

#### JSL/JRD/ENV/2024-25/10

Date: 31.05.2024

То

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, 2023 to March, 2024.

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, 2023 to March, 2024.

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** 

aifreyee Deb Maitreyee De Head-Environment

Enc: As Above

CC: 1. The Director, Industry – I, MOEF&CC, Indira Paryavaran, Jor Bagh Road, Aliganj, New Delhi – 110003.
2. The In-Charge, Central Pollution Control Board, 502, Southernd Conclave 1582, Rajdanga Main Road, Kolkata – 700017



**Jindal Stainless Limited** 

Jajpur Unit : Kalinga Nagar Industrial Complex, Duburi, Distt. Jajpur - 755 026 (Odisha) India. CIN: L26922HR1980PLC010901 Corporate Office : Jindal Centre,12, Bhikaiji Cama Place,New Delhi - 110 066, India, Registered Office : O.P. Jindal Marg, Hisar - 125 005. (Haryana) India. T; (06726) 266260, F: (06726) 266006, E: info.jajpur@jindalstainless.com, Website : www.jindalstainless.com

# JINDAL STAINLESS LIMITED



# HALF YEARLY EC COMP LIANCE REPORT

# OCTOBER, 2023 TO MARCH, 2024



# **M/s. JINDAL STAINLESS LIMITED**

Kalinganagar Industrial Complex, Duburi, Dist. Jajpur - 755026, Orissa, India Tel: +91 06726 266031 - 33 Fax: +91 06726 266006 E-mail: <u>info.jajpur@jindalsteel.com</u>



# 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. 1<sup>st</sup> June, 2022

### &

## Amendment in environment clearance w.r.t. Exclusion of iron making facilities of 2.35 MTPA and steel making facilities of 2.3 MTPA from ENVIRONMENT CLEARANCE REF: F. No. J-11011/281/2007-IA. II(I), Dated. 16<sup>th</sup> 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. 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.	<ul> <li>JSL has planted 3,46,154 nos. of trees till date inside the plant premises with three tier design.</li> <li>Survival rate of plants are being monitored and 4457 nos. damage plants have been replaced till now.</li> </ul>
ii	Greening and Paving shall be implemented in the plant area to arrest soil erosion and dust pollution from exposed soil surface.	Vacant areas are covered greeneries through landscaping/shrubs etc. All roads are paved either through concreting or through paver blocks.
111	41,784 m <sup>3</sup> /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	<ul> <li>The present water consumption of JSL is around 33,384 m3/day</li> <li>Treated water from RO installed at CPP is being reused as cooling tower makeup.</li> </ul>

Jindal Stainless Limited, Jajpur, Odisha



SI. No.	Condition	Compliance Status
	abstraction is permitted.	<ul> <li>No ground water is being used.</li> </ul>
iv	Cold Rolling Mill shall have its independent ETP. Hazardous waste generated in CRM shall be sent to TSDF and oily waste shall be sent to registered recyclers. Acid Recovery Plant shall be provided in CRM.	<ul> <li>Two nos. of ETPs of capacity 750M<sup>3</sup>/day and 1560m<sup>3</sup>/day have been installed for treatment of process water generated from both the existing and new CRM.</li> <li>ETP sludge generated is partially reused for making of Briquette for further reuse in Ferro Alloy process and the rest is being sent to SPCB approved CHWTSDF site of M/s Re Sustainability Limited, Sukinda,</li> <li>Two nos. of Acid recovery plants have been installed for both existing and new CRM unit.</li> </ul>
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.	<ul> <li>The raw materials like coal, chrome ore are kept on Concrete flooring and covered by tarpaulin.</li> <li>Toe walls, garland drains and settling pits have been made to check any attrition.</li> </ul>
vi	Top Recovery Turbine, Dry Gas Cleaning and Stove gas waste heat recovery systems shall be installed in BF.	Blast Furnace is not under the existing facility of Jindal Stainless Limited as it has been transferred to JSL Ferrous Limited and separate EC is 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 Sinter cooler waste recovery system and suitable technology for control of dioxins and furans emissions from the plant	Sinter Plant is not under the existing facility of Jindal Stainless Limited as it has been transferred to JSL Ferrous Limited and separate EC is issued to JSL Ferrous Limited, vide letter No. J-11011/2811/2007–IA–II(I), dated: 16.06.2023



SI. No.	Condition	Compliance Status
viii	TCLP analysis of the AOD slag shall be carried out periodically. In case of presence of hazardous material, the same shall be sent to TSDF. In case of non-hazardous material, AOD slag shall be utilized at project site for brick manufacturing and construction work after the recovery of metal.	TCLP analysis of AOD slag is being carried out periodically by IMMT (CSIR – Institute of Minerals and Materials Technology), Bhubaneswar and the AOD slag is found to be non-hazardous in nature. The slag after metal recovery is being used as low laying area filling along with construction of ongoing projects and road construction at NHAI.
ix	The Oil scum and oily waste from CRM shall be sent to registered recyclers	Oily sludge generated from CRM is being sent to authorized recyclers. Yearly return for the same is being submitted to State Pollution Control Board yearly.
X	<ul> <li>Following additional arrangements to control fugitive dust shall be provided:</li> <li>a. Fog / Mist Sprinklers at all conveyors point and on bulk raw material storage area (at the transfer points) like Iron Ore, Coal and for Fly Ash and similar solid waste storage areas.</li> <li>b. Proper covered vehicle shall be used while transport of materials. EC Identification No EC22A008OR182825</li> <li>File No IA-J-11011/281/2007-IA.II(I) Date of Issue EC - 01/06/2022 Page 6 of 13</li> <li>c. Wheel washing mechanism shall be provided in entry and exit gates with complete recirculation system.</li> </ul>	<ul> <li>a. Dry fog systems have been installed at conveyors points and gun sprinklers were also installed at raw material storage yard to control fugitive emission.</li> <li>b. All the raw materials are transporting through rail and covered vehicles are provided in case of transportation through road.</li> <li>c. Wheel washing system with complete water recirculation has been installed.</li> </ul>
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	All the internal roads and connecting road from project site to main highway are made with RCC/PCC.



SI. No.	Condition	Compliance Status
	proposed project.	
xii	Performance test shall be conducted on all pollution control systems every year and report shall be submitted to Regional Office of the MoEF&CC.	Performance test of all pollution control device by approved institute has been undertaken.
xiii	Particulate matter emission from stacks shall be less than 30 mg/Nm3.	ESPs and Bag Filters have been installed to confirm the Particulate Matter emission from stacks less than 30 mg/Nm3 for all new units like Pellet Plat and CRM. Both manual and online stack monitoring is being carried out and the results are attached as <b>Appendix- A &amp; B</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 is operating using COG & LPG as a fuel.
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.	CER compliance status is being given in Half Yearly EC Compliance report and submitted to IRO. The compliance status of CER is enclosed as Annexure – I.



### B. General Condition

SI. No.	Condition	Compliance Status
١.	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 legislations, etc., as may be applicable to the project.	Noted.
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.	<ul> <li>11 nos. of CEMS have been installed at all major process stacks and connected to SPCB/CPCB servers.</li> <li>Four numbers of 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 &amp; CPCB server.</li> <li>To maintain reliability and accuracy of the analyzer, periodical calibration is being performed.</li> </ul>



ii	The project proponent shall monitor fugitive emissions in the plant premises at least once in 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 monthly basis. The monitoring report is attached as <b>Appendix</b> – <b>A</b> .
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 and DFDS have been provided for all the dust generating points including fugitive dust from all vulnerable sources to comply with prescribed stack emission and fugitive emission standards.
iv	The project proponent shall provide leakage detection and mechanized bag cleaning facilities for better maintenance of bags.	Mechanized bag cleaning facilities has been provided for better maintenance of bags in Air Pollution Control Systems devices.
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 is being used for Briquette making which in turn being used in Ferro Alloy plant.
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 transporting 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 system has been provided at all melting furnaces in Ferro Alloys. Common fume extraction system is in place for SMS.
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 existing and new ETP of Cold Rolling Mill for monitoring of parameters like pH, TSS, BOD, COD, Fluoride and Cr <sup>+6</sup> and connected to SPCB/CPCB server.
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 recognised under Environment (Protection) Act, 1986 and NABL accredited laboratories.	Ground water quality is being monitored in in core zone & buffer zone twice in a year (pre- and post- monsoon) through NABL accredited laboratory. The last ground water monitoring report is enclosed as <b>Appendix – A</b> .
iii	Sewage Treatment Plant shall be provided for treatment of domestic wastewater to meet the prescribed standards.	Two nos. of Sewage Treatment Plants of capacity 100 KLD & 35 KLD have been installed for treatment of domestic waste water. The treated water is being regularly analyzed by approved Third Party.
iv	The project proponent shall provide the ETP for effluents of rolling mills to meet the standards prescribed in G.S.R 277 (E) 31 <sup>st</sup> March 2012 as amended from time to time.	Dedicated effluent treatment plant has been installed for both existing and new Cold Rolling Mill unit with the provision of Effluent Quality Monitoring System.
V	Garland drains and collection pits shall be provided for each stock pile 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 raw material storage area to arrest the runoff in the event of heavy rains and to check the water pollution due to surface run off.



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.
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 Regional Officer of the Ministry as a part of six-monthly compliance report.	Noise quality is being monitored as per the prescribed Noise Pollution (Regulation and Control) Rules, 2000 and report is being submitted to Regional Officer of the Ministry as a part of sixmonthly compliance report. (Enclosed as Appendix-A)
۷.	Energy Conservation measures	
i	Energy Conservation measures may be adopted such as adoption of solar energy and provision of LED lights etc., to minimize the energy consumption.	<ul> <li>LED lights are provided along the roads and work areas.</li> <li>Floating solar project has been installed at water reservoir of JSL for generation of 7.3 MW power and Roof top solar installed for 7.3 MW as RE power.</li> </ul>
ii	Used refractories shall be recycled.	Used refractories generated from SMS are being recycled in the process itself.
iii	Kitchen waste shall be composted or converted to biogas for further use.	An organic Waste Converter of capacity 100 kg/day has been installed and the compost produced is used for greenbelt development.
VI.	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.	GHG emission inventory for the plant has been carried out and the GHG Emission Intensity as follows.GHG Emission Intensity (TCO2e/T)FY 2023-24Scope 1Scope 20.14



ii	Project proponent shall submit a study report on De-carbonization program, which would essentially consist of company's carbon emissions, carbon	JSL has taken various Decarburization programs. The detail report is enclosed as <b>Annexure – II.</b>
	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 monitor able	
VII.	Public hearing and Human health issues	
i	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	<ul> <li>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.</li> <li>Disaster Management Plan has been prepared in consultation with District Administration and has implemented for existing operation.</li> </ul>
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 checks up of workers is being carried out and records are being maintained. Specialty and super specialty health services is being provided to employees/workers and their dependants by reputed hospitals.
VIII	Environment Management	



i	The project proponent shall comply with	Necessary initiative has been taken to adopt the
	the provisions contained in this	villages as per the need base programme.
	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 likar, Kumphiragadia,	
ii	The company shall have a well laid down	The company has well established Environmental
	environmental policy duly approved by	Policy as a part of the OFOHS (Quality
	the Board of Directors The	Environment Occupational Health & Safety) policy
	environmental policy should prescribe	framework and is committed to maintain proper
	for standard operating procedures to	checks & balances for integrating environment
	have proper checks and balances and to	roviow and action
	have proper checks and balances and to	
	infringements (douistion (violation of the	
	anvironmental / forest / wildlife norms /	
	conditions The company shall have	Copy of the Board Resolution is enclosed as
	defined system of reporting	Annexure- III.
	infringements ( deviation ( violation of	
	the environmental ( ferent ( wildlife	
	the environmental / forest / wildlife	
	forms / conditions and / or snareholders	
	/ stake holders. The copy of the board	
	resolution in this regard shall be	
	submitted to the MOEF&CC as a part of	
	six-monthly report.	
	A separate Environmental Cell both at	JSL has a well-equipped Environment department
	the project and company head quarter	with qualified and experienced officers led by a
	level, with qualified personnel shall be	senior level executive as Head Environment who
	set up under the control of senior	directly reports to the Site Head.
	Executive, who will directly to the head	
	of the organization	
IX.	Miscellaneous	



Ì	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.	<ul> <li>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.</li> <li>Advertisement on grant of Environment Clearance had been published in newspapers namely ORISSA POST &amp; The New Indian Express (English) and Dharitri &amp; Pragativadi (Odia) on 22.06.2023 respectively for EC granted on 16.06.2023.</li> <li>Environment Clearance is displayed at the website of the company permanently.</li> </ul>
I	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.	<ul> <li>The copies of the environmental clearance have been submitted to the Heads of local bodies, Panchayats on 09.06.2022 for EC granted on 01.06.2022.</li> <li>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.</li> </ul>
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.	<ul> <li>Six-monthly reports on the status of the compliance of the stipulated environmental conditions uploaded on company website.</li> </ul>



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 location for disclosure to the public and put on the website of the company.	<ul> <li>Both online and manual Stack Monitoring and ambient air quality monitoring are being carried out related data are being displayed on the display board installed at main gate for public view.</li> <li>The Monitoring data along with half yearly EC compliance is being uploaded in the company website.</li> </ul>
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.	<ul> <li>Six-monthly reports on the status of the compliance of the stipulated environmental conditions is being submitted to MOEF&amp;CC and also uploaded on MoEF&amp;CC website.</li> </ul>
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	<ul> <li>Environmental statement for each financial year in Form-V is being submitted to SPCB, Odisha in due time and the last report submitted on 28.09.2023 and also display on company website.</li> </ul>
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.	Noted.
viii	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	The project proponent is continuously implementing and tracking all the commitment made in EIA/EMP report and commitment made in Public Hearing.



ix	No further expansion or modifications in	Noted.
	the plant shall be carried out without	
	prior approval of the Ministry of	
	Environment, Forests and Climate	
	Change (MoEF&CC).	
x	Concealing factual data or submission of	Noted.
	false/fabricated data may result in	
	revocation of this environmental	
	clearance and attract action under the	
	provisions of Environment (Protection)	
	Act, 1986	
xi	The Ministry may revoke or suspend the	Noted.
	clearance, if implementation of any of	
	the above conditions is not satisfactory.	
xii	The Ministry reserves the right to	Noted.
	stipulate additional conditions if found	
	necessary. The Company in a time bound	
	manner shall implement these	
	conditions.	
xiii	The Regional Office of this Ministry shall	Noted.
	monitor compliance of the stipulated	
	conditions. The project authorities	
	should extend full cooperation to the	
	officer (s) of the Regional Office by	
	furnishing the requisite data /	
	information/monitoring reports.	
xiv	Any appeal against this EC shall lie with	Noted.
	the National Green Tribunal, if preferred,	
	within a period of 30 days as prescribed	
	under Section 16 of the National Green	
	Tribunal Act, 2010.	



## 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. 18<sup>th</sup> September, 2019

#### C. Specific conditions

SI.	Condition	Compliance status
no.		
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 <b>Annexure – IV</b> .
ii	Action plan for rainwater harvesting measures at plant site shall be submitted to the Regional office indicating quantity of rain water to be harvest from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.	<ul> <li>Rain water harvesting for collection and utilization of rooftop water has been implemented at Store-2.</li> <li>An earthen pit for collection of surface runoff collection has been constructed.</li> <li>A detailed report on Rain Water Harvesting measures at plant site has already been submitted to Regional Office of MoEF&amp;CC, Bhubaneswar.</li> </ul>
iii	The company shall establish separate environmental management cell for JSL & JCL respectively	Environment Management Cell has been established and sufficiently equipped to cater the requirement of JSL & JCL.
iv	Greenbelt shall be in area of 40 ha. Outside the factory premises and the implementation status shall be reported to Regional Office of MoEF&CC.	Plantation consisting 52,000 no. of saplings covering an area of 35 Acres at Ambasar, Sukinda, Telibahali, Jajpur, at Goshala, Jajpur Road and at Village Nadiabhanga, Duburi, Dist . Jajpur.

#### D. General condition

Jindal Stainless Limited, Jajpur, Odisha



SI .No.	Condition	Compliance status	
I. Stat	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. 10786/IND-II-CTE-6892, dated 07.07.2023. Consent to Operate has been obtained vide SPCB letter no. 3882/IND-I-CON-5136, Dated 17.03.2023 and 5865/IND-I-CON-5136, Dated	
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.	19.04.2024 valid up to 31.03.2025. No ground water is being extracted. Water is being sourced from Bramhani river within the permissible water drawl capacity of water resource Deptt., 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 31.03.2025.	
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.	<ul> <li>11 nos. of CEMS have been installed at process stacks and connected to SPCB/CPCB server.</li> <li>CEMS are also being calibrated periodically according to equipment supplier specification.</li> <li>The data of CEMS found to be within the permissible limit for all process stacks including thermal power plant.</li> </ul>	



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 on monthly basis through third party having NABL accreditation certification.
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 $120^\circ$ each), covering upwind and downwind directions.	<ul> <li>JSL has already installed 4 nos. of CAAQMS having parameter PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NOx &amp; CO at strategic locations of JSL premises and data is being sent to SPCB/CPCB server.</li> </ul>
iv.	The camera shall be installed at suitable locations for 24x7 recording of battery emissions on the both sides of coke oven batteries and videos shall be preserved for at least one month 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 <b>Appendix – A.</b> The monthly summary report of continuous stack emission and air quality monitoring data is annexed as <b>Appendix – B.</b>
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 emission.



