CPCB.
xi.	Sufficient number of mobile or stationery vacuum cleaners shall be provided to clean plant roads, shop floors, and roofs regularly.	6 nos. of mechanical sweepers engaged for road and shop floor cleaning throughout the plant.
xii.	Recycle and reuse iron ore fines, coal and coke fines, lime fines collected in the pollution control devices and vacuum cleaning devices in the process after briquetting / agglomeration.	The fines collected from the processes of Ferro Alloy, Steel Melting Shop, Briquette Plant and Cold Rolling Mill are being used for Briquette making for further reuse in Ferro Plant.

xiii.	The project proponent shall use leak proof trucks / dumpers carrying coal and other raw materials and cover them with tarpaulin.	Raw materials are being transported through rail and covered vehicles to prevent spillage/dust generation.
xiv.	Wind Shelter fence and chemical spraying shall be provided on the raw material stockpiles.	Provision of Wind Shelter fence at coal stockpile has been taken up. Chemical spraying and covering by tarpaulin to reduce fugitive escape is being done in dry season.
xv.	Design the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses, Oil Cellars.	All the ventilation system for adequate air changes as per ACGIH document for all tunnels, motor houses and shop floors.
xvi.	The project proponent shall install Dry Gas Cleaning Plant with bag filters for the SMS converter.	Two nos. of pulse jet type bag filter having capacity of 11,56,000 M^3/hr each have been installed at the EAF & AOD furnaces for taking care of secondary emission.
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 (applicable to IF/EAF) as amended from time to time; S.O. 3305 (E) dated 7th December 2015 (Thermal Power Plants) 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 continuous Effluent Monitoring System has been installed at ETPs of Cold Rolling Mill for monitoring parameters like pH, TSS, BOD, COD, Fluoride and Cr^{+6} and connected to SPCB/CPCB server. Thermal Power plant CT blowdown is being recycled in the process through RO Plant. To maintain reliability and accuracy of the analyzer, periodical calibration is being performed as per the analysis report of NABL accredited laboratory. Analysis report of ETP is enclosed as **Appendix – A.**
ii.	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 or NABL accredited laboratories.	The unit is monitoring ground water quality in core zone as well as in nearby areas by NABL accredited third party. Report is annexed as **Appendix – A.**

iii.	The project proponent shall submit monthly summary report of continuous effluent monitoring and results of manual effluent testing and manual monitoring of ground water to regional office of MoEF &CC, Zonal office of CPCB and regional office of SPCB along with six monthly monitoring report.	Continuous Effluent monitoring system has been installed at ETP outlet Cold Rolling Mill. The monthly summary report of continuous effluent monitoring data has been annexed as **Appendix – B.** The same has been submitted to regional office of MoEF &CC, Zonal office of CPCB and regional office of SPCB along with six monthly monitoring report.
iv.	The project proponent shall provide the ETP to meet the standards prescribed in G.S.R. 277(E), dated 31st March 2012(Integrated Iron & Steel) as amended from time to time.	Two nos. of ETPs of capacity 750M^3/day and 1560m^3/day have been installed for treatment of process water generated from both the existing and new CRM. Periodical analysis of outlet water of ETP is being carried out to conform the compliance under G.S.R. 277(E), dated 31st March 2012(Integrated Iron & Steel).
v.	Adhere to "Zero Liquid Discharge"	The process effluent is being treated and reused in different low-end applications. To use the treated water in high end application, the Reserve Osmosis system project has been taken up.
vi.	A sewage Treatment Plant shall be provided for the treatment of domestic wastewater to meet the prescribed standards.	• Sewage Treatment Plants having capacity 100 KLD has been installed inside plant premises for treatment of domestic waste water including one STP at Township. • The treated water from STP is being tested by NABL accredited third party to ensure it meets prescribed standard. Analysis report is enclosed as Appendix – A.
vii.	Garland drains and collection pits shall be provided for each stockpile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run-off.	Garland drains and collection pits have been provided at raw material storage area to arrest the run-off in the event of rain.

viii.	Tyre washing facilities shall be provided at the entrance of the plant gates.	Wheel washing system with complete water recirculation system has been installed at Ash loading area.
ix.	CO_2 injections shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.	The EAF system is designed for dry cleaning, so no water is being used in the system.
x.	The project proponent shall practice rainwater harvesting to the maximum possible extent.	• A detailed study has been conducted to assess the potential of rainwater harvesting potential in the entire complex. • An earthen pond of 10000 m^3 has been constructed for storage of rainwater. • A Settling pit has been constructed to harvest rainwater and reuse it for plant activities.
xi.	Water meters shall be provided at the inlet to all unit process in the steel plants.	Water meters have been provided at the inlet of all process units.
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.	• The unit is making all necessary efforts to minimize water consumption in the steel plant complex by recycling and reuse of treated water. • The CPP cooling tower blowdown water is being treated in RO plant and the treated water is being reused as cooling tower makeup water. • The process water generated from CRM is being treated and is being reutilized in cascaded rinsing in subsequent process and then treated in ETP and the treated water is being reused for SMS slag quenching, in Jigging plant, dust suppression and other low-end use.

IV. Noise monitoring and prevention		
i.	Noise levels shall be carried out according to the prescribed guidelines and the report in this regard shall be submitted to the Regional Officer of the Ministry as a part of a six-monthly compliance report.	The monitoring of work zone noise level and ambient noise are being carried out periodically and the monitored data is being submitted to the Regional Officer of the Ministry along with six-monthly compliance report. The monitoring data for the period from Oct' 24 to Mar' 25 is annexed as **Appendix – A.**
ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during daytime and 70 dB(A) during nighttime.	The monitoring of ambient noise level is being carried out periodically to conform the compliance with E(P)A Rules, 1986 viz. 75 dB(A) during daytime and 70 dB(A) during nighttime.
V. Energy Conservation Measures		
i.	Waste Heat Recovery shall be provided in all units where the flue gas or process gas exceeds 300^{o}C.	2 nos. Waste Heat Recovery Boilers of 2 x 28.5 TPH capacity have been installed at the 60 MVA Ferro Alloy Complex. Waste heat recovery boiler has also been installed in Cold Rolling Mill.
ii.	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.	Presently the unit is not having Blast Furnace and Sinter Plant.
iii.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, streetlights, parking around the project area and maintain the same regularly.	Floating solar project has been installed at water reservoir of JSL for generation of 7.3 MW power as RE power. The installation of roof top solar panel for generation of 14.4 MWp power has been completed.
iv.	Provide LED lights in their office and residential areas.	LED lights are provided in all offices, canteens, and street.
v.	Ensure installation of regenerative type burners on all reheating furnaces.	Reheating furnaces are not being used in JSL.
VI. Waste Management		

i.	Waste recycling plants shall be installed to recover scrap, metallic and flux for recycling to SMS.	Metal Recovery Plant has been setup for recovery of metal from Ferro & SMS slag and the recovered metal is being reused in the process.
ii.	Used refractories shall be recycled a far as possible.	Used refectories are generated from processes and are being reused in SMS as maximum as possible.
iii.	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 scrap, metallic and flux for recycling to Sinter Plant. The project proponent shall establish a linkage for 100% reuse of rejects from Waste Recycling Plant.	Slag generated from SMS and Ferro Alloys is being processed at Metal Recovery Plant and the metal free slag is used for low lying area filling and road making of NHAI.
iv.	100% utilization of fly ash shall be assured. All the fly ash shall be provided to cement and brick manufactures for further utilization and Memorandum of Understanding in this regard shall be submitted to the Ministry's Regional Office.	Fly ash is utilized for Cement & Brick making and to NHAI for road making ensuring 100% utilization in a financial year.
v.	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.	Oil Collection pits and Oil collection trays has been provided at oil cellar and under coils on saddles in cold rolled coil storage area to reuse/recycle spilled oil.
vi.	The waste oil, grease and other hazardous wastes like acidic sludge from pickling, galvanizing, chrome plating mills etc. shall be disposed as per the Hazardous & Other Waste (Management & Transboundary Movement) Rules, 2016.	• The waste oil is being disposed of to authorized and registered recyclers • CRM ETP sludge including acid recovery sludge is being sent to SPCB approved CHWTSDF, Re Sustainability Limited at Sukinda and partially reused in Briquetting.
VII. Green Belt		

i.	Green belts shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guidelines. The greenbelt shall inter alia cover the entire periphery of the plant.	• JSL has planted 2, 81, 804 nos. of trees with native species till date inside the plant premises with three tier design. • Survival rates of plants are being monitored, and 23302 nos. damage plants have been replaced in FY 24-25 to maintain the tree density as per the requirement.
ii.	The project proponent shall prepare GHG emission inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	The GHG Inventory has been prepared to assess the baseline emission.
VIII. Public hearing and Human health issues		
i.	Emergency Preparedness plan based on Hazard Identification and Risk Management (HIRA) and Disaster Management Plan shall be implemented.	• Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) has been prepared and regular mock drill being conducted for verifying effectiveness of the plan. • The Disaster Management Plan has been prepared in consultation with the District Administration and has implemented for existing operation.
ii.	The project proponent shall carryout heat stress analysis for the workmen who work in high temperature work zone and provide Personal Protective Equipment (PPE) as per the norms of Factory Act.	Heat stress analysis at high temperature work zone has been carried out by third party and Personal Protective Equipment (PPE) as per the norms of Factory Act is being provided to the workman.

iii.	Provision shall be made for housing construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical healthcare, crèche etc. The housing may be in the form of temporary structures to be removed after completion of the project.	Construction laborers are majorly hired from local sites leading no labor hut within plant premises.
iv.	Occupation Health surveillance of the workers shall be done on a regular basis and records maintained as per the Factory Act.	Occupation Health surveillance of the workers is being carried out on a periodical basis as per the Factory Act and records are being maintained.
IX. Corporate Environment 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 Environment Responsibility.	The said notification is superseded by MoEF & CC notification dated 30th September 2020. The issues raised during public hearing are being reviewed, tracked and implemented.
ii.	The company shall have a well-laid-down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe 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 a defined system for 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 compliance report.	The company has laid down dedicated Environmental Policy and Biodiversity Policy duly approved by the Board of Directors and is committed to maintain proper checks & balances for integrating environmental review and action.
iii.	A separate Environment 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	JSL has a well-equipped Environment department with qualified and experienced officers led by a senior level executive as Head Environment who directly reports to the Site Head.

iv.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be dully approved by competent authorities. 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.	An action plan has been made to implement EMP and environmental conditions applicable to JSL. Year wise budget are sanctioned and allocated towards environmental improvement. Compliance with environmental conditions is regularly submitted to RO, MoEF&CC on a half yearly basis.
v.	Self –environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	• Self-environmental audits are being conducted regularly and any point observed is being discussed, reviewed and the action plan made. • Third Party Environment Audit for the FY 2022-23 has been carried out and reports have been submitted to MoEF&CC.
vi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants shall be implemented.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) are strictly followed.
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.	The advertisement has been published in two newspapers namely ORISSA POST (English) and SURYAPRAVA (Odia) on 29.09.2019 & 01.10.2019 respectively. A copy of the same has been submitted to your good office on 14.10.2019.