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 system shall be provided at SMS Converters.	Two nos. of pulse jet type bag filter having capacity of 11,56,000 M <sup>3</sup> /hr. each have 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, roofs regularly.	6 nos. of mechanical sweepers engaged for road and shop floor cleaning.
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 processes of Ferro Alloy, Steel Melting Shop, Briquette Plant and Cold Rolling Mill has been used for Briquette making for further reuse for Ferro Alloy making.
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 transportied through rail and covered vehicles to prevent spillage/dust generation.
xiv.	Wind Shelter fence and chemical spraying shall be provided on the raw material stock piles.	The raw material stock piles being kept under tarpaulin cover to mitigate fugitive emission in dry season. Chemical Spray facility is being explored with different vendors.
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 SMS converter.	Two nos. of pulse jet type bag filter having capacity of 11,56,000 M <sup>3</sup> /hr each have been installed at the EAF & AOD furnaces for taking care of secondary emission.



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.	Continuous Effluent Monitoring System has been installed at both existing and new ETP of Cold Rolling Mill for monitoring of parameters like pH, TSS, BOD, COD, Fluoride and Cr <sup>+6</sup> and connected to SPCB/CPCB server. Thermal Power plant CT blow down is being recycled in the process through RO.
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 <b>Appendix – A.</b>
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 out let Cold Rolling Mill. The monthly summary report of continuous effluent monitoring data has been annexed as <b>Appendix – B.</b>
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 <sup>3</sup> /day and 1560m <sup>3</sup> /day have been installed for treatment of process water generated from both the existing and new CRM to meet the prescribed standard dated 31 <sup>st</sup> March 2012.



V.	Adhere to "Zero Liquid Discharge"	reused in different low-end applications. To use the treated water in high end application, Reserve Osmosis system project has been taken and will be completed by March 2025.
vi.	Sewage Treatment Plant shall be provided for treatment of domestic waste water to meet the prescribed standards.	<ul> <li>Two nos. of Sewage Treatment Plants having capacity 100 KLD &amp; 35 KLD have been installed inside plant premises for treatment of domestic waste water including one STP at Town Ship.</li> <li>The treated water from STP is being tested from NABL accredited third party to ensure its meets prescribed standard.</li> </ul>
vii.	Garland drains and collection pits shall be provided for each stock pile to arrest the run-off in the event of heavy rains and to check the water pollution due to surface run-off.	Garland drains and collection pits have been provided at raw material storage area to arrest the run-off in the event of rains.
viii.	Tyre washing facilities shall be provided at the entrance of the plant gates.	The Tyre washing systems have been provided at Truck entry gate at CPP
ix.	CO <sub>2</sub> injection shall be provided in GCP of SMS to reduce pH in circulating water to ensure optimal recycling of treated water for converter gas cleaning.	The EAF system is designed for dry cleaning, so no water is being used in the system.
х.	The project proponent shall practice rain water harvesting to maximum possible extent.	<ul> <li>A detailed study has been conducted for estimating rainwater harvesting potential in the entire complex.</li> <li>An earthen pond of 10000 m<sup>3</sup> has been constructed for storage of rain water.</li> <li>For utilization of maximum potential roof top rainwater harvesting is being explored.</li> </ul>
xi	Water meters shall be provided at the inlet to all unit process in the steel plants.	Water meter has been provided at 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.	<ul> <li>The unit is making all necessary efforts to minimize water consumption in the steel plant complex by recycling and reuse of treated water.</li> <li>The CPP cooling tower blow down water is being treated in RO plant and the treated water is being reused as cooling tower makeup water.</li> <li>The process water generated from CRM is being treated in ETP and the treated water is being reused for SMS slag quenching, in Jigging plant, dust suppression and other low-end use.</li> </ul>
IV. No	ise monitoring and prevention	
i.	Noise level shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six- monthly compliance report.	The monitoring of work zone noise level is 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' 23 to Mar' 24 is annexed as <b>Appendix – A</b> .
ii.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	The monitoring of ambient noise level is 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' 23 to Mar' 24 is annexed as <b>Appendix – A.</b>
V. Ene	ergy Conservation Measures	
i.	Waste Heat Recovery shall be provided in all units where the flue gas or process gas exceeds 300°C.	2 nos. Waste Heat Recovery Boilers of 2 x 28.5 TPH capacity have been installed at the 60 MVA Ferro Alloy Complex.



ii.	Explore feasibility to install WHRS at Waste Gases form 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, street lights, 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. Installation of roof top solar panel is under progress. Presently 7.3 MW already commissioned.
iv.	Provide LED lights in their office and residential areas.	LED lights are provided in all office, canteen, street.
V	Ensure installation of regenerative type burners on all reheating furnaces.	Reheating furnace are not being used in JSL.
VI. Wa	aste Management	
i.	Waste recycling plant 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 process are being reused in SMS as maximum as possible.
111.	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 recycle to Sinter Plant. The project proponent shall establish 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 NH.
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.	At present 100% utilization of fly ash is being carried by providing it to Cement Plant, Brick / and to NH for road making.



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.	<ul> <li>The waste oil is being disposed to authorized and registered recyclers</li> <li>CRM ETP sludge generated from plant is being sent to SPCB approved CHWTSDF, Re Sustainability Limited at Sukinda.</li> </ul>
VII. Gr	reen Belt	
i.	Green belt shall be developed in an area equal to 33% of the plant area with a native tree species in accordance with CPCB guideline. The greenbelt shall inter alia cover the entire periphery of the plant.	<ul> <li>JSL has planted 3,46,154 nos. of native trees till date inside the plant premises with three tier design.</li> <li>Survival rate of plants are being monitored and 4457 nos. damage plants have been replaced till now.</li> </ul>
ii.	The project proponent shall prepare GHG	Being complied.
	emission inventory for the plant and shall submit the programme for reduction of the same including carbon sequestration including plantation.	GHG emission inventory for the plant has been carried out and the GHG Emission Intensity as follows.
		FY 2023-24    Scope 1    2.40
		Scope 2 0.14
VIII. P	ublic hearing and Human health issues	



i.	Emergency Preparedness plan based on Hazard Identification and Risk Management (HIRA) and Disaster Management Plan shall be implemented.	<ul> <li>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.</li> <li>Disaster Management Plan has been prepared in consultation with District Administration and has implemented for existing operation.</li> </ul>
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.	There is no provision of staying of construction labor within the plant site. The construction labors are staying outside the plant premises with their own / contractor arrangements.
iv.	Occupation Health surveillance of the workers shall be done regular basis and records maintained as per the Factory Act.	Occupation Health surveillance of the workers is being carried out on periodical basis as per the Factory Act and records are being maintained.
IX. Co	rporate 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 notification is superseded by MoEF notification dated 30 <sup>th</sup> September 2020. The issues raised during public hearing is being complied.



ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system 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 well established Environmental Policy as a part of the QEOHS (Quality, Environment, Occupational Health & Safety) policy framework and is committed to maintain proper checks & balances for integrating environment review and action. Copy of the Board Resolution is enclosed as Annexure- III.
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.	Action plan has been made for implementing EMP and environmental conditions applicable to JSL. Year wise funds are being allocated towards environment cost. Compliance of environmental conditions is being regularly submitted to RO, MoEF&CC on half yearly basis.



v.	Self —environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	<ul> <li>Self-environmental audit is being conducted regularly and any point observed is being discussed, reviewed and action plan made.</li> <li>Third Party Environment Audit for the FY 2022-23 has been carried out and reports have been submitted to MoEF&amp;CC.</li> </ul>
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. Mis	cellaneous	
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. 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 Zillaparishad, Jajpur and Additional District Magistrate, Kalinga Nagar and District Magistrate, Jajpur. 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.



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	<ul> <li>Four numbers of 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 &amp; CPCB server.</li> </ul>
	website of the company.	<ul> <li>The monitoring data are also being displayed in electronic display board placed at Gate No. 1 of JSL for public view.</li> </ul>
		<ul> <li>The monitored data is uploaded in company website along with Six monthly report and update the same periodically.</li> </ul>
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 submitted periodically to MoEF&CC, CPCB & SPCB and also been uploaded at the Website of the Company.
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 30 <sup>th</sup> September. The Last report has been submitted on 28.09.2023 and also uploaded on the company website.



vii.	The project proponent shall inform the	The Project Has been completed and in operation
	Regional Office as well as the Ministry, the	Consent to Operate has been issued and renewed
	date of financial closure and final approval	via letter no 3882/IND-I-CON-5136, Dated
	of the project by the concerned	17.03.2023 and 5865/IND-I-CON-5136, Dated
	authorities, commencing the land	19.04.2024 valid up to 31.03.2025
	development work and start of production	
	operation by the project.	
	<ul> <li>i. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.</li> <li>ii. The project proponent shall abide by all commitments and recommendations made in the</li> </ul>	<ol> <li>All the stipulations made by State Pollution Control Board are being complied with.</li> </ol>
	EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	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	Any further expansion of the project will be
	the plant shall be carried out prior	routed in accordance with the MoFF&CC's
	approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).	relevant guidelines.
ix.	approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC). Concealing factual data or submission of false/fabricated data may result revocation of this environmental clearance and attract action under the provision of Environment (Protection). Act 1986.	relevant guidelines.
ix.	approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC). Concealing factual data or submission of false/fabricated data may result revocation of this environmental clearance and attract action under the provision of Environment (Protection). Act 1986. The Ministry may revoke or suspended the clearance, if implementation of any of the above conditions is not satisfactory.	relevant guidelines.
ix. x.	approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC). Concealing factual data or submission of false/fabricated data may result revocation of this environmental clearance and attract action under the provision of Environment (Protection). Act 1986. The Ministry may revoke or suspended the clearance, if implementation of any of the above conditions is not satisfactory. The Ministry reserves the right to stipulate	relevant guidelines. Noted Noted Noted
ix. x. xi.	approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC). Concealing factual data or submission of false/fabricated data may result revocation of this environmental clearance and attract action under the provision of Environment (Protection). Act 1986. The Ministry may revoke or suspended the clearance, if implementation of any of the above conditions is not satisfactory. The Ministry reserves the right to stipulate additional conditions if found necessary.	Noted       Noted       Noted
ix. x. xi.	approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC). Concealing factual data or submission of false/fabricated data may result revocation of this environmental clearance and attract action under the provision of Environment (Protection). Act 1986. The Ministry may revoke or suspended the clearance, if implementation of any of the above conditions is not satisfactory. The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner	Noted       Noted       Noted



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.	Noted. 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.	Noted. All statutory provisions under Air Act, Water Act, Hazardous waste management rule, Public liability insurance act shall be 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	Noted



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

SI.	Condition	Compliance
No.		
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 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.	Noted.
4.	The status of implementation of project, as per Environmental Clearance accorded to M/s. JSL for Integrated Stainless-Steel Plant vide Dated. 5th August 2005, for Captive Power Project vide 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 remaining part of Integrated Stainless-Steel Plant of M/s. JSL, excluding Coke Oven plant and Hot Strip Mill, is located 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, 27960 KLD allotted to M/s. Jindal Stainless Ltd. The power requirement will be 210 MWH.	Noted. The present water consumption of JSL is around 33,384 m3/day 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.	Noted



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 requirement of the customers. Power requirement is met through existing 2x125 MW Captive Power Plant.	Noted
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 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 / 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 are 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 are 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.	Noted



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.	Noted.
14.	After detailed deliberations, the committee recommended for 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.	Noted.
15.	Further, M/s Jindal Stainless Ltd (JSL) submitted the requisite documents vide letter dated 24 <sup>th</sup> 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.	Noted.



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.	Noted
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.	Noted.
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.	Noted
19.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.
20.	The Ministry reserves the right to stipulate additional conditions if found necessary, The Company in a time bound manner shall implement these conditions.	Noted.



21.	The PP shall ensure no change in the pollution load and no conflict in sharing in common facilities in day to day operations.	Noted.
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
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.	Noted.
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.	Noted.


### 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. 1<sup>st</sup> November, 2007

#### A. SPECIFIC CONDITIONS:

SI.	Condition	Compliance
No.		
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.
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 <sup>3</sup> . Bag filter shall be provided to BF, lime plant, SMS, Ferro-Alloy Plant etc. 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 system 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.	<ul> <li>Blast Furnace and Sinter is not under the existing facility of Jindal Stainless Limited as it has been transferred to JSL Ferrous Limited and separate EC has been obtained on behalf of M/s. JSL Ferrous Limited, vide letter No. J-11011/2811/2007–IA–II(I), dated: 16.06.2023.</li> <li>Bag houses are in place at Ferro Alloys Plant, SMS and CRM, with adequate Dust Extraction System (DES).</li> <li>Fixed type water sprinkler, gun sprinkler &amp; DFS have been installed at Raw Material Handling Areas &amp; Material Transfer points to control fugitive emissions.</li> <li>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 &amp; CPCB Servers.</li> <li>House-keeping on roads is being maintained by using Mechanical Sweepers.</li> <li>Further, 4 nos. of truck mounted tankers of 12 KL capacity are deployed for controlling fugitive emissions on the road.</li> <li>Eived type water sprinklers and Mobile</li> </ul>



SI.	Condition	Compliance
No.		Water sprinklers have been provided in plant areas to control fugitive emissions round the clock.
iii.	Total water requirement from Brahamani river shall not exceed 72, 696 m <sup>3</sup> / 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 waste water 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. Phenoilc 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 discharged shall not be more than 2100 mg/l. The domestic waste water after treatment in STP shall be used for green belt development.	No ground water is being used in the plant. Zero discharge of effluent is being maintained for the entire plant. The CPP blow-down water is being reused for road dust suppression, floor washing, fire hydrant systems, etc. Further An RO plant of 50 m <sup>3</sup> /hr has been installed and commissioned to take care of the cooling tower blow - down water for process use. Acidic/ alkaline effluent from DM plant is being neutralized and reused in the plant. Treated waste water from Ferro alloys is being used in Slag Granulation and Jigging Plant. Treated STP water is being used for greenbelt development (Horticulture).
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.	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.



SI.	Condition	Compliance
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 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 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.	<ul> <li>Slag is used for road construction and filling in low lying areas inside the plant. Fe-Cr slag is further processed in Jigging Plant and utilized for road construction &amp; low laying are filling inside the plant.</li> <li>Flue gas residue from bag House and Mill Scale from CRM is being recycled in Ferro Alloys in the form of Briquettes.</li> <li>CRM ETP Sludge is 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.</li> </ul>



SI. No.	Condition	Compliance
vii.	Green belt shall be developed in 135 ha out of total 526.0 ha area within and around the plant premises as per the CPCB guidelines in consultation with DFO.	<ul> <li>JSL has planted 3,46,154 nos. of trees till date inside the plant premises with three tier design.</li> <li>Survival rate of plants are being monitored and 4457 nos. damage plants have been replaced till now.</li> </ul>
viii.	As proposed, modified wet quenching for 1 <sup>st</sup> and 2 <sup>nd</sup> coke oven batteries as per CPCB guidelines and dry quenching in 3 <sup>rd</sup> and 4 <sup>th</sup> batteries shall be adopted during the expansion.	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.

### **B. GENERAL CONDITIONS:**

SI. 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 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.	Noted.



Half- yearly Compliance Report (Oct' 2023 – Mar' 2024)

iii.	The gaseous emissions from various process units shall conform to the load/ mass based standards notified by this Ministry on 19 <sup>th</sup> 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. On line continuous monitoring system shall be installed in stacks to monitor SPM and interlocking facilities shall be provided so that process can be automatically stopped in case 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. 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. Four numbers of 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.
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 <sub>2</sub> _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 month.	4(four) nos. of AAQ monitoring stations have been installed inside the plant premises in consultation with SPCB officials. Monitoring of Ambient Air is being carried out for PM <sub>10</sub> , PM <sub>2.5</sub> and other gaseous parameters. Monitoring data is being submitted to both SPCB and MOEF regularly. The manual monitoring data of both Stack & ambient air quality is annexed as <b>Appendix-A</b> .



Half- yearly Compliance Report (Oct' 2023 – Mar' 2024)

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 stock piles 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. 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 the industry shall be provided. Fugitive emissions shall be controlled, regularly monitored and records maintained.	Fugitive emission is being controlled by installation of Dust suppression systems like DFS 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 Ferro-Alloys, SMS & CRM units. 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.
vi.	Industrial waste water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 or as amended from time to time. The waste water shall be utilized for plantation purpose.	Industrial waste water is treated to conform to prescribed standards and fully recycled / reused in the process and various in-house applications. A separate treatment facilities have been set-up at Cold Rolling Mill (CRM), Captive Power Plant (CPP) and Steel Melting Shop (SMS) to utilize the treated water thereby reducing the fresh water consumptions.



vii.	The overall noise levels in and around the plant area shall be kept within the standards 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 level within 85 dB(A) in and around plant area. Acoustic Enclosures are provided to control noises, in various areas of the Plant. Noise monitoring result are enclosed as <i>Appendix-A</i> .
viii.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean period besides recharging the GW table.	An earthen pond of capacity 10000m3 has been made for storage of Rain water.
ix.	Occupational health surveillance of the workers shall 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.
Х.	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 Plant has taken all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further the unit has undertaken various CSR related activities for peripheral development including community development, educational development, safe drinking water supply, good sanitation of the villagers etc. The various works undertaken during said period as a part of CSR is enclosed as <i>Annexure-V.</i>



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 so provided shall not be diverted for other purpose.	We have already incurred more than the specified of Rs. 46 crores on environmental pollution control measures in all the plants viz., Ferro alloys plant, SMS, CRM, etc.
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 is being submitted to the Ministry regularly.
xiv.	The project proponent shall inform to the public that the project has been accorded 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.	Paper advertisement regarding grant of Environment Clearance had been publish in odia 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. 3882/IND-I-CON-5136, Dated 17.03.2023 and 5865/IND-I-CON- 5136, Dated 19.04.2024 valid up to 31.03.2025.



xvi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Noted.
xvii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The company in a time bound manner will implement these conditions.	Noted.
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 are being followed.