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 day of receipt.	Copies of the Environmental Clearance have been submitted to President Zilla parishad, Jajpur and Additional District Magistrate, Kalinga Nagar and District Magistrate, Jajpur. A copy of the same has been submitted to your good office on 14.10.2019.
iii.	The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions including results of monitored data on their website and update the same on half-yearly basis.	Half Yearly EC compliance report has been uploaded at the Website of the Company and periodically upated.
iv.	The project proponent shall monitor the criteria pollutant level namely, PM10, SO2, NOx (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.	• Four continuous on-line ambient air quality monitoring systems (CAAQMS) have been installed in consultation with SPCB, and the data is continuously transmitted to both SPCB & CPCB servers. • The monitoring data are also being displayed on the electronic display board placed at Gate No. 1 of JSL for public view. • The monitored data is uploaded in company website along with Six monthly report and update the same periodically.
v.	The project proponent shall submit six-monthly report on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environmental clearance portal.	Half Yearly EC compliance report is being uploaded at the Website of Ministry of Environment, Forests and Climate Change six-monthly.
vi.	The project proponent shall submit the environmental statement for each financial year in Form-IV to the concern State Pollution Control Board under the Environment (Protection). Act 1986, as amended subsequently and put on the website of the company.	Environment Statement in Form – V is being submitted to SPCB, Odisha every year by 30th September. The Last report had been submitted on 28.09.2024 and uploaded on the company website.

vii.	The project proponent 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. i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government. ii. The project proponent shall abide by all commitments and recommendations made in the EIA/EMP report, commitments made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	The Project has been completed and in operation and Consent to Operate has been obtained vide SPCB letter no. 6518/IND-I-CON-5136, Dated 28.03.2025 and 6522/IND-I-CON-5136, Dated 28.03.2025 valid up to 31.03.2027. I. All the stipulations made by the State Pollution Control Board are being complied with. II. Commitments made in EIA/EMP report and public hearing report are being reviewed, tracked and implemented. Details are enclosed as Annex- I & IV.
viii.	No further expansion or modifications in the plant shall be carried out prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).	Any further expansion of the project will be routed in accordance with the MoEF&CC's relevant guidelines.
ix.	Concealing factual data or submission of false/fabricated data may result in the revocation of this environmental clearance and attract action under the provision of Environment (Protection). Act 1986.	All the data/information submitted is factual and correct.
x.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	The project proponent is implementing all the relevant conditions
xi.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time-bound manner shall implement these conditions.	All the existing and any additional condition is being implemented on priority.
xii.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities shall extend full co-operation to the officer(s) of the Regional office by furnishing the requisite data / information / monitoring reports.	All the cooperation is being extended to any statutory authorities by furnishing requisite data, information and monitoring reports.

xiii.	The above conditions shall be enforced, inter-alia under the provision 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 Manner.	All statutory provisions under Air Act, Water Act, Hazardous waste management rule, public liability insurance act are being followed.
xiv.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under the Section 16 of the National Green Tribunal Act, 2010	Any such appeal shall be routed through the NGT if any.

Status of compliance of environment clearance conditions of 1.6 MTPA integrated stainless steel plant (*REF: J-11011/281/2007-IA-II (I), Dated. 17th May, 2018)*

Sl. No.	**Condition**	**Compliance**
1.	M/s. Jindal Stainless Limited was granted Environmental Clearance for Integrated Stainless-Steel Plant (1.6 MTPA) at Kalinga Nagar Industrial Complex, Duburi, Dist. Jajpur, Odisha vide letter No. J-11011/155/2005-IA. II(I), Dated. 05th August 2005.	**Noted.**
2.	In addition to Integrated Stainless-Steel Plant, Environmental Clearance for 4x125 MWH captive power project at Kalinga Nagar Industrial Complex, Duburi, Dist. Jajpur was granted vide letter No. J-13011/5/2006-IA. II(I), Dated. 30.11.2006.	**Noted.**
3.	Further, M/s. Jindal Stainless Limited was granted Environmental Clearance for	**Noted.**

	Modification-cum-Expansion of the Integrated Stainless-Steel Ltd., vide letter No. J-11011/281/2007-IA.II(I), Dated. 01.11.2007 for modification and addition of new facilities.	
4.	The status of implementation of project, as per Environmental Clearance accorded to M/s. JSL for Integrated Stainless-Steel Plant Dated. 5th August 2005, for Captive Power Project Dated 30th November 2006 and Modification-cum-Expansion vide Dated 1st November 2007.	**Noted.**
5.	M/s. Jindal Stainless Limited has proposed to transfer the existing Coke Oven Battery (Recovery Type) of capacity 0.425 MTPA to M/s. Jindal Coke Ltd. and Hot Strip Mill of capacity 1.6 MTPA to M/s. Jindal United Steel Ltd.	**Noted**
6.	It was reported that the remaining part of the Integrated Stainless-Steel Plant of M/s. JSL, excluding Coke Oven plant and Hot Strip Mill, is in 318.02 ha of land lies within the given bounded coordinates.	**Noted.**
7.	Details of the raw materials requirements for M/s. Jindal Stainless Ltd. after transfer of Coke Oven Battery and Hot Strip Mill are Chrome Ore 6,30,000MTPA, Coke 1,45,000MTPA, Lime 90,000MTPA, Quartzite 37,000MTPA.	**Noted**
8.	The required water shall be drawn within the quantity of 27960 KLD allotted to M/s. Jindal Stainless Ltd. The power requirement will be 210 MWH.	The required water quantity of 33,384 m3/day shall be met from River Brahmani as per EC granted vide letter No. F. No. J-11011/281/2007-IA. II(I), Dated. 16th June 2023.
9.	The capital requirement of the Integrated Stainless-Steel Plant excluding Coke Oven plant and Hot Strip Plant was Rs. 6714 Cr. and the relevant budget Rs. 240 Cr. was earmarked for the environmental Protection measures as a capital.	The earmarked cost for environmental protection is judiciously spent on air, water pollution control, and solid waste management.

10.	The process inter alia includes receiving of raw materials namely Chrome ore, Coal, Lime, Dolomite at CRMHS area for further feed into plant process, feeding of chrome ore and other raw materials into Submerged Arc Furnace of Ferro Alloys Plant in the form of briquette to produce Ferro Alloy and Sending liquid Ferro Chrome metal to SMS for production of Crude Steel in the form of Slab. The hot rolled coils received from JUSL are further rolled in Cold Rolling Mill to get thinner grade of cold rolled products and processed to meet the requirements of the customers. Power requirement is met through existing 2x125 MW Captive Power Plant.	The key raw materials are chromite ore, Steam coal, Lime stone and dolomite.
11.	Fly Ash generated from CPP is being 100% utilized by sending it to brick manufacturers and asbestos manufacturers. SMS slag and Ferro Alloys slag are being processed in Metal Recovery Plant/Jigging plant for metal recovery. Residual slag are used in low lying area filling inside plant premises. Furnace scale and Shot blaster dust from CRM, Bag filter duster and Caster dust from SMS are being reused in Briquette Plant of Ferro Alloy Complex. CRM ETP Sludge generated from CRM is being sent to CHWTSDF at Sukinda, Odisha for secured land filling. Flue gas residue (Bag filter dust) from SAF of Ferro Alloy Plant are being reused 100% in the briquette plant. Used oil and Waste oil are sent to authorized recyclers as per Hazardous Waste guidelines.	At present 100% utilization of fly ash is being carried by providing it to Cement Plant, Brick manufacturing/ and to NH for road making. SMS slag and Ferro Alloys slag are being processed in Metal Recovery Plant/Jigging plant for metal recovery. Residual slag is used in low lying area filling inside plant premises and road constriction. Furnace scale and Shot blaster dust from CRM, Bag filter duster and Caster dust from SMS are being reused in Briquette Plant. Bag filter dust from SAF of Ferro Alloy Plant is being reused 100% in briquette plant. Used oil and Waste oil are being sent to authorized recyclers
12.	No court case or violation under EIA Notification, 2006 to the project or related activity reported by project proponent.	-
13.	The proposal was considered in the Expert Appraisal Committee (Industry-I) in its 27-meeting held during 34 — 5th January 2018 and 28th meeting held during 5th — 7th	-

	February 2018.	
14.	After detailed deliberations, the committee recommended the transfer of Environmental Clearance for Coke Oven Plant from M/s Jindal Stainless Ltd (parent company) to M/s Jindal Coke Ltd (new company) and Hot Strip Mill along with plate finishing facilities to M/s Jindal United Steel Limited (new company) with specific and general conditions.	-
15.	Further, M/s Jindal Stainless Ltd (JSL) submitted the requisite documents vide letter dated 24th March 2018 for transfer of Environmental Clearance, 'No Objection Certificate' from transferor, M/s JSL and Undertaking from transferee, M/s JCL on non- judicial stamp papers, Punjab and Haryana High Court Order dated 20t October, 2015 and certificate of incorporation of M/s JCL as well as the same documents with respect to transfer of 1.6 MTPA of Hot strip mill to M/s Jindal United Steel Limited.	-
16.	The Ministry of Environment, Forest and Climate Change, based on the recommendations of the Expert Appraisal. Committee (Industry-I), hereby decided to transfer the Environmental Clearance of Coke Oven Plant from M/s Jindal Stainless Ltd (parent company) to M/s Jindal Coke Ltd (new company) and Hot Strip Mill to M/s Jindal United Steel Ltd (new company) under clause 11 of EIA Notification, 2006 and subsequent amendments subject to strict compliance of the specific and general conditions stipulated in the Environmental Clearance dated 1st November 2007 and 30 November 2006.	-
17.	This amendment to the Environmental Clearance granted for Integrated Stainless-Steel Plant vide F.No.J-11011/281/2007-IA.II(I) dated 1st November, 2007 should be read with the Environmental Clearance	-

	granted for captive thermal power plant vide No. J-13011/5/2006-IA.II(T) dated 30 November, 2006.	
18.	M/s Jindal Stainless Ltd shall abide by all the commitments and recommendations made in the EIA/EMP report and that during presentation to the EAC; commitments made during the Public hearing held on 22.09.2005 for 4x125 MW Captive Power Plant and 30.06.2006 for Integrated Stainless-Steel Plant.	Jindal Stainless is committed to comply with all the recommendations made in EIA/EMP report and commitments made during public hearing. All the commitments made are being periodically reviewed, tracked and implemented.
19.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	All the conditions are being implemented /checked and maintained.
20.	The Ministry reserves the right to stipulate additional conditions if found necessary, The Company in a time bound manner shall implement these conditions.	All conditions including additional conditions if any are being complied, checked and maintained.
21.	The PP shall ensure no change in the pollution load and no conflict in sharing common facilities in day-to-day operations.	Noted and agreed.
22.	All the liabilities regarding environmental issues of Coke Oven Plant and Hot strip mill will also be the responsibility of M/s Jindal Stainless Ltd.	Noted and agreed.
23.	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.	All prevailing Acts and Rules are being complied which is being ensured through periodical review and monitoring.
24.	Any appeal against this Environmental Clearance 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.	Any such appeal shall be routed through the NGT if any.

Status of compliance of environment clearance conditions of modification cum expansion of 1.6 MTPA integrated stainless steel plant. *(REF: J-11011/281/2007-1A II (I), Dated. 1st November 2007)*

A. SPECIFIC CONDITIONS:

Sl. No.	Condition	Compliance
i.	The industry shall follow Coke Oven standards as per E (P) A Notification. VOCs from the Coke Oven shall be monitored and controlled as per CPCB guidelines.	Separate EC has been obtained in the name of M/s. Jindal Coke Limited, vide letter No. IA–J–11011/111/2018–IA–II(I) on Dated: 25.05.2018. VOC is being monitored at Coke Ove plant under M/s Jindal Coke Limited.
ii.	ESP shall be provided to Sinter Plant and Gas Cleaning Plant (GCP) to blast furnace (BF) to control gaseous emissions from all the vents/ stacks within 50 mg/Nm^3. Bag filters shall be provided for BF, lime plant, SMS, Ferro-Alloy Plant etc. An online continuous monitoring system shall be installed to monitor various pollutants and data submitted to the Ministry's regional office at Bhubaneswar, CPCB and OSPCB. Dust suppression systems shall be installed at Raw material handling areas, material transfer points and solid waste dumps to control fugitive emissions. Water sprinkling shall be done on the roads to control fugitive emissions.	• Blast Furnace is equipped with GCP and Sinter is equipped ESP as compliance under separate EC of JSL Ferrous Limited (Ref. No. J-11011/2811/2007–IA–II(I), dated: 16.06.2023.) • Bag houses are in place at Ferro Alloys Plant, SMS and CRM, with adequate Dust Extraction System (DES). • Fixed type water sprinkler, gun sprinkler & DFS have been installed at Raw Material Handling Areas & Material Transfer points to control fugitive emissions. • Online Continuous Monitoring Systems are installed at various places to monitor the emissions and data transmission is being carried out continuously through the RTDAS system of SPCB & CPCB Servers. • Housekeeping on roads is being maintained by using Mechanical Sweepers. • Further, 4 nos. of truck mounted tankers of 12 KL capacity are deployed for controlling fugitive emissions on the road. • Fixed type water sprinklers and Mobile Water sprinklers have been provided in plant areas to control fugitive emissions round the clock.

Sl. No.	Condition	Compliance
iii.	Total water requirement from Brahamani river shall not exceed 72, 696 m^3 / day or 43.66 cusec as per permission accorded by the Department of Water Resources, Govt. of Orissa. No ground water shall be used for the plant. All the treated wastewater shall be recycled and reused in the process and Zero discharge shall be strictly adopted as per direction of OPCB. Water from BF GCP shall be sent to a clarifier/thickener and overflow shall be used in pig casting machine. Phenolic effluent from coke oven complex shall be treated in the ETP of BOD plant and recycled and reused for quenching of coke. Acidic/ alkaline effluent from DM plant shall be neutralized and reused in the plant. Blow down from different sources shall be used for slag granulation. Back wash from filtration plant shall be collected in sludge pond and over flow shall be used for dust suppression and irrigation of green belt. Ammonia, Phenol and Cyanide in the effluent should be treated. Cyanide shall meet the standard of 0.2 ppm. TDS in the effluent discharged shall not be more than 2100 mg/l. The domestic wastewater after treatment in STP shall be used for green belt development.	No ground water is being used in the plant. The CPP blow-down water is being recycled through installed RO Acidic/ alkaline effluent from DM plant is being neutralized and reused in ash quenching. Treated wastewater from Ferro alloys is being used in Slag quenching and Jigging Plant. Treated STP water is being used for greenbelt development. Effluent generated from CRM is being treated in and reused in low end application like slag quenching, Jigging, Ash slurry making etc.
iv.	Coke oven by-product effluent shall be treated as per notified standards and only treated effluents after meeting the norms shall be used for coke quenching. No fresh water shall be used for this purpose.	Coke Oven by product effluent is being treated in PETP and reused in internally. A separate EC has been obtained in the name of M/s. Jindal Coke Limited, vide letter No. IA–J–11011/111/2018–IA–II(I) on Dated: 25.05.2018.
v.	Ground water monitoring around the solid waste disposal site/ secured landfill (SLF) shall be carried out regularly and report submitted to the Ministry's regional office at BBSR, CPCB and OPCB.	Ground water monitoring is carried out in core zone as well as peripheral areas twice in a year in pre-monsoon and post monsoon and analysis report is enclosed as Appendix-A.
vi.	Solid waste shall be disposed of in secured landfill designed as per the specifications of the CPCB. Iron ore fines, mill scales, scales	Fe-Cr slag is further processed in Jigging Plant and utilized for road construction & low lying are filling inside the plant.

Sl. No.	Condition	Compliance
	from slab caster, sinter plant dust, dust from GCP, coke breeze, sludge from GCP and blast furnace, sludge from thickener and dust from SMS shall be recycled and reused in sinter plant. SMS scrap shall be recycled in SMS. Scrap from different sources like slab caster stickle mill, DRAP line, CR slitting line, CRM etc. shall be recycled in Chromium plant. SMS slag shall be used for land filling. Ferro-Manganese slag shall be used for Si-Mn production. Slag from Si-Mn plant (54000 TPA) and Fe-Cr Plant shall be dumped.	SMS slag is being used in road and cement making. Flue gas residue from bag House and Mill Scale from CRM is being recycled in Ferro Alloys in the form of Briquettes. CRM ETP Sludge is partially used in briquette making and rest stored at designated place in concrete floor with covered shed and sent to Common Hazardous Waste Treatment, Storage and Facility (CHWTSDF), Re sustainability Ltd, at Jajpur as per guideline of SPCB, Odisha.
vii.	The green belt shall be developed in 135 ha out of a total 526.0 ha area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	• JSL has planted 2,81,804 nos. of trees with native species till date inside the plant premises with three tier design. • Survival rates of plants are being monitored, and 24501 nos. damage plants have been replaced to maintain the tree density as per the requirement.
viii.	As proposed, modified wet quenching for 1st and 2nd coke oven batteries as per CPCB guidelines and dry quenching in 3rd and 4th batteries shall be adopted during the expansion.	Dry quenching is proposed under separate EC in the name of M/s. Jindal Coke Limited, vide letter No. IA–J–11011/111/2018–IA–II(I) on Dated: 25.05.2018.

B. GENERAL CONDITIONS:

Sl. No.	Condition	Compliance
i.	The project authorities must strictly adhere to the stipulations made by the Orissa Pollution Control Board and the State Government.	JSL is strictly adhering to all the stipulations made by SPCB and the State Government.
ii.	No further expansion or modifications in the plant should be carried out without prior approval of the MoEF.	Any further expansion or modification will be routed according to the latest MoEF&CC guideline.

iii.	The gaseous emissions from various process units shall conform to the mass-based load standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The state board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location. At no time, the emission level shall go beyond the prescribed standards. Online continuous monitoring systems shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case the emission level exceeds the limit. NOx burners shall be installed to control NOx levels.	The gaseous emissions from various process units are being monitored by NABL accredited Laboratory. The analysis reports are being submitted to SPCB and MOEF regularly. The gaseous emissions are conforming to the standards as per CTO issued by SPCB, Odisha. Online Continuous monitoring systems have been installed in Stack for monitoring of SPM and gaseous parameters as per the CPCB/SPCB guidelines and the data are continuously transmitted to both SPCB and CPCB server. Different interlocking facilities like tripping on high hopper level / switching on DFDS are interlocked with load sensors of conveyors etc. have been installed.
iv.	At least 4 ambient air quality monitoring stations shall be established in the downward direction as well as where maximum ground level concentration of SPM, SO_2 and NOx is anticipated in consultation with the OPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at BBSR/ OPCB/ CPCB once in six months.	4(four) nos. of AAQ monitoring stations have been installed inside the plant premises in consultation with SPCB, Odisha. Monitoring of Ambient Air is being carried out for PM_{10}, $PM_{2.5}$ and other gaseous parameters. Monitoring data is being submitted to both SPCB and MOEF regularly. The manual monitoring data of both ambient air quality is annexed as ***Appendix-A***.

v.	In plant control measures for checking fugitive emissions from all the vulnerable sources like coke oven area, sinter plant, blast furnace area etc. Further specific measures like water sprinkling shall be carried out at the stockpiles of raw material, stacker re-claimer, conveyor transfer points and vibrating screens etc. Dust extraction system and bag filters shall be provided to the sinter plant stock house, BF and Ferro-alloys handling area in SMS etc. Fume extraction system in steel refining units shall also be provided. A centralized de-dusting system, i.e. collection of fugitive emissions through suction hood and subsequent treatment through bag filter or any other device and finally emitted through a stack of appropriately designed and height conforming to the standards for induction furnaces in industry shall be provided. Fugitive emissions should be controlled, regularly monitored and records maintained.	• Fugitive emission is being controlled by installation of Dust suppression systems like DFS system and fixed type water sprinkler system at raw material handling areas, material transfer points of Ferro-alloys plants and CRMHS area to control fugitive emissions. • Bag filters have been provided in Ferroalloys, SMS & CRM units to control point source emission. • Water sprinklers were installed at truck tippler area to take care of fugitive dust emission. Fixed type water sprinklers and Mobile Water sprinklers have been provided in plant areas to control fugitive emissions round the clock. • Fume extraction in Rolling mills have been installed.
vi.	Industrial wastewater shall be properly collected, treated to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time. The wastewater shall be utilized for plantation purposes.	Industrial wastewater is treated to conform to prescribed standards and fully recycled / reused in the process and various in-house applications. Separate treatment facilities have been set-up at Cold Rolling Mill (CRM), Captive Power Plant (CPP) for treatment of wastewater, Colling tower blowdown.
vii.	The overall noise levels in and around the plant area shall be kept within standard 85 dB(A) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation.	Adequate measures have been taken to keep noise levels within 85 dB(A) in and around the plant area. Acoustic Enclosures are provided to control noises in DG; silencers are provided in vents. Noise monitoring results are enclosed as ***Appendix-A.***
viii.	The company shall develop surface water harvesting structures to harvest the	An earthen pond of 10000m3 has been made for storage of Rainwater.

	rainwater for utilization in the lean period besides recharging the GW table.	A Surface runoff Treatment System has been installed to treat rainwater and reutilized in low end application. A settling pit has been installed to collect surface run off and reutilized in different low-end applications.
ix.	Occupational health surveillance of the workers should be done on a regular basis and record maintained as per the Factories Act.	Occupational health surveillance of the workers is being carried out on a regular basis and records are being maintained as per the Factories Act.
x.	Recommendations made in the CREP guidelines issued for the steel plants shall be implemented.	CREP guidelines are being followed.
xi.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/ EMP report. Further the company shall undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	The project proponent is continuously implementing and tracking all the commitments made in EIA/EMP report and commitment made in Public Hearing. Detailed status of which is enclosed as **Annexure – I & II.**
xii.	The project authorities shall utilize Rs. 46 Crore earmarked for the environment pollution control measures judiciously to implement the conditions stipulated by the MOEF as well as the state government along with the implementation schedule for all the conditions stipulated herein. The funds provided shall not be diverted for other purpose.	The earmarked fund for environment protection is being judiciously utilized in pollution control activities in the field of Air, Water, waste management and green belt development. A detailed breakup of spent expenditure is being submitted to OSPCB along with the Environment Statement every year.
xiii.	The regional office of the Ministry at BBSR/ CPCB/ OPCB will monitor the stipulated conditions. A six-monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Six monthly compliance report and monitored data are being submitted to the Ministry on six monthly basis. The same has been submitted to regional office of CPCB and SPCB.
xiv.	The project proponent shall inform the public that the project has been accorded	Paper advertisement regarding grant of Environment Clearance had been publish in odia

	environmental clearance by the Ministry and copies of the clearance letter are available with the OPCB/ Committee and may also be seen at website of the MOEF 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 shall be forwarded to the R.O.	and English news paper.
xv.	Project authorities shall inform the R.O. 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.	Consent to Operate has been obtained vide SPCB letter no. 6518/IND-I-CON-5136, Dated 28.03.2025 and 6522/IND-I-CON-5136, Dated 28.03.2025 valid up to 31.03.2027.
xvi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	All the conditions are being implemented, reviewed and tracked periodically.
xvii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner will implement these conditions.	All the conditions, including additional conditions if any are being implemented reviewed and tracked periodically.
xviii.	The above conditions will 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 Waste (Management & Handling) rules, 2003 and the Public Liability Act, 1991 along with their amendments and rules.	All the relevant acts and rules are being followed.