## Status of compliance of environment clearance conditions of <u>4 x 125 Captive Power Plant (CPP)</u> Ref: J-13011/5/2006-IA.II (T), dated 30<sup>th</sup> November, 2006

SI. No.	Condition	Compliance
i.	It is noted that the proposal is for grant of environmental clearance under the 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 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.	In the first phase, 2X125 MW coal based Power Plant have been installed and commissioned. Adequate land for the project is already available with us. There is no forest land falls under the Project, So no forest diversion proposal is required. Similarly, no displacement of people is involved as land is obtained from IDCO. No ground water is being used for this project. The necessary approval for water drawl has already been obtained from IDCO. The coal used for CPP is having ash content of < 40% and sulphur content is less than 0.5%.



SI. No.	Condition	Compliance
ii.	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.	Noted.
iii.	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.
iv.	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 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.	Noted.
V.	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.	Noted. We have developed an Ash Pond inside the plant with provision of lining and other arrangements.



SI. No.	Condition	Compliance
vi.	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.
vii.	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) & South Eastern Coal Field by road/rail. The ash content of the coal being used is in the range of <45 % with coal blending of imported coal and F Grade coal with Sulphur content below 0.5%.
viii.	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.	<ul> <li>Bi-flue stacks having height of 150 m above the ground level has been installed.</li> <li>On line monitoring instrument for Particulate Matter (PM), SO<sub>2</sub>, NO<sub>x</sub> and Hg emissions have been installed with transmission of data to both SPCB &amp; CPCB server.</li> </ul>
ix.	Low NO <sub>x</sub> burner shall be provided.	The unit has installed the low $NO_x$ burners for coal and oil.
х.	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 <sup>3</sup> . The stack monitoring data is attached as <i>Appendix - A.</i>



SI. No.	Condition	Compliance
xi.	Adequate dust extraction system such as bag filters and water spray system in coal and ash handling areas and transfer areas shall be provided.	Bag filters have been installed on top of the ash silos and telescopic chutes have been provided for 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.
xii.	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 9 <sup>th</sup> year full fly ash utilization shall be used.	Presently 100% of Fly Ash generated is being utilized by supplying to Cement plants, fly ash bricks/Asbestos manufacturing and NHAI for road making.
xiii.	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 50m <sup>3</sup> /hr has been installed and commissioned to take care of the cooling tower blow - down water for process use.
xiv.	Water requirement shall not exceed 2550 cum/hr. No ground water shall be extracted for use in the project. No discharge of waste water outside the project boundary shall be made. Zero discharge of effluents shall be adopted.	<ul> <li>Being Complied.</li> <li>The water consumption of CPP is about 610 m<sup>3</sup>/hr. There is no ground water usage in CPP. The plant has been designed for zero discharge. No waste water is being discharged outside the plant boundary.</li> <li>RO plant of 50 m<sup>3</sup>/hr has been installed and commissioned to take care of the cooling tower blow - down water for process use.</li> </ul>



SI. No.	Condition	Compliance
xv.	Rain water 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.	Rain water harvesting system has been constructed to harvest the rain water and reuse it for the plant activities.
xvi.	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.
xvii.	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 plant is limited to 75 dB(A). Acoustic enclosures have been provided in DG set and Air Compressors for keeping the noise level below 75 dB(A). Personal protective equipments like Ear Plugs, Ear Muffs have been issued to people working in high noise area. The ambient noise and work zone noise data is enclosed as <b>Appendix – A</b> .
xviii.	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.	Air quality monitoring is being done on regular basis. The six monthly monitoring data is attached as <b>Appendix - A</b> .



xix.	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 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. In addition to this wheel washing system has been installed at ash handling section for dust suppression. Further, Rain guns have been provided in coal handling area to control the fugitive dust emission.
XX.	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.	<ul> <li>JSL has planted 3,46,154 nos. of trees till date inside the plant premises with three tier design.</li> <li>Survival rate of plants are being monitored and 4457 nos. damage plants have been replaced till now.</li> </ul>



xxi.	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 also at website of MOEFCC.	Paper advertisement regarding grant of Environment Clearance had been published in odia and English news paper.
xxii.	A separate environmental monitoring cell with suitable qualified staff shall be set up for the implementation of the stipulated environmental safeguards.	An Environment monitoring cell with sophisticated in-house environmental laboratory manned by qualified & experienced staff has been set up.
xxiii.	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.
xxiv.	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 had been submitted to Regional office of the MOEFCC located at Bhubaneswar.



XXV.	Separate funds shall be allocated for 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.	Noted.
xxvi.	Full cooperation to the Scientists/ Officers from the Ministry/regional office/the CPCB/the SPCB who would be monitoring the compliance of environmental safeguards.	Noted
xxvii.	The Ministry reserves the right to revoke the clearance if conditions are not implemented to the satisfaction of the Ministry.	Noted
xxviii.	The environmental Clearance shall be valid for 5 years from the start of generation of power from CPP.	Noted
xxix.	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
XXX.	The above stipulation would be enforced under Water Pollution Control Act, 1974, Air Pollution Control Act, 1981, the Environment Protection Act, 1986, The public liability Insurance Act, 1991, the EIA notification of September, 2006.	All the relevant Acts are being followed.

# LIST OF ENCLOSURES

SI. No.	Description	Annexure /Appendix
1.	CER compliance report – EC 2022	Annexure - I
2.	Report on Decarbonisation programme	Annexure - II
3.	Board resolution copy	Annexure – III
4.	CER compliance report – EC 2019	Annexure – IV
5.	CSR Report (Oct'23 to Mar ' 24)	Annexure – V
6.	Monitoring Report (Oct'23 to Mar ' 24)	Appendix –A
7.	Online Monitoring Report (Oct'23 to Mar ' 24)	Appendix –B

#### Annexure - I

Major Issue	Action Plan	Physical	Ti	ime Line for Executio	n	Total Budget	Amount
Raised		Target				in Lakh	Spent in
			Year 1 <sup>st</sup>	Year 2 <sup>nd</sup>	Year 3 <sup>rd</sup>		Lakh
Area Developmen	t						
Development of	Set up of Ind	loor Sports	Land selection	Construction of	Supply of sports	2000	500
Park	Complex at Ja	jpur	and acquisition	Buildings and	equipment,		
			Under process	utilities	furniture and		
			Status : Under		fixtures.		
			Discussion with				
			District				
			Administraion,				
			Jajpur, Govt				
			Land identified				
			for the project.				
			Jindal Stainless				
			to execute the				
			work on behalf				
			of District				
			Administration,				
			Accordingly An				
			Amount of Ks				
			Scr nas been				
			uisburseu.				
Davalonment of	Now establish	mont of	Sat un in	Sat up in villages	Sat up in villages	100	70
nublic community	community ha	11 at 6	villages namely:	namely:	namely.	100	70
hall	nos of villages		Dhuligarh	Damodarnur	Mangalnur		
nun	nos.or vinage.		Tikar.	by providing new	Singagadia:		
			Trijanga:by	building with	by providing new		
			providing	electrification.	building		
			new building				
			with	Community hall at	with		
			electrification.	Damodarpur has	electrification.		
			Community	been completed.	The		
			hall at		Construction of		
			Dhuligarh and		Mangalpur		
			tikar has been		Comm Centre is		
			completed		in		
					progress.(Delaye		
					d due to pilotical		
D1 ( )	D1 ( ) 1	•	V'11 D 1 1	x7'11 T 1 1	ISSUE)	40	
Plantation	Plantation dr	ive at five	village: Pankapal	village: Jakhapura	Village: Kharadi	40	
activities in	numbers o	oi village.		&Jajpur	Actual area and		
peripheral villages			Actual area and	Road Actual area	number of trees to		
			ha decided head	to be decided	be decided based		
			on survey	hased survey and	discussion with		
			and discussion	discussion with	local authorities		
			with local	local authorities	Report will be sent		
			authorities	Report will besent	to MoEF & CC as a		
			Report will be	to MoEF	nart of Half Yearly		
			sent to MoEF &	&CC as a part of	EC Compliance		

# CER Compliance Report – EC granted on 01.06.2022

		CC as a part of Half Yearly EC Half Yearly EC Compliance. Completed at Nuagaon and kharadi instead of pankapal and dhabalagiri Additionally Plantation carried out at Telibahali and Coschele	
		(Approx - 20000 Saplings planted)	
Madical Easilities			
wiedical Facilities	D . 11.1 . 0 . 100		
Provision of health care facilities	Establishment of 100 bedded super specialties hospital at village Jakhapura	LandConstructionofProvisionof2000acquisitionBuildingsandmedical equipment,2000process to beutilities.furniture and fixturescompleted.andessentialLand has beenmedicines.identified,constructionwork to bestarted postprocurementof land	
Medical assistance to cancer patients	Identification with assistance to cancer patients at village Kumbhiragadia	Assistance will 50 be provided on case to case and need basis. Support is being extended to the needy people not only in kumbhirgadia , but also in periphery area.	
Local Employmen	t	· · · · ·	
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.	

Education						
Establishment	Renovation/Construction	At village:	At village:	At village : Tikara	60	42
of educational	of additional new 2nos.	Asanabahali,	Kumbhiragadia			
facilities	of classrooms and	Mantira		In Tikar as per		
	electrification with		Homeopathy	villagers request,		
	sanitation facility at	Mantira Sisu	centre at kumbhir	Community Centre		
	four	Mandir	gadia completed -	built. 14 lac		
	nos. school.	Clasroom and	8lac			
		Asanabahali				
		Khandurai				
		Temple(As per				
		villagers				
		Request) work				
		Completed. 15				
		lakh+5 lakh				
Major Issue	Action Plan Physical	Ti	me Line for Execu	ition	Total Budget	
Kaised	Target	Year 1 <sup>st</sup>	Year 2 <sup>nu</sup>	Year 3 <sup>ru</sup>	in Lakh	20
Establishment of	Establishment of skill	At village: Trijanga	At village:		20	20
technical education	development centre	Establishment of	Asanbahali			
/coaching centres	and financial	skill development	Establishment of			
	assistance to coaching	centre like	skill development			
	centre at 2nos. Of	tailoring,	centre like			
	villages.	Financial	computer			
		assistance for four	portour clostrical			
		provided	machinarias			
		provided.	machimeries.			
Drinking Water f	acility					
Provide drinking	Arrangement to be	At village Manpur:	At village Tikar:	At village Mantira	30	20
water to peripheral	made in three	Set up of Pump	Set up of Pump	Construction of 2	20	
villages	numbers of villages.	house at the	house at the	Nos. of Bore well.		
6	8	existing source and	existing source and			
		new pipeline	new pipeline laying			
		laying of 1KM	of 1KM along with			
		along with stand	stand post.			
		post.	1			
		Completed at				
		Manpur Patra				
		sahi and Benga				
		patia				
Women Empower	ment	x · 1·1 ·		<b>D</b> 1111		
Strengthening of	Focus on various	Livelihood	Establishment of	Establishment of	300	100
women	livelihood programme	promotion through	sanitary napkin unit	neem powder and		
empowerment .	through Self Help	SHG that include	at Danagadı.	turmeric powder		
measures in	Group (SHG) for	dairy farming,	alloring training at	making unit at		
peripheral villages	women empowerment	poultry, goatery,	Vinage Damdorpur,	Danagadi/Jakhapura.		
	in peripheral villages.	A compute making,	Napada and	ot Danage 1:		
		Wheat grinding at		ai Danagadi,		
		30nos of villages	The Teilewine	закприта.		
		in 7 GP $\sim f$	training has been			
		Danagadi block	relocated to			
		Pankanal Mantira	Alekhnur Ranagun			
		Kumbhiragadia i	di and Mines			
		akhapura,mangal	and million			

		pura,Dhuligarh and Trijanga	
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.	Effective pollution control equipments with interlocking As per EMI facility with process to be in place for proposed expansion budget of plant 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.	
Water sprinkling on roads to control air pollution	Extensive water sprinkling to be done in roads of peripheral villages.	Regular water sprinkling to be done in villages at Jakhpura20and Manpur.	7

JINDALSTAINLESS	I NO.	Evidence														
1       Development of Park         1       Development of Park	1 Dev	agistrate (Gen & Misc)/ E SL/ER/557/202 made paymen and Roof Comple Desc Desc Desc Desc NRBR5202306: UDGE ROOF CC	J I 58/2023-24 d District N ase of fund etter No.143 ur letter No.143 ur letter No.143 ur letter No.143 ur letter No.143 ur letter No.143 to M/S Bridge to M/S Bridge th) lations Co. India Lt	L/ER/558/ tor and D : Release 1. Lette 2. Our l hity zone a tt details a Date 1, 2023 Dur kind in 10, Stainless aba Rath) mal Relati a Roof Co.	V/ER/558 or and I Releas 1. Lett 2. Our ce to the hase to 1 ty zone. 2023 ur kind ir 2.2023 ur kind ir 2.2023 ur kind ir kiness ki kin kin kiness kiness kin kin ki	d District PN ease of etter N Dur letter N Dur lette the abco to M/s at Si lis are a a is are a ress Lim ess Lim العامان	JIN JIN 223-24 Attrict M of funds No.143/ No.143/ tter No. s Sathipu as follo GS Dr-( BF mation mited s s hdia Ltd	Magistr s 3/(Gen & A), JSL/EF e and I ver madde ge and I vr, Jajpi lows: -CNRBR RRIDGE n.	A L S A L S	Dtd.01/06 023-24, Dt ent of Rs. mpany Ind cription 530585680 OMPANY 1	6/2023 td. 28/06, 5,00,00,0 dia Ltd. t	6/2023 .000/- (Ru towards of N0031864 TD	S tupees f constru- 4- 5,0	Dt.01/07, Five Crore: uction of a Debit 00,00,000.	/2023 s only) activity 00	







5	Establishment of technical education /coaching centres	Skill development programme at Triganja
6	Provide drinking water to peripheral villages	

		Agarbati and Phenyle training programme
7	Strengthening of women empowerment measures in peripheral villages	<image/> <image/>
	Water sprinkling on roads to control air	Snacks making training at Jakhapura
8	pollution	

Annexure - II

S No	Description of Project	Department	Carbon Abatement Potential
			(tCO2/Year)
1	Annealing Bypass (304L and JT grades)	CRM	2166
2	Reduction of Ammonia Consumption at HBA lines	CRM	1425
3	Reduction of Sp. Power consumption at AP lines	CRM	2359
4	Hot Charging of Slabs in RHF for fuel saving	HSM	963
5	Chrome palletization-FAD	Ferro Alloys	65700
6	Use Combustion catalyst in Boilers	СРР	10638
7	Electric Forklift (2No) on hire basis	I&SM, CRM	160
8	Reduction of consumption of coke breeze at SMS-EAF	SMS	11000
9	Reduction of %C input of liquid Fe-Cr received from Ferro-alloys by 0.8-1%	SMS	2500
10	100 MW RE-RTC	Energy	435372
11	100 MW RE-RTC	Energy	435373
12	22 MWp (23 MWp Rooftop Solar + 7 MW Floating)	Energy, CRM, I&SM, CGS	20524.68
13	Green Hydrogen Plant	CRM & HSM	26000
14	Biomass substitution (7% of coal)	СРР	130740
15	Increasing the liquid Fe-Cr usage at SMS-EAF	SMS	9648
16	WHR SAF 3, 4 & 5	Ferro Alloys	19500
17	17.5 RE RTC	Energy	82782
18	RE Power in Intake Well	Energy	3000
		Total	12,59,851

### DE-CARBONIZATION PROJECTS ON BEHALF OF JINDAL STAINLESS LIMITED (FY 2023-24)



# CERTIFIED TRUE COPY OF THE RESOLUTION PASSED IN THE MEETING OF SUB COMMITTEE OF BOARD OF DIRECTORS HELD ON MAY 26, 2022.