Status of compliance of environment clearance conditions of 4 x 125 Captive Power Plant (CPP)

(Ref: J-13011/5/2006-IA. II (T), dated 30th November, 2006)

Sl. No.	Condition	Compliance
2	It is noted that the proposal is for grant of environmental clearance under the	2X125 MW coal-based Power Plant has been installed and commissioned.

	provisions of EIA Notification, 1994 for setting up of 4X125 MW coal based CPP in KNIC, district- Jajpur in Orissa. In the initial phase two units will be set up and then two more units will be added. The land requirement for the power plant is 60 ha which is already available with the proponent. In addition, another 100 ha of land is required for the ash pond. No ecologically sensitive area and no R & R is involved in the project. The distance of the plant site from the railway line is approx. 1 km and that of the ash pond about 1.1 km on the other side of the railway line. The water requirement is estimated about 2550 cum/hr, which will be obtained from IDCO reservoir. No ground water will be tapped for the project. The coal requirement has been estimated as 3.0 MTPY having ash content of 42-45% and sulphur content of 0.5%. Public hearing was held on 22.09.05 and NOC was obtained on 30.01.06 from the OSPCB. Capital cost of the project will be 2000.00 cores which includes Rs.100.92 Cores for Environmental Protection measures.	No groundwater is being used for this project. The necessary approval for water drawl has already been obtained from IDCO.
3	On the basis of the information submitted & after its consideration with the Expert Committee for Thermal Power Projects, environmental Clearance for the above mentioned projects is here by accorded in accordance with clause 12 of the EIA Notification, 2006 read with para 2.1.1 (1) of the circular no. J-11013/41/2006-IA.II (I) dated 13.10.06 subject to implementation of the following terms and conditions.	-
i.	The conditions stipulated by OSPCB vide their letter no. 1641/IND-II-NOC-3379 dated 30.01.06 shall be strictly implemented	All the conditions given by SPCB, Odisha in the NOC granted for the CPP, are being implemented.
ii.	Necessary clearance under the FC Act, 1980 for diversion of the forest land involved in the ash pond, if any shall be obtained from the competent authority and a copy of the	The land for interim ash pond is available. No forest clearance is involved.

	forest clearance shall be submitted to this Ministry. No activity in the forest area shall be undertaken till the requisite clearance is obtained from the same.	
iii.	Total area of ash pond for the project shall not exceed 100 ha. The ash pond and the plant boundary shall be at least 500 m away from the railway line, highway and the flood plain of the Riverine system.	The interim Ash Pond inside the plant has been constructed in the area in accordance with the ministry's latest notification of the Thermal Power plant.
iv.	The ash pond was lined with clay on the other side embankment and with LDPE sheet on the bottom.	The ash pond made inside the plant is lined with LDPE sheets and the side embankment is lined with clay and bricks.
v.	Coal having not more than 45% ash and 0.5% sulphur content shall be used in the project. Copy of coal linkage shall be submitted within 3 months from the date of clearance.	The coal is sourced from Mahanadi Coal Field (MCF), Central Coal Field (CCL) & Southeastern Coal Field by road/rail. The ash content of the feeding coal blend is being used in the range of 45 % with coal blending of imported coal and F Grade coal with Sulphur content below 0.5%.
vi.	Two bi-flue stacks of 150 m height each shall be provided with continuous online monitoring equipments. Exit velocity of 15.99 m/sec shall be maintained.	Bi-flue stacks, having height of 150 m above the ground level have been installed. Online monitoring instruments for Particulate Matter PM, SO_2, NO_x and Hg emissions have been installed with transmission of data to both SPCB & CPCB server.
vii.	Low NOx burners shall be provided.	Nox level in boilers is well within the limit of CTO.
viii.	High efficiency ESP with efficiency not less than 99.9% shall be installed to ensure that SPM emission does not exceed 100 mg/Nm3.	Each Boiler has been provided with an ESP having two passes with 7 fields each. The ESP is designed to perform at an efficiency of 99.9% to control the particulate matter emission below 50 mg/Nm^3 as mandated by CTO. The stack monitoring data is attached as ***Appendix - A.***
ix.	Adequate dust extraction systems such as bag filters and water spray system in coal and ash handling areas and transfer areas shall be provided.	Vent filters have been installed on top of the ash silos and telescopic chutes have been provided for the unloading of fly ash.

		Dust conditioners have been installed under the silos to prevent fugitive dust. Further, Dust suppression system has been installed at coal handling areas and transfer points.
x.	Ash generated shall be used in a phased manner as per provisions of the notification on Fly Ash Utilization issued by the Ministry in September 1999 and its amendment. By the end of 9th year full fly ash utilization shall be used.	Presently 100% of Fly Ash generated is being utilized by supplying Cement plants, fly ash bricks/Asbestos manufacturing and NHAI for road making.
xi.	A closed Cycle Cooling system with cooling towers shall be installed. COC of 6 shall be adopted.	Cooling tower circuit is of closed cycle where COC of more than 8 is being maintained. A reverse osmosis (RO) plant of 75m^3/hr has been installed and commissioned to take care of the cooling tower blow - down water for process use.
xii.	Water requirement shall not exceed 2550 cum/hr. No ground water shall be extracted for use in the project. No discharge of wastewater outside the project boundary shall be made. Zero discharge of effluents shall be adopted.	The water consumption of CPP is about 608 m^3/hr. There is no ground water usage in CPP. No wastewater is being discharged outside the plant boundary. RO plant of 75 m^3/hr has been installed and commissioned to take care of the cooling tower blow - down water for process use.
xiii.	Rainwater harvesting shall be adopted in consultation with the Central Ground Water Authority/ Board. The plan for the same shall be submitted within a period of 3 months from the date of clearance.	A rainwater harvesting system has been constructed to harvest the rainwater and reuse it for the plant activities.
xiv.	Regular monitoring (quarterly) of ground water around ash dyke and the project area shall be undertaken, and the data shall be analyzed to ascertain any change in the quality of water. Results shall be regularly submitted to the Ministry.	Regular monitoring of ground water is being carried out and the analyzed data is being submitted to SPCB & MOEFCC regularly.

xv.	Level of noise level (Leq) shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment likes earplugs etc. shall be provided.	The noise level in power plants is being monitored periodically. Noise prone equipment is acoustically enclosed like in DG set and Air Compressors are kept in enclosed rooms for keeping the noise level below 75 dB(A). Personal protective equipments like Ear Plugs and Earmuffs have been issued to people working in high noise areas. The ambient noise and work zone noise data is enclosed as ***Appendix – A.***
xvi.	Regular monitoring of air quality shall be carried out in and around the CPP and records maintained. 6 monthly reports shall be submitted to this Ministry.	Manual air quality monitoring is being done periodically. An online analyzer for ambient air quality monitoring has been installed in Captive Power Plant. The six-monthly monitoring data is attached as ***Appendix - A***.
xvii.	For controlling fugitive dust, regular sprinkling of water in vulnerable areas of the plant shall be ensured.	Sprinkling systems are being installed for combating fugitive dust. Water is being sprinkled on roads on a regular basis by tankers for suppression of dust. Fixed type water sprinklers have been provided in ash unloading area including Mist sprinklers during unloading of ash at Ash Silo. Further, Rain guns have been provided in coal handling area to control the fugitive dust emission.
xviii.	A green belt all around the plant and the ash pond area shall be developed covering at least 40 ha area both the sites put together.	• JSL has planted 2, 81, 804 nos. of trees with native species till date inside the plant premises with three tier design. • Survival rates of plants are being monitored, and 23302 nos. damage plants have been replaced in FY 24-25 to maintain the tree density as per the requirement.

xix.	The project proponent shall advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned, informing that the project has been accorded environmental Clearances and copies of clearance letter are available with the SPCB/committee and at website of MOEFCC.	Paper advertisement regarding grant of Environment Clearance had been published in odia and English news paper.
xx.	A separate environmental monitoring cell with suitable qualified staff shall be set up for the implementation of the stipulated environmental safeguards.	An Environment management department with qualified professional lead by a senior leader has been established.
xxi.	A half yearly report on the status of implementation of the stipulated conditions and environmental safeguards shall be submitted to this Ministry/Regional office/CPCB/SPCB.	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguards are being regularly submitted to MOEFCC/Regional office/CPCB/SPCB.
xxii.	Regional office of the MOEFCC located at Bhubaneswar will monitor the implementation of the stipulated conditions. A complete set of Environmental impact assessment Report and EMP along with additional information/clarification submitted to the ministry shall be forwarded to the Regional Office for their use during monitoring.	A complete set of Environmental impact assessment Report and EMP have been submitted to the regional office of the MOEFCC located at Bhubaneswar.
xxiii.	Separate funds shall be allocated for the implementation of environmental protection measures along with item-wise break-up. These costs shall be Included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure shall be reported to the Ministry.	Fund allocated for environmental protection measures is spent on air, water, waste management and green belt development. Yearly spent on environment protection measures are being submitted to OSPCB, Odisha along with Environment Statement which has been also uploaded in company website.
xxiv.	Full cooperation to the Scientists/ Officers from the Ministry/regional office/the CPCB/the SPCB who would be monitoring the compliance of environmental safeguards.	All the cooperation is being extended to any statutory authorities by furnishing requisite data, information and monitoring reports.

4	The Ministry reserves the right to revoke the clearance if conditions are not implemented to the satisfaction of the Ministry.	The project proponent is implementing all the relevant conditions
5	Environmental Clearance shall be valid for 5 years from the start of generation of power from CPP.	**Noted**
6	In case of any deviation or alteration, a fresh reference should be made to the Ministry to assess the adequacy of the conditions and add additional environmental measures required, if any.	**Noted**
7	The above stipulation would be enforced under the Water Pollution Control Act, 1974, Air Pollution Control Act, 1981, the Environment Protection Act, 1986, The public liability Insurance Act, 1991, and the EIA notification of September, 2006.	All the relevant Acts are being followed.

CER Compliance Report – EC granted on 01.06.2022

Major Issue Raised	Action Plan	Time Line for Execution (Physical Target)			Total Budget in Lakh	Amount Spent in Lakh
		Year 1st	Year 2nd	Year 3rd		
Area Development						
Development of Park	Set up of Indoor Sports Complex at Jajpur	**Condition:** Land selection and acquisition.	**Condition:** Construction of Buildings and utilities.	**Condition:** Supply of sports equipment, furniture and fixtures.	2000	500
		Status: Under Discussion with District Administration, Jajpur, Govt Land identified for the project. Jindal Stainless to execute the work on behalf of District Administration, Accordingly an Amount of Rs 5cr has been disbursed.				
Development of public community hall	New establishment of community hall at **6 nos.** of villages.	**Condition:** Set up in villages namely: Dhuligarh, Tikar, Trijanga: by providing new building with electrification. **Status:** Community hall at Dhuligarh and Tikar has been completed	**Condition:** Set up in villages namely: Damodarpur by providing new building with electrification. **Status:** Community hall at Damodarpur has been completed.	**Condition:** Set up in villages namely: Mangalpur, Singagadia: by providing new building with electrification. **Status:** The Construction of Mangalpur Community Centre is in progress. Due to community Issue the same has been diverted from Singagadia to Nimpalli of Pingal GP.	100	70

Plantation activities in peripheral villages	Plantation drive at five numbers of village.	**Condition:** Village: Pankapal & Dhabalgiri Actual area and number of trees to be decided based on survey and discussion with local authorities. Report will be sent to MoEF & CC as a part of Half Yearly EC Compliance. **Status:** Plantation activity is being carried out as per land allocation/availability. Based on land availability 800 nos. of saplings have been planted at village Nuagaon.	**Condition:** Village: Jakhapura & Jajpur Road Actual area and number of trees to be decided based survey and discussion with local authorities. Report will be sent to MoEF &CC as a part of Half Yearly EC Compliance. **Status:** Approximate 24400 nos of saplings have been planted at Telibahali and Goshala of Jajpur Road.	**Condition:** Village: Kharadi Actual area and number of trees to be decided based survey and discussion with local authorities. Report will be sent to MoEF & CC as a part of Half Yearly EC Compliance. **Status:** Approximate 40000 nos of saplings have been planted Ambasra and Bandhagaon of Sukinda**.**	40	194
Medical Facilities						
Provision of health care facilities	Establishment of 100 bedded super specialties hospital at village Jakhapura	**Condition:** Land acquisition process to be completed.	**Condition:** Construction of Buildings and utilities.	**Condition:** Provision of medical equipment, furniture and fixtures and essential medicines.	2000	31.82
		Status: Identification of suitable land at village Jakhapura is under process. However various health care facilities have been provided to surrounding Communities through Static Clinic Centre and Mobile Health Care unit and organizing Animal Health camps.				

		• Conducting Mobile Health Camps across 15 villages, providing free consultations and distributing free medications. • Blood sugar testing services are provided to individuals. • Animal Health Camps in Villages - Recognizing the importance of livestock in rural livelihoods animal health camps that provide veterinary check-ups, vaccinations, and guidance on animal care for farmers and livestock owners along with free medicines. • Clubfoot Project in Collaboration with CURE International In partnership with CURE International NGO, we are supporting a Clubfoot Treatment Project at Sishu Bhavan and SCB Medical College, Cuttack, ensuring timely intervention, treatment, and rehabilitation for children affected by clubfoot.		
Medical assistance to cancer patients	Identification with assistance to cancer patients at village Kumbhiragadia	**Condition:** Assistance will be provided on case to case and need basis. **Status:** Organization is in touch with local villagers for identifying any such need at the village. Before 2022 organization had given financial support to cancer patient.	50	-
Local Employment				
Provide employment with preference to local people	Priority to be given for local employment during both construction and operation phase.	During Construction phase it is envisaged for Direct employment of 380 nos. and Indirect employment of 1800 no's & during operation phases direct employment of 715 nos. and Indirect employment of 1,525 no. During construction phase 70 % indirect employment and 30 % direct employment will be through local employment. During operation phase 90 % indirect employment and 30 % direct employment will be through local employment.	Jindal Stainless has given 1480 nos. of direct employment and 7865 nos. of indirect employments locally within the state till date.	
Education				

Establishment of educational facilities	Renovation/Construction of additional new 2nos. of classrooms and electrification with sanitation facility at four nos. school.	**Condition:** At village: Asanabahali, Mantira **Status:** Classroom of Mantira Sisu Mandir and Khandurai Temple at Asanabahali (As per villagers Request) have been completed.	**Condition:** At village: Kumbhiragadia **Status:** Homeopathy centre at kumbhirgadia has been completed as per villager's request.	At village: Tikara **Status:** Community Centre has been constructed at Tikar as per villager's request,	60	42
Establishment of technical education /coaching centers.	Establishment of skill development centre and financial assistance to coaching centre at 2nos. of villages.	**Condition:** At village: Trijanga. Establishment of skill development centre like tailoring, Financial assistance for four nos. of teachers to provided. **Status:** Computer training center has been established at Danagadi of Trijanga GP.	**Condition:** At village: Asanbahali Establishment of skill development centre like computer education, beauty parlor, electrical machineries. **Status:** Tailoring training center was established at Asanbahali and about 60 nos. women and girls are trained.	**Computer Training Centre at Danagadi** - Operating a Computer Training Centre in Danagadi, providing digital literacy and essential IT skills to enrolled students Academic Support Program at Budharaj Vidyapitha (Danagadi) and Manatira High School (Manatira). Consistent academic support is being provided to the students of Budharaj Vidyapitha and Manatira High School which includes assistance in core subject delivery and specialized computer training. **Stainless Steel**	20	164.72

				Fabrication Training at Government Polytechnic, Ragadi Running a skill-oriented Stainless Steel Fabrication Training Program that equips students with practical competencies and theoretical knowledge about the properties, significance, and applications of stainless steel in industrial fabrication**.** **Village Library at Hudisahi, Danagadi** Managing a village library in Hudisahi, Danagadi, to promote reading habits and access to educational resources for rural communities, especially children and youth. **Scholarship Support for Technical Education:** Providing scholarship assistance to 10 economically vulnerable students		

				pursuing technical education, helping them overcome financial barriers and achieve their academic goals		
Drinking Water facility						
Provide drinking water to peripheral villages	Arrangement to be made in three numbers of villages.	**Condition:** At village Manpur: Set up of Pump house at the existing source and new pipeline laying of 1KM along with stand Post	**Condition:** At village Tikar: Set up of Pump house at the existing source and new pipeline laying of 1KM along with stand post.	**Condition:** At village Mantira Construction of 2 Nos. of Bore well.	30	20
		Status: Completed at Manpur Patra sahi and Benga patia.				
Women Empowerment						
Strengthening of women empowerment measures in peripheral villages	Focus on various livelihood programme through Self Help Group (SHG) for women empowerment in peripheral villages.	**Condition:** Livelihood promotion through SHG that include dairy farming poultry, goatery, Phenyl making, Agarwati making, Wheat grinding at 30 nos. of villages in 7 GP of Danagadi block. **Status:** Variou Livelihood programmes like Food processing, ASMITA Boutique, ASMITA Production center, Sahaja Sanitary Napkin, Tailoring Training Centres,	**Condition:** Establishment of sanitary napkin unit at Danagadi. Tailoring training at village Damdorpur, Kiapada and Dhabahali. **Status:** A sanitary napkin manufacturing unit has been established at Dangadi. Tailoring training centres are established at	**Condition:** Establishment of neem powder and turmeric powder making unitat Danagadi/Jakhapura Mushroom farming at Danagadi, Jakhpura. **Status:** Turmeric making unit has been established at village Jakhapura. Mushroom farming is being promoted and training on mushroom	300	128.2

		Boutique centers, Farm income generating activities such as dairy, goat rearing sheep rearing, poultry, mushroom cultivation are continued through SHG of Pankapal, Mantira, Kumbhiragadia, Jakhapura, Mangalpura, Dhuligarh and Trijanga GP of Danagadi block.	Kiapada, Dhabahali, and Damodarpur villages.	cultivation, mushrooms seeds etc. are distributed to farmers of Danagadi and Jakhpura villages.		
Environment						
Air and Water pollution control	Effective APC devices to be in place during plant operation and set up of ETP for treatment of process of effluent. No wastewater discharge to be ensured.	**Condition:** Effective pollution control equipments with interlocking facility with process to be in place for proposed expansion project. continuous emission monitoring, ambient air quality monitoring and effluent quality monitoring to be done. Periodical Ambient air quality monitoring to be done in buffer zone of plant site. **Status:** Effective operation pollution control equipments are being ensured. Continuous emission monitoring systems, ambient air quality monitoring systems and effluent quality monitoring systems are installed. Periodical Ambient air quality monitoring is being carried out in buffer zone of plant site.		As per EMP budget of plant	Operation cost for pollution control equipment in FY23-24 Rs 10008
Water sprinkling on roads to control air pollution	Extensive water sprinkling to be done in roads of peripheral villages	**Condition:** Regular water sprinkling to be done in villages at Jakhapura and Manpur. **Status:** Regular water sprinkling is being carried out.			20	7

CER compliance - EC granted on 18.09.2019

CER ACTIVITIES (PH ISSUES)	Planned Expenditure (Rs. In Lakh)				Status as on date	Amount Spent (Rs. In Lakh)
	Year-1	Year-2	Year-3	Total		
Local Infrastructure Development Program.						
Repairing of Damaged Roads in villages of Gardpur & Rachipur.	15	10	5	**30**	The said work has been initiated by Local Municipality. However, JSL has participated in the construction of road connecting from NH-16 to Dhamra Port.	**200**
Cleaning of Ponds in villages of Gardpur and Marutikar.	2	2	-	**4**	Pond cleaning work has been completed at Marutikar village.	**3**
Construction of a pond for bathing purposes in the village of Mulasir.	-	15	5	**20**	Construction of the bathing pond could not be done due to the non-availability of land. Construction of bore well completed at Jakhapura and Ragadi.	**7**
Drinking water						
Provision of drinking water in villages of Dhuligarh, Pankapal & Mulasir	50	-	-	**50**	Drinking water system with pipeline completed at Dhuligarh Gram Panchayat and drinking water supply done in Trijanga GP. Already done in pankapal and Mulasir by Govt project, will be taken up for future requirement.	**50**
Restoration of disconnected water supply in Gardpur village	10	-	-	**10**	Restoration work of disconnected water pipeline has been completed at village Kantipur. Gardpur and Kantipur are adjacent villages and the residents of Gardpur have been relocated to Kantipur following the complete acquisition of Gardpur village. Accordingly, the water supply has been restored in Gardpur, where the residents now reside.	**8**
Community Environmental Protection Program						

In Villages of Gardpur, Dhuligarh, Khurunti, Rachilpur and Hardisahi	30	20	20	**70**	Third Party monitoring in buffer zone is being conducted periodically. However, a detailed comprehensive study on air and water quality has been conducted in 2020 as a part of EMP study. In addition to this 800 nos. of saplings have been planted the village Nuagaon.	**25**
Education						
Providing Tuition Teachers & Salaried teachers for specific requirements of schools with special focus in villages of Rachipur, Ranagundi and Pankapal**.**	15	10	10	**35**	Teachers with fixed salary to the school and tuition teachers are continuing in village Danagadi and Trijanga RC.	**15**
Health						
Support towards the establishment of a medical centre in Marutikar in consultation with the local administration.	18	16	16	**50**	Set up of Homeopathy clinic in kumbhiragadia village which is nearest to marutikar is completed.	**8**
Strengthening Malaria Eradication progrmme in Marutikar.	15	10	5	**30**	Malaria Eradication program completed at village Chingudipal and Nagada	**18**

Support towards strengthening health facilities in villages of Kacherigan (Kidney ailment) and Trijanga (health of children residing in the R & R colony)	15	10	5	**30**	Support is being provided in strengthening health facilities by providing medicine and doctors with mobile vans at 17 nos. of villages like Trijanga Colony, Kantipur, Manpur and pataranga etc.	**30**
Health Assessment study for cancer & diarrhea in Kumbhuria and Kidney ailments in Kacherigan.	60	*	*	**60**	Health screening and Assessment study for cancer & diarrhea for villagers have been done at village Kumbhirgadia, Kacherigan and Jakhapura. Financial assistance also provided to cancer patients.	18
Local Skill & Vocational Training Programme						
Provision of local skill development (Communication skills) in response to demand from a Jakhapura resident and ITI training for students in response to demand from Garadihi	50	40	30	**120**	Provision of local skill development like mushroom culture, tailoring, dress designing in nearby village and facilitating ITI training at Ragad i Polytechnic School for needy students.	60
Avenue/Urban Plantation in Buffer Zone						
Avenue/Urban Plantation in Buffer Zone in Gardpur, Dhuligarh, Khurunti, Rachilipur and Hadisahi	20	10	10	**40**	Plantation carried out at Telibahali and Goshala of jajpur Road (Approx - 24400 Saplings planted) Plantation carried out at Ambasra and Bandhagaon of Sukinda (Approx – 40000 Saplings planted) as per land allocation/availability.	194
Total				**549**		**646**

CER ACTIVITIES FROM NEEDS ASSESSMENT	YEAR 1	YEAR 2	YEAR 3	TOTAL	Status as on date	Amount Spent (Rs. In Lakh
	(Rs. In Lakh)					
Drinking Water						
Pipeline, pump house and bore well with solar power at Dankagadia Adivsi Sahi, Manatira Harijan Sahi and Village of Balungabandi and Dhapanki	16	14	10	**40**	Pipeline laying work with pump house and bore well with electrification has been completed at Manpur Patrasahi, Sulia and Kantipur village.Pipeline laying work with pump house and bore well for water supply through Solar power system at Mantira Adivasi sahi.	**50**
Repair & Reinstallation of the Pump used by Villagers in Kantipur	5	-	-	**5**	Repair & Reinstallation of the Pump has been completed.	**5**
Health						
Solid Waste Management in 22 Villages	25	25	20	**70**	Swachha Bharat Avijan by following COVID protocol with supply of sanitizer and mask at peripheral 10 nos. of village completed. Municipal kitchen waste from 10 Nos of Villages is being collected and segregated prior to generation of Compost. Sustainable waste management at village Solei, Singagadhia, Danagadi villages and Dangadi Market Daily Waste Collection: Regular waste collection services have been implemented across villages to maintain cleanliness and promote proper waste disposal practices. Awareness Programs on Sustainable Waste Management: Conduct awareness sessions with village residents and school students to educate and engage communities on sustainable waste management	**58**

					practices. Distribution of Dustbins: Dustbins were provided to villagers to encourage household-level waste segregation and improve sanitation.	
Support towards improvement in medical amenities in the village of Sarangpur, Godigotha and Ranagundi	10	5	5	**20**	Support is being provided in strengthening health facilities by providing medicine and doctors with mobile vans at 17 nos. of villages. Asanabahali, Mohorapur nuasahi, mantira Munda Sahi, JKhaaradi, Rungrunga, Sunalo, Manpur, Kantipur, Pataranga, Mangalpur etc.	**20**
Local Infrastructure Development program						
Electricity expenditure along with installation of transformer at Brahman Sahi	10	5	-	**15**	Electricity expenditure along with street light installation at Manpur (Brahman Sahi) road have been completed.	**10**
Renovation of community center used by local villagers, Media & Administration at Sukinda Bhavan	15	-	-	**15**	Renovation of community center used by local villagers, Media & Administration at Sukinda Bhavan has been completed.	**9**
Renovation of community center used by local villagers, Media & Administration at Danagadi Bhavan.	15	-	-	**15**	Renovation of community center used by local villagers, Media & Administration at Danagadi Bhavan has been completed.	**9**
					Construction of Nodal Upper Primary School Boundary Wall in Trijanga Village has been completed. Entrance gate and back side of kantipur colony gate coloring.	**10**
Renovation of community Hall in Mangobindapur	10	-	-	**10**	Renovation of Mahila community center at Mangovindpur and Suanallo adibasi Sahi has been completed	**14**