# AUTHORISATION FOR VARIOUS MATTERS PERTAINING TO COMPANY'S ODISHA UNIT INCLUDING MINES.

"RESOLVED UNANIMOUSLY THAT in supersession to the earlier resolution passed by the sub-committee of the Board of Directors of the Company on June 15, 2016, consent of the sub-committee of the Board of Directors be and is hereby accorded to severally authorise Mr. Deepak Agrawal (Unit Head) & Mr. Awanindra Kumar Singh (Business Head) (Phase-1) & Chief Metallurgist (hereinafter collectively referred as "Authorised Persons"), on behalf of the Company, to do any and all of the following acts, things and deeds in relation to the Company's Odisha Unit including Mines:

- To file, institute, prosecute, defend, compromise, settle, withdraw, appear, depose, represent and refer to arbitration including filing of suits, petitions, matters, complaints or other initiating legal proceedings relating to land owned / occupied by or in name of the Company and / or relating to case of theft, loss, fraud, misappropriation of Company's funds / resources / material etc., which are pending / which may arise hereinafter, before the any Court or with any other judicial authority or quasi-judicial authority or Tribunal (Civil, Writ, Revenue, Criminal, Taxation or Labour, whether original or appellate jurisdiction or review or revision or execution) or District Consumer Forum or State Consumer Forum or National Consumer Forum or with any other authority;
- To sign, present and verify plaints, written statements, petitions, affidavits, counter affidavits, rejoinders, claims, objections, memorandum of appeal, revisions, petitions, counter claims and applications, settlement, other pleadings, undertakings and legal documents of all kinds and to file/submit them in any Court, judicial authority, quasi judicial authority, Tribunal, District Consumer Forum, State Consumer Forum, National Consumer Forum, Tribunal or office of any of the statutory authority;
- To pay or receive money in settlement or compromise of matters, pay court fees, legal expenses, for and on behalf of the Company;
- To appoint any advocate, pleader, solicitor or any other legal experts, to sign Vakalatnama and to obtain such legal or other professional and expert assistance or advice and to give them necessary instructions and settle their fees and expenses to take all or any effective steps in this regard, in the best interest of the Company;
- To execute / sign on behalf of the Company, necessary Application(s) returns, declarations, undertakings and any other documents as may be required, from time to time, under Central Excise Act and Rules, Finance Act, Service Tax Rules, Entry Tax Act, Value Added Tax Act, Central Sales Tax Act, Mines and Minerals (Development and Regulation) Act, 1957, and other applicable laws/regulations, for the time being in force, including any statutory modifications, amendments or re-enactment thereof and to do all acts, deeds, matters and things in connection therewith and incidental thereto; and
- To enter into, sign, perform contracts, arrangements or execute any document, application, agreement and deed or apply and / or represent to any government / non-government authority, judicial / quasi-judicial bodies including the Customs, Excise, Income Tax, Service Tax, Value Added Tax, Entry Tax, Employees' State Insurance and Provident

**Jindal Stainless Limited** 

CIN: L26922HR1980PLC010901

Gurugram Office: Stainless Centre, Plot No.- 50, Sector - 32, Gurugram - 122001, Haryana, India T: +91 124 449 4100 E: info@jindalstainless.com Website: www.jindalstainless.com Registered Office: O.P. Jindal Marg, Hisar - 125005, Haryana, India Corporate Office: Jindal Centre, 12 Bhikaji Cama Place, New Delhi - 110066, India T: +91 011-26188345, 41462000, 61462000



Fund, Land, Mines, Railway, Ports, Telephone, Electricity, Postal Authorities, Coal, Mineral and all other applicable authorities and to take appropriate steps, as may be required, necessary or expedient, for obtaining permits, approvals, sanctions, licences, consents & permissions, required from time to time, from the said Authorities.

**RESOLVED FURTHER THAT** the Authorised Persons of the Company, be and are hereby severally authorised to further delegate all or any of the powers mentioned above including matters connected therewith or incidental thereto and execute Special power of Attorney / authority letter for the said purpose, if required and is expedient, to do so;

**RESOLVED FURTHER THAT** Mr. Tarun Kumar Khulbe, Wholetime Director & Occupier of all factories of the Company including Odisha Unit, be and is hereby authorised to execute Special Power of Attorney in favour of the Authorised Persons for all or any of the above said acts, deeds, matters and things as may be necessary for the purpose and the so given be operative unless revoked or so long as the Authorised Persons are associated with / is in the employment of the Company;

**RESOLVED FURTHER THAT** a certified copy of the resolution duly signed by the Company Secretary of the Company be issued to the concerned to the authorities and they be requested to act upon the same."

Certified to be true,

For Jindal Stainless Limited Navneet Raghuvanshi Head Legal & Company Secretary

CIN: L26922HR1980PLC010901 Gurugram Office: Stainless Centre, Plot No.- 50, Sector - 32, Gurugram - 122001, Haryana, India T: +91 124 449 4100 E: info@jindalstainless.com Website: www.jindalstainless.com Registered Office: O.P. Jindal Marg, Hisar - 125005, Haryana, India Corporate Office: Jindal Centre, 12 Bhikaji Cama Place, New Delhi - 110066, India T: +91 011-26188345, 41462000, 61462000

**Jindal Stainless Limited** 

	YEAR 1	YEAR 2	YEAR 3	TOTAL	Status as an data	Amount Spent
CER ACTIVITIES (PH ISSUES)	(Rs. In Lakh)				Status as on date	(Rs. In Lakh)
Local Infrastructure Development Programme. 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 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 completed at Marutikar.	3
Construction of a pond for bathing purposes in the village of <b>Mulasir.</b>	*	15	5	20	Construction of bathing pond could not be done due to land availability. Construction of bore well completed at village Jakhapura and Ragadi.	7
Drinking water * Provision of drinking water in villages of Dhuligarh, Pankapal & Mulasir	50	*	*	50	Drinking water system with pipe line completed at Dhuligarh GP, Composite water supply done in Trijanga GP.	50
* Restoration of disconnected water supply in <b>Gardpur</b> village	10	*	*	10	Restoration work of disconnected water pipe line have been completed at village <b>Kantipur</b>	8
<b>Community Environmental</b> <b>Protection Programme</b> * 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 a massive plantation drive has been carried out at village Nuagaon.	25

# CER compliance - EC granted on 18.09.2019

Education Providing Tutition Teachers & Salary teachers for specific requirements of schools with special focus in villages of Rachlipur, Ranagundi and Pankapal.	15	10	10	35	Tuition teacher provided with salary to the school at village Danagadi and Trijanga.	15
Health					Set up of Homeopathy clinic	
Support towards establishment of a medical centre in <b>Marutikar</b> in consultation with the local administration.	18	16	16	50	work at Ollala is cancelled due land issue however in kumbhiragadia village the same is completed	8
Strengthening Malaria Eradication progrmme in <b>Marutikar.</b>	15	10	5	30	Malaria Eradication programme completed at village Chingudipal and Nagada	18
Support towards strengthening of health facilities in villages of <b>Kacherigan</b> (Kidney ailment) and <b>Trijanga</b> (health of children residing in the R & R colony)	15	10	5	30	Support is being provided in strengthening of health facility by providing medicine and doctor with mobile van at 17 nos. of villages	30
Health Assessment study for cancer & diarrhea <b>in Kumbhuria</b> and Kidney ailments in <b>Kacherigan.</b>	60	*	*	60	Health screening for villagers have been done at village Assessment study for cancer & diarrhea in Kumbhuria Kacherigan and Jakhapura. Financial assistance 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 Ragadi Polytechnic School for needy students.	60

Avenue/Urban Plantation in Buffer Zone In Gardpur, Dhuligarh, Khurunti, Rachilipur and Hadisahi	20	10	10	40	Based on the availability of land through local administration, 23,000 nos. of trees have been planted at 35 Acres of land Goshala and Telibahali.	80
Total				549		522
CER ACTIVITIES FROM NEEDS ASSESSMENT	YEAR 1	YEAR 2 (Rs. 1	YEAR 3 In Lakh)	TOTAL	Status as on date	Amount Spent (Rs. In Lakh
Drinking Water					Pipe line laying work with pump house and bore well with electrification has been completed at Manpur Patrasahi, Sulia and Kantipur village.	38
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	Pipe line laying work with pump house and bore well for water supply through Solar power system at Mantira Adivasi sahi.	12
Repair & Reinstallation of the Pump used by Villagers in <b>Kantipur</b>	5	*	*	5	Repair & Reinstallation of the Pump 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 are being collected and segregate prior to generation of Compost.	25
Support towards improvement in medical amenities in village of Sarangpur, Godigotha and Ranagundi	10	5	5	20	Support is being provided in strengthening of health facility by providing medicine and doctor with mobile van at 17 nos. of villages.	20

Development programme						
Electricity expenditure along with installation of transformer at <b>Brahman Sahi</b>	10	5	*	15	Electricity expenditure along with street light installation at Manpur road have been completed.	10
Renovation of community center used by local villagers, Media & Administration at <b>Sukinda</b> <b>Bhavan</b>	15	*	*	15	Renovation of community center used by local villagers, Media & Administration at Sukinda Bhavan have been completed.	9
* Renovation of community center used by local villagers,	15	*	*	15	Renovation of community center used by local villagers, Media & Administration at Danagadi Bhavan have been completed.	9
Media & Administration at Danagadi Bhavan	13			12	Construction of Nodal Up 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 <b>Mangobindapur</b>	10	*	*	10	Renovation of Mahila community center at Mangovindpur and Suanallo adibasi Sahi work is under progress.	14
* Construction of Shiva Temple in Kaitha Village	5	*	*	5	Construction of Shiva Temple in Kaitha Village has been completed	9
Local Skill & Vocational Training					Stainless Steel Skill	
* Stainless Steel Skill Development at Government polytechnic, Ragadi, Jajpur	25	25	25	75	Development at Government polytechnic, Ragadi, Jajpur is regularly 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 on going.	8
Total				280		219

SI.	Activity	Evidence
110.	Local Infrastructure Development Programme:	
а	Cleaning of Ponds in villages of Gardpur and Marutikar.	
b	Construction of a pond for bathing	Fore well at Jakhapura & Ragadi village
C	Electricity expenditure along with installation of transformer at Brahman Sahi	
d	Renovation of community center used by local villagers, Media & Administration at Sukinda Bhavan	
---	---	---
e		
	* Renovation of community center used by local villagers, Media & Administration at Danagadi Bhayan	- Construction of Triianga Nodal Up School boundary
f	* Renovation of community Hall in Mangobindapur	Renovation of Community center is in progress.

g	* Construction of Shiva Temple in Kaitha Village	
	Drinking water	
a	Provision of drinking water in villages of Dhuligarh, Pankapal & Mulasir	
b	Restoration of disconnected water supply	Water Pipe Line at Kantipur Village
C	Pipeline, pump house and bore well with solar power at Dankagadia Adivasi Sahi, Manatira Harijan Sahi and Village of Balungabandi and Dhapanki	

d	Repair & Reinstallation of the Pump used by Villagers in Kantipur	
	Health	
а	Support towards establishment of a medical centre in Marutikar in consultation with the local administration.	
b	Strengthening Malaria Eradication progrmme in Marutikar.	<image/>

C	Support towards strengthening of health facilities in villages of Kacherigan (Kidney ailment) and Trijanga (health of children residing in the R & R colony)	
d	Health Assessment study for cancer & diarrhea in KumbhirGaria and Kidney ailments in Kacherigan.	
e		
	Solid Waste Management in 22 Villages	



а	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	
b	Stainless Steel Skill Development at Government polytechnic, Ragadi, Jajpur	
C	Skill based training for youth groups in Dhuligarh & Kantipur	

Avenue/Urban Plantation in Buffer Zone	
In Gardpur, Dhuligarh, Khurunti, Rachilipur and Hudisahi	<image/>
Programme	









# **Annual Report**

SELF-SUSTENANCE IS THE KEY TO HAPPINESS

# **CORPORATE SOCIAL RESPONSIBILITY**

KALINGA NAGARA, JAJPUR JINDAL STAINLESS FOUNDATION



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Gouri Patra of Khurundi village in Danagadi Block in Jajpur district has made a name for herself by implementing modern methods of mushroom cultivation. Mushroom cultivation is more profitable than other businesses. Gouri Patra, 36, of Sai Shree SHG says: "We constructed 500 beds in 2014 and have been earning about ₹4, 50,000/ per year by selling the mushrooms, with a net profit of about ₹3, 00,000/ year. I am appreciative of Jindal Stainless Foundation's assistance in providing me with training, raw materials, and marketing space to launch and expand the business. I believe that mushroom farming is a viable and successful endeavor for us as a means of subsistence because it only requires two hours of my time every day, rather than requiring me to go out and work all day. Gouri adds with a smile: "I can now take care of my homes and kids and make money at the same time. The outcomes have greatly boosted my confidence and motivated me to carry on with my mushroom cultivation. My spouse has been assisting me with marketing and raw material purchases and is fully supportive of the venture. Growing mushrooms has given us the way to a happy life. We built my house with the money we earned through this venture, and we have been able to support our three girls financially for their education.

Mrs. Gouri Patra, Khurundi, Danagadi



I started goat cultivation in 2016 with four goats, with

support from Jindal Stainless Foundation. The number of goats has increased to 35 in the last eight years. Every year, I earn Rs. 1, 50,000 to Rs. 2, 00,000 only from selling goats. Jindal Stainless Foundation has provided all the required support in terms of goat procurement, vaccination, and marketing goats at good prices. With the help of goat rearing, I have been able to significantly improve my family's socioeconomic standing in terms of educating my grandchildren, partially building a house, and supporting my son in running the household. We no longer need to borrow money from the village leader to cover our expenses. We are grateful to the Jindal Stainless Foundation for showing us this virtuous path at a critical juncture of our lives. **Ms. Dasama Munda, Telibahali** 



Life left me alone when my husband moved away from me at one point of time. I had to embrace the pain and suffering every day to maintain my two small kids. Then, Jindal Stainless Foundation was a blessing in disguise for me and pulled me from the pool of sorrow and showed me a path to live a contented, self-sufficient existence. I received six-month tailoring courses from the Jindal Stainless Foundation-supported tailoring training center at Danagadi and acquired stitching skills, particularly for blouses and ladies' clothing. With a little financial support from my parents, I started a tailoring shop at Kamakshya Nagar, Dhenkanal, which fetched me good earnings regularly. After deducting all expenses, including electricity, shop rent, and the honoraria for the two employees who work in my shop, my monthly income is currently between Rs. 20,000 and Rs. 25,000. I live with my in-laws at the moment and support my husband financially as well as my two kids' education. I am grateful to Jindal Stainless Foundation for this tailoring training, which has made my life happier. *Mrs.Nandini patra, Kamakshya Nagar, Dhenkanal* 



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There was a time when my family was struggling to meet its ends. We were poverty-stricken. Thanks to the support of Jindal Stainless Foundation for supporting us in terms of solar power irrigation systems, seeds, fertilizer, and training support to start vegetable cultivation. Now we cultivate varied vegetables in 0.75 acres of our land and earn Rs. 1, 70,000 to Rs. 2, 00,000 every year. The income has enabled us to smoothly nurture our family. We are grateful to Jindal for showing us the right path at a pivotal point in our existence.

Mrs.Pravati Biswas Benaapatia. Danaaadi



# A few noteworthy events from the year in brief

### Addiction Free Campaign- A Mission towards "Nasha Mukt" Odisha



On 4<sup>th</sup> May 2023 the Honourable President of India, Smt Droupadi Murmu, launched a year-long campaign – Addiction Free Odisha (Nashamukta Odisha) at Rairangpur, Odisha. Jindal Stainless had joined this noble cause by becoming a primary sponsor of this initiative. As a part of this campaign, **Rajyog Education and Research Foundation (a wing of Prajapita Brahmakumari)** had organized a number of awareness campaigns in the shape of workshops, roadside shows, seminars, and pledge drives in Sundargarh, Balasore, Dhenkanal, Nawarangpur, Cuttack, Jajpur, Bargarh, Mayurbhanj and Sambalpaur districts covering about 40,000 people raise awareness of the negative impacts of addiction. The initiative is a component of the Government of India's larger "Nasha Mukt Bharat" project, which aims to educate the public about drug abuse through a variety of awareness-raising events. The Government of India and the Brahma Kumaris have teamed up to accomplish this goal, and Jindal Stainless Limited has fully supported the project to ensure its state-wide dissemination. From the day of its start, the program had witnessed enthusiastic participation of all individuals irrespective of castes, creeds, and religions.

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# Visit of Mrs. Deepika Jindal, Chair Person, Jindal Stainless Foundation to CSR Project sites

On 19<sup>th</sup> February-24, Mrs. Deepika Jindal Chairperson of the Jindal Stainless Foundation had visited the company's various CSR initiatives in Jajpur and interacted with the project beneficiaries. She witnessed the women managing profitable enterprises and crafting exquisite items. Mrs. Jindal had visited the women-run Sahaja Sanitary Napkin Production Unit, the Sanjeevni Spice Unit, and the Asmita Production Centre and interacted with the members involved with these trades. She also witnessed various applique products exhibited by the trainees of the Applique Art Training Centre, Alekhapur. Her presence is a living example of our unwavering commitment to improving the lives of people dwelling in surrounding communities.





## **Project SAMARPAN @ Glance**

It is a fact that if we haven't worn clothes for more than a year, then it's time to let them go. But instead of throwing them away or just accumulating them in some corner of the house for no reason, why not donate them to the needy and poor? Reaching out to the needy is the moral responsibility of every individual. Under the banner of the project Samarpan," the CSR team of Jindal Stainless Foundation had collected washed clothes and other items, segregated them, and distributed them to the underprivileged and vulnerable community. Our employees dwelling at Spring Ville and Manpur Complex had donated their old clothes and other old household items to distribute among the poor and needy. The initiative was started in August-23, and attracted many JSL employees to participate in this gracious endeavour with enthusiasm and fervour. Numerous impoverished individuals in the vicinity have expressed their happiness as a result of this great effort.



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## **Observation of the Birth Anniversary of Shri OP Jindal Ji**

On August 7–23, Jindal Stainless organized a Blood Donation camp inside its plant premises to observe the 93rd Birth anniversary of our founder, Shri O P Jindal. The camp was organized in association with the Red Cross Blood Bank team. Mr. Deepak Agarwal, Head of the plant, was present at the camp and encouraged the employees to donate the blood. A total of 320 units of blood was collected during the camp. After garlanding Shri O.P Jindal's statue, a team comprising CSR, ER, and HR staffs had distributed lunch and bedsheets to the disabled people of Shanti Bhawan at Jajpur Road and fruits and sweets to the inmates of Leprosy Colony and hospitals at Danagadi and Jajpur Road.



### **Battery Driven Vehicle Donated to Puri Railway Station**

In order to facilitate the transportation of the elderly, physically challenged, and ill person between the Puri Railway Station and the Jagannath Temple, Jindal Stainless Limited, Kalinga Nagar, donated two battery-driven cars to the Puri Railway Station authority in the month of June-23. The initiative paved the way for these people to travel Jagganath temple without any charges. The Puri Railway Authority has been exercising good oversight over the vehicle's operations. Numerous thousands of Jgannath followers have been made happy by this gracious endeavour of the company. This noble initiative has received attention from various print media as well as from many dignified personalities of the state and beyond.