Construction of Shiva Temple in Kaitha Village	5	-	-	**5**	Construction of Shiva Temple in Kaitha Village has been completed (around 300 Sq Ft temple with around 400 sq ft sit up area.	**9**
Local Skill & Vocational Training						
Stainless Steel Skill Development at Government polytechnic, Ragadi, Jajpur	25	25	25	**75**	Stainless Steel Skill Development at Government polytechnic, Ragadi, Jajpur is on going.	**50**
Skill-based training for youth groups in Dhuligarh & Kantipur	5	5	*	**10**	Skill-based training like mobile repairing, electrical repairing and tailoring etc. for youth groups in Dhuligarh & Kantipur is ongoing.	**8**
Total				**280**		**252**

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A. Stack Analysis:

Particulate Matter (PM):

Sl. No.	Sampling Stations	Concentration of Particulate Matter (mg/Nm³)						
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar. -25	Permissible limit (CTO)
1	FAP (SAF – 3)	57.1	34.0	57.8	34.6	39.0	18.8	**100**
2	FAP (SAF – 4 & 5)	48.9	38.4	46.8	30.1	41.0	40.7	
3	FAP (SAF – 4 & 5)-New	8.0	16.6	25.6	SD	17.1	SD	
4	FAP (SAF 4 & 5)– Tapping Fume	8.9	10.1	13.4	11.2	9.7	14.0	
5	Pellet Plant	28.1	16.3	13.2	26.8	28.6	27.0	**30**
6	SMS (EAF Furnace Stack)	38.7	28.1	56.1	47.9	58.6	36.8	**100**
7	SMS (AOD Furnace Stack)	32.5	31.2	38.5	62.3	43.2	40.5	
8	CRM (Shot Blaster Stack)	63.2	45.6	50.9	55.8	27.8	44.8	
9	CRM _Combo (Shot Blaster Stack)	13.4	21.8	20.4	11.6	17.5	18.3	**30**
10	CPP- 1	35.3	21.4	45.9	45.8	43.8	40.6	**50**
11	CPP - 2	34.4	26.6	48.3	24.1	39.6	46.6	
12	CPP – 13 MW	24.9	23.3	30.5	36.8	32.8	27.8	

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Sulphur Dioxide (SO2):

Sl. No.	Sampling Stations	Concentration of Sulphur Dioxide (mg/Nm³)						
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar. -25	Permissible limit (CTO)
10	CPP- 1	294.3	328.4	351.6	392.4	398.6	415.2	**600**
11	CPP - 2	236.4	397.6	320.8	403.2	418.4	438.6	
12	CPP-13 MW	182.2	148.2	150.0	151.0	107.6	129.0	

Oxide of Nitrogen (NOx):

Sl. No.	Sampling Stations	Concentration of Oxide of Nitrogen (mg/Nm³)						
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar. -25	Permissible limit (CTO)
10	CPP- 1	162.8	178.6	122.4	172.8	202.5	197.6	**450**
11	CPP - 2	114.6	184.2	113.5	186.4	224.2	215.0	
12	CPP-13 MW	87.7	82.7	80.0	79.0	72.2	61.5	

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B. Ambient Air Monitoring Report (Inside Plant & Buffer Zone):

AAQ near Nursery (Inside Plant)

Sl. No.	Parameters	Results						
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar. -25	Permissible limit
1	PM_{10} µg/m³	84.6	79.8	72.6	75.5	73.8	75.7	100(24 Hrs)
2	$PM_{2.5}$ µg/m³	32.8	30.4	26.8	26.6	25.2	25.6	60 (24 Hrs)
3	SO_2 µg/m³	25.8	23.8	18.6	18.2	17.8	18.4	80(24 Hrs)
4	NO_x µg/m³	15.5	14.8	13.4	13.0	13.2	15.1	80(24 Hrs)
5	CO mg/m³	0.75	0.72	0.66	0.70	0.75	0.78	2 (8 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near Security Barrack (In side plant)

Sl. No.	Parameters	Results						
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar. -25	Permissible limit
1	PM_{10} µg/m³	87.2	84.4	81.1	82.0	80.4	84.7	100(24 Hrs)
2	$PM_{2.5}$ µg/m³	38.6	35.8	34.5	36.0	34.1	36.2	60 (24 Hrs)
3	SO_2 µg/m³	28.3	26.4	24.2	24.8	24.5	25.2	80(24 Hrs)
4	NO_x µg/m³	18.3	18.6	19.4	22.3	21.6	21.8	80(24 Hrs)
5	CO mg/m³	0.90	0.88	0.82	0.84	0.82	0.92	2 (8 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel found to be below detection limit (BDL).								

AAQ near CPP Area (Inside plant)

Sl. No.	Parameters	Results						
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar. -25	Permissible limit
1	PM_{10} µg/m³	82.4	86.2	88.9	84.6	81.6	82.2	100(24 Hrs)
2	$PM_{2.5}$ µg/m³	30.6	38.6	38.0	38.1	34.0	34.8	60 (24 Hrs)
3	SO_2 µg/m³	24.9	26.9	26.4	26.2	24.9	24.5	80(24 Hrs)
4	NO_x µg/m³	14.7	18.8	21.7	21.1	22.2	21.0	80(24 Hrs)
5	CO mg/m³	0.85	0.90	0.68	0.879	0.82	0.87	2 (8 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benz o pyrene, Arsenic & Nickel found to be below detection limit (BDL).								

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AAQ near Tata Corner (In side plant)

Sl. No.	Parameters	Results						
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar. -25	Permissible limit
1	PM_{10} µg/m³	80.1	78.1	83.6	79.4	78.6	84.7	100(24 Hrs)
2	$PM_{2.5}$ µg/m³	34.4	30.0	35.4	30.4	29.4	36.8	60 (24 Hrs)
3	SO_2 µg/m³	21.8	23.1	25.8	23.7	20.2	26.1	80(24 Hrs)
4	NO_x µg/m³	12.2	14.4	22.1	21.4	16.4	17.9	80(24 Hrs)
5	CO mg/m³	0.60	0.69	0.68	0.72	0.76	0.64	2 (8 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benz o pyrene, Arsenic & Nickel found to be below detection limit (BDL).								

Ambient Air Quality (Buffer Zone)

Sl. No.	Parameters	Nov.-24	Dec.-24	Dec.-24	Jan.-25	Mar. -25	Permissible limit
		Near Danagadi-Budhraja Nodal Vidyapith	Near Dhapanki Village	Near Bhagbhali Village)	Near Nadya Bhanga Village)	Near Dhapanki Village)	
1	PM_{10} µg/m³	90.2	77.3	84.7	67.8	72.6	100 (24 Hrs)
2	$PM_{2.5}$ µg/m³	33.8	24.8	28.9	21.8	28.6	60 (24 Hrs)
3	SO_2 µg/m³	18.2	20.0	25.3	14.4	17.6	80 (24 Hrs)
4	NO_x µg/m³	15.7	14.1	20.6	11.7	15.3	80 (24 Hrs)
5	CO mg/m³	0.55	0.48	0.55	0.38	0.58	2 (8 Hrs)
NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benz o pyrene, Arsenic & Nickel found to be below detection limit (BDL).							

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C. Noise Monitoring Report:

a. Ambient Noise Monitoring (Inside plant)

Sl. No.	Location	Noise Level(Leq in dB(A)											
		Oct.-24		Nov.-24		Dec.-24		Jan.-25		Feb. -25		Mar. -25	
		Day TIME	NIGHT TIME	Day TIME	NIGHT TIME	Day TIME	NIGHT TIME	Day TIME	NIGHT TIME	Day TIME	NIGHT TIME	Day TIME	NIGHT TIME
1	At Nursery	72.0	57.0	71.8	56.8	71.0	56.4	70.6	56.2	71.2	56.7	72.0	57.0
2	At Security Barrack	70.8	57.2	72.4	57.2	72.2	56.9	71.9	56.8	72.0	57.0	71.4	56.8
3	At Rohit Gate	70.1	56.9	71.9	57.0	71.4	57.2	72.0	56.4	70.0	56.2	72.2	56.1
4	At Tata Corner	67.7	56.4	70.6	56.1	70.9	57.3	69.7	56.3	69.0	56.0	70.5	56.3
Permissible limit(dBA)		**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**	**75**	**70**

b. Ambient Noise Monitoring Data (Buffer Zone)

Sl. No.	Location	Monthly Average Noise Level	DAY TIME	Permissible limit for DAY TIME	NIGHT TIME	Permissible limit for NIGHTTIME
1	At Danagadi	Nov.-24	53.4	55	42.9	45
2	At Dhanpanki Village	Dec.-24	48.7		41.2	
3	At Bhagbhali Village	Dec.-24	51.6		40.8	
4	At Nadya Bhanga Village	Jan.-25	49.1		41.9	
5	At Dhanpanki Village	Mar. -25	50.5		42.5	

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C. Work Zone Noise Monitoring Data

Sl no	Location	Average Noise Level (Leq in dB(A))						
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar. -25	Permissible limit
1	SAF#3 Control room, FAP	72.9	76.1	70.6	67.5	78.4	79.1	85 dB(A)
2	SAF# 4&5 control Room, FAP	69.7	71.9	75.3	68.2	74.5	75.8	
3	Near Briquette plant office	80.6	82.1	80.8	65.7	72.9	71.6	
4	Near Ferro Alloy Building's	78.9	75.6	72.9	80.2	67.5	72.2	
5	ECR control room, Pellet Plant, FAP	67.8	63.5	65.3	73.3	68.2	70.3	
6	Pellet Plant Office, FAP	67.5	63.8	69.6	65.2	77.4	78.3	
7	Control Room (CPP)	79.2	79.6	77.2	67.8	76.5	77.4	
8	Near Main Building, CPP	69.8	73.1	70.5	77.6	78.2	78.7	
9	HAPL quality Office, CRM	76.2	69.5	78.2	81.9	72.2	70.6	
10	CRM Main Office, CRM	68.2	65.8	69.1	63.5	70.5	75.6	
11	HAPL Entry office, CRM	69.3	72.4	73.8	70.7	75.8	76.2	
12	ECR automation room, Combo line	78.3	80.2	72.9	67.3	74.3	75.6	
13	Maintenance Office, Combo Line	79.2	71.8	80.5	69.4	69.8	70.3	
14	Dispatch office bay#5, BA Line	63.4	73.4	68.9	68.4	69.2	70.9	
15	Combo line exit pulpit, combo	75.6	69.1	72.5	68.3	73.4	72.8	
16	Briquette Plant control room, FAP	63.8	68.1	64.9	65.7	73.4	72.8	
17	Quality Laboratory, SMS	65.3	61.8	68.7	72.6	78.8	79.4	
18	LRF control Room, SMS	78.3	63.6	72.8	70.6	79.2	79.8	

d. Shop Floor Noise Monitoring Data

Sl no	Location	Average Noise Level (Leq in dB(A)					
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar.-25
1	Near 60 MVA furnace	80.6	81	80.8	78.3	75.5	77.2
2	Near 27.6 MVA furnace	81.4	80.8	81.1	81.8	84.6	82.3
3	Near Jigging Plant - I	80.2	79.9	80.6	83.4	78.9	84.1
4	Near Compressor Room	86.7	87.9	90.1	84.8	88.3	89.4
5	Near Pellet Plant ESP	80	81.6	83.7	82.9	81.7	84.6
6	Pellet Plant compressor room	89.4	81.5	81	86.1	84.3	87.6
7	Pellet Plant – Grinding Building	76.9	80.7	80	81.7	82.3	79.8
8	Pellet Plant Pump House, FAP	84.1	83.9	82.9	80.4	79.2	78.8
9	Near ESP (CPP)	81.9	78.2	82.6	83.4	80.9	81.7
10	Near CHP (CPP)	83.7	81.4	82.3	84.2	82.9	80.6