#### Jindal Stainless provided battery powered vehicle



elp transport eld-lisabled and sick ns free of charge. Sukant Kumar Head of Social Department tainless Limi aniess Limited, gar, Mr. Arvind of Logistics lent, and Mr. Kumar of Social Wel-partment was e D nded over The bat-y operated vehicle to



n the the sion of Rath ratra .On this oc Railway Departmen have lauded the phila Sukant Kumar d of CSR, ex ied the opinion that opic progra travel without any hin-drance. Mr. Rath an hanse tery operated vehicle to unanced that this ve-Puri Railway Division nounced that this ve-Mr. SK Padhi. Seniori hicle will be run entirely Chief Depot Officer under the direct supernt of Jaga th-le ing de sense of sp cance to th of spirit



### Relief Work at Train Accident site, Bahanaga

On June 2, 2023, a railway disaster happened close to Bahanaga Railway Station in Balasore district of Odisha. Near the Bahanaga Bazar Rly. Station, the Coromandel Express veered off the main line and onto the passing loop at full speed, colliding with a freight train. A little over 300 passengers perished and 1,000 were hurt in the mishap. The CSR team along with Logistic Department (Train) had arrived at the site of the accident and provided assistance to the injured persons in collaboration with JSL's Administrative Department. The company had deployed five of its buses as a measure to provide hassle-free transportation for affected people. Food packets were provided to train victims for two days.





# Celebration of International Women's Day with Commitment to Empowerment and Inclusivity

Commemorating International Women's Day, Jindal Stainless Foundation had hosted a special series of events at its Kalinga Nagar setup in Odisha, showcasing initiatives dedicated to empowering and uplifting women, while also emphasizing Jindal Stainless Limited's commitment to promoting inclusivity, diversity, and gender equality in the communities surrounding its operations. The event was graced by renowned, Mrs. Archana Das, Block Chairperson, Dangadi block who brought her valuable insights as Chief Guest. Also, among the distinguished guests were Mrs Pragyan Mahala, Social activist, Cuttack, Mrs. Anita Agarwal, President Jindal Ladies Club, and Mrs. Kagaji Patra, Sarpanch Trijanga GP. The day was marked by a range of cultural activities highlighting the pivotal role of women in driving positive change within their communities. The cultural activities performed by the women and girls had left the entire audience spellbound. The thundering applause that had vibrated throughout the entire auditorium was nothing to be surprised about but to be believed. Honouring women Sarpanch and SHG members for their exemplary service to the community was another highlight of the event. The guests and officials discovered immense joy in the exhibition of SHG-made products, which was another attraction of the event adding a valuable feather to our cap. Finally, the women were given awards for their exquisite cultural programs and significant

contributions to the sphere of the entrepreneurship program.







### Children's Literature Festival: -Unleashing Intuitiveness of Rural Children



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Ankur Children's Literature Festival was organized at Danagadi Bhavan Jajpur Road on December 16, 2023 with much fervour and gaiety. With over 120 participants, the festival had witnessed active engagement of students in diverse activities such as story-telling, poetry making, theatre, arts and craft, and puppet-making. Storytelling nurtures imagination; poetry-making enhances creative expression; theatre promotes confidence and communication skills; art and crafts foster fine motor skills; and puppet-making stimulates creativity and storytelling abilities among students. When taken as a whole, these exercises help students grow holistically and improve their language comprehension and usage. The campaign also aims to raise awareness and instil a sense of culture in the hearts of the students. The festival was formally inaugurated by JSL Plant Head Mr.Deepak Agarwal. Mrs. Arachana Das Chairperson of Danagadi Panchayat Samiti bestowed prizes and certificates to all participants at the end of the event.

# Jindal Stainless Foundation empowers adolescent girls and young women through sports and play

Jindal Stainless Foundation organized a community women sports event on 20<sup>th</sup> January-24 in which more than 300 women and girls from different villages participated in various traditional sports events and won prizes. Jindal Stainless Foundation strongly believe that women those participate in sports, besides improving their physical and mental health, are more likely to overcome biases, feel empowered and develop leadership skill.



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# CSR ACTIVITIES OF JSL, JAJPUR @GLANCE (2023-24) Education & Skill Development

#### Village Library

In an attempt to promote information literacy in villages, Jindal Stainless Foundation has established

a learning hub for the local community at Hudisahi in Dangadi block in the form of a village library. About 1000 people, including children, youth, and senior citizens, from the surrounding communities had visited the library during the year, perused a range of publications, and broadened their knowledge on a wide range of topics. A reader's assemblage was held on 23<sup>rd</sup> June-23 in which 36 young people had attended and presented their thoughts on the benefits of the village library in terms of expanding their knowledge base in various areas. 147 new books were provided to the village library during the year. To assist local



youth in gaining computer skills, the Village Library has a self-learning computer education centre in place. Prajapita Brahma Kumari Iswariya Viswavidyalaya had conducted a series of spiritual sessions at the village Library to assist people in lowering their stress levels and enhancing their mental tranquillity.

#### **SS Fabrication Project**

These days, stainless steel has become one of the materials that are most frequently utilized in India

and other countries. Jindal Stainless Limited and the Government Polytechnic, Jajpur, had inked an MOU to train students to be innovators in the SS fabrication industry. In order to provide practical training to the students, the Stainless Steel Demo Van, equipped with a generator and all welding, finishing, and cutting tools, was stationed at the Govt. Polytechnic Institute, Jajpur Road, from May 5 to May 9, and conducted onsite demonstrations for the students. The initiative has helped about 40 students at the institute develop the skills necessary to fabricate stainless steel

products effectively. A total of 40 students had received training on SS Fabrication during the year. As a part of an exposure visit program, Students had visited Govt. ITI, Jajpur and acquired enormous skills on application of various improved welding machineries. In addition, a range of academic exercises were carried out to bring out the latent abilities of the students.

#### Education Project at Budharaj Bidyapitah

In an effort to provide the students of Budharaja High School in Danagadi with a top-notch education,

Jindal Stainless Foundation has provided two prominent and experienced teachers to the school. The teachers are teaching science and computer classes to students in Classes VIII, Class IX and X under the direction of the school administration. In addition to teaching the students, the teachers also organized the **Suravi** Programme, conducted debates, and quiz competitions, and prepared the students ready for science exhibitions during the period. In



addition to teaching computer skills, the computer instructor encouraged students to participate in a bingo game to spark their interest in indoor gaming. About 1000 students benefitted from the project this year. Under the Computer education program, 180 students were taught computer operation skill.

### **Sports Promotion**

### Football coaching at Sukinda Mines

In a bid to nurture young football talent from remote locations in the mining area, Jindal Stainless

Foundation runs a Football coaching centre at Sukinda Mines, where 16 children from the locality are undergoing training under the tutelage of an expert trainer. During the year, the trainees practiced various games such as iced short runs, ball dribbling, ball push passes, heading, tackling a long ball, and rapid jingling. Moreover, the coach, Bhakul Majhi, participated in a renowned Football tournament namely "the Maa Khadurai Sourik



Football Tournament" on behalf of Kalarangi Football Club, Sukinda, and claimed the victory. This has led to enhanced efficiency in Football games for children. The Children's also participated in several friendly tournaments and demonstrated their effective sporting skill.

#### Football Coaching at Sudeva Football Academy, New Delhi

The Jindal Stainless Foundation has been putting several programs into place to encourage the athletic prowess of the local youngsters dwelling in surrounding villages. Five local tribal youngsters were receiving football coaching from Sudeva Football Academy in New Delhi, with the goal of enabling their skillset to play football to the best of their abilities. The trainees spent more time in the gym and

practiced football in the early morning and late afternoon as part of this training to keep themselves physically and mentally fit. The Sudeva football club played the inaugural inter-state Football Tournament in Jammu & Kashmir and claimed the victory. Bijay Champia and Bhanja Kishore Hansda from Jajpur showed their best play



during the match. The Sudeva Junior Football Team visited Bhutan in the month of November 23 and played two friendly matches against the Bhutan National Team, in which the Sudeva Junior team triumphed in both games. Sudeva also played in Bhutan with the Paro Football Club and won the game. Sudeva team also played several tournaments with some reputed Foot clubs in Delhi and beyond and won all the tournaments with good scores. After completing training, three trainees returned to their homes in the month of March 24 and two are playing various national-level tournaments in Delhi.

#### **Entrepreneurship Development**

#### **Beauty and Wellness Training Centre**

The Indian cosmetics and beauty products segment has been witnessing steady growth over the years. In order to provide skillsets for women and girls in the beauty and wellness aspects, Jindal Stainless Foundation has set up a Beauty and wellness training centre at Dhabalagiri. During the year, 619 clients received beauty and wellness services in terms of threading, facials, clean-ups, hair spas, hair cutting, etc. from the Beauty and Wellness Training Centre. Ten local girls are pursuing Beauty and Wellness training under the centre, and more girls are on the way to signing up for it. During this period, the trainees learned about different types of hair color, facials, hair spas, hair cutting, etc. In order to acquire more skills in the beauty and wellness aspects, the beauty and wellness instructor attended a one-day "Look and



Learn" seminar at Puri, which was organised by international makeup exporter Alpa Rajgor, artist Raju Orpe, hairstylist export Uday Takke, and Bollywood prostatic artist Amod Doshi.

#### **Electrical Training**

In an attempt to give young people skills that would increase their prospects of getting employment,

Jindal Stainless Foundation has started providing electrical training at Danagadi, enrolling ten students. Jindal Stainless Foundation thinks that in the near future, its program will assist in upskilling the youth and provide them with greater economic options. As part of their training, the trainees practiced repairing exhaust fans, mixer grinders, pedestal fans, connecting and installing inverters, wall fans, ceiling fans, and changeover switches on a regular basis. The trainees also regularly learnt how to install refrigerators, wire electric irons, and connect two-way switches. After completion of electrical training, tool kits containing a Tool Bag, Electrical Tool Kit, and Odia Electrical Books were provided to each trainee.



#### JIIT Electricals Workshop

Jindal Stainless Foundation has been running one electrical workshop at Danagadi under the brand JIIT Electrical over the past year. As a part of its work, the workshop repairs the defective wiring, sets up the geyser, installs LED lights, fits the switchboard, locates wiring faults in the panel board and the faulty MCB, and performs other electrical maintenance and repair jobs in the surrounding villages and Jajpur Road. During the period, orders were received from various agencies like Kanakalata Apartment, Kusunpur BHIL Residence Danagadi, JSL, TATA JUSCO, and Geeta Filling Station Singagadia to accomplish various electrical works. These efforts have resulted in leverage of Rs. 7,62,754/--for the unit during the year.





#### JIIT Computer Training Centre

Jindal Stainless Foundation has established two computer education centres in Dangadi and Duburi

under the name JIITC in which 291 students were pursuing computer education in different computer courses. During the course of the year, students in batch 1 of the advanced computer course studied MS Word and MS Excel, while students in batch 2 studied MS Paint, Notepad, WordPad, and MS Word. In OSCIT and OSCIT-A, students studied the online course and home module of MS Word in theory as well as practical. A carom board competition was held among the students, in which



16 students participated. Celebrations like Ganesh Puja, Gandhi Jayanti, etc. were conducted with the enthusiastic participation of students. A twenty day's training program on computer operation for Master Book Keepers (MBK) deployed in various Gram Panchayats (GPs) by the Odisha Livelihood Mission (OLM) was held in the month of December in which 21 MBKs received training on MS WORD, EXCEL, POWERPOINT, Google applications and all online websites which are required for them. Various measures like Van campaign, campaigning at the Examination centers, student counseling in different schools, opening spoken English courses, etc. were undertaken to increase the enrolment of students in the centers. After completing the Computer course, 29 students have got placement opportunities in various commercial setups.

#### Certificate Distribution Ceremony at JIIT Computer Training Centre, Duburi

The JIIT Computer Education Centre, Duburi, conducted the certificate distribution ceremony on May

20, 2023, when sixty young people from the Dangadi and Sukinda blocks were given certificates by the institute for having completed the JRPY (Job Readiness Programme) course. The course, which spanned from November 6, 2021 to July 31, 2022, had the overarching goal of preparing young people for the job market by providing them the employability and life skills they need in addition to other crucial abilities required to secure reputable jobs. The District Mineral Foundation provided funds for the programme, which is operated by a



partnership with OKCL (Odisha Knowledge Corporation Ltd.). During the training session, the students obtained information on digital skills, soft skills, and freelancing.

### SAHAJA Project @Glance

The Jindal Stainless Foundation has established a sanitary napkin manufacturing unit at Dangadi under

the brand name "SAHAJA" in an effort to solve the issues related to personal hygiene for women and adolescent girls. Five female members of the Self-Help Group (SHG) from adjacent villages are manufacturing and selling sanitary pads through the group and shops nearby. The team demonstrated the sanitary napkin's absorption capacity to adolescent girls, SHG members, Anganwadi workers, and ASHA workers during a series of awareness events held in villages like Solei, TRC, Kantipur, Manatira, and Rabana during this period. In the month of September 23, the unit received an order from SHG members in Nuagaon, Sundargarh, and supplied 1000 sanitary pads. The unit manufactured 4086 units of sanitary pads and sold 3805 units through various channels during the year.



#### **Integrated Health**

#### Static Health Care Centre

To deliver comprehensive primary health care services closer to the homes of people living in surrounding villages, a static health care centre has been operating at Trijnaga Rehabilitation Colony (TRC) Dangadi. Free consultations and medications were given to 4238 individuals from different villages during the period to treat ailments like peptic illnesses, *j*, coughs, fevers, loose motion, skin infections, and joint pain. Additionally, 33 Senior citizens and sick people of JSL Rehabilitation Colony received doorstep medical



support as part of the home visiting arrangement, and 30 critical patients were referred to CHC Danagadi for improved treatment. The month-wise patients details are as follows.

TRC STATIC CLINIC 2023-24						
MONTH	No. Of PATIENT					
April	344					
May	326					
June	293					
July	334					
August	348					
September	345					
October	326					
November	369					
December	385					
January	421					
February	362					
March	385					

#### Mobile Health camp

The Jindal Stainless Foundation organized weekly health camps at the villages of Asanabahali, Mantira Mundha Sahi, Kaitha, Manpur Mundha Sahi, Rungurunga, Kantipur , Kantipur , Kuhuika, Kankadapala and Ransol throughout the reporting period as part of its mobile health care efforts. A total of 4189 patients with ailments such as joint pain, loose motion, fungal infections, upper respiratory tract infections, fevers, coughing, and injuries received free consultations and treatment. Aside from this, the residents of these villages were made aware of



various healthcare aspects as a measure to prevent the onset of multiple ailments and keep them disease-free. The below table presents an organized overview of patient information sorted by month.

MOBILE HEALTH CARE UNIT 2023-24 (PATIENT DATA)										
VILLAGE		SEDT	ОСТ	NOV	DEC		EED	MAD	CUMULATIVE	
VILLAGE	700	JEFT	001		DLC		TLD	MAN	DATA	
ASANABAHALI	92	110	104	151	120	218	161	79	1035	
MANATIRA	47	25	20	44	20	60	24	24	212	
MUNDASAHI	47	35	50	44	30	00	54	24	512	
ΚΑΙΤΗΑ	243	196	114	148	37	270	283	128	1419	
MANAPUR	26	26	10	24	10	26	E 1	24	217	
MUNDASAHI	50	20	10	24	10	30	51	24	217	
RUNGURUNGA	26	112	143	108		142	111	160	802	
KANTIPUR	14	25	16	24		27	10	57	272	
COLONY	14	35	40	54		57	49	57	272	
ΚυΗΙΚΑ								36	36	
KANKADPAL								68	68	
RANSOL								28	28	
Total	458	514	447	509	205	763	689	604	4189	

#### Sunstroke Awareness meeting

In order to raise awareness among the villagers about Sunstroke, Jindal Stainless Foundation conducted sunstroke awareness meetings at Manpur, Sanbahali, and TRC Hudisahi colony in the month of May 23. The meetings provided information on the causes, symptoms, and preventive measures against the Sunstroke. One hundred SHG leaders from these villages took part in the training and enhanced their awareness of sunstroke.

#### Awareness Programme on Health and Hygiene

The goals of the programme are to improve health and hygiene habits among women, Adolescent girls, and schoolchildren; to motivate them to use and maintain sanitation facilities in schools and communities; to instill better hygiene habits; and to assist people in realizing the importance of maintaining good health and hygiene to live a disease-free life.Keeping this in mind, Jindal Stainless Foundation conducted a series of health and sanitation awareness programme in the villages of Rungurunga,





Asanabahali, and Kaitha in which 155 participants, comprising women, school-aged children, adolescent girls, and others, attended and gained knowledge about multiple topics concerning health and sanitation.

#### **Observation of Breast Feeding Week**

Jindal Stainless Foundation, in association with ICDS, Danagadi Block observed the World Breastfeeding Week (1–7 August) at Rugurunga,

Asanabahali, Mantira Mundha Sahi, Kaitha, and TRC colony. As part of the observation, members of Self-Help Groups (SHGs), lactating mothers, pregnant women, and adolescent girls were sensitized to the benefits of breast milk and how it works as ideal nutrition for infants. In line with the theme of the year *let's make breastfeeding and work, work!*—the programs focused on sensitizing the community to the importance of breastfeeding new-born children for at



least up to six months. About 200 women and adolescent girls had attended the program and gained more insight into the importance of breastfeeding.

#### **Celebration of International Yoga Day**

The greatest method for achieving both physical and mental wellness is now yoga. It is now acknowledged as the most effective method for letting go of our negative energy and embracing optimism in life. Considering the importance of practicing Yoga in daily life, on 21st June-23 Jindal Stainless Foundation celebrated International Yoga Day at ASMITA Training Centre Danagadi with much fervor and enthusiasm. The trainees of the ASMITA Training Centre and, JSF Medical Team had participated in this yoga session and practiced Yoga. The aim of the program was to motivate staff



members to get into the regular practice of yoga to keep themselves physically and mentally fit. *Menstruation Hygiene of Adolescent Girls* 

To provide menstrual hygiene awareness for rural girls of menstrual age, Jindal Stainless Foundation

had organized a series of Menstruation Hygiene awareness meetings in various villages throughout the year. The main aim was to develop a menstrual hygiene awareness program to empower rural girls and young women by dispelling misconceptions, as well as encouraging more sanitary menstrual practices, and studying the impact of the intervention itself. The program focused awareness on the health impact caused by lack of menstrual hygiene. The aim was to improve health with better sanitation practices, raise self-esteem, and empower girls and women by initiating



dialog on the taboo topic of menstruation. The program was followed by the free distribution of sanitary pads to 978 Adolescent girls. A total of 1323 adolescent girls nourished the benefits of the initiative.

#### **Observation of World AIDS Day**

As a measure to spread awareness about the dreadfulness of HIV/AIDS, Jindal Stainless Foundation observed Worlds AIDS Day on 1st December 2023 at Kaitha and TRC (Hudisahi) village. The same event was also conducted inside the JSL Plant premises with the objective of spreading awareness among the truckers. The event witnessed the wearing of Red Ribbon, distributing books and leaflets on HIV/AIDS, distributing condom packets to Truckers etc. A quiz competition on HIV/ AIDS was also conducted among the truckers followed by distributing prizes to successful contestants. The theme for AIDS Day was **Let Communities Lead.** 

#### Pulse Polio Immunization Program

The JSL CSR Department had volunteered its support in arranging the Pulse Polio Immunization program in villages through the provision of a JSL ambulance from March 3-5 2024, at the request of the Medical Officer of CHC Danagadi. The ambulance was utilized to transport vaccines to several booth locations across the Danagadi block. To ensure that a sizable number of beneficiaries benefited from the mission, the CSR health care team arranged the camps in JSL peripheral communities in collaboration with the Pulse Polio Team of Govt. of Odisha.

#### Cancer Awareness Week

To make people aware of the causes, symptoms, and prevention of Cancer, the Health team of Jindal Stainless Foundation organized Cancer awareness program at Hudisahi, Asanbahali, Asmita Training center, Kaitha, Rungrunga, and Kantipur Rehabilitation Colony on 5<sup>th</sup>, 6th, 7th, 8<sup>th</sup>, 10th and 11th February respectively in which 327 people including women, Youth members and elderly people of these villages participated enthusiastically. The drive aimed at promoting greater awareness of cancer prevention, timely detection, and care. The initiative was



focused on enhancing the quality of life with the Sustainable Development Goal (SDG) of Good Health & Well-being (SDG 3).







#### **Elimination of Disability from Clubfoot**

Jindal Stainless Foundation in association with CURE India NGO has been executing the Clubfoot program at Sardar Vallabhbhai Patel PGI Pediatrics Sishu Bhawan and Sriram Chandra Bhanja (SCB) with the support of Jindal Stainless Foundation. As part of this project, 135 children with clubfoot disabilities are being identified and added to the treatment protocol. Parents of the children are receiving counselling at all three levels in order to achieve 0% dropout rates. Additionally, awareness-raising initiatives have been launched in neighbouring towns, schools, diagnostic facilities, and other establishments. After conferring with the headmaster of the school, Sarpanch of various GPs, Cure has set up fifteen seed banks on the school premises and seven nutrition forests in nearby villages. Moreover, the cure team has effectively planted 27,520 seeds in the project area



since the program's initiation as a preventive measure against the Clubfoot.

#### **Gender Equality and Women Empowerment**

#### **Expanding Market of SHG Products**

Jindal Stainless Limited (JSL) has been working on a project called "Expanding Market of SHG Products"

as part of its CSR initiative. The project's goal is to help women's SHGs have a reliable source of income by assisting them in reaching a wider market for their goods through value addition, competitive pricing, packaging, and branding. The principal achievements of the project during the year are listed below.

1-The baseline survey data for 110 SHGs was completed in the month of April 23.

2-Capacity Building Training of Sanjeevani, Asmita, and Sahaja members on Book-keeping, Costing, Marketing, and Bank Finance was being conducted by ICCo NGO on 07<sup>th</sup> June 2023 at JSL Guest house, Manpur. Mr. Smruti Ranjan Nayak from ICCo had imparted training to the trainees.



3-Training on product design and quality control measures was imparted by the professional designer from ICCo on 27<sup>th</sup> and 28<sup>th</sup> June 2023 at Asmita Training centre, Danagadi.

4- Thirty-two potential vendors were listed for selling of Sanjeevani spices, and their database was also developed.

5- On September 15, 2023, at JSL Guest House in Manpur, the second capacity-building training for Sanjeevani, Asmita, and Sahaja staffs and members of the production group was held. The training was imparted by Mr. Ajata Kumar Sahoo from Bhubaneswar, who has extensive knowledge and skill in FPO and FPC with SHG

promotion and financial and marketing connectivity.

6-20 members from the ASMITA training centre had participated in a four-day training course on clothing cutting, designing, and marketing. They obtained the necessary skills for sewing *kurtas* of different designs and other products from waste materials.

7- FSSAI License for Sanjeevani Turmeric Powder obtained from the Food and Safety Department, Govt of Odisha.

8- Sanjeevani Members went for an exposure visit to Kandhamal and Jharsuguda to see the Turmeric and Chilli cultivation.

#### **Income Generation Activities**

With a larger goal of bringing about a noticeable change in the lives and livelihoods of women SHG members operating in Dangadi block of Jajpur district, Jindal Stainless Foundation has given handholding support to several SHGs to start Income-Generating Activities (IGAs) and become financially independent. As a result, 238 SHG members have engaged in various Income income-Generating Activities (IGAs) like wheat grinding, sheep and goat husbandry, poultry farming, mushroom farming, and other allied activities with tremendous fervor and effectiveness. As a measure to promote mushroom cultivation in the area, 2036 bottles of mushroom seeds were supplied to 32 mushroom growers in 10 villages, leading to the production of 2045 kg of mushrooms during the year. To promote the Bio Flock Fish Farming Unit with the support of the Fishery Department, an exposure visit of SHG members was organized, in which 12 SHG members from six SHGs participated. The CSR team regularly followed up on each IGA and provided the support and guidance they needed to boost business volume. Below is a thorough breakdown of the revenue generated by the Income Generation units.

Name of Income	Month-wise Income (INR)											Total	
Generation Activities	April	May	June	July	August	Sept.	October	Nov	Dec	January	February	March	(INR)
Mushroom	35640	24800	61000	81600	79180	54000	56200	28750	29300	28500	16100	30450	525520
Goat	173600	124200	163900	118700	155500	170080	172500	187500	142300	131300	204050	258490	2002120
Sheep	45700	14800	21800	16950	21900	24700	11300	10500	13100	22600	15000	32100	250450
Poultry	13750	16450	13750	48900	20520	12780	14500	16350	17500	12050	20130	18250	224930
Dairy (Milking)	4950	4260	5502	5123	5715	5752	220	4450	4503	5134	3615	3510	52734
Wheat grinding	19800	17040	20460	20492	22840	22968	8520	7850	18012	20536	14460	14040	207018
Other IGA	1088740	1105260	10388515	1065204	1071720	1099218	1131950	1210850	1268689	1295703	1247222	1695703	23668774
Loan Leverage	1300000	1700000	3000000	2500000	4850000	2900000	2600000	3800000	5400000	4100000	2600000	2910000	37660000
Total	2682180	3006810	13674927	3856969	6227375	4289498	3995190	5266250	6893404	5615823	4120577	4962543	64591546



#### Mushroom Training to SHG members in Sukinda

With an objective to provide entrepreneurial opportunities to women, Jindal Stainless Foundation had conducted a one day Mushroom training at Sukinda village in which 30 women members from three SHGs participated. Jindal Stainless Foundation had provided Mushroom spawn to set up the Mushroom beds. The women had shown keen interest in mushroom farming which has good income generating potential in the area. This training, being conducted in phases, includes basics of the mushroom farming techniques, the process to start the farming, and how to take it forward with market linkage to make it a sustainable venture. Mrs. Sasmita



from Jindal Stainless Foundation had imparted training to these SHG members.

#### Asmita Boutiques

The initiative is meant to improve the social and economic conditions of unemployed women and girls by imparting skills in boutique techniques and finding a market for selling of their products. Three Asmita Boutique centres are presently running in Dhabalagiri, Rabana, and Kaitha villages with good business profitability. The boutique centre running at Dhabalagiri had received a good quantity of orders from local vendors during the year. Presently, few women and girls from the nearby villages are enrolled in the training at Kaitha Boutique training centre due to the effectiveness of the trade.



In order to help local women develop their \_ expertise in the tailoring trade and become economically self-sufficient Jindal Stainless Foundation has been operating tailoring training centers

in the villages of Alekhapur, Danagadi, Ranagundi, and Sukinda mines. Over the course of the time, 165 trainees completed the Tailoring course and acquired skills in cutting and sewing Rumal frocks, long umbrella-style frocks, two types of nightgowns, Kurti plane tops etc. In a bid to augment Soft skill expertise of trainees, several group discussion sessions on various topics such as Marketing, Customer Management, conflict resolution etc. were



conducted with enthusiastic participation of trainees. A two-day sewing machine repair and maintenance training program was also held at Alekhapur and Asmita production centers, Danagadi in collaboration with USHA International on March 5–6, 2024, wherein 80 girls and women acquired extensive knowledge on hardware aspects of the sewing machine. Moreover, adding feather to its cap Jindal Stainless Foundation have successfully connected 10 Tailoring pass-out trainees of Alekhapur and Rangaundi Tailoring Training Centres in Shahi Export for doing stitching job with a monthly remuneration of Rs.10,000/- Rs.14,000/- plus other facilities.

\*\*\*\*

# Appliqué Training

Applique is a special craft of Odisha where a patch of coloured cloth cut in different motifs is fixed on another cloth by stitching to produce elegant articles. These are the most decorative items used for beautifying walls, covering instruments, household articles, luxurious goods, etc. In order to promote this craft, Jindal Stainless Foundation has been providing applique training to 30 women and girls from **Alekhapur** Village in Danagadi block of Jajpur District since December 2022, with a focus on making them economically self-reliant. The women involved in this vocation are learning applique skills enthusiastically and are making various applique articles like handkerchiefs, money purses, mobile covers, cushion covers, wall hangings, patchwork bags, etc. which have gained wide popularity in the area. In the month of September, an exposure visit of trainees was organized wherein 20 trainees along with the trainer visited Puri and acquired extensive knowledge of applique work. The appliqué works done by the ladies and girls of Alekhapur village caught the attention of several visitors who visited the Applique Training Centre during the period. The team received orders of Rs.56,000/- from different vendors from Odisha and beyond to supply various applique items.



### ASMITA @ Glance

(a,b)

The key members of Asmita had met with the principal, Ekalavya Adarsha Vidyalaya, and the Mission Shakti Department at Danagadi and explored supplying students' uniforms to different schools through SHGs. The team also took part in several meetings organized for their capacity building. Apart from this, the team supplied a sizeable quantity of safety Jackets to various Vendors as per their orders. Major jobs carried out by the team and revenue generated during the year are as follows:

Name of the Items	Production (Qty)	Revenue generated (INR)		
Safety Jackets	7930 Pcs	2662745		
Uniforms	830 Pairs	124500		
Total		2787245		





# Updates on Electric Rickshaw

Three SHGs in Dangadi Block have received electric auto rickshaws from Jindal Stainless Foundation. It gives the SHG members great pleasure to drive these electric rickshaws around their local communities as an income generation activity. In addition to helping with schooling and plant worker transportation, the electric rickshaw has been handling emergencies in rural areas. The following details relate to the income that Self-Help Groups (SHGs) received from running E-Rickshaws during the year:-





# **Rural Development Project**

# Doubling Farmers Income project @ Glance

The key achievements of the project during the year are as follows.

1-28 Training Programs and 56 farmers meetings/interactions were conducted on the appropriate package of practices, training on land preparation and sowing practices, training on nutrition management, training on insect and pest management, training on post-harvest management with covered 1322 farmers respectively on Groundnut, Paddy, Maize and various seasonal vegetable crops such as Bitter Gourd, Brinjal, Cucumber, Cauliflower, etc. with enthusiastic participation of farmers.

2- More than 2500 field visits in a year and provided necessary guidance to the farmers on all focused crops and seasonal vegetables.

3-One-on-one interaction/sessions to raise awareness on soil testing, water testing, drip irrigation, and others was carried out in 70 villages with participation of 1800 farmers.

3- The project promoted groundnut, maize, paddy, and vegetables which are recommended for the region by agriculture experts and also as per the demand of farmers. The team also ensured that farmers were given guidance regarding the appropriate dosage for these inputs to avoid overuse. 4- A total of 1350 Farmers were provided genuine seed and quality inputs for all the major crops grown in the area as per the farmers' requirements and demand.

5- Distributed crop protection inputs to 355 farmers to prevent/control weeds and pests (insects and diseases) in all the focused crops.

6- Developed linkages with the Advanta paddy seed and provided a demonstration to the farmers.

- Seed 180 kg
- Farmers 60
- Acreage 60





### **Environment and Ecological Sustainability**

#### **RO Drinking water system**

The project was initiated with the goal of providing clean drinking water to school students. There are seven RO drinking water systems installed in seven schools. A total of 4850 students in all are reaping the fruits of the endeavor.



#### Plastic Waste Collection Drive on World Environment Day 2023

On the occasion of World Environment Day 2023, a Plastic Waste Collection Drive was implemented by Greer Dream Foundation in association with Jindal Stainless Limited, Jajpur to ensure mass awareness among the plant workers and employees and provide them a platform to dispose of all their plastic waste responsibly. On 5<sup>th</sup> June 2023 with the active participation of employees and workers, more than 1100 kg of plastic waste was collected across nine booths set up within the JSL plant premises and Manpur complex. The collected waste was sent for responsible recycling for creating utility products like benches and bins that would be deployed at multiple locations in Jajpur. Participants were awarded gifts such as stationary items and SS bottles to motivate them to Switch to Stainless products, reuse reusable plastic, and say no to single-use plastic.







#### Waste Management Project

The key highlights of the project during the period are as follows:

1-The Waste collectors continued the collection from Solei, Singagadia, Danagadi road and Danagadi Village as per the scheduled timing. As of March 2024, more than 71 % of households participated in Solei, more than 84% of households participated in Singagadia, more than 68% of shops participated in Danagadi Road and more than 57% of households participated in Danagadi Village.The Daily Average Collection of Wet Waste was 65 Kgs while the daily Average Collection of Dry Waste was 29 kg.

2-As the output of organic compost being made from wet waste has been regularized, we explored handing over the compost in eco-friendly bags (with JSF and GDF branding) to the communities to enhance their connection with the Waste Management project..

3- On August 18th, the project team interacted with women members in Solei village who are actively participating in segregating waste at the source and giving dry and wet waste to waste collectors during the regular waste collections. Women shared their understanding regarding the proper segregation of waste and the environmental impacts of its disposal. Appreciation certificates were handed over to the ladies as a recognition for their support of the program and behavioural changes towards proper waste disposal in collection tricycles.

4-To ensure our staff and the facility are adequately protected from fire hazards, a portable fire extinguisher of 4 kg capacity was installed at the MRF in August.

5- From November 2023 to February 2024, three clean-up drives were conducted at three prime locations (1. Danagadi Road; 2. Solei; 3. Singagadia) to drive a notion of how sustainable and proper waste disposal practices impact the traditional and modern perception of community.

6-Until February 2024, 6.3 tonnes of dry waste have been collected and 4.2 tonnes of waste have been channelized for recycling.



#### **Plantation Activities @ Glance**

As a part of our plantation initiative, Jindal Stainless Foundation planted 350 plants of forest and horticultural varieties inside Manatira Secondary School premises. An awareness meeting about the significance of tree plantations was held on the school premises, in which about 300 students and their teachers participated in the event and planted the saplings vigorously. Similarly, 200 saplings were planted on the premises of the government polytechnic in Ragadi. To preserve the age-old traditional healthcare practices of the state, an herbal garden containing 107 nos. of medicinal plants of seven varieties was planted on the premises of Kumbhiragadia High School, Kumbhiragadia, in March-24.





#### **Employee volunteering activity**

On 26<sup>th</sup> December-23, Jindal Stainless Foundation organized a financial literacy program at Jakhapura village in which 49 women SHG members from Jakhapura and nearby villages participated. Mr. Sujit Kumar Prusty from the Finance Department of Jindal Stainless Limited had attended the program as a Resource Person and shed light on different aspects of financial literacy such as operating savings bank accounts, safe handling of Credit and Debit cards, safe online money transfers, etc.. Online fraud in cyber security includes online scams, spam, identity theft, fraud buying products online from your account without your knowledge, identity spoofing, etc. was also briefly discussed during the event.