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Sl no	Location	Average Noise Level (Leq in dB(A)					
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. -25	Mar.-25
11	Near Cooling Tower(CPP)	82	81.5	80.2	78.4	73.8	74.6
12	Near Boiler - 1 & 2 (CPP)	81.6	82	82.9	83.6	82.8	82.8
13	Near T G Building (CPP)	81.1	81.8	83	68.9	83.2	82.1
14	Near Compressor Room (CPP)	82.2	82.4	81.5	86.2	85.9	87.1
15	Firing Floor, CPP	84.5	83.7	82.9	78.2	81.3	80.6
16	BFP Area, CPP	83.2	84.6	82.1	81.8	80.2	79.8
17	CEP Area#1, CPP	82.9	80.6	83.8	80.8	78.9	78.2
18	CondenserArea#1, CPP	83.8	84.2	81.9	82.7	82.6	80.5
19	Heater Area#1, CPP	82.3	80.4	81.6	80.9	82.1	80.4
20	Near PA Fan#1 (CPP)	82.6	82.3	80.4	81.6	83.3	79.6
21	Shot Bluster (CRM)	80.8	80.7	81.1	83.8	83	84.7
22	Boiler Room (CRM)	80.3	80.9	80.8	84.6	81.3	83.1
23	Near Compressor Room (CRM)	85.9	87.3	91.2	86.8	88.4	86.7
24	HAPL Exit gate – I (CRM)	79.8	79.4	80.2	78.9	82.4	83.9
25	Pickling strip dryer, CRM	82.3	84.1	81.7	80.6	78.4	78.7
26	Near EAF (SMS)	82.2	83.1	81.1	80.2	80.2	80.6
27	Near AOD (SMS)	80.8	82.3	83.2	79.9	80.6	79.9
28	Near Scrap Yard (SMS)	78.6	79.4	82.2	81.2	83.4	78.6
29	Entry Section (Combo Line)	79.2	79.5	78.4	81.9	83.6	82.3
30	Scale Breaker (Combo Line)	81.1	80.7	80	84.3	82.9	83.7
31	Re coiler (Combo Line)	80.6	81.4	82.1	83.7	84.1	81.6
32	20 HI Mill (BA Line)	81.4	82.2	79	81.4	82.3	80.6
33	Bay 3 ECR panel room (BA Line)	79.9	79.2	77.9	80.6	75.6	78.7
34	Z mill#1 pulpit, BA line	69.1	71.6	72.3	68.5	67.7	68
35	Near Caster-1 (SMS)	82.1	82.6	80.6	77.8	78.2	78.6
36	Near Grinder-1&2 (SMS)	80.2	80.7	81.3	83.4	79.6	82.8
37	Near Grider-3&4 (SMS) (SMS)	80.8	81.1	81.8	78.9	82.6	80.3
38	Help Rest room, 60 MVA, FAP	73.5	69.7	70.3	66.4	68.4	71.8
39	Outside EAF Hydraulic room, SMS	86.3	87.1	84.6	81.4	88.3	85.7
40	Near AOD de-dusting (SMS)	82.1	81.6	83.8	84.3	78.6	79.5

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D. Ground Water Quality: October'24 (Pre Monsoon)

Sl. No.	Parameter	Limit IS 10500 :2012		Date of sampling: 23.04.2024	
		Acceptable Limit	Permissible limit	GW1	GW2
1	Colour, Hazen Units	5	15	<5	<5
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable
3	pH	6.5 - 8.5	6.5 - 8.5	7.5	8
4	Turbidity, NTU	1	5	<1.0	<1.0
5	Total dissolve solid, mg/l	500	2000	268	452
6	Total Hardness (as CaCO3), mg/l	200	600	168	180
7	Iron (as Fe), mg/l	0.3	0.3	<0.1	<0.1
8	Chloride (as Cl), mg/l	250	1000	15.5	138.4
9	Residual Free Chlorine, mg/l	0.2	1	<0.2	<0.1
10	Fluoride (as F), mg/l	1	1.5	0.48	<0.02
11	Calcium (as Ca), mg/l	75	200	19.2	36.8
12	Magnesium(as Mg), mg/l	30	100	28.8	21.4
13	Copper(as Cu), mg/l	0.05	1.5	<0.05	<0.05
14	Manganese (as Mn), mg/l	0.1	0.3	<0.05	<0.05
15	Sulphate (as SO4), mg/l	200	400	20.1	151
16	Nitrate (as NO3), mg/l	45	45	3.2	4.2
17	Phenol (as C6H5OH), mg/l	0.001	0.002	< 0.001	< 0.001
18	Mercury,(as Hg), mg/l	0.001	0.001	<0.001	<0.001
19	Cadmium (as Cd), mg/l	0.003	0.003	<0.003	<0.003
20	Selenium (as Se), mg/l	0.01	0.01	< 0.001	< 0.001
21	Arsenic (as As), mg/l	0.01	0.05	< 0.004	< 0.004
22	Cyanide (as CN), mg/l	0.05	0.05	<0.02	<0.02
23	Lead (as Pb), mg/l	0.01	0.01	<0.01	<0.01
24	Zinc (as Zn), mg/l	5	15	<0.03	<0.03
25	Total Chromium (as Cr), mg/l	0.05	0.05	< 0.01	<0.01
26	Total Alkalinity(as CaCO3), mg/l	200	600	164.9	147.6
27	Aluminium (as Al), mg/l	0.03	0.2	< 0.01	< 0.01
28	Boron (as B), mg/l	0.5	1	< 0.1	< 0.1
29	Nickel (as Ni), mg/l	0.02	0.02	<0.01	<0.01
30	Coliform Organisms, (MPN/100ml)	Shall not be detectable in any 100 ml sample		Absent	Absent
31	E Coli (MPN/100 ml)	Shall not be detectable in any 100 ml sample		Absent	Absent

N.B:- GW1: Bore well near Captive Power Plant, GW2: Bore well near Ferro Alloy Plant

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E. Treated Effluent Quality:

Treated Effluent Quality at CRM ETP Outlet

Sl. No.	PARAMETER (mg/l)*	Norm as per G.S.R. 422 (E)(Inland Surface water)/CTO	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
			Date of Sampling – 09.10.2024	Date of Sampling – 16.11.2024	Date of Sampling – 28.12.2024	Date of Sampling – 21.01.2025	Date of Sampling – 25.02.2025	Date of Sampling – 31.03.2025
1	Color	-	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless
2	Suspended Solid	100	82.9	89.6	72.5	92.4	90.8	96.2
3	Total Dissolved Solids	2100	1644.2	1452.4	1524	1428.6	1262.2	1255.7
4	pH Value	5.5 to 9.0	8.8	8.6	8.7	8.5	8.2	8.4
5	Oil & grease	10	4.6	5	5	4.6	4.2	5.2
6	Total Res. Chlorine	1	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)
7	BOD (3 days at 27^0C) mg/l	30	13.1	12	13.3	10.6	10	10
8	COD mg/l	250	53.5	50.6	55.8	74.6	47.8	48.8
9	Hexavalent chromium (as Cr^{6+})	0.1	0.03	0.06	0.02	0.06	0.02	0.04
10	Cyanide (as CN)	0.2	BDL (DL- 0.02)	BDL (DL- 0.02)	BDL (DL- 0.02)	BDL (DL- 0.02)	BDL (DL- 0.02)	BDL (DL- 0.02)
11	Fluoride (as F)	2	1.2	1.6	1.1	1.2	1	1
12	Sulphide (as S)	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
13	Phenolic Compound (as C_6H_5OH)	1	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)
14	Iron (as Fe)	3	1.3	1	1.1	1.4	1.6	2.1
15	Nitrate Nitrogen	10	6.8	5.2	6.6	5.6	6	5.2
16	Dissolved Phosphate	5	1.5	1.2	1.1	2.2	2.8	2
17	Arsenic	0.2	BDL (DL- 0.004)	BDL (DL- 0.004)	BDL (DL- 0.004)	BDL (DL- 0.004)	BDL (DL- 0.004)	BDL (DL- 0.004)

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Sl. No.	PARAMETER (mg/l)*	Norm as per G.S.R. 422 (E)(Inland Surface water)/CTO	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
			Date of Sampling – 09.10.2024	Date of Sampling – 16.11.2024	Date of Sampling – 28.12.2024	Date of Sampling – 21.01.2025	Date of Sampling – 25.02.2025	Date of Sampling – 31.03.2025
18	Lead	0.1	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)
19	Zinc	5	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)
20	Mercury	0.01	BDL (DL-0.004)	BDL (DL-0.004)	BDL (DL-0.004)	BDL (DL-0.004)	BDL (DL-0.004)	BDL (DL-0.004)
21	Total Chromium	2	1	0.6	0.6	1.3	1	1.1
22	Copper	3	BDL (DL-0.02)	BDL (DL-0.02)	BDL (DL-0.02)	BDL (DL-0.02)	BDL (DL-0.02)	BDL (DL-0.02)
23	Nickel	3	0.4	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)
24	Manganese	2	0.8	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)
25	Vanadium	0.2	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)
26	Selenium	0.05	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)	BDL(DL-0.001)
27	Ammonical Nitrogen	50	6.8	4.2	6.6	3.9	4.1	6.8
28	Total Kjeldahl Nitrogen	100	18.2	10.8	13.7	16.3	12.6	10
29	Cadmium	0.2	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)

**Except pH & Colour*

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Treated Effluent Quality at CRM Combo Line ETP Outlet

Sl. No.	PARAMETER	Norm as per G.S.R. 422 (E)(Inland Surface water) /CTO	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
			Date of Sampling – 09.10.2024	Date of Sampling – 16.11.2024	Date of Sampling – 28.12.2024	Date of Sampling – 21.01.2025	Date of Sampling – 25.02.2025	Date of Sampling – 31.03.2025
1	Color	-	Colourless	Colourless	Colourless	Colourless	Colourless	Colourless
2	Suspended Solid, mg/l	100	92.4	84.9	72.5	89.6	93.7	91.4
3	Total Dissolved Solids, mg/l	2100	1634.2	1264.2	1344	1384.7	1645.8	1265.7
4	pH Value	5.5 to 9.0	7.8	7.9	8.1	8.2	8.7	8.6
5	Oil & grease, mg/l	10	5	4.6	4.3	5	4.9	4.2
6	Total Res. Chlorine, mg/l	1	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)	BDL(DL-0.1)
7	BOD (3 days at 27^0C), mg/l	30	12.8	10.6	10.2	11.8	12	10.2
8	COD, mg/l	250	62.8	48.6	43.8	48.2	52.4	46.2
9	Hexavalent chromium (as Cr^{6+}), mg/l	0.1	0.04	0.02	0.01	0.04	<0.01	<0.01
10	Cyanide (as CN), mg/l	0.2	BDL (DL- 0.02)	BDL (DL- 0.02)	BDL (DL- 0.02)	BDL (DL- 0.02)	BDL (DL- 0.02)	BDL (DL- 0.02)
11	Fluoride (as F), mg/l	2	1.4	1.6	0.9	1	1	1.2
12	Sulphide (as S) mg/l	2	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)	BDL(DL-1.0)
13	Phenol (as C_6H_5OH), mg/l	1	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)
14	Iron (as Fe), mg/l	3	1.2	0.8	0.9	1.6	1.6	1.8
15	Nitrate Nitrogen, mg/l	10	8.8	6.1	7.2	5.3	5.9	4.6
16	Dissolved Phosphate, mg/l	5	1.1	2	1	2	3.4	2.2
17	Arsenic, mg/l	0.2	BDL	BDL(DL-	BDL	BDL	BDL	BDL