#### Media Coverage

# JSL DONATES ELECTRIC CARS FOR ELDERLY, DISABLED DEVOTEES

on and Jagar

#### ମହାନବୀ ମଝରେ । ହଠାତ୍ର ମେସନ୍ ଅଚଳ ହୋଇଗଲା ଯାହ୍ରୀମାନେ ଅଭଯୋଗ କରଛନ୍ତ ଜିନ୍ଦଲ ଷ୍ଟେନଲେସ ଲିମିଟେଡର ସଫେଇ ଅଭିଯାନ

ବ୍ୟାସନଗର(କିସ୍ତ୍ର): ଜିହଲ ଷ୍ଟେନଲେସ ଲିମିଟେଡ ଡରଫର ଆବର୍ଚ୍ଚନା ସଫେର କାର୍ଯ୍ୟକମ ଦାନଗଦ୍ଧୀ ସିତ ସୋଲେଇ ଗାମରେ ଅନୁଷ୍ଠିତ ହୋଇଯାଇଛି। ଅଭିଯାନରେ ସୋଲେଇ ଏବଂ ସିଙ୍ଗଗଡିଆ ଗ୍ରାମର ୫୫ ଜଣ ସ୍ୱେଚ୍ଛାସେବୀ ଅଂଶଗ୍ରହଣ କରି ଗ୍ରାମର ମୁଖ୍ୟରାସ୍ଥା ସହିତ ବିଭିନ୍ନ ଗଳି ରାସ୍ତା ଗୁଡିକୁ ଆବର୍ଚ୍ଚନା ମୁକ୍ତ କରାଯାଇଥିଲା। ଏଥିସହିତ ଗ୍ରାମ୍ୟ ପରିବେଶକୁ ଆବର୍ଚ୍ଚନା ମୁକ୍ତ ରଖିବା ପାଇଁ ଲୋକଙ୍କୁ ପରାମର୍ଶ ଦିଆଯାଇଥିଲା। ସଫେର କାର୍ଯ୍ୟକ୍ରମ ସହିତ ରାସ୍ତା ତୁଇ ପାଶର୍ବରେ ଥିବା ନାଳନର୍ଦ୍ଧମା ଗୁଡ଼ିକରେ ବର୍ଷବର୍ଷ ଧରି ପତି ରହିଥିବା ଅଳିଆ ଆବର୍ଚ୍ଚନାକୁ ପରିଷାର କରି ବ୍ରିଟିଙ୍ଗ ପାଉତର ସିଞ୍ଚନ କରାଯାଇଥିଲା । ଜିନ୍ଦଲ ସିଏସଆର ବିଭାଗ ତରଫରୁ ଏହି କାର୍ଯକ୍ରମର ଲକ୍ଷ୍ୟ ଓ ଉଦେଶ୍ୟ ସମ୍ପର୍ଭରେ ସମସ୍ଥଙ୍କୁ ମାଧ୍ୟମରେ ପ୍ରତିଦିନ ଗ୍ରାମ ତୃତିକରୁ



ଅନଗର କରାଇକା ମରେ ସେହାସେବୀ ସଂସ୍ଥା ଗୀନତୀମ ଫାଇନ୍ଡେସନ ର ଅଧିକାରୀଙ୍କ ତଦ୍ୱାବଧାନରେ ସଫେଇ କାର୍ଯକ୍ରମ ଆରମ୍ଭ ହୋଇ ୮୬୫ କିଗ୍ରା ଆବର୍ଜନା ସଂଗ୍ରହ କରାଯାଇଥିଲା । ପ୍ରକାଶଥାଉକି ଳିନ୍ଦଲ ଷ୍ଟେନଲେସ ତାର ସିଏସଆର କାର୍ଯକମ ମାଧ୍ୟମରେ ସୋଲେଇ. ସିଙ୍ଗାଗଡିଆ, ଦାନଗଦୀ ସ୍ୱକ୍ତିତ ଗ୍ରାମ ଗୁଡିକରୁ ବର୍ଚ୍ଚବସ୍ଥୁ ପରିଚାଳନା ପ୍ରକଳ୍ପ କାର୍ଯକାରୀ କରି ଆସୁଛି। ଏହି ପ୍ରକଳ୍ପ

ଆବର୍ଜନା ସଂଗ୍ରହ କରିବାସହିତ ଗାମବାସୀ ଓ ବିଦ୍ୟାଳୟର ଛାଡ଼ଛାଡ଼ୀ ମାନଙ୍କୁ ବର୍ଚ୍ଚବସ୍ଥୁ ପରିଚାଳନା ସମ୍ଭକ୍ଷରେ ସଚେତନତା କରାଯାଉଛି। ଏହି କାର୍ଯକ୍ରମ ମାଧ୍ୟମରେ ଓଦା ଅକିଆ ରୁ ଭଚକୋଟିର ଖତ ପ୍ରସ୍ତୁତ କରିଗାମିମହିକା ମାନଙ୍କୁ ପରିବା ଚାଷ ନିମତେ ଯୋଗାଇ ବିଆଯାଇଛି। ଏଥିପାଇଁ ଏକ ବର୍ଚ୍ଚବସ୍ତୁ ପରିଚାକନା କେନ୍ଦ୍ର ନିର୍ମାଶ କରାଯାଇ ଏଥ୍ରେ ୮ଜଣ ବ୍ୟକ୍ତିଙ୍କୁ ନିୟୁକ୍ତି ପଦାନ କରାଯାଇଛି।

### ବିଗ୍ୱବାଣା

ଶନିକାର ୨୧ ଅକ୍ଟୋକର, ୨୦୨୩ ଭୁକନେଶ୍ୱର

#### ଜିନ୍ଦଲ ଷ୍ଟେନଲେସ ଲିମିଟେଡ ସିଏସଆର ହାରା ବକ୍ଷ ରୋପଣ କାଯ୍ୟକ୍ମ

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# **Environmental Monitoring Report for the Period**

# **October - 2023 to March - 2024**

# **INDEX**

- A. Stack Analysis
- B. Ambient Air Quality
- C. Noise Monitoring
- D. Ground Water Quality
- E. Treated Effluent Quality At Final Collection Point
- F. Fugitive Air Emission



# A. Stack Analysis:

# Particulate Matter (PM):

Monitoring Results of Stack Analysis											
		Monthly Average Concentration of Particulate Matter (mg/Nm <sup>3</sup> )									
SI. No.	Sampling Stations	Oct23	Nov23	Dec23	Jan24	Feb24	Mar24	Permissible limit			
1	FAP (SAF – 3)	46.3	52.2	48.1	43.8	40.6	48.2				
2	FAP (SAF – 4 & 5)	42.6	54.3	62.2	49.2	43.4	36.4				
3	SMS (EAF Furnace Stack)	32.8	34.6	27.3	32.5	38.4	18.2	100			
4	SMS (AOD Furnace Stack)	39.4	37.2	30.7	39.8	24.7	44.7				
5	CRM (Shot Blaster Stack)	75.6	70.8	71.3	79.6	76.4	72.2				
6	CPP- 1	42.6	38.2	39.5	40.2	38.2	39.7	50			
7	CPP - 2	39.3	39.8	41.0	37.1	43.6	41.4	50			

# Sulphur Dioxide (SO2):

Monitoring Results of Stack Analysis								
		Monthly Average Concentration of Sulphur Dioxide (mg/Nm <sup>3</sup> )						
SI. No.	Sampling Stations	Oct23	Nov23	Dec23	Jan24	Feb24	Mar24	Permissible limit
1	FAP (SAF – 3)	50.2	57.9	55.3	54.2	43.4	37.6	
2	FAP (SAF – 4 & 5)	43.1	49.1	51.7	43.5	52.3	46.8	
3	SMS (EAF Furnace Stack)	42.2	38.2	38.0	30.4	32.8	30.6	-
4	SMS (AOD Furnace Stack)	33.7	32.6	35.5	32.6	36.2	40.2	
5	CRM (Shot Blaster Stack)	18.2	15.4	14.5	12.8	10.4	10.0	
6	CPP-1	227.4	218.3	221.0	218.2	226.2	234.8	600
7	СРР - 2	213.3	221.8	218.0	197.6	238.4	227.3	


# Oxide of Nitrogen (NOx):

	Monitoring Results of Stack Analysis											
		Mont	Monthly Average Concentration of Oxide of Nitrogen (mg/Nm <sup>3</sup> )									
Sl. No.	Sampling Stations	Oct23	Nov23	Dec23	Jan24	Feb24	Mar24	Permissible limit				
1	FAP (SAF – 3)	37.8	45.8	57.9	52.2	52.3	44.2					
2	FAP (SAF – 4 & 5)	39.2	47.8	57.2	50.8	58.2	52.0					
3	SMS (EAF Furnace Stack)	51.8	44.8	46.8	50.6	40.2	39.4	_				
4	SMS (AOD Furnace Stack)	55.8	49.7	51.7	46.7	44.1	48.1					
5	CRM (Shot Blaster Stack)	22.5	21.6	26.4	18.8	17.8	22.4					
6	CPP- 1	141.1	133.8	152.0	97.3	105.8	97.2	300				
7	CPP - 2	126.4	118.7	134.0	114.2	98.6	104.4	500				

## **B. Ambient Air Monitoring Report:**

#### AAQ near Nursery

	Parameters		Monthly Average concentration									
SI. No.		Oct23	Nov23	Dec23	Jan24	Feb 24	Mar 24	Permissible limit				
1	PM <sub>10</sub> μg/m <sup>3</sup>	73.6	71.8	73.4	71.7	70.2	73.8	100(24 Hrs)				
2	$PM_{2.5}\mu g/m^3$	26.1	25.4	25.6	23.2	24.3	26.2	60 (24 Hrs)				
3	$SO_2 \mu g/m^3$	17.4	17.0	16.8	29.1	29.3	25.8	80(24 Hrs)				
4	$NO_x \mu g/m^3$	16.1	15.8	15.4	13.4	13.7	13.4	80(24 Hrs)				
NB:	NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel											
	found to be bel	ow detection	on limit (BD	L).								



#### AAQ near Security Barrack

C	Parameters		Monthly Average concentration									
51. No.		Oct23	Nov23	Dec23	Jan24	Feb 24	Mar 24	Permissible limit				
1	$PM_{10}\mu g/m^3$	81.7	82.4	80.8	77.4	72.6	84.6	100(24 Hrs)				
2	$PM_{2.5}\mu g/m^{3}$	29.8	30.8	28.6	28.4	21.3	32.2	60 (24 Hrs)				
3	$SO_2  \mu g/m^3$	26.3	27.4	25.4	27.2	27.6	29.2	80(24 Hrs)				
4	$NO_x \mu g/m^3$	20.2	21.6	20.2	25.3	25.4	25.4	80(24 Hrs)				
NB:	NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benzopyrene, Arsenic & Nickel											

found to be below detection limit (BDL).

#### AAQ near CPP Area

CI			Monthly Average concentration									
SI. No.	Parameters	Oct23	Nov23	Dec23	Jan24	Feb 24	Mar 24	Permissible limit				
1	$PM_{10}\mu g/m^3$	78.8	79.2	78.0	67.6	77.4	80.2	100(24 Hrs)				
2	$PM_{2.5}\mu g/m^{3}$	27.2	28.6	27.4	29.4	34.6	31.8	60 (24 Hrs)				
3	$SO_2  \mu g/m^3$	24.5	24.8	23.8	20.5	27.9	27.9	80(24 Hrs)				
4	$NO_x \mu g/m^3$	18.6	19.6	18.8	21.6	21.6	21.6	80(24 Hrs)				
NB:	Parameters suc found to be belo	h as Lead, ( ow detectio	Ozone, Amm on limit (BD)	ionia, Benz L).	ene, Benz o	o pyrene, A	rsenic & N	ickel				

#### AAQ near Tata Corner

CI		Monthly Average concentration									
SI. No.	Parameters	Oct23	Nov23	Dec23	Jan24	Feb 24	Mar 24	Permissible limit			
1	PM <sub>10</sub> μg/m <sup>3</sup>	76.3	78.4	77.2	69.3	71.2	78.8	100(24 Hrs)			
2	PM <sub>2.5</sub> μg/m <sup>3</sup>	26.9	27.9	26.8	24.3	33.4	39.0	60 (24 Hrs)			
3	$SO_2 \mu g/m^3$	23.8	24.2	23.4	25.0	23.2	23.2	80(24 Hrs)			
4	$NO_x \mu g/m^3$	17.1	17.6	17.6	16.9	15.8	14.8	80(24 Hrs)			
NB:	NB: Parameters such as Lead, Ozone, Ammonia, Benzene, Benz o pyrene, Arsenic & Nickel found to be below detection limit (BDL).										



## **C. Noise Monitoring Report:**

#### a. Ambient Noise Monitoring Data

	Noise Level Monitoring Results at Different Locations of the Plant									
CI				Mon	thly Ave	erage Noi	se Level			
51. No.	Location	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Permissible limit		
				DAY	<b>TIME</b>					
1.	At Nursery	67.3	68.2	68.8	68.4	70.0	69.4			
2.	At Security Barrack	71.3	72.2	70.6	72.6	72.0	73.5			
3.	At Rohit Gate	72.4	72.8	73.2	74.0	73.0	72.2	75 dB(A)		
4.	At Tata Corner	68.4	69.2	68.4	70.3	70.0	71.4			
	·			NIGH	T TIME	·				
1.	At Nursery	54.4	54.2	54.0	55.6	56.0	56.8			
2.	At Security Barrack	59.2	58.8	56.4	58.2	56.4	57.4			
3.	At Rohit Gate	53.7	54.6	55.2	55.7	55.0	58.4	70 dB(A)		
4.	At Tata Corner	54.8	54.2	54.3	54.8	54.0	55.1			

# b. Work Zone Noise Monitoring Data

	Noise Level Monitoring Results at Different Locations of the Plant										
			Mont	hly Avera	age Nois	e Level (	Leq in d	B(A) )			
Sl no	Location	0ct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Permissible limit			
1	Near 60 MVA furnace	79.2	80.6	80.0	81.6	82.2	82.6				
2	Near 27.6 MVA furnace	80.9	79.4	79.8	80.8	80.4	81.8				
3	Near Briquette plant office	78.6	79.6	79.6	80.1	80.6	80.1				
4	Near Jigging Plant - I	73.7	80.1	80.6	80.2	80.8	80.6				
5	Near EAF (SMS)	76.2	78.2	78.6	77.2	78.6	78.2				
6	Near AOD (SMS)	81.8	81.4	81.6	82.2	81.8	82.4				
7	Near Scrap Yard (SMS)	81.3	80.6	81.2	82.6	80.4	81.7				
8	Shot Bluster (CRM)	79.2	76.8	79.7	80.3	80.6	80.8				
9	Boiler Room (CRM)	78.6	79.2	78.8	79.5	79.2	80.2				
10	Compressor Room (CRM)	78.3	79.8	80.6	80.9	80.4	80.6				
11	HAPL Exit gate – I (CRM)	67.6	79.4	77.3	78.8	78.4	79.0	85 dB(A)			
12	Control Room (CPP)	74.8	75.5	77.2	78.2	78.0	76.8				
13	Near ESP (CPP)	79.9	80.4	80.1	81.2	82.6	82.6				



14	Near Cooling Tower(CPP)	77.1	80.3	80.6	80.8	82.8	82.4
15	Near Boiler - 1 & 2 (CPP)	80.6	81.2	81.1	82.1	82.4	82.4
16	T G Building (CPP)	81.1	79.9	80.4	82.4	83.0	82.0
17	Compressor Room (CPP)	80.2	80.0	79.9	81.8	82.0	82.6
18	Near Compressor Room	77.5	81.1	80.9	81.6	81.4	82.0
19	Near 600KVA DG Set at 60 MVA Furnace area	76.8	78.8	79.2	79.8	79.6	80.3
20	Near 600 KVA DG Set at 27.6 MVA Furnace area	78.6	79.1	79.6	80.1	80.6	80.6

# D1. Ground Water Quality: March'24

Sl.	Parameter	Limit as per	IS 10500 :2012	Date of sampling: 25.03.2024		
No.	Tarameter	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	7.4	7.6	
4	Turbidity, NTU	1	5	<1.0	<1.0	
5	Total dissolve solid, mg/l	500	2000	196.3	203.0	
6	Total Hardness (as CaCO3), mg/l	200	600	48.6	54.6	
7	Iron (as Fe), mg/l	1.0	1.0	0.2	0.4	
8	Chloride (as Cl), mg/l	250	1000	38.7	52.2	
9	Residual Free Chlorine, mg/l	0.2	1.0	<0.1	<0.1	
10	Fluoride (as F), mg/l	1.0	1.5	<0.1	<0.1	
11	Calcium (as Ca), mg/l	75	200	30.2	38.1	
12	Magnesium(as Mg), mg/l	30	100	12.4	18.3	
13	Copper(as Cu), mg/l	0.05	1.5	< 0.02	< 0.02	
14	Manganese (as Mn), mg/l	0.1	0.3	<0.05	<0.05	
15	Sulphate (as SO <sub>4</sub> ), mg/l	200	400	6.2	17.4	
16	Nitrate (as NO <sub>3</sub> ), mg/l	45	45	14.6	10.3	
17	Phenol (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	0.001	0.002	< 0.002	< 0.002	
18	Mercury,(as Hg), mg/l	0.001	0.001	<0.001	<0.001	
19	Cadmium (as Cd), mg/l	0.003	0.003	<0.01	<0.01	
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	< 0.01	< 0.01
25	Anionic Detergents (as MBAS), mg/l	0.2	1.0	<0.1	<0.1
26	Total Chromium (as Cr), mg/l	0.05	0.05	< 0.05	<0.05
27	Mineral Oil, mg/l	0.5	0.5	< 0.2	< 0.2
28	Total Alkalinity( as CaCO <sub>3</sub> ), mg/l	200	600	64.4	76.8
29	Aluminium (as Al ), mg/l	0.03	0.2	< 0.01	< 0.01
30	Boron (as B), mg/l	0.5	1.0	< 0.1	< 0.1
31	Nickel (as Ni), mg/l	0.02	0.02	< 0.02	< 0.02
32	Molybdenum (as Mo), mg/l	0.07	0.07	<0.05	<0.05
33	Coliform Organisms, (MPN/100ml)	Nil	Nil	Absent	Absent
34	E Coli (MPN/100 ml)	Nil	Nil	Absent	Absent