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Sl. No.	PARAMETER	Norm as per G.S.R. 422 (E)(Inland Surface water) /CTO	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
			Date of Sampling – 09.10.2024	Date of Sampling – 16.11.2024	Date of Sampling – 28.12.2024	Date of Sampling – 21.01.2025	Date of Sampling – 25.02.2025	Date of Sampling – 31.03.2025
			(DL- 0.004)	0.004)	(DL- 0.004)	(DL- 0.004)	(DL- 0.004)	(DL- 0.004)
18	Lead, mg/l	0.1	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)
19	Zinc, mg/l	5	0.06	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	0.06	BDL (DL- 0.01)
20	Mercury, mg/l	0.01	BDL (DL-0.004)	BDL (DL-0.004)	BDL (DL-0.004)	BDL (DL-0.004)	BDL (DL-0.004)	BDL (DL-0.004)
21	Total Chromium, mg/l	2	0.3	0.4	0.4	1.1	1.1	1
22	Copper, mg/l	3	BDL (DL-0.02)	BDL (DL-0.02)	BDL (DL-0.02)	BDL (DL-0.02)	BDL (DL-0.02)	BDL (DL-0.02)
23	Nickel, mg/l	3	0.01	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)
24	Manganese, mg/l	2	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)	BDL (DL-0.05)
25	Vanadium, mg/l	0.2	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)	BDL(DL-0.2)
26	Selenium, mg/l	0.05	BDL (DL-0.001)	BDL (DL-0.001)	BDL (DL-0.001)	BDL (DL-0.001)	BDL (DL-0.001)	BDL (DL-0.001)
27	Ammonical Nitrogen, mg/l	50	4.8	5.2	4.6	3.8	3.9	3.8
28	Total Kjeldahl Nitrogen, mg/l	100	12.2	14.6	16.9	14.3	10.7	9.6
29	Cadmium, mg/l	0.2	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)	BDL (DL- 0.01)

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Treated Surface Runoff Quality at SRTS Outlet

Sl. No.	PARAMETER (mg/l except pH)	Norm as per G.S.R. 422 (E)(Inland Surface water)	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
			Date of Sampling – 09.10.24	Date of Sampling – 16.11.24	Date of Sampling – 28.12.24	Date of Sampling – 21.01.25	Date of Sampling – 25.02.25	Date of Sampling – 31.03.25
1	Suspended Solid	100	70.8	64.2	42.5	48.4	58	43.3
2	pH Value	5.5 to 9.0	8.1	7.6	7.5	7.8	7.4	7.4
3	Oil & grease	10	5	4.8	4	5	4.8	4.2
4	Hexavalent chromium (as Cr^{6+})	0.1	0.02	BDL (DL-0.01)	BDL (DL-0.01)	BDL (DL-0.01)	BDL (DL-0.01)	BDL (DL-0.01)

Treated Sewage Quality at Club House STP Outlet

Sl. No.	PARAMETER	CPCB/CTO	Mar-25
			Date of Sampling – 31.03.2025
1	Suspended Solid, mg/l	100	5.6
2	pH Value	6.5 to 9.0	6.8
3	BOD (3 days at 27^0C), mg/l	30	7.2
4	Fecal Coliform (MPN/100 ml)	<1000	425.5

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Fugitive Dust Emission:

Monitoring Results of Fugitive Emission from source								
Sl. No.	Sampling Stations	Concentration of Particulate Matter Below 10 micron as PM_{10} (µg/m³)						
		Oct.-24	Nov.-24	Dec.-24	Jan.-25	Feb. - 25	Mar. - 25	Permissible limit
1	60 MVA furnace #1 (FAP)	876	876	912	862	824	785	-
2	27.6 MVA furnace#3 (FAP)	847	786	824	780	924	810	
4	Ash silo Area (CPP)	867	626	793	828	637	762	
8	CRM ETP lime feeding room (CRM)	790	590	526	783	385	325	
9	Near HAPL Shot Blaster - CRM	813	782	892	524	638	836	
11	Near Combo line Shot Blaster - CRM	681	728	567	762	671	578	
12	Near EAF#1(SMS)	785	768	720	628	975	913	-
13	Near AOD#2 (SMS)	976	746	986	913	527	508	
14	Grinder Area (SMS)	714	687	589	637	452	597	
15	Slag Yard (SMS)	862	924	899	937	961	983	
16	Caster Area (SMS)	586	724	979	488	990	394	
18	LRF Area (SMS)	876	785	918	612	725	936	
19	Crusher house (CRMHS)	677	719	686	734	650	677	-
24	SAF# 4&5 dust silo – (FAP)	765	815	786	839	876	728	
25	Cooler Area (Pellet Plant)	823	458	780	531	486	538	

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Continuous Ambient Air Quality Monitoring System (CAAQMS) report:

Location - Near Nursery

Sl. No.	Parameters	Monthly Average concentration						
		Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	March'25	Permissible limits as per SPCB
1	PM_{10} (µg/m³)	68.99	81.36	51.96	61.36	60.24	51.21	100(24 Hrs)
2	$PM_{2.5}$ (µg/m³)	33.82	51.23	30.70	39.13	27.14	30.77	60 (24 Hrs)
3	SO_2 (µg/m³)	8.69	6.98	15.01	18.66	28.46	33.19	80(24 Hrs)
4	NO_x(µg/m³)	15.72	15.78	15.74	15.71	15.63	15.39	80(24 Hrs)
5	CO (µg/m³)	0.23	0.24	0.39	0.91	0.37	0.12	02 (08 Hrs)

Location - Near Security Barrack

Sl. No.	Parameters	Monthly Average concentration						
		Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	March'25	Permissible limits as per SPCB
1	PM_{10} (µg/m³)	54.53	69.98	44.60	47.74	45.95	68.86	100(24 Hrs)
2	$PM_{2.5}$ (µg/m³)	19.29	27.20	25.86	34.71	31.17	35.74	60 (24 Hrs)
3	SO_2 (µg/m³)	25.75	34.96	25.00	21.37	15.54	13.64	80(24 Hrs)
4	NO_x(µg/m³)	10.41	12.10	14.86	14.68	14.88	14.87	80(24 Hrs)
5	CO (µg/m³)	0.30	0.42	0.40	0.48	0.32	0.31	02 (08 Hrs)

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Location - Near CPP

Sl. No.	Parameters	Monthly Average concentration						
		Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	March'25	Permissible limits as per SPCB
1	PM_{10} (µg/m³)	92.91	98.64	89.50	65.67	57.77	82.24	100(24 Hrs)
2	$PM_{2.5}$ (µg/m³)	27.26	40.37	52.06	24.76	44.36	41.93	60 (24 Hrs)
3	SO_2 (µg/m³)	44.04	45.95	46.67	47.71	49.00	51.90	80(24 Hrs)
4	NO_x(µg/m³)	21.74	21.86	21.73	21.46	21.33	21.31	80(24 Hrs)
5	CO (µg/m³)	0.65	0.82	0.96	0.93	0.73	0.72	02 (08 Hrs)

Location - Near Tata Corner

Sl. No.	Parameters	Monthly Average concentration						
		Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	March'25	Permissible limits as per SPCB
1	PM_{10} (µg/m³)	-	95.73	92.88	92.43	67.80	66.39	100(24 Hrs)
2	$PM_{2.5}$ (µg/m³)	33.13	50.03	29.66	39.27	21.12	34.15	60 (24 Hrs)
3	SO_2 (µg/m³)	43.53	48.00	45.45	47.02	51.09	55.37	80(24 Hrs)
4	NO_x(µg/m³)	11.14	11.20	11.26	11.14	11.01	10.72	80(24 Hrs)
5	CO (µg/m³)	0.28	0.38	0.43	0.48	0.35	0.31	02 (08 Hrs)

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A. Continuous Emission Monitoring System (CEMS) report:

Sl. No.	Sampling Stations	Parameters	Monthly Average Concentration of PM, SO_2 & NO_x (mg/Nm^3)						
			Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	March'25	Permissible limits as per SPCB
1	FAP (SAF – 3)	PM	50.38	31.84	39.28	28.57	15.86	24.44	**100**
2	FAP (SAF – 4 & 5)	PM	49.69	45.77	44.21	29.01	-	39.30	
3	FAP (SAF – 4 & 5) New	PM	15.57	13.18	13.63	-	6.61	-	
4	FAP (SAF – 4 & 5) Tapping Fume	PM	07.82	8.01	10.58	17.62	15.49	15.66	
5	SMS (EAF Furnace Stack)	PM	21.36	26.51	20.49	33.43	40.01	29.81	
6	SMS (AOD Furnace Stack)	PM	42.20	46.49	74.54	73.06	36.40	37.82	
7	CPP- 1	PM	38.73	29.44	42.30	43.81	42.99	44.81	**50**
		SO_2	328.59	351.32	414.84	422.00	417.83	405.79	**600**
		NOx	171.60	165.06	188.59	189.97	188.23	175.47	**450**
8	CPP - 2	PM	36.33	41.04	42.88	38.46	35.76	42.52	**50**
		SO_2	309.31	404.55	439.81	440.28	440.81	443.87	**600**
		NOx	123.51	182.26	202.27	202.48	202.72	204.14	**450**
9	CRM Combo line	PM	-	07.76	7.43	05.91	06.61	05.61	**30**
10	Pellet Plant	PM	15.92	25.62	28.01	23.25	24.63	22.02	**30**

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B. Effluent Quality Monitoring System (EQMS) report:

Location: CRM ETP outlet

Sl. No.	Parameters	Monthly Average concentration						
		Oct'24	Nov'24	Dec'24	Jan'25	Feb'25	March'25	Permissible limits as per SPCB
1	**TSS**	21.92	78.00	82.25	73.95	89.84	85.16	**0 - 100.0 mg**
2	**pH**	7.85	7.34	8.34	8.76	8.67	8.29	**5.5 - 9.0 pH**
3	**BOD**	12.61	11.32	12.17	9.80	9.47	9.51	**0 - 30.0 mg/l**
4	**COD**	52.57	49.92	52.72	69.06	48.85	46.46	**0 - 250.0 mg/l**
5	**Fluoride**	1.03	1.02	0.94	0.83	0.86	0.91	**0 – 2.00 mg/l**
6	**Cr^{+6}**	≤ 0.01	≤ 0.01	≤ 0.01	≤ 0.01	≤ 0.01	≤ 0.01	**0 – 0.1 mg/l**

Location: CRM Combo line ETP outlet

Sl. No.	Parameters	Monthly Average concentration						
		Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per SPCB
1	**TSS**	79.29	82.55	73.61	86.83	81.19	86.58	**0 - 100 mg**
2	**pH**	7.62	7.78	7.78	7.87	7.87	7.91	**5.5 - 9.0 pH**
3	**BOD**	11.90	11.02	9.86	10.92	11.34	9.52	**0 - 30 mg/l**
4	**COD**	61.92	49.57	40.81	47.71	50.98	44.75	**0 - 250 mg/l**
5	**Fluoride**	0.74	0.93	0.89	1.15	1.45	1.54	**0 – 2.0 mg/l**
6	**Cr^{+6}**	-	-	≤ 0.01	≤ 0.01	≤ 0.01	0.02	**0 – 0.1 mg/l**