N.B:- GW1: Tube well near Manpur Haulting Colony, GW2: Tube well near Visa Railway Crossing

# D2. Ground Water Quality: April'24

SI.	Daramatar	Limit as per 1	IS 10500 :2012	Date of sa 23.04	Date of sampling: 23.04.2024		
No.	i ai ametei	Acceptable Limit	Permissible limit	GW3	GW4		
1	Colour, Hazen Units	5	15	<5	<5		
2	Odour	Agreeable	Agreeable	Agreeable	Agreeable		
3	рН	6.5 - 8.5	6.5 - 8.5	7.2	7.3		
4	Turbidity, NTU	1	5	<1.0	<1.0		
5	Total dissolve solid, mg/l	500	2000	285.2	358.6		
6	Total Hardness (as CaCO₃), mg/l	200	600	129.5	178.4		
7	Iron (as Fe), mg/l	1.0	1.0	0.24	0.26		
8	Chloride (as Cl), mg/l	250	1000	11.6	147.6		
9	Residual Free Chlorine, mg/l	0.2	1.0	<0.1	<0.1		
10	Fluoride (as F), mg/l	1.0	1.5	0.2	0.4		
11	Calcium (as Ca), mg/l	75	200	58.1	72.2		
12	Magnesium(as Mg), mg/l	30	100	34.3	104.3		
13	Copper(as Cu), mg/l	0.05	1.5	< 0.02	< 0.02		
14	Manganese (as Mn), mg/l	0.1	0.3	<0.05	<0.05		
15	Sulphate (as SO <sub>4</sub> ), mg/l	200	400	19.4	59.6		
16	Nitrate (as NO <sub>3</sub> ), mg/l	45	45	1.9	39.1		

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17	Phenol (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	0.001	0.002	< 0.002	< 0.002
18	Mercury,(as Hg), mg/l	0.001	0.001	<0.001	<0.001
19	Cadmium (as Cd), mg/l	0.003	0.003	<0.01	<0.01
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	< 0.01	< 0.01
25	Anionic Detergents (as MBAS), mg/l	0.2	1.0	<0.1	<0.1
26	Total Chromium (as Cr), mg/l	0.05	0.05	<0.05	<0.05
27	Mineral Oil, mg/l	0.5	0.5	< 0.2	< 0.2
28	Total Alkalinity( as CaCO <sub>3</sub> ), mg/l	200	600	72.4	117.8
29	Aluminium (as Al ), mg/l	0.03	0.2	< 0.01	< 0.01
30	Boron (as B), mg/l	0.5	1.0	< 0.1	< 0.1
31	Nickel (as Ni), mg/l	0.02	0.02	< 0.02	<0.02
32	Molybdenum (as Mo), mg/l	0.07	0.07	<0.05	< 0.05
33	Coliform Organisms, (MPN/100ml)	Nil	Nil	Absent	Absent
34	E Coli (MPN/100 ml)	Nil	Nil	Absent	Absent

 $\textbf{N.B:-}\ \text{GW3:}\ \text{Bore well at Captive Power Plant}$  ,  $\ \text{GW4:}\ \text{Bore well at Ferro Alloy Plant}$ 



# E. Treated Effluent Quality At Final Collection Point:

#### Table E1:

SI.		Norm as per G.S.R.	October-2023	November-2023
No.	PAKAMETEK	Surface water)	Date of Sampling - 18.10.2023	Date of Sampling – 25.11.2023
1	Colour & Odour	Colourless & Odourless	<5 & Agreeable	<5 & Agreeable
2	Suspended Solid, mg/l	100	63.4	67.4
3	Total Dissolved Solids, mg/l	2100	559.6	523.4
4	pH Value	5.5 to 9.0	7.78	7.67
5	Temperature, ºC	Shall not exceed by + 5°C	25.6	24.9
6	Oil & grease, mg/l	10	<5.0	<5.0
7	Total Res. Chlorine, mg/l	1	ND	ND
8	BOD (3 days at 27°C), mg/l	30	17.3	19.5
9	COD, mg/l	250	69.7	68.5
10	Hexavalent chromium (as Cr <sup>6+</sup> ), mg/l	0.1	<0.01	<0.01
11	Cyanide (as CN), mg/l	0.2	<0.02	<0.02
12	Fluoride (as F), mg/l	2	1.2	1.5
13	Sulphide (as S) mg/l	2	<1.0	<0.1
14	Phenol (as $C_6H_5OH$ ), mg/l	1	<0.05	<0.05
15	Iron (as Fe), mg/l	3	1.1	1.3
16	Nitrate Nitrogen, mg/l	10	5.3	4.8
17	Dissolved Phosphate, mg/l	5	1.1	1.2
18	Arsenic, mg/l	0.2	< 0.004	< 0.004
19	Lead, mg/l	0.1	<0.01	<0.01
20	Zinc, mg/l	5	<0.01	<0.03
21	Mercury, mg/l	0.01	<0.004	<0.004
22	Total Chromium, mg/l	2	0.4	0.6
23	Copper, mg/l	3	<0.05	<0.02
24	Nickel, mg/l	3	<0.05	<0.05
25	Manganese, mg/l	2	0.02	<0.05
26	Vanadium, mg/l	0.2	<0.2	<0.2
27	Selenium, mg/l	0.05	<0.001	<0.001
28	Bio-assay test	90% survival of fish after 96 hr. in 100% effluent	92%	93%



## Table E<sub>2</sub>:

Sl.	ΡΔΡΔΜΕΤΕΡ	Norm as per G.S.R.	December -2023	January -2024
No.	I ANAME I EN	Surface water)	Date of Sampling – 29.12.2023	Date of Sampling – 12.01.2024
1	Colour & Odour	Colourless & Odourless	<5 & Agreeable	<5 & Agreeable
2	Suspended Solid, mg/l	100	60.4	62.8
3	Total Dissolved Solids, mg/l	2100	584.6	657.0
4	pH Value	5.5 to 9.0	7.78	7.6
5	Temperature, ºC	Shall not exceed by + 5°C	23.9	23.8
6	0il & grease, mg/l	10	<5.0	<5.0
7	Total Res. Chlorine, mg/l	1	ND	ND
8	BOD (3 days at 27°C), mg/l	30	16.4	10.4
9	COD, mg/l	250	62.8	48.8
10	Hexavalent chromium (as Cr <sup>6+</sup> ), mg/l	0.1	<0.01	<0.01
11	Cyanide (as CN), mg/l	0.2	<0.02	<0.02
12	Fluoride (as F), mg/l	2	1.4	1.2
13	Sulphide (as S) mg/l	2	<1.0	<0.1
14	Phenol (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	1	<0.05	<0.05
15	Iron (as Fe), mg/l	3	1.4	1.8
16	Nitrate Nitrogen, mg/l	10	5.2	6.8
17	Dissolved Phosphate, mg/l	5	1.8	3.8
18	Arsenic, mg/l	0.2	< 0.004	< 0.004
19	Lead, mg/l	0.1	<0.01	<0.01
20	Zinc, mg/l	5	<0.01	<0.01
21	Mercury, mg/l	0.01	<0.004	<0.004
22	Total Chromium, mg/l	2	0.1	0.2
23	Copper, mg/l	3	<0.02	<0.02
24	Nickel, mg/l	3	<0.05	<0.05
25	Manganese, mg/l	2	<0.05	<0.05
26	Vanadium, mg/l	0.2	<0.2	<0.2
27	Selenium, mg/l	0.05	<0.001	<0.001
28	Bio-assay test	90% survival of fish after 96 hr. in 100% effluent	93%	93%



# <u>Table E<sub>3</sub>:</u>

Sl.	DADAMETED	Norm as per G.S.R.	February - 2024	March - 2024
No.	FARAMETER	Surface water)	Date of Sampling – 24.02.2024	Date of Sampling – 25.09.2023
1	Colour & Odour	Colourless &	<5 &	<5 &
		Odourless	Agreeable	Agreeable
2	Suspended Solid, mg/l	100	68.4	68.9
3	Total Dissolved Solids, mg/l	2100	621.2	782.0
4	pH Value	5.5 to 9.0	7.62	7.78
5	Temperature, <sup>0</sup> C	Shall not exceed by + 5°C	25.6	27.1
6	Oil & grease, mg/l	10	<5.0	<5.0
7	Total Res. Chlorine, mg/l	1	ND	ND
8	BOD (3 days at 27ºC), mg/l	30	16.2	14.8
9	COD, mg/l	250	68.6	72.4
10	Hexavalent chromium (as Cr <sup>6+</sup> ), mg/l	0.1	<0.01	<0.01
11	Cyanide (as CN), mg/l	0.2	<0.02	<0.02
12	Fluoride (as F), mg/l	2	1.2	1.4
13	Sulphide (as S) mg/l	2	<1.0	<1.0
14	Phenol (as $C_6H_5OH$ ), mg/l	1	<0.05	<0.05
15	Iron (as Fe), mg/l	3	1.3	1.8
16	Nitrate Nitrogen, mg/l	10	4.6	5.4
17	Dissolved Phosphate, mg/l	5	3.0	3.2
18	Arsenic, mg/l	0.2	< 0.004	< 0.004
19	Lead, mg/l	0.1	<0.01	<0.01
20	Zinc, mg/l	5	<0.01	<0.01
21	Mercury, mg/l	0.01	<0.004	<0.004
22	Total Chromium, mg/l	2	0.8	1.0
23	Copper, mg/l	3	<0.02	<0.02
24	Nickel, mg/l	3	<0.05	<0.05
25	Manganese, mg/l	2	<0.05	<0.05
26	Vanadium, mg/l	0.2	<0.2	<0.2
27	Selenium, mg/l	0.05	<0.001	<0.001
28	Bio-assay test	90% survival of fish after 96 hr. in 100% effluent	93%	93%



# F. Fugitive Air Emission:

	Monitoring Results of Fugitive Air Emission											
		Concen	Concentration of Particulate Matter Below 10 micron as $PM_{10}$ (µg/m <sup>3</sup> )									
Sl. No.	Sampling Stations	Oct23	Nov23	Dec23	Jan24	Feb24	Mar24	Permissible limit				
1	Near 60 MVA furnace of FAP	814.3	866.4	809.4	782.3	892.2	827.6					
2	Near 27.6 MVA furnace of FAP	795.8	802.7	825.3	820.5	876.4	857.4					
3	Near ESP of CPP	727.9	788.6	792.1	468.7	789.5	800.8					
4	Near main entrance of CRM	817.5	762.8	720.9	418.9	742.5	897.8					
5	Near De-dusting area of SMS	793.4	785.0	811.3	567.3	844.8	780.6					
6	Near RMHA of CRMHS	635.3	685.4	702.6	387.2	424.2	524.2					

Appendix - B

# Online Monitoring Report for the Period October - 2023 to March-2024

# **INDEX**

- A. Continuous Ambient Air Quality Monitoring Report
- B. Continuous Emission Monitoring Report
- C. Effluent Quality Monitoring Report

# A. Continuous Ambient Air Quality Monitoring System (CAAQMS) report:

		Monthly Average concentration								
SI. No.	Parameters	Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per SPCB		
1	PM <sub>10</sub> (μg/m <sup>3</sup> )	58.61	55.81	59.52	71.52	69.93	53.97	100(24 Hrs)		
2	$PM_{2.5} (\mu g/m^3)$	45.35	36.71	37.08	43.83	35.70	29.67	60 (24 Hrs)		
3	$SO_2 (\mu g/m^3)$	44.52	42.95	34.05	38.87	37.41	48.19	80(24 Hrs)		
4	NO <sub>x</sub> (µg/m <sup>3</sup> )	13.33	13.33	13.35	13.36	13.36	13.35	80(24 Hrs)		
5	CO ( µg/m <sup>3</sup> )	0.60	0.77	0.76	0.99	0.77	0.66	02 (08 Hrs)		

# Location - Near Nursery

#### Location - Near Security Barrack

		Monthly Average concentration								
Sl. No.	Parameters	0ct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per		
								SPCB		
1	PM <sub>10</sub> (μg/m <sup>3</sup> )	62.25	76.18	82.12	57.30	66.89	63.55	100(24 Hrs)		
2	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	32.79	44.17	26.97	18.18	15.66	24.12	60 (24 Hrs)		
3	$SO_2 (\mu g/m^3)$	25.92	26.82	29.21	27.26	27.42	26.18	80(24 Hrs)		
4	NO <sub>x</sub> (µg/m <sup>3</sup> )	29.54	34.40	36.93	23.05	25.16	26.90	80(24 Hrs)		
5	CO (µg/m <sup>3</sup> )	0.36	0.40	0.41	0.61	0.41	0.32	02 (08 Hrs)		

#### Location - Near CPP

	Parameters	Monthly Average concentration								
Sl. No.		0ct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per SPCB		
1	PM <sub>10</sub> (μg/m <sup>3</sup> )	45.97	59.62	58.37	67.64	53.42	50.68	100(24 Hrs)		
2	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	30.30	36.67	31.75	49.40	25.51	32.62	60 (24 Hrs)		
3	$SO_2(\mu g/m^3)$	31.92	32.67	33.54	35.55	36.94	30.06	80(24 Hrs)		
4	$NO_x(\mu g/m^3)$	21.56	21.60	21.58	21.62	21.61	21.62	80(24 Hrs)		
5	CO <sub>(</sub> µg/m <sup>3</sup> )	0.63	0.70	0.70	0.92	0.68	0.59	02 (08 Hrs)		

#### Location - Near Tata Corner

		Monthly Average concentration								
SI.	Parameters							Permissible		
No.		Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	limits as per		
								SPCB		
1	$PM_{10} (\mu \sigma/m^3)$	73 99	62 17	44 30	49.60	72.03	59.91	100(24		
	ι M <sub>10</sub> (μg/ m )	73.77	02.17	11.50	17.00	72.03	0,1,1	Hrs)		
2	PM <sub>2.5</sub> (μg/m <sup>3</sup> )	43.59	52.23	12.06	14.26	21.45	21.75	60 (24 Hrs)		
3	$SO_2 (\mu g/m^3)$	35.06	36.95	43.38	37.25	39.05	40.42	80(24 Hrs)		
4	NO <sub>x</sub> (µg/m <sup>3</sup> )	11.07	11.00	10.17	11.18	11.18	11.15	80(24 Hrs)		
5	CO ( µg/m <sup>3</sup> )	0.40	0.47	0.50	0.66	0.45	0.36	02 (08 Hrs)		

		n of PM,	1, SO <sub>2 &amp;</sub> NO <sub>x</sub> (mg/Nm <sup>3</sup> )						
Sl. No.	Sampling Stations	Parameter s	0ct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissibl e limits as per SPCB
1	FAP (SAF - 3)	РМ	51.00	58.90	17.21	7.94	9.72	26.88	
2	FAP (SAF – 4 & 5)	РМ	49.78	52.61	46.33	39.76	37.66	27.85	
3	FAP (SAF – 4 & 5) New	РМ	36.52	14.74	23.93	28.36	35.46	13.22	100
4	SMS (EAF Furnace Stack)	РМ	9.39	10.72	11.05	14.37	11.09	15.11	100
5	SMS (AOD Furnace Stack)	РМ	56.10	58.15	51.53	48.95	43.45	36.16	
		РМ	43.93	42.01 9	39.92	38.95	38.77	38.41	50
6	CPP-1	SO <sub>2</sub>	215.30	232.5 2	213.18	233.13	233.28	228.87	600
		NOx	83.69	83.42	78.25	83.99	83.86	84.41	300
		РМ	45.76	42.90	39.24	42.81	40.76	39.27	50
7	CPP - 2	SO <sub>2</sub>	233.52	231.12	216.50	232.39	233.15	234.84	600
		NOx	97.93	97.22	91.96	97.60	97.82	98.33	300
8	CRM Comboline	РМ	23.56	17.58	17.11	12.22	18.23	18.69	30
9	Pellet_Plant	РМ	Not installed	0.16	8.38	11.33	9.48	9.9	30

# B. Continuous Emission Monitoring System (CEMS) report:

# C. Effluent Quality Monitoring System (EQMS) report:

				Monthl	y Average	concentra	tion	
SI. No.	Parameters	Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per SPCB
1	TSS	18.08	18.03	18.12	19.67	19.02	19.32	0 - 100.0 mg
2	рН	7.90	7.38	7.76	8.13	8.04	8.05	5.5 - 9.0 pH
3	BOD	2.64	2.63	3.57	3.61	2.81	2.95	0 - 30.0 mg/l
4	COD	1318	13.15	17.86	18.07	14.03	14.74	0 - 250.0 mg/l
5	Flouride	-	-	1.62	1.84	1.65	1.69	0 – 2.00 mg/l
6	Cr+6	-	-	≤ 0.01	≤ 0.01	≤ 0.01	≤ 0.01	0 – 0.1 mg/l

#### Location: CRM ETP outlet

#### Location: CRM Comboline ETP outlet

		Monthly Average concentration								
SI. No.	Parameters	Oct'23	Nov'23	Dec'23	Jan'24	Feb'24	March'24	Permissible limits as per SPCB		
1	TSS	6.87	19.16	23.08	22.12	18.42	18.91	0 - 100.0 mg		
2	рН	7.45	7.18	7.43	7.61	7.45	7.53	5.5 - 9.0 pH		
3	BOD	5.49	7.16	6.73	7.10	7.73	7.77	0 - 30.0 mg/l		
4	COD	45.71	59.70	56.12	59.21	64.42	64.72	0 - 250.0 mg/l		
5	Flouride	-	-	1.22	1.20	1.37	1.24	0 – 2.00 mg/l		
6	Cr+6	-	-	≤ 0.01	≤ 0.01	≤ 0.01	0.02	0 – 0.1 mg/l